

24 June 2021

ASX Announcement

CONDUCTORS IDENTIFIED IN AIRBORNE GEOPHYSICAL SURVEY AT DONNELLY RIVER

BlackEarth Minerals NL (**ASX: BEM**) ("**BlackEarth**", the "**Company**"), a company specialising in critical commodities, is pleased to announce the commencement of a regional scale, detailed airborne electromagnetic (AEM) at its 100% owned Donnelly River Nickel-Copper-Platinum Group Metals (Ni-Cu-PGM) Project located 240km south of Perth, Western Australia.

The Donnelly River Project is situated immediately adjoining the Thor and Odin Ni-Cu-PGM Prospects, recently identified by Chalice Gold Mines and Venture Minerals at their South West JV.

Key details of the survey include:

- The AEM survey has identified a number of significant conductors that warrant more detailed assessment and testing. The data management and interpretation of the survey was undertaken by Southern Geoscience Consultants (SGC):
 - Targets 1 and 2 are considered high priority VTEM targets based on their high-amplitude, late-time conductance. Both are coincident with magnetic trends that potentially represent the targeted mafic-ultramafic rock types (Figure 1).
 - Target 4 is of particular interest even though it is only ranked as a moderate VTEM conductor as it is located within the geochemically anomalous, mapped mafic-ultramafic units identified at the Palgorup Prospect.
 - Targets 5 and 6 are moderate VTEM conductors but their proximity to prospective magnetic trends, interpreted as potential mafic-ultramafic units, elevate their priority.
- The results of this survey have now provided areas of key focus within the broader Donnelly River Project. Each target will be assessed in detail and follow-up programs of ground-based exploration will be designed and implemented subject to standard ground access protocols.
- The survey was completed by UTS Geophysics using a VTEM Max Versatile Time Domain Electromagnetic System.
- The survey covered the entirety of E70/4825 (~80km²) and was flown on 200m line spacing for a total of 396-line kilometres.

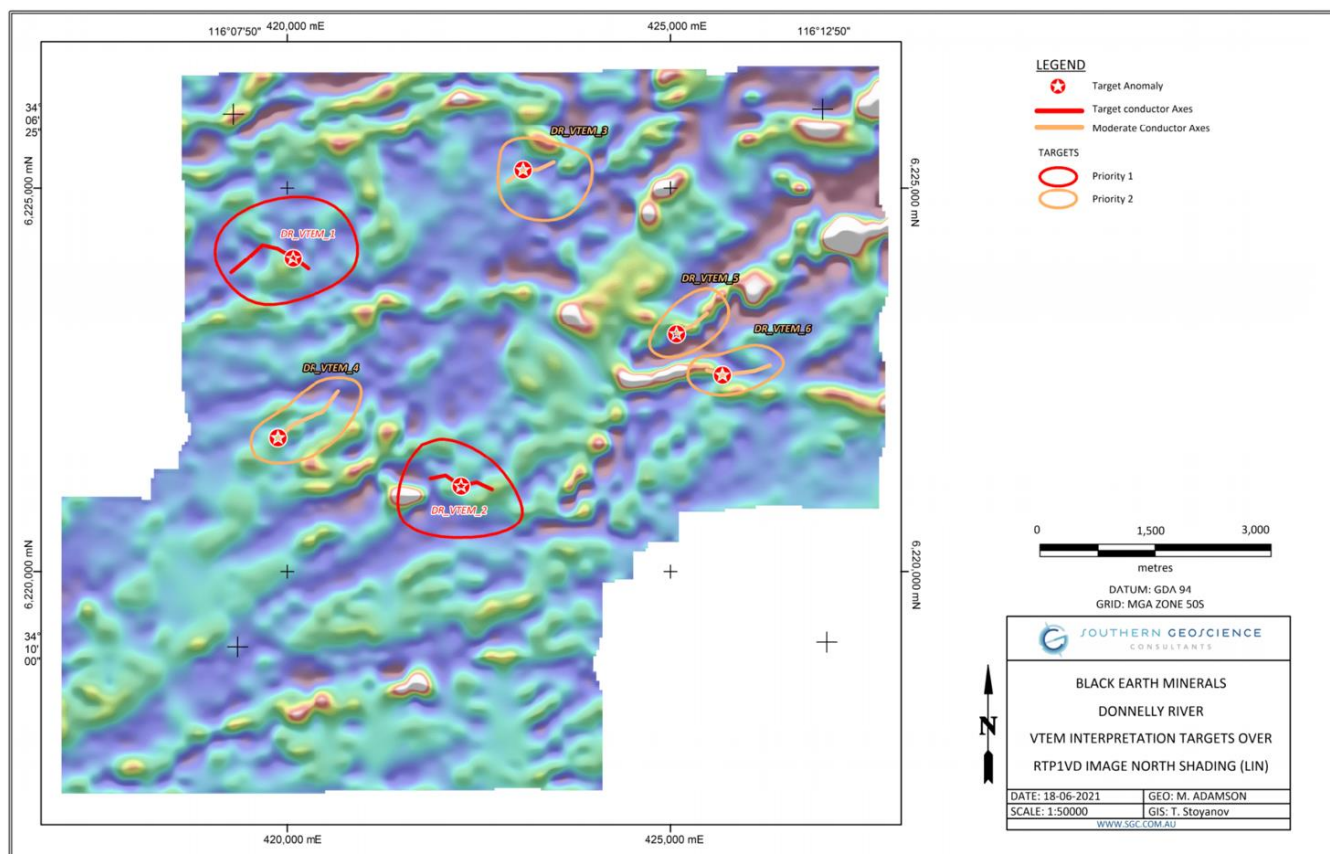


Figure (1): VTEM interpretation Targets (over RTP1VD Magnetic Image)

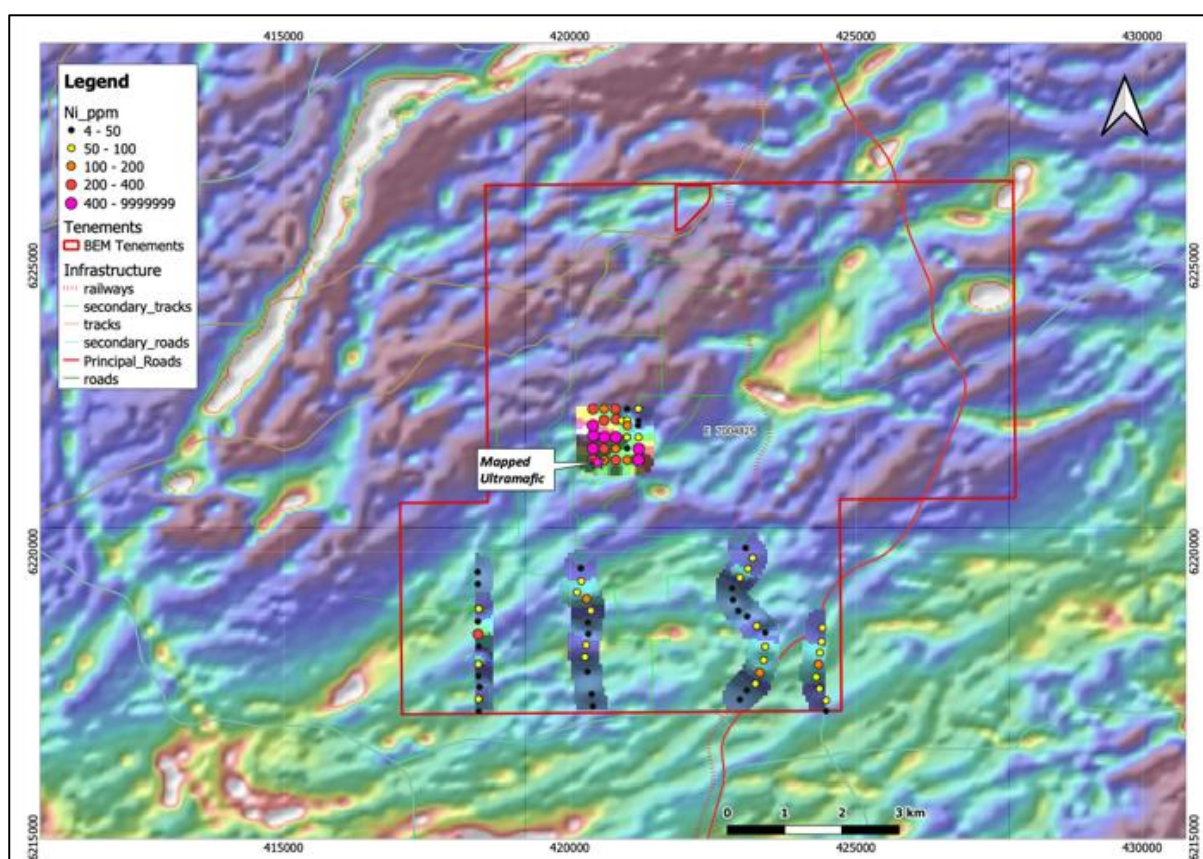


Figure (2): Summary map of geochemistry over regional airborne magnetic image

Commenting on the update on Donnelly River Prospect, BlackEarth Managing Director, Tom Revy, said:

“While we are obviously still at a very early stage of exploration at our Donnelly River Prospect, the identification of 6 follow-up VTEM targets coincident with magnetic trends and or mafic-ultramafic rocks, is certainly an exciting outcome for us, as it demonstrates potential similarities with other large scale nickel sulphide discoveries in Western Australia

BlackEarth’s management and technical teams will now review next steps re Donnelly River in order to realise value for shareholders as soon as possible.”

This announcement is authorised for release by Mr Tom Revy, Managing Director.

CONTACTS

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BlackEarth encourages investors to update their contact details to stay up to date with Company news and announcements here: <http://www.blackearthminerals.com.au/update-details/>

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Competent Person's Statement

The information contained in this report relates to exploration activities and information compiled by Mr Peter Langworthy, a member of The Australasian Institute of Mining and Metallurgy. Mr Peter Langworthy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves." Mr Langworthy consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

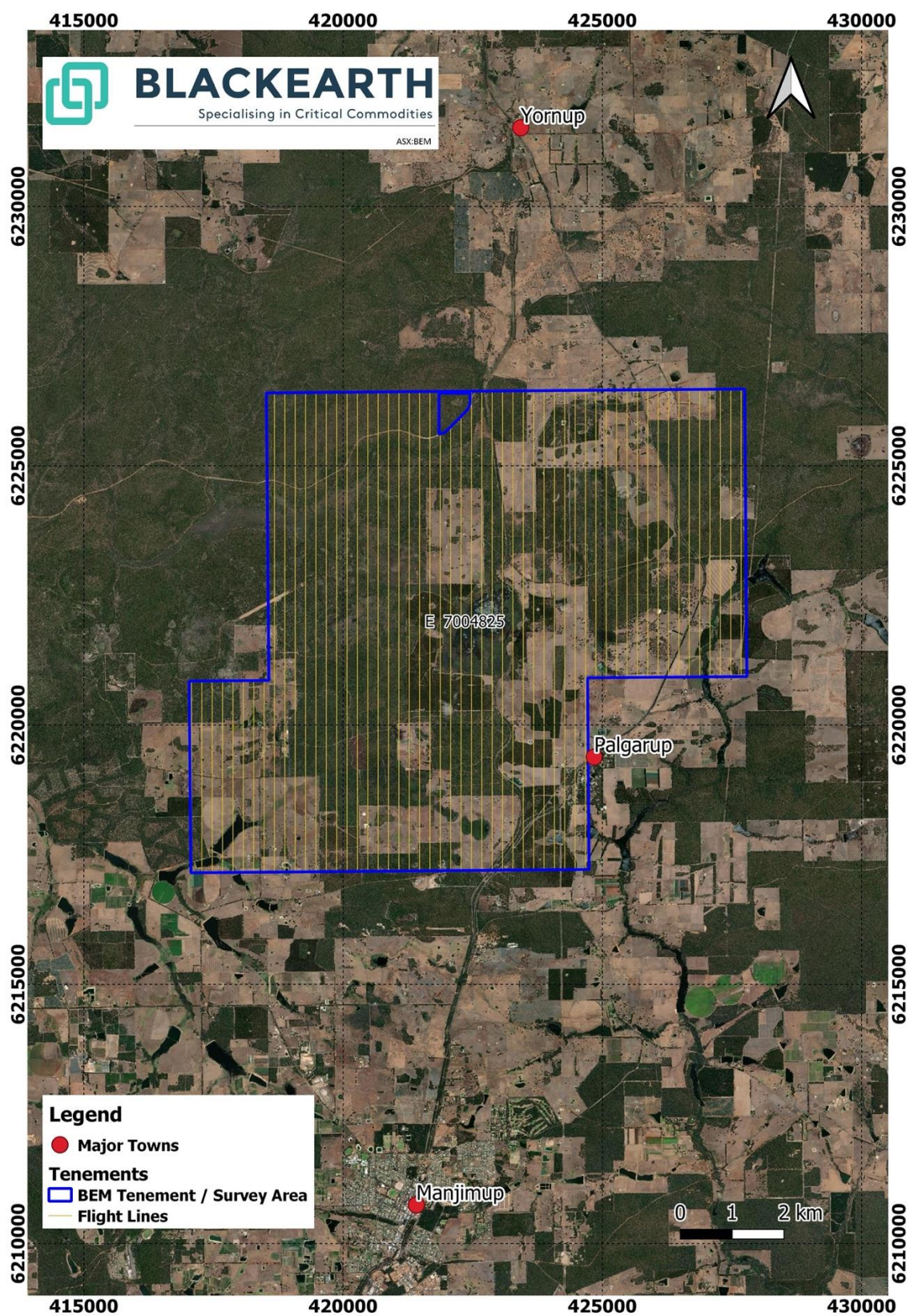
Forward Looking Statements

Some of the statements appearing in this announcement may be in the nature of forward looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which BlackEarth operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement.

No forward looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside the Company's control.

The Company does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of the Company's Directors, employees, advisors or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward-looking statement. The forward-looking statements in this announcement reflect views held only as at the date of this announcement.

This announcement is not an offer, invitation or recommendation to subscribe for, or purchase securities by the Company. Nor does this announcement constitute investment or financial product advice (nor tax, accounting or legal advice) and is not intended to be used for the basis of making an investment decision. Investors should obtain their own advice before making any investment decision.



Plan showing project location and planned 200m line-spaced airborne electromagnetic survey.

APPENDIX (1): Donnelly River Ni-Cu-PGM Geochemical Sampling Program
JORC Code, 2012 Edition

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 style="list-style-type: none"> 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 pulverized 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. 	<ul style="list-style-type: none"> The Airborne Electromagnetics, Versatile Time Domain Electromagnetics (VTEM) surveying was completed by UTS Geophysics PTY LTD, using the VTEM Max system in March 2021. A total of 78 2kg bulk samples were collected due to the wet nature of the regolith at time of sampling. The samples were dried and then sieved to -1mm mesh size and collected into 30g brown paper packets with pre-number BEM prefix and submitted to ALS laboratories. At ALS laboratories the 30g samples were sieved down to -53um for 4-acid digestion multielement assay. The samples were first analysed by pXRF as a first pass assessment. These samples were then submitted to a commercial laboratory for a 4-acid digestion multielement assay. The sampling was completed along public access roads and tracks (see attached figures). The southern area was on a nominal 200 metre spacing and a 200 x 200m semi-grid was sampled at the Palgorup Prospect.
Drilling techniques	<ul style="list-style-type: none"> 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 other type, whether core is oriented and if so, by what method, etc.). 	<ul style="list-style-type: none"> No drilling reported
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximize 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. 	<ul style="list-style-type: none"> No drilling reported
Logging	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> VTEM Airborne EM data is recorded 0.1sec. A basic description of the sampling location was recorded and geological records taken.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <i>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.</i> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • VTEM data recordings were taken at 0.1Sec. • The soil samples were taken using a pick and shovel and a ~2kg bulk sample was collected into pre-numbered calico bags. • Samplers were trained in best practice techniques including: avoiding contamination by cleaning sampling equipment between samples, avoid cross contamination by removing jewellery during sampling and ensuring a representative sample is taken by taking several shovel scoops from the base of the hole and sieving out large soil fragments • 2kg bulk samples were collected due to the wet nature of the regolith at time of sampling. The samples were dried and then sieved to -1mm mesh size and collected into 30g brown paper packets with pre-number BEM prefix and submitted to ALS laboratories. At ALS laboratories the 30g samples were sieved down to -53um for 4-acid digestion multielement assay • ALS adopts industry best practice to ensure that there is no contamination during the sample preparation • Field duplicates were collected 1 per 25 samples which consisted of taking a second sample from the same location • Standard reference material samples were inserted every 25th sample to monitor potential contamination from the laboratory • Sample size was appropriate for a 25g analysis
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>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.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • Noise in data has been recognised and matched against known areas of infrastructure as suvey flown in farmland region of south west WA. • The 4-acid digest multielement method (ME-MS61L) assaying of the -53um samples is considered appropriate and has been recommended by the Company's Consultant Geochemist. 48 elements were analysed for in this method. • QAQC procedures adopted the inclusion of QAQC samples, including 1 standard and one duplicate sample taken every 25 samples • The laboratory will analyse a range of internal and industry standards, blanks and duplicates as part of their internal analysis if the samples are submitted.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Data collected on site was monitored by a senior staff member and has been imported into the BlackEarth database • Assay data from ALS has been imported into the BlackEarth database
Location of data points	<ul style="list-style-type: none"> • <i>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.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • VTEM 200m line spaced survey (see attached diagram) • Samples were located using a handheld GPS with an expected accuracy of +/-3m • All sample locations are located in MGA94 Zone 50 • RL's are measured with the GPS during the program and considered a sufficient source of data

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>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.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • VTEM 200m line spaced survey (see attached diagram) • The data spacing and distribution is not sufficient enough to establish the degree of geological and grade continuity appropriate for Minerals Resource estimation purposes • No compositing is applied
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>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.</i> 	<ul style="list-style-type: none"> • VTEM survey flown orthogonally to regional structure • The sample lines were aimed to be approximately perpendicular to the prospective mineralised strike of the lithological contacts as defined by using a combination of outcropping geology, aeromagnetic data and ground gravity data
Sample security	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • VTEM data were emailed daily from the field to be processed and quality checked daily by the contractor UTS Geophysics PTY LTD, and by Southern Geoscience Consultants. Data is stored and archived by GEM Geophysics and, Southern Geoscience Consultants. • Due to the wet nature of the regolith the soil samples were collected onsite as bulk samples into pre-numbered calico bags by the Company's geological consultants. • These calico sample bags were then stored in pre-numbered green polyweave bags which were cable-tied • Upon the completion of the program, all bags were transported to Perth and laid out to dry in the Company's geological consultant's secure warehouse. The samples were sieved at the secure warehouse and then initially analysed by pXRF owned by the geological consultants. The samples were then submitted to ALS laboratories where the samples were sieved further to -53um for multielement analysis. • Pulps will be retained and stored in numbered boxes at the Company's geological consultant's secure warehouse.
Audits or reviews	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • A review of this geochemical program will be conducted and approved by Dr Nigel Brand (Geochemical Services Pty Ltd) prior to the program being undertaken

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Donnelly River geochemical program is located on E70/4825 which is a 100% owned by BlackEarth Minerals NL There are Native Title claims are lodged over the tenements
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Only limited exploration has been specifically undertaken on E70/4825. The general area has seen exploration by various companies for intrusive related nickel, copper, PGM's, graphite, chromium and volcanic hosted massive sulphide deposits (Cu-Zn-Pb-Ag-Au) There is no evidence of any historical mining activities in the immediate project area. Recent work by Chalice Minerals and Venture Minerals intersected anomalous sulphide mineralisation reported to demonstrate the prospectivity of the area for mafic-ultramafic intrusion related Ni-Cu-PGM deposits.
<i>Geology</i>	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> Mafic-ultramafic intrusion related Ni-Cu-PGM deposits.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> 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 style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Plan of VTEM survey and location of described conductive bodies shown in ASX announcement. Plan of soil samples shown in ASX announcement
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> 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. 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. 	<ul style="list-style-type: none"> No aggregation applied
<i>Relationship between</i>	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Not known at this stage

Criteria	JORC Code explanation	Commentary
<i>mineralisation widths and intercept lengths</i>	<p><i>nature should be reported.</i></p> <ul style="list-style-type: none"> <i>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').</i> 	
<i>Diagrams</i>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> Plan of VTEM survey and location of described conductive bodies shown in ASX announcement. Plan of soil samples shown in ASX announcement
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> All exploration results in the form of images have been provided.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> No other relevant data at this stage
<i>Further work</i>	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> Field checking of Priority VTEM targets with potential for mapping, geochemical sampling and if warranted programs of ground based EM surveying. Dependent on results and negotiation of access agreements