



ACN 119 484 016

**CLASSIC**  
MINERALS LTD

## CORPORATE STRUCTURE

ASX Code: CLZ- CLZO  
ABN: 77 119 484 016

Shares: 239,301,999  
Options (listed): 101,137,607  
Options (unlisted): 12,500,000

Share Price: \$0.04 (at 21/5/2014)  
Option price: \$0.01 (at 21/5/2014)

## BOARD & MANAGEMENT

Justin Douch, Managing Director  
Stanislaw Procak, Non-Executive Director  
Kent Hunter, Non-Executive Director  
Jeffrey Nurse, Company Secretary

## ABOUT CLASSIC MINERALS

Classic Minerals (ASX: CLZ) is a Perth-based mineral exploration Company focused on advancing its Fraser Range project E28/1904, in Western Australia. The Fraser Range Project is approximately 40km northeast of Sirius Resources' NL (ASX: SIR) Nova and Bollinger nickel-copper discoveries, and has historic nickel-copper-zinc soil anomalies.

## CONTACT

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## INVESTOR RELATIONS

Neil Le Febvre  
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ASX ANNOUNCEMENT 22 MAY 2014

# MAJOR NEW CONDUCTOR TARGETS DISCOVERED AT DEPTH BY HIGH POWER SAM FLEM ELECTROMAGNETIC SURVEY

### Highlights:

- Major conductor 1km long interpreted to extend to 500m depth identified beneath current drilling at A17 prospect
- A further three new conductors discovered at depth in "hot zone" extending southwest from Mammoth nickel discovery
- Conductive target hot zone area now extended to over 8km in strike
- Surface geochemistry being undertaken across each target to assist in prioritising drill targets
- RC and diamond core drilling targeted to commence in June
- SAM FLEM survey now moved to Classic's Eye structure to search for more deep conductors

Classic Minerals (ASX:CLZ) - The prospectivity for discovering a large massive sulphide orebody on Classic Minerals' Fraser Range tenement has received a big boost with preliminary results from a new high power Sub Audio Magnetics (SAM) Fixed Loop Electromagnetic (FLEM) survey identifying a major conductor 1km long interpreted to extend from 40m to at least 500m deep below the depth of existing drilling at prospect A17.

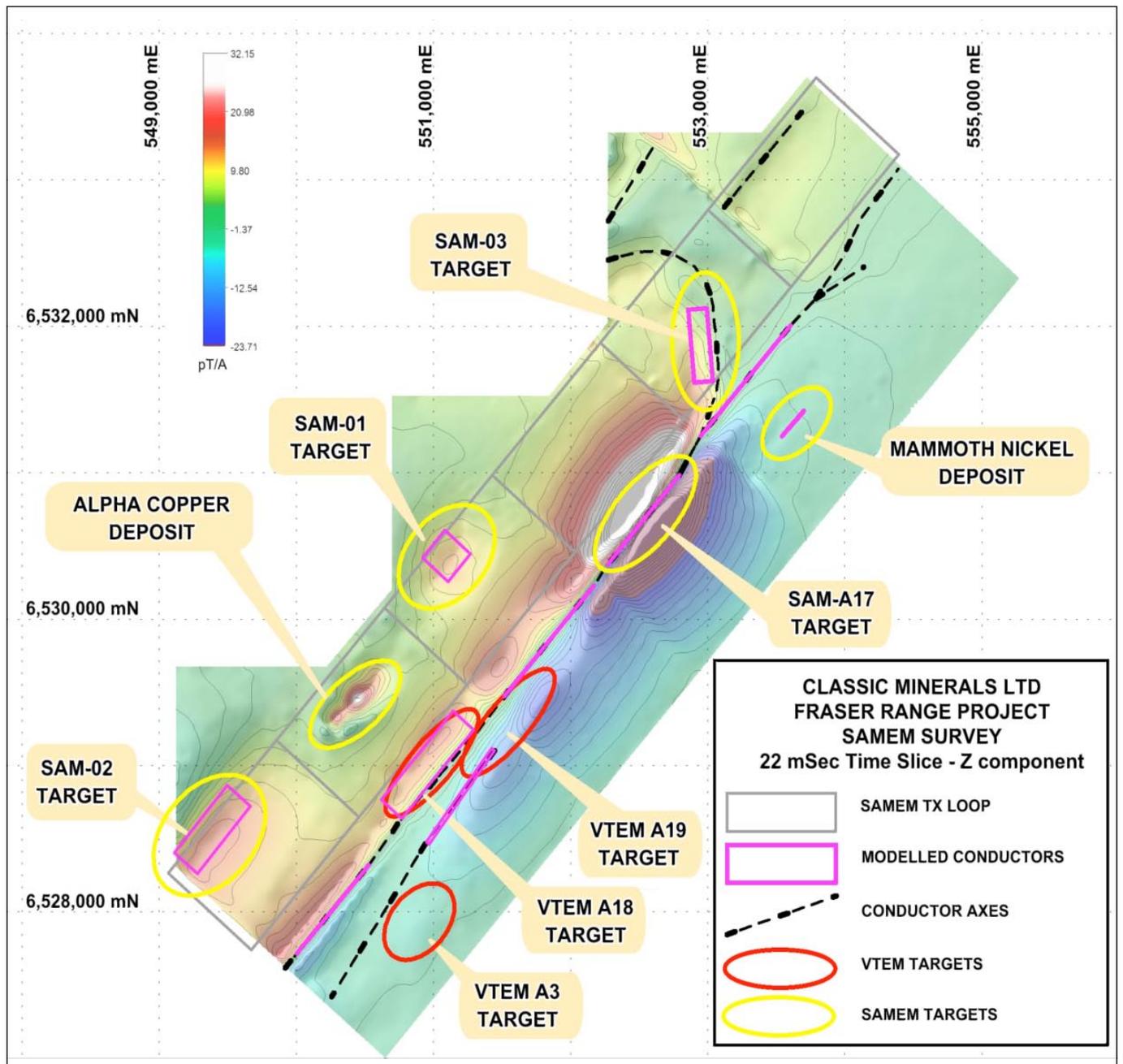


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The survey, completed over the northern part of the tenement, has focused on a trend running northeast through the Alpha Copper Deposit and Mammoth Nickel Copper Deposit.

In addition three new conductors have been identified at depth and the conductive target “hot zone” in this already target rich area has been extended to over 8km in strike.

*Figure 1. Image from the SAM FLEM Survey with Conductor Targets and VTEM Targets*





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Classic Minerals' Managing Director, Justin Douth, said the SAM FLEM survey was building another vital layer of information for the exploration team in aiding drill targeting, following on from the original VTEM survey that triggered the first rounds of exploration.

"Since we flew our initial VTEM programme we knew we were dealing with a highly prospective area at the northern end of our Fraser Range tenement and we've been getting rewards for that with relatively shallow drilling hitting sulphide mineralisation at a number of our conductor targets" said Mr Douth.

"The SAM FLEM survey is giving us a new layer of information as it penetrates to depths considerably deeper than the VTEM survey, and what we are seeing from these preliminary results is clearly showing continued belief in our search for the next big massive sulphide orebody in this region".

- **A17**

A deep major conductor 1km long has been located below the shallow VTEM conductor A17, which was recently drilled to 150m vertical depth and has anomalous Zn and Cu values in RC samples from two parallel mineralisation zones. The conductor has been modelled to extend sub-vertically from 40m to at least 500m depth. There may be larger sulphide mineralisation at depth, and this target will have high priority for drilling.

**Figure 1 shows that the conductor appears to be much larger than the Mammoth deposit.**

- **Target SAM-01**

A deeper conductor, SAM-01, has been found along strike to the northeast of the Alpha Copper Deposit. This conductor is reported by the geophysical consultants (Southern Geoscience) to have twice the conductance (conductivity x width) as that recorded at Alpha suggesting greater conductive mineral content or greater target width. This is modelled as a reasonably well-constrained target 250m x 250m in size at ~350m depth with a shallow dip. This target has high priority for drilling.

- **Target SAM-02**

The survey has also identified a deeper conductor, SAM-02, to the southwest along strike from Alpha. This broader conductor is not as well constrained as SAM-02. The modelling indicates a depth of ~ 330m and a shallow dip. This may be a zone of disseminated conductive minerals. This is a priority 2 target for drilling.

- **Target SAM-03**

A northwest curving EM conductor has been located at the northeast end of the hot zone, crosscutting the northeast trending stratigraphy. However the aeromagnetic imagery shows only linear northeast striking magnetic stratigraphy, and does not show any northwest striking features. This suggests that the EM conductor may be a shallow conductive regolith feature and this will be checked by mapping and shallow drilling.

Further geophysical modelling is being undertaken to allow the positioning of initial deep drill holes to intersect these conductors to determine their nature.

A detailed aeromagnetic survey at 50m line spacing has also commenced over the whole tenement, which will allow a detailed structural interpretation of the area to be undertaken and assist in the definition of further targets.

The SAM FLEM survey has now moved to Classic's Eye structure at the southwest end of the tenement which has a significant Zn Cu Pb Ag rock chip anomaly on the northeast side, and also a significant Cu rock chip anomaly to the west of the Eye structure. The Eye structure to date has only been drilled with one deep RC hole to 170m which intersected a large oval gabbroic intrusion within the structure.



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## COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Mr Andrew Rust, who is a Member of the Australasian Institute of Mining & Metallurgy. Mr Rust is employed by Shearwater Australia Pty. Ltd who is a consultant to Classic Minerals Ltd. Mr Rust has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Rust 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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### SAM FLEM Survey

This is a relatively new geophysical method using a very powerful generator/transmitter developed by Gap Geophysics to drive a large electrical current through a large wire loop to create a powerful inducing magnetic field at considerable depth. This field induces a secondary magnetic field within conductors which is then detected at the surface by a continuously recording sensitive magnetometer. It differs from previous EM survey methods in that it uses a new much more powerful transmitter, and it records information rapidly and continuously at the surface using a walking receiver and GPS.

In test work at the Forestania geophysical test range in Western Australia, Gap Geophysics trialled this method which was able to clearly detect a known massive sulphide body at a depth of over 350m. Theoretical modelling indicates that the SAM FLEM system is capable of seeing down to greater depths than this in suitable conditions.

This method has been employed to complement the earlier airborne VTEM method which only detects conductors down to shallower depths.

## Share Purchase Plan

The company recently announced its intention to raise up to \$1,000,000 via a share purchase plan (SPP) for existing shareholders to support the acceleration of its exploration programme across its Fraser Range tenement.

Eligible Shareholders will be entitled to acquire up to \$15,000 of New Shares without paying any brokerage or other transaction costs. This is subject to Classic's right to scale back applications if it considers it appropriate. The total number of New Shares that may be issued under the SPP is 25,000,000 New Shares.

The SPP is scheduled to close 28 May 2014.

### Justin Douch

Managing Director  
Phone: 08 94453008  
justin@classicminerals.com.au



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## JORC Table

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Sub-Audio Magnetic-Fixed Loop Electro-Magnetic (SAM-FLEM) survey.</li> <li>• The survey was undertaken in a series of adjoining fixed loops, each 800m x 1200m.</li> <li>• The transmitter used was a Gap GeoPak HPTX-70 high powered geophysical transmitter using 150amp current at 3.125Hz base frequency.</li> <li>• The mobile receiver used was a Gap TM-7 magnetometer sampling at 2400Hz, continuously receiving. A differential GPS receiver accurate to +/-1m was used to locate the receiver.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• No information required for these exploration results as no drilling results are presented.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <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> <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>	<ul style="list-style-type: none"> <li>• No information required for these exploration results as no drilling results are presented.</li> </ul>
Logging	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• No information required for these exploration results as no drilling results are presented.</li> </ul>



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Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No information required for these exploration results as no drilling results are presented.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Sub-Audio Magnetic-Fixed Loop Electro-Magnetic (SAM-FLEM) survey.</li> <li>The survey was undertaken in a series of adjoining fixed loops, each 800m x 1200m.</li> <li>The transmitter used was a Gap GeoPak HPTX-70 high powered geophysical transmitter using 150amp current at 3.125Hz base frequency.</li> <li>The mobile receiver used was a Gap TM-7 magnetometer sampling at 2400Hz, continuously receiving. A differential GPS receiver accurate to +/-1m was used to locate the receiver.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>All data is checked on a daily basis by field staff and consultants</li> <li>Any data points that are questionable are re-surveyed</li> </ul>
Location of data points	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Data points were located by real time Differential GPS. Elevation values were in AHD. Expected accuracy is +/-1m for northing and easting and +/-3m for elevation coordinates.</li> <li>The grid system is GDA94(MGA), zone 51</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>200m and 100m line spacing's.</li> <li>Continuous data sampling along lines at 2400Hz</li> </ul>



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Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Traverse lines oriented Northwest – Southeast (310° / 130° mag), perpendicular to the general lithological strike direction. Some traverses undertaken parallel to the strike direction</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All data has been collected in the field by by GAP Geophysics Australia with the data then provided to the Company's Geophysical Consultants</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews have been carried out at this stage</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The SAM – FLEM survey is located wholly within Exploration Licence E28/1904, which is 100% owned by Classic Minerals Limited</li> <li>The tenement is in good standing and no known impediments exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>No electrical geophysical surveys are known to have been undertaken by other Companies within the licence area</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Geological setting is in Fraser Zone of the Albany Fraser Mobile Belt consisting of gneiss, mafic rocks including gabbro with significant garnet in the metamorphic rocks.</li> <li>The Company is exploring for magmatic hosted base metal mineralization.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No information required for these exploration results as no drilling results are presented.</li> </ul>



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Criteria	JORC Code explanation	Commentary
Data aggregation methods	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No information required for these exploration results as no drilling results are presented.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No information required for these exploration results as no drilling results are presented.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Figure 1. Shows a plan view of the EM conductors</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No information required for these exploration results as no drilling results are presented.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Previous ASX releases by Classic Minerals Limited have detailed aspects of previous work undertaken within the licence area.</li> </ul>
Further work	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The preliminary EM results are indicative in nature and require further exploration, including drilling, to establish the true size and nature of the conductors and the presence of mineralisation, if any.</li> <li>Refer to diagrams in body of report.</li> </ul>