

# TEM | Meleya Update - 4km copper anomaly at Remorse Target

# **Key Points**

- 4 kilometre base metal anomaly identified at the Remorse Target
- Results of up to 635 ppm copper and 182 ppm zinc in soil assays
- Geochemistry potentially correlates with a VMS signature
- Newly acquired tenements extend the target along strike
- Further work and approvals for drilling in progress

### **Summary**

Tempest Minerals Ltd (TEM) is pleased to update the market regarding geochemistry results from the Company's 100% Meleya Project. Soil geochemistry data recently received from surface sampling work undertaken across the eastern portion of the Meleya Project in Q4 2022 form an impressive 4 kilometre strike polymetallic anomaly. Results to date form a coherent copper-zinc zone with values of up to 635 ppm copper and 182 ppm zinc having been recorded. This copper-zinc zonation is typical of VMS (volcanogenic massive sulphide) deposits. The recent acquisition of tenements may extend this anomaly further. With very little or no prior exploration having been conducted in this area region - this once again highlights the impressive potential for multiple Gold, Base and Critical Metal mineralisation systems within the Tempest portfolio.

## **Meleya Project**

#### **Background**

The Meleya Project represents a previously unrecognised extension of the Yalgoo Greenstone belt identified through the innovative use of data analysis <sup>1</sup>. The project is part of the flagship 100% Yalgoo regional holdings. In 2021, TEM identified further easterly extensions to the belt <sup>2</sup> and in March 2023, TEM expanded this to further consolidate the Company's dominant position comprising more than 1,000km<sup>2</sup> of high potential exploration ground <sup>3</sup>. TEM has for some time considered the multitude of target zones at Meleya to represent some of the most exciting greenfields base and precious metal upside exploration opportunities in the industry today. This view was strongly supported in 2022 by the discovery of multiple mineralisation occurrences 4,5 within a regional geological context that hosts numerous world class gold, base metal and iron ore deposits. In late 2022, in parallel with multiple drilling programs <sup>6,7</sup> TEM commenced the first ever systematic exploration in the eastern portion of the Meleya Project with a regional mapping and surface geochemistry sampling program.

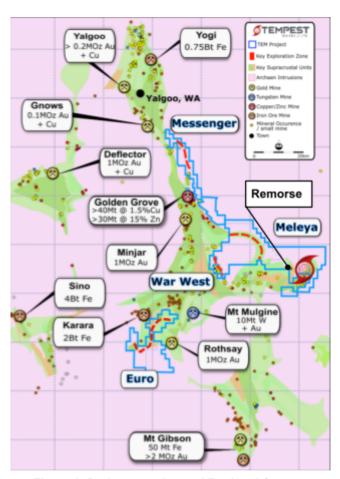


Figure 1: Project Location and Regional Context



#### **Meleya East Sampling**

The target area was an easterly portion of the Meleya Project surrounding the Ktulu target. The area is known to host several historical gold workings at the Pinyalling Mining Centre (8 km SSW of the tenement area) where 958 ounces of gold was produced between 1902 - 1939 <sup>8</sup> and later the Baron Rothschild project (pyrite and pyrrhotite-associated gold-hosted BIF) explored by Thundelarra Exploration during the late 1990's <sup>9</sup>.

The purpose of the campaign was to generate data relating to the area's geochemistry and geology. During Q4 2022 an initial broad 45km², 200mx200m spaced soil sampling and mapping campaign of over 1,000 samples was incrementally completed for the purpose of ground-truthing and developing a broad preliminary understanding of the region's geochemistry and stratigraphy.

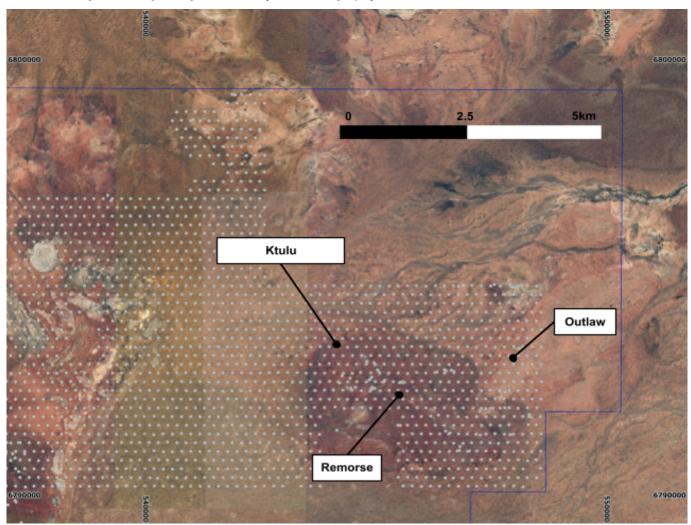


Figure 2: Overview of sampling completed with selected target areas

Much of the sampling area has soil cover with occasional hilled regions characterised by isoclinal folds, and steep N-W plunging outcrops. All samples were assayed with Ultrafine+ <sup>10</sup>, a method of analysis used to detect low levels of Au and multi-elements within soil samples. Highlights include:

- 635 ppm Cu + 96 ppm Zn + 14 ppm Pb,
- and 280 ppm Cu + 182 ppm Zn + 24.3 ppm Pb

This geochemical work encompasses a number of existing prospects interpreted from geophysics and satellite data by TEM - including the Remorse Target.

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#### **Remorse Target**

The Meleya Project area has a multitude of prospective targets including the 'Remorse Target'. Remorse presents as a local distortion in geophysical and remote sensing datasets which correlates strongly with a multi-element geochemical anomaly in the collected samples (over 100 samples define the anomaly to date) over at least 4 km.

While this anomaly is traceable via numerous geochemical elements, the sampling has identified a coherent core zone of copper-zinc anomalism which now defines the Remorse target. Notably: the copper and zinc anomalism appears as 'layered' with a predominance of copper to the NorthEast and increased and more dispersed zinc halo to the SouthWest as per Figure 3. This type of zonation is typically seen within VMS deposits and is related to the preferential crystallisation of mineralisation relative to the proximity of a local heat source and the metal concentration source.

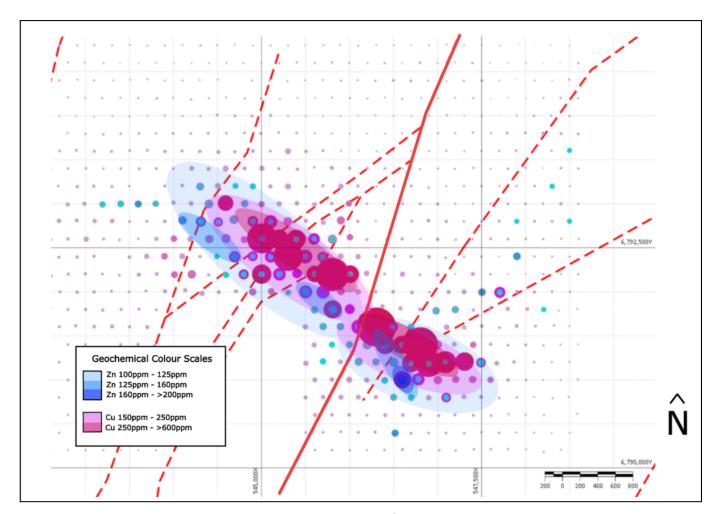


Figure 3: Remorse Copper-Zinc Surface Geochem Anomaly

#### Geology

The geology of this area was initially interpreted as a discontinuous geological sequence within the Yalgoo Regional geology. However, more recent scrutiny of geophysics and other data sets including surrounding areas indicates that the Yalgoo Greenstone belt and the south-eastern extension of the Warriedar Fold Belt that pass through this region of the Meleya Project are comparable to those hosting major regional deposits. Initial exploration shows high magnetism, banded stratigraphy, and numerous large-scale cross-cutting

structures; potential 'feeders' for mineralisation styles such as Volcanogenic Massive Sulphides (VMS) <sup>11</sup>, Intrusion Related Gold (IRG) deposits, Iron and Tungsten Skarn (Skarn) and Lode Hosted / Orogenic vein style gold.

One such zone spans over 10 km across the southeastern part of the project with the highly anomalous zone spanning 4 km along a contorted part of the sequence. In addition to the structural openings and visible surface fluid alteration, the stratigraphy has been offset by over 300m of displacement interpreted to have been caused by large-scale regional structures.

Recent soil program results demonstrate potential 4km striking geochemistry correlated with a VMS system (Gossan Hill - Golden Grove style) including soil samples reaching 635 ppm Cu + 96 ppm Zn +  $\sim$ 14ppm Pb and 280 ppm Cu + 182 ppm Zn + 24ppm Pb).

These anomalous results appear to be stratiform and soil samples taken along one of the central stratigraphies (intercalated basalt, volcanic felsics, and sediments) along the Ktulu ridgeline show a consistent trend of Cu and Zn not explainable by stratigraphy only.

This is reflected in the Cu-Zn anomalism which appears stratigraphy bound and mirrors the structural displacement indicating that it may represent a VMS feeder zone. Initial geochemical analysis suggests this stratigraphic style anomaly has a similar geochemical fingerprint to a VMS mineral assemblage, including the nearby Gossan Hill Deposit / Golden Grove <sup>12</sup> deposits.

# **Next Steps**

- Furthers remaining assays pending
- Further sampling in new tenement areas to be completed
- Potential geophysical surveys
- Approvals and planning for drilling of the Remorse target in progress
- Further exploration work at other projects in progress

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The Board of the Company has authorised the release of this announcement to the market.

#### **About TEM**

Tempest Minerals Ltd is an Australian based mineral exploration company with a diversified portfolio of projects in Western Australia considered highly prospective for precious, base and energy metals. The Company has an experienced board and management team with a history of exploration, operational and corporate success.

Tempest leverages the team's energy, technical and commercial acumen to execute the Company's mission - to maximise shareholder value through focused, data-driven, risk-weighted exploration and development of our assets.

#### **Investor Information**



### <u> investorhub.tempestminerals.com</u>

TEM welcomes direct engagement and encourages shareholders and interested parties to visit the TEM Investor hub which provides additional background information, videos and a forum for stakeholders to communicate with each other and with the company.

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# Forward-looking statements

This document may contain certain forward-looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the company's control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement. The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward-looking statements will be or are likely to be fulfilled. Tempest undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements). The information in this document does not take into account the objectives, financial situation or particular needs of any person or organisation. Nothing contained in this document constitutes investment, legal, tax or other advice.

# **Competent Person Statement**

The information in this announcement that relates to Exploration Results and general project comments is based on information compiled by Don Smith who is the Managing Director of Tempest Minerals Ltd. Don is a Member of AusIMM, AIG and GSA and has sufficient experience relevant to the style of mineralisation under consideration and to the activities 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'. Don consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# **Appendix A: References**

- 1. LI3 ASX Announcement dated 06 August 2020 "Meleya Zone Prospectivity"
- 2. TEM ASX Announcement dated 02 March 2022 "Meleya Update Expansion of granted tenure"
- 3. TEM ASX Announcement dated 15 February 2023 "Increase in Yalgoo Landholding"
- 4. TEM ASX Announcement dated 28 March 2022 "Meleya Update Significant Discovery"
- TEM ASX Announcement dated 11 October 2022 "Meleya Update Master Drilling Completion"
- 6. TEM ASX Announcement dated 20 October 2022 "Meleya Update Drilling at Clover Target"
- TEM ASX Announcement dated 09 December 2022 "Meleya Update Completion of drilling 2022"
- 8. ROY ASX Announcement dated 2012 "Royal Resources Limited 2012 Annual Report"
- 9. Whittle M. (1999) "Annual Report for the Baron Project." Thundelarra Exploration Ltd. WA Department of Mines and Energy
- 10. LabWest Website https://www.labwest.net/ultrafine/ (accessed March 2023)
- 11. Hollis S.P., Yeats C.J., Wyche S., Barnes S.J., & Ivanic T.J. (2017) "VMS Mineralisation In The Yilgarn Craton, Western Australia: A Review Of Known Deposits And Prospectivity Analysis Of Felsic Volcanic Rocks"
- 12. Smith R.E., Perdrix J.L (1982) "Pisolitic Laterite Geochemistry In The Golden Grove Massive SulphideDistrict, Western Australia"

# Appendix B: JORC Table 1

### **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m 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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>QAQC entailed a revolving Blank/Standard/Duplicate at every 20th sample. The field duplicate was acquired by the sampler from the same soil profile as the original sample.</li> <li>300g sample collected from the top of the B horizon and placed into pulp bag for assay. A separate 1kg sample collected from the top of the B horizon in the same profile collected for potential future testing using different lab analysis. Both samples were unsieved as per lab analysis requirements.</li> <li>Sample bags were collected onsite and delivered to LabWest Minerals Analysis in Perth by Tempest or contract personnel, and were tested via UltraFine+ gold and multielement (50 elements) assay method.</li> <li>Soil samples are only used to determine the presence of gold plus 50 elements and are not used to determine mineral resources or reserves.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	• N/A
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	• N/A



	<ul> <li>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.</li> </ul>	
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	Soils were qualitatively logged, including colour and texture.
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	• N/A
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>UltraFine+ analysis was used to determine gold and multi-element content, this method was chosen as it detects low levels of Au and multi-elements within ultrafine (&lt; 2 µm) fraction of soil samples.</li> <li>UltraFine+ Leachwell is considered a partial method as only gold recoverable from cyanide will be reported.</li> <li>Laboratory and company QAQC results were used to determine the quality of data.</li> <li>All samples were submitted to LabWest Minerals Analysis in Perth and were multielement (50 elements) tested via UltraFine+ analysis UFF-PE.</li> </ul>



Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	• N/A
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Sample point locations collected by handheld GPS (±3m horizontal, up to 12m vertical error - however error was consistently below 4m.</li> <li>Grid: Datum WGS84 UTM Zone 50S</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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 estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Samples were located on a grid oriented at 090 on a 200m line spacing and 200m sample spacing, with each line offset 100m from the other.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Soil sample points were located perpendicular to the general strike of geological formations when they were encountered. Most samples were acquired in areas with little to no surface geology (soil only, few proximal outcrops which were predominantly bedrock).</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Sample bags were collected onsite and moved on scheduled weekly or collections directly to the laboratory in Perth by Tempest or contract personnel.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Results were confirmed using company-led QA/QC, with standards, blanks and duplicates inserted every 20th sample.</li> </ul>



# **Section 2 Reporting of Exploration Results**

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	or material issues with third parties such as joint ventures, partnerships.	lease is owned 100% by Warrigal Mining Pty Ltd which is a subsidiary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Tempest acknowledges the work by previous explorers including Minjar, Goldfields Exploration Pty Ltd, Thundelarra Exploration Ltd, and Royal Resources Ltd.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The project area lies over the easternmost interpreted extension of the Yalgoo Greenstone belt within the Warriedar Fold Belt.</li> <li>The Warriedar Fold Belt is known to comprise a folded sequence of dolerite and gabbro intercalated with basalt, Banded Iron Formation (BIF), sediments, and ultramafics. The area is known to host several historical gold workings at the Pinyalling Mining Centre (8 km SSW of the tenement area) where 958 ounces of gold was produced between 1902 - 1939 and later the Baron Rothschild project (pyrite and pyrrhotite-associated gold-hosted BIF) explored by Thundelarra Exploration during the late 1990s.</li> <li>Extensive historic works have been conducted over the eastern extension of the Yalgoo Greenstone belt just south of the sampling area, and by correlation, can infer a deeper understanding of the Ktulu Project geology supported by recent mapping. The main geology consists of a basal sequence of mafic rocks overlain by a thick sequence of felsic volcanic rocks, and later by jaspilitic BIF and banded grey chert intercalated with felsic volcanics. This is predominantly consistent with mapping conducted at the sampling area, however due to extensive ground cover and heavily weathered</li> </ul>



		•	outcrops, further drilling is required for a stronger understanding of the local geology.  Geochemistry from soil sampling suggests potential VMS style mineralisation across the main outcropping ridgeline (aka Remorse Target). The Remorse target is a coincidental geophysical (magnetic high and magnetic low) and geochemical (multi-elemental) anomaly.
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <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> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	•	N/A
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate 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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	•	N/A
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	•	N/A



Diagrams	<ul> <li>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 plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	• N/A
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	• N/A
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; 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.</li> </ul>	• N/A
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Tempest Minerals will progress regulatory approvals and develop an initial drill program for the resultant target area.</li> <li>Exploration programs planned going forward may include:         <ul> <li>Detailed geological interpretations and modelling</li> <li>Downhole Electromagnetics</li> <li>Airborne and ground-based EPR geophysical surveys</li> <li>RAB or Aircore drilling</li> <li>RC Drilling</li> <li>Diamond Drilling</li> <li>Further survey mapping and geochemical sampling</li> </ul> </li> </ul>