TEM | Regional Electron Paramagnetic Resonance Survey Completed

Key Points

- Electron Paramagnetic Resonance Survey (EPR) Completed Over Yalgoo and Mt Magnet Project Areas
- ~250 Geochemical Signals Identified confirming the prospectivity of the portfolio
- Multiple signals complementary to existing Tempest priority targets
- The high priority EPR signals assisting in exploration target ranking
- TEM moving towards multiple drill programs in 2022

Tempest Minerals Ltd (TEM) is pleased to announce the completion of regional EPR surveys across its Yalgoo and Mt Magnet projects. Numerous (more than 250) potentially mineralised responses were detected during the survey. This confirms the prospectivity of the company's portfolio and the correlation to multiple existing targets identified by TEM lends further evidence as the company moves towards drilling multiple areas in the coming quarter.

Background

Tempest Minerals is committed to innovation in all aspects of the Company [1].

This focus includes adapting new technologies that have the potential to advance its operations.

EPR was identified in 2021 and researched as a potential tool for advancing non-invasive exploration at its projects in Western Australia. Tempest Minerals entered into a partnership in 2022 with Southern Sky Energy [2] who are a primary provider of proprietary EPR services in Australia. Together, the team have designed a 'broad brush' regional scale survey across the TEM Yalgoo and Mt Magnet portfolios. This trial scoping survey using the first two of a number of possible phases of the survey technique (airborne with ground tie in points) was completed recently.

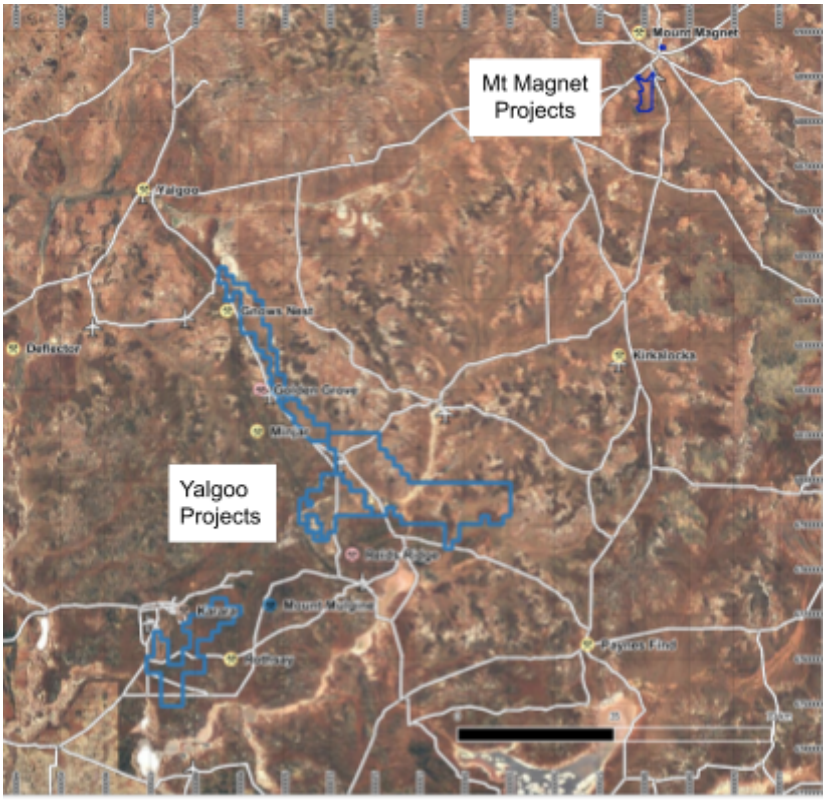

Figure 1: Projects areas flown with EPR survey

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EPR

EPR is the process of measuring the differing spectra emitted as a result of [3] unbound electron spin changes and relaxation from an excited state due to the influence of a magnetic field.

In addition to the magnetic field, unpaired electrons are also sensitive to their local environments. The resulting interaction between the electron and the nuclei can provide a great deal of information about the sample including providing information about the number and identity of nuclei in a complex as well as their distance from the unpaired electron.[4]

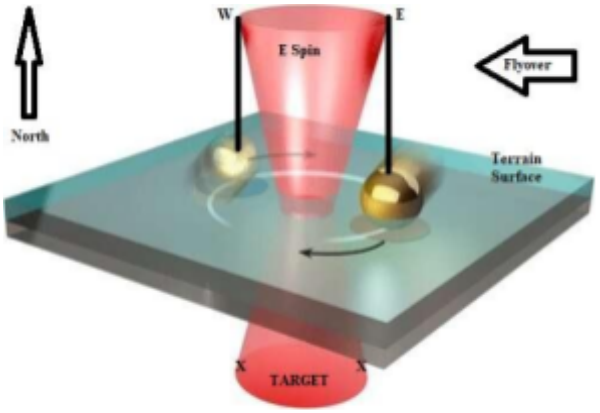

Figure 2: Conceptual EPR Process Measuring Electron Spin

EPR has been extensively implemented across a wide variety of industries including: material science [5], biomedical [6], food quality control [7] and hydrocarbon exploration [8].

Although previously having limited mainstream adoption within the metalliferous sector, EPR has been used in Australia since at least the 1990's and used on several occasions [9,10] to successfully identify mineralisation in exploration in several commodities including base metals [11] across Australia.

More recent work in Western Australian gold exploration identified that "As the emphasis in exploration changes to more difficult terrains, the suitability of EPR needs to be widely tested. These preliminary results from Western Australia suggest that EPR may have some significant role to play in the search for deeply buried gold deposits." [12]

When certain ground conditions can be met, this spectroscopic technique has the potential to detect hydrocarbons, metals, halogens, biomarkers and other pathfinder elements potentially associated with precious and base metal deposits at significant depth.

This technique can advance regional targeting - for example - in the absence of other large grid based soil or shallow sampling by disregarding areas that have no EPR signal and focusing on priority areas. EPR augments and can be used in conjunction as another layer of evidence with more well known methods of standard exploration methods such as Magnetics and drilling.

Results

Data from the first phase of the survey has yielded at least 250 metal related anomalies. At least 50 of these are in the Meleya Project area and 5 are spatially proximal to a number of established high priority exploration localities including the high profile Orion target and the Master target at which TEM is currently drilling [13].

As with all potential field and remote sensing methods, EPR must be cross referenced with a wide variety of spatial, mapping and geochemical data to understand their full relevance. Factors such as signal interference and non unique solutions are possible, meaning that all targets shall be assessed against other geoscientific datasets prior to drilling.

Next Steps

- Validation of results with comparative analysis to other datasets
- Ongoing fieldwork including large scale mapping and surface sampling programs
- Multiple drilling programs planned for 2022 and 2023 [14]

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 focussed, data-driven, risk-weighted exploration and development of our assets.

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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 Managing Director to Tempest Minerals Ltd. Don is a Member of AIG, GSA and AusIMM 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.

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Appendix A: References

1. https://tempestminerals.com/culture/
2. https://www.linkedin.com/in/prof-david-powter-49402097
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4. https://sites.cns.utexas.edu/epr_facility/what-epr
5. Lancaster G (1967) Electron Paramagnetic Resonance (a review)
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11. Pwa A., Van Moort J.C. (1999) Electron paramagnetic resonance (EPR) spectroscopy in massive sulphide exploration, Rosebery mine area, western Tasmania, Australia
12. Li X, Butt C.R.M., van Moort J.C. (1997) Electron Paramagnetic Resonance (EPR) as a tool in gold exploration
13. TEM ASX announcement dated 05 September 2022 “Meleya Update - Drilling Commences At Master”
14. TEM ASX announcement dated 08 September 2022 “Meleya Update - Orion DHEM Survey And Assays Confirm Project Potential”

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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	• *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.* • *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 (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.*	• Not applicable to the Geophysical Survey
Drilling techniques	• *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).*	• Not applicable to the Geophysical Survey
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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 to the Geophysical Survey

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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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Not applicable to the Geophysical Survey
Sub-sampling techniques and sample preparation	• *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.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.*	• Not applicable to the Geophysical Survey
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• Not applicable to the Geophysical Survey
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Not applicable to the Geophysical Survey

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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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Not applicable to the Geophysical Survey
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Not applicable to the Geophysical Survey
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.* • *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.*	• Not applicable to the Geophysical Survey
Sample security	• *The measures taken to ensure sample security.*	• Not applicable to the Geophysical Survey
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Not applicable to the Geophysical Survey

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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	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as 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 EPR survey was conducted at Tempest Minerals Yalgoo and Mt Magnet Projects, owned 100% by Warrigal Mining Pty Ltd which is a subsidiary of Tempest Minerals Ltd. • No overriding interests are present to the Company's knowledge.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Not applicable to the Geophysical Survey
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Not applicable to the Geophysical Survey

Drill hole Information	• *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:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	  ○ *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 to the Geophysical Survey

Data aggregation methods	• *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.*	• Not applicable to the Geophysical Survey

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	• *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
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 (eg 'down hole length, true width not known').*	• Not applicable to the Geophysical Survey
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 plan view of drill hole collar locations and appropriate sectional views.*	• Not applicable to the Geophysical Survey
Balanced reporting	• *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.*	• Not applicable to the Geophysical Survey
Other substantive exploration data	• *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.*	• Not applicable to the Geophysical Survey
Further work	• *The nature and scale of planned further work (eg 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.*	• Follow up soil sampling will be completed on EPR targets to confirm extent of anomaly. •

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