Multiple Strong EM Conductors at Jimperding

Date: 17 February 2021

ASX Code: MAN

Capital Structure
Ordinary Shares: 347,049,843
Unlisted Options:
135,300,077 (3c exercise)
Current Share Price: 8.3c
Market Capitalisation:
$28.8M
Cash: $4.6M
Debt: Nil

Directors

Patrick Burke
Non-Executive Chairman

James Allchurch
Managing Director

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Highlights

- **Airborne electromagnetic survey (AEM) identifies numerous strong EM conductors across the Jimperding Project located 28km east of the Julimar PGE-Ni-Cu discovery**
- **Several outstanding late-time EM conductors associated with mapped metamorphic rocks and magnetic features require immediate follow-up work**
- **Large pipeline of targets developed with target ranking and follow-up work underway**
- **Confirmed distinct high conductance EM response at Newleyine - drilling on track to commence in the current quarter.**

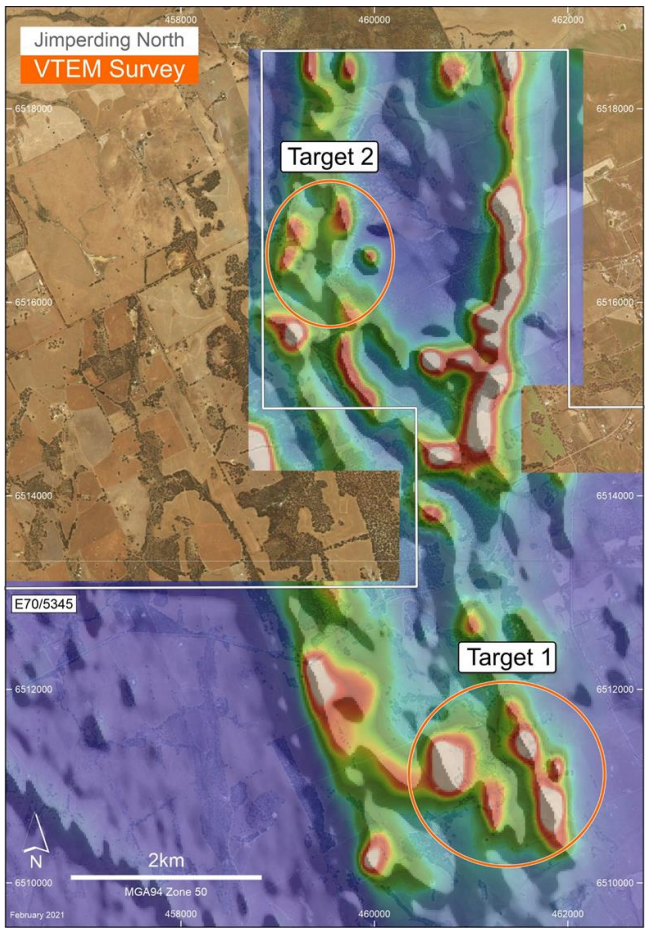

Figure 1 – AEM survey showing large late-time conductors (Ch 33 image) - northern Jimperding Project

Mandrake Managing Director James Allchurch commented:

'The airborne EM across Mandrake's Jimperding EL is a crucial baseline dataset that allows for the identification of bedrock conductive sources such as nickel sulphide mineralisation. Several very promising late-time conductors have been identified coincident with

metamorphic rocks and magnetic anomalies that demand immediate follow-up. Field surveys will look to characterise any outcrop in the area with ground EM and drilling to follow.'

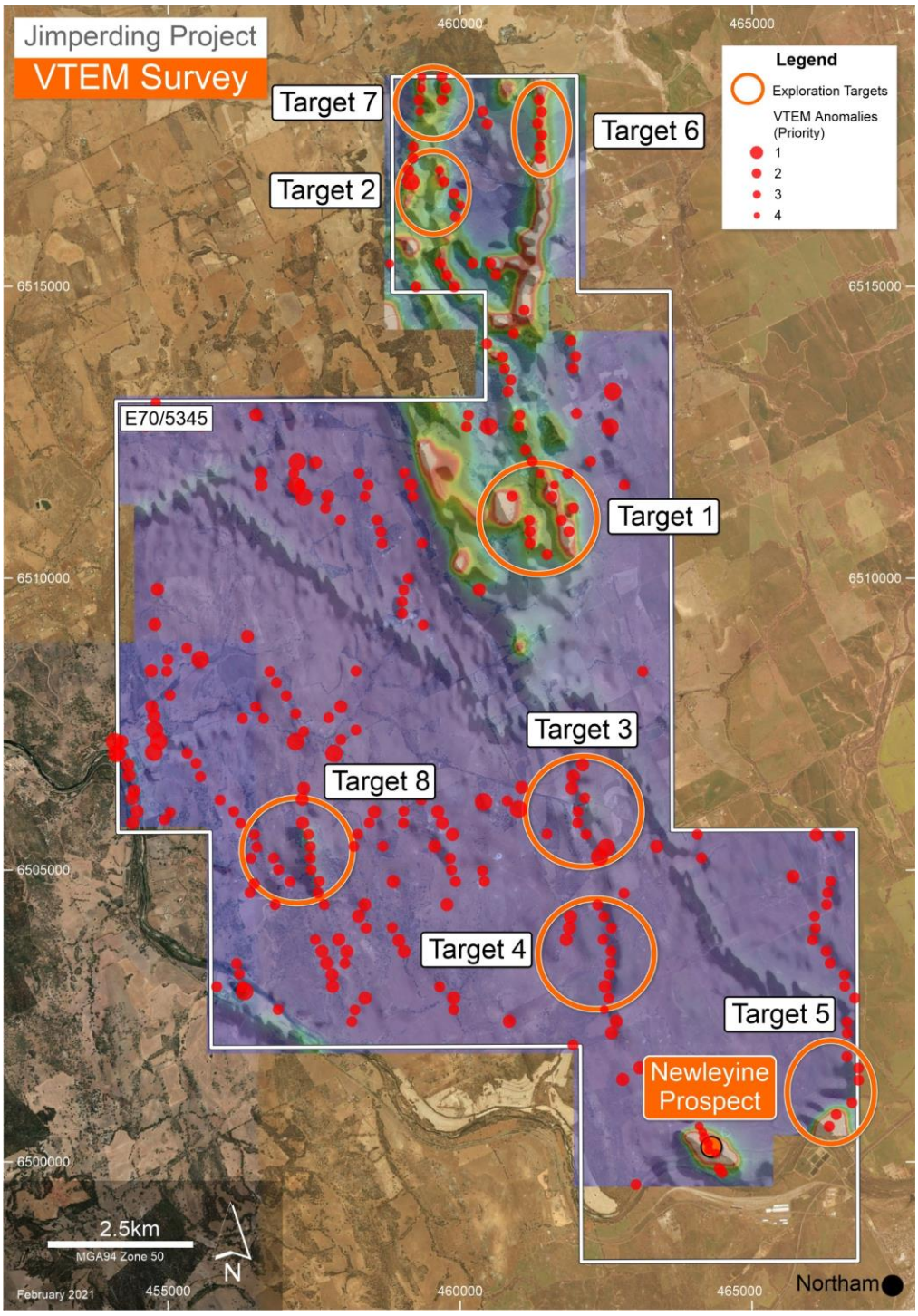

Figure 2 – Jimperding AEM survey preliminary interpretation (CH33 image) showing larger targets

Mandrake Resources Limited (ASX: MAN) (Mandrake or the Company) is pleased to advise the results of an initial whole-of–permit (~142km^2) airborne

electromagnetic (AEM) survey at the Jimperding Project, in the Jimperding Metamorphic Belt located 70km north east of Perth, Western Australia.

The heliborne AEM survey utilised Geotech Limited's Versatile Time-Domain Electromagnetic (VTEM™ Max) geophysical system surveying at 200m spacing (with some 100m-spaced infill lines flown over anomalous areas). Cultural sources (sheds, power lines etc.) were avoided by flight lines where possible.

The objective of the survey was to generate targets prospective for "Julimar-style" mineralisation given the Jimperding Project lies approximately 28km east of Chalice Mining Limited's Julimar PGE-Ni-Cu discovery in the same geological terrane.

The AEM survey has successfully identified a large number of late-time EM conductors that require immediate field reconnaissance work and mapping. In particular, Targets 1 and 2 in the north of the Jimperding Project (Figure 1) represent compelling targets given their relatively strong conductance, proximity to known metamorphic rocks and association with adjacent magnetic responses.

Several coherent targets (Figure 2) have been identified along with a host of conductors following independent preliminary interpretation with several anomalous responses demonstrating multiple broad late-time EM responses similar to that exhibited by the Newleyine Prospect.

AEM survey design and data interpretation were undertaken by Southern Geoscience Consultants (SGC).

Final geophysical survey interpretation is yet to be received and it is possible that additional anomalies may be identified.

Next Steps

Mandrake has commenced the process of refining and ranking the EM targets. Starting with top ranked EM targets, Mandrake will commence land access discussions with a view to a site visit to characterise rock types and conduct initial mapping (provided sufficient outcrop).

Ground EM would then be used to establish drill targets.

Newleyine Prospect

The Newleyine Prospect was also flown (including infill lines) during the survey which has confirmed the distinct high conductance EM response from the target area. Drilling of Newleyine is on track to commence in the current quarter.

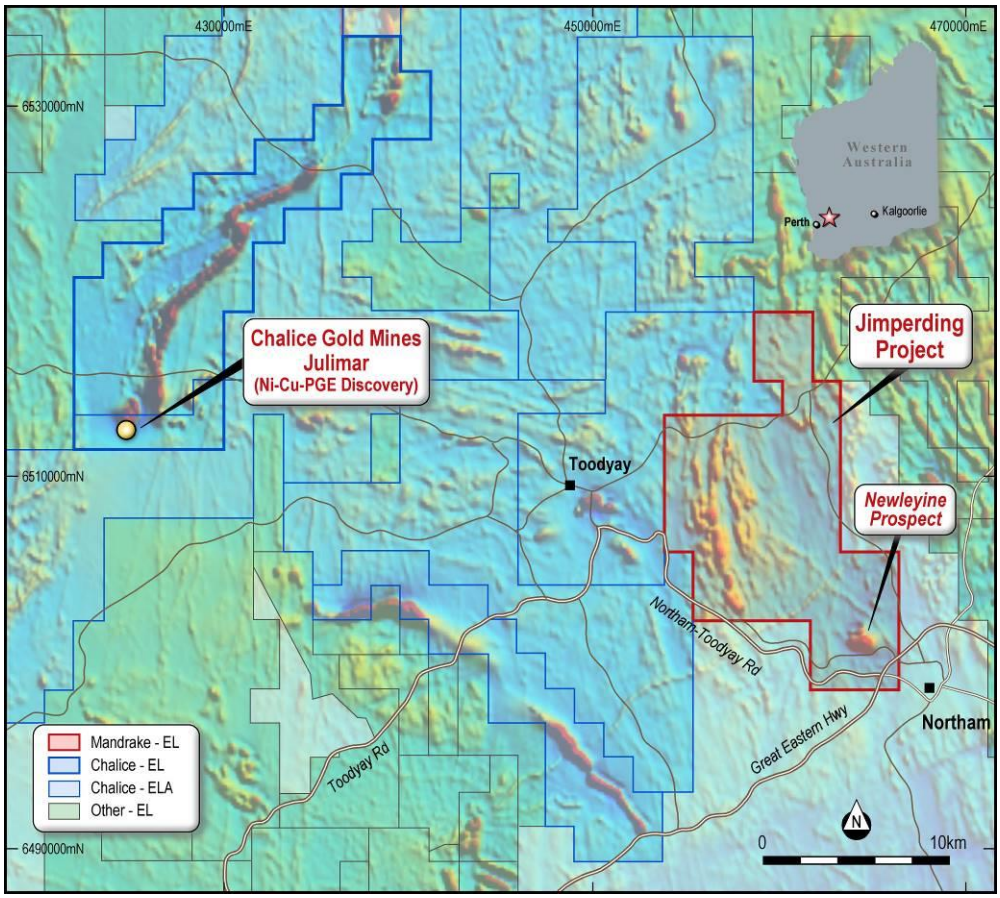

Figure 3 - Regional aeromagnetics – Jimperding Project

This announcement has been authorized by the board of directors of Mandrake.

About Mandrake Resources

Mandrake is a junior exploration company established with the purpose of exploring and developing gold, nickel, copper and PGE opportunities. The Company controls 100% of a 140km^2 exploration licence prospective for Ni/Cu/PGEs in the exciting Jimperding Metamorphic Belt, 70km NE of Perth.

Mandrake also owns a mineral exploration project located in the prolific Pine Creek Orogen of the Northern Territory prospective for gold, silver and base metals.

For further information visit www.mandrakeresources.com.au

Competent Persons Statement

The technical information in this announcement complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Mr James Allchurch, Managing Director of Mandrake Resources. Mr Allchurch is a Member of the

Australian Institute of Geoscientists. He 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 JORC Code. Mr Allchurch consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Geophysical Results and Interpretation is based on information compiled and reviewed by Anne Tomlinson, who is a Member of the Australian Institute of Geoscientists and an employee of Southern Geoscience Consultants. Anne Tomlinson has sufficient experience that is relevant 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'. Anne Tomlinson consents to the inclusion in this announcement of the matters based on her information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1 Report Template

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 (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 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 (e.g. submarine nodules) may warrant disclosure of detailed information.*
		• An Airborne Versatile Time-Domain Electromagnetic (VTEM™ Max) survey was undertaken at the Jimperding Project
		• The VTEM survey was designed by Southern Geoscience Consultants to assess the potential for bedrock conductors that may be the response of massive sulphide accumulations associated with Ni-Cu-PGE
		• UTS Geophysics Pty Ltd/Geotech undertook the survey in December 2020 with the following specifications:
		  • Base frequency: 25 Hz
		  • Transmitter loop diameter: 34.6m
		  • Peak dipole moment: 651,026 NIA
		  • Transmitter pulse width: 7.35 ms
		  • Receiver: Z, X coils
		  • Line spacing: 200m (plus infill at 100m)
		  • Line direction: E-W (plus x2 N-S infill lines)
		  • EM sensor height: 38m / Magnetic sensor height: 73m
		  • Total line km: 735km

Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or*	• No drilling undertaken. Not relevant for VTEM™ Max survey

Criteria	JORC Code Explanation	Commentary
	other type, whether core is oriented and if so, by what method, etc).	
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.*	• No drilling undertaken. Not relevant for VTEM™ Max survey
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.*	• No drilling undertaken. Not relevant for VTEM™ Max 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*	• No drilling undertaken. Not relevant for VTEM™ Max survey

Criteria	JORC Code Explanation	Commentary
	duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
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.*	• The VTEM™ Max system was calibrated prior to commencement of the survey • All digital data were inspected daily by the UTS Geophysics site crew and Southern Geoscience Consultants • The Company received a daily report on production and on any equipment issues • The data were reviewed by Southern Geoscience Consultants and any lines were re-flown if necessary • The data presented here are final processed and levelled data
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.*	• Daily data were independently checked by Southern Geoscience Consultants.
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.*	• Real-time GPS navigation system utilising NovAtel's WAAS enabled GPS receiver. The positional accuracy is 1.8m and with WAAS active it is 1.0m • The co-ordinates of the block were set-up prior to the survey and the information was fed into the airborne navigation system. A preliminary flight path map is plotted daily and checked against survey specifications

Criteria	JORC Code Explanation	Commentary
		• Coordinates presented are in GDA94 UTM Zone 50
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.*	• Spacing between flight lines was approximately 200m, infilled to 100m over areas of interest, with readings taken approximately 2 to 4m along line, and is sufficient to locate discrete conductive anomalies
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.*	• Flight lines were orientated E-W to be orthogonal to the interpreted strike of the bedrock geology • Two infill lines were orientated N-S over the Newleyine Prospect
Sample security	• *The measures taken to ensure sample security.*	• All data acquired by UTS Geophysics were securely transmitted digitally to Southern Geoscience Consultants
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data is managed and processed by Perth geophysical consultants, Southern Geoscience Consultants. All data collected and interpretations are peer reviewed

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 Newleyine Prospect is located on exploration licence EL 70/5345 which is beneficially held 100% by Mandrake • Requisite landholder agreement negotiations underway and Heritage Survey completed for the Newleyine area only

Criteria	JORC Code Explanation	Commentary
	• *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.*	
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Various geophysical surveys, surface sampling and limited drilling undertaken by previous explorers as detailed in previous releases
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Archaean Jimperding Metamorphic Belt. Newleyine: Ultramafic intrusive associated with a banded iron formation. Ni-Cu-Fe mineralisation within a serpentinised dunite
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	• No drilling undertaken
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.* • *Where aggregate intercepts incorporate short lengths of high-*	• No drilling undertaken

Criteria	JORC Code Explanation	Commentary
	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 (e.g. 'down hole length, true width not known').*	• No drilling undertaken
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.*	• Refer to figures in announcement
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 practised to avoid misleading reporting of Exploration Results.*	• The accompanying document is a balanced report with a suitable cautionary note. Reporting of the AEM results is considered balanced considering the nature of the technique
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.*	• All meaningful information provided
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).*	• Mandrake intends to follow-up these conductors with surface mapping and ground EM

Criteria	JORC Code Explanation	Commentary
	• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	