

22 May 2018

**ASX** Release

## EM extends conductors at Saints nickel-cobalt project, Kalgoorlie

New EM conductors indicate significant extensions to Saints nickel sulphide lodes may exist:

- Known EM conductors hosting St Patricks resource extended
- Strike length of St Patricks conductive trend extended by 600m
- New 800m long conductive zone, not tested by drilling, identified at St Julian 150m northwest of St Patricks

Minotaur Exploration Ltd (ASX: MEP, 'Minotaur') has defined strong electromagnetic ('EM') anomalies at the Saints nickel-cobalt deposit 65km north of Kalgoorlie, Western Australia (Figure 1), significantly extending potential for nickel sulphide mineralisation outside the existing resource limits.

### Background

EM data collected in April 2018 reveals new drill targets close to the St Patricks lode. Two areas south of St Andrews lode were also to be surveyed<sup>1</sup>, however wet conditions prevented site access.

Strong EM conductors are evident at St Patricks and a new zone named St Julian, suggesting nickel sulphide mineralisation could extend well beyond current estimates (Figure 1).

### St Patricks

New EM data around St Patricks refined and extended the two known conductive plates representing the nickel resource (Figure 2). Of particular interest is the revised scale of the modelled conductors relative to the drilled resource. The undrilled area immediately south (refer Figure 2, left side) of the St Patricks resource clearly presents a significant drill-ready target with potential to extend the current resource<sup>2</sup>. A gap in the drilling on the northern side of the resource is also evident (Figure 2, right side).

Beyond the limit of resource drilling, to the north, the data also revealed a 600m long extension to the conductive trend (Figure 1); an area sparsely drilled and only to shallow depths. The position of this conductive zone correlates well with the interpreted basal contact of the ultramafic unit hosting mineralisation at St Patricks. If hosting nickel sulphides it could add significant tonnes to the current resource estimate.

<sup>1</sup> Minoatur report to ASX dated 26 March 2018, *EM survey underway at Saints nickel-cobalt project, Kalgoorlie*

<sup>2</sup> Refer Minotaur report to ASX dated 4 May 2017, *Maiden JORC Resource estimate for Saints Nickel deposit*

## St Julian

A previously unknown zone of high conductivity, St Julian, is also identified in the new EM data. The zone, at least 800m long, lies parallel to and 150m west of the St Patricks conductor (Figure 1). Historic drilling over the conductive zone comprises 7 aircore/RAB holes to an average depth of 14m, with one hole returning 0.14% Ni. The conductor has not been closed off as full access was denied at the time of the survey due to minor flooding.

When available, a full EM dataset will serve to establish St Julian's geometry, extents and conductivity thickness characteristics. That knowledge will guide interpretation of its relative relationship to ultramafic host units and adjacent sulphide mineralisation at St Patricks.

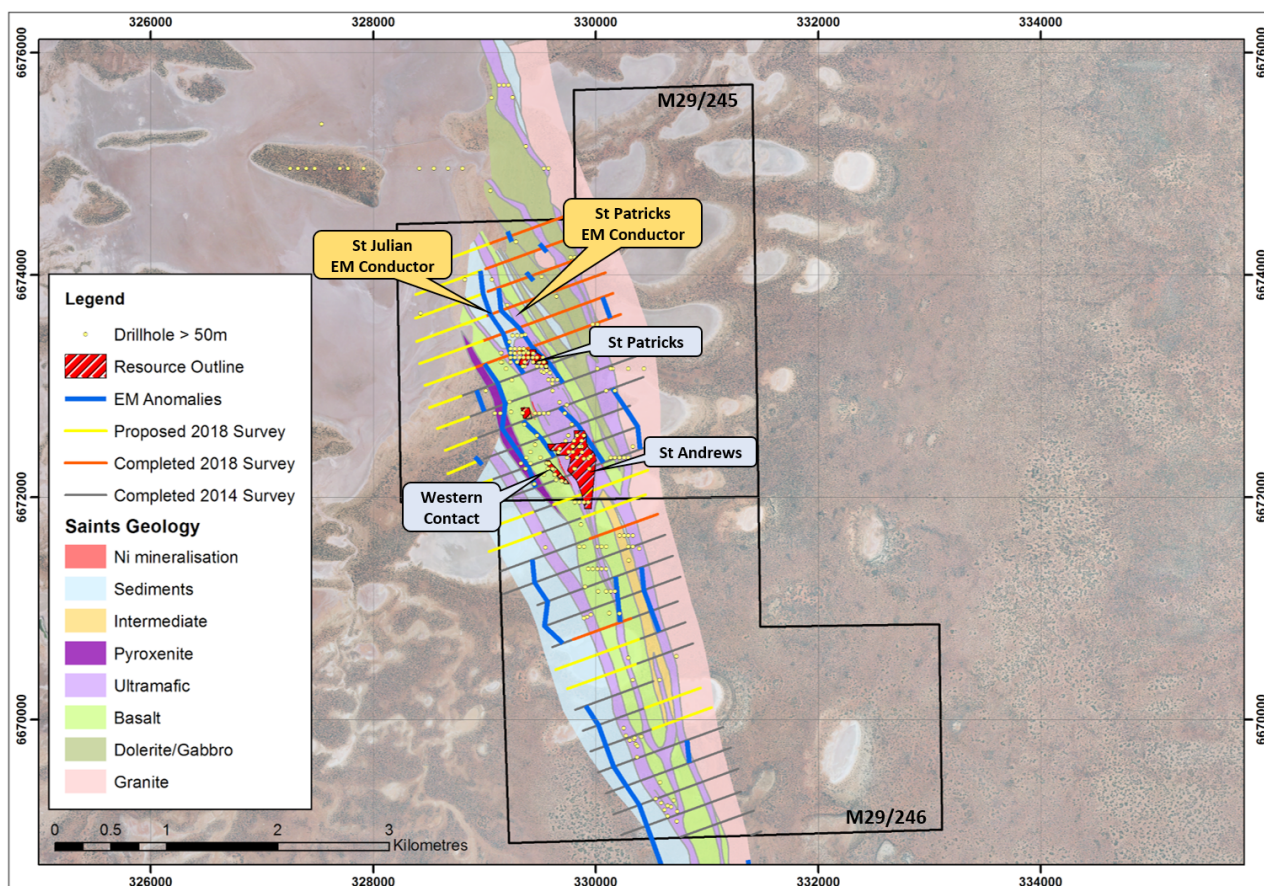


Figure 1: Saints EM survey area with modelled conductors, drill holes >50m deep and the Saints Ni-Co mineral resource. Note: the resource dips moderately west therefore its eastern edges represent the top of mineralisation, which matches well with EM conductors

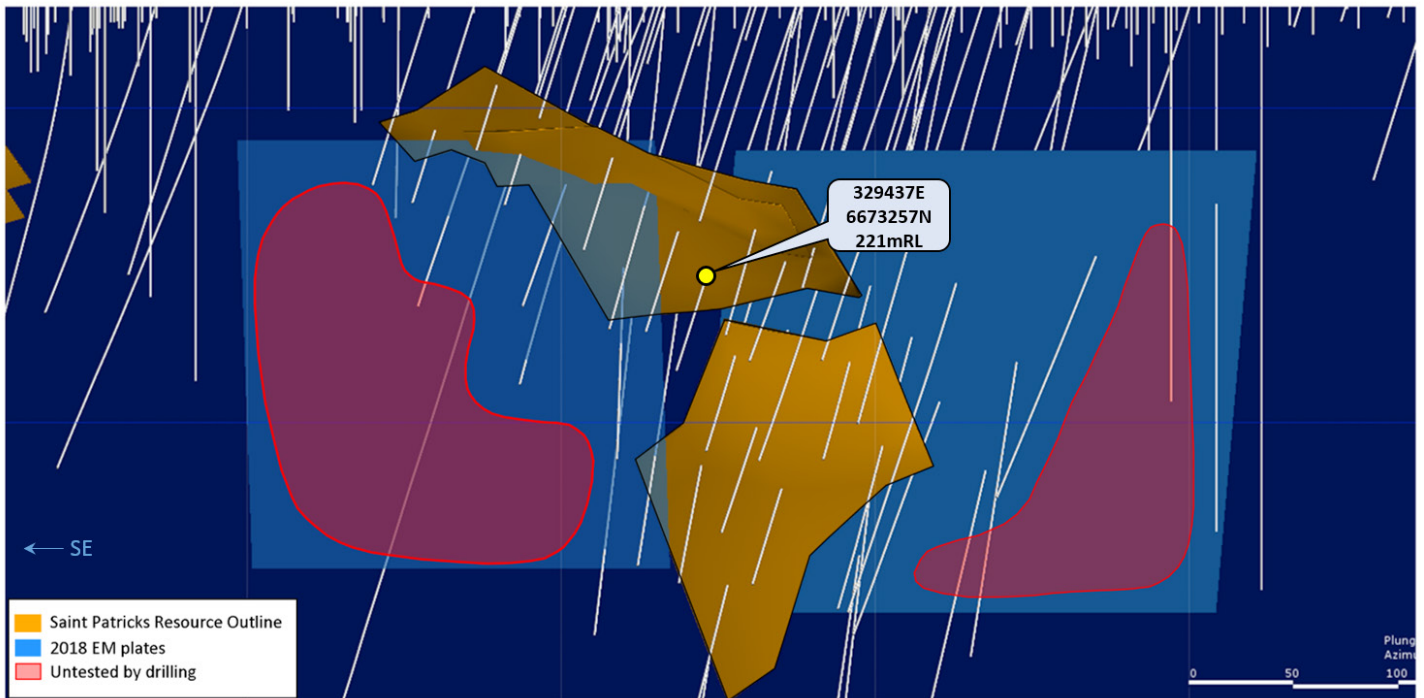


Figure 2: St Patricks long section, looking southwest, showing the resource outline (orange) and the modelled EM conductor plates (blue) with drill holes. Areas offering potential for expansion of the resource are shown in mauve

## Next Steps

The St Patrick's EM conductor presents a drill-ready target to potentially extend the existing high-grade nickel sulphide resource. At the newly defined St Julian zone additional EM data is required north and west to help 'close-off' the anomaly to allow more accurate modelling. Minotaur will, in the coming weeks (and subject to weather permitting access), extend EM data over that area and the area south of St Andrews.

## About the Saints Nickel-Cobalt Deposit

Minotaur holds 100% interest in the Saints nickel-cobalt project, located approximately 65km north of Kalgoorlie in Western Australia. Mineralisation is typical of other komatiite-hosted nickel sulphide deposits in the WA nickel belt and lies along strike 15km north of the historic Scotia nickel mine. The Saints deposit comprises a JORC 2012 Inferred resource<sup>3</sup> estimate of 1.05Mt @ 2% Ni, 0.06% Co and 0.2% Cu (of which 97% being primary sulphide mineralisation) containing 21,000t Ni, 600t Co and 1,600t Cu.

<sup>3</sup> Minotaur report to ASX dated 4 May 2017, Maiden JORC Resource estimate for Saints Nickel Deposit



#### COMPETENT PERSON'S STATEMENT

Information in this report that relates to Exploration Results is based on information compiled by Mr. Glen Little, who is a full-time employee of the Company and a Member of the Australian Institute of Geoscientists (AIG). Mr. Little has sufficient experience relevant to the style of mineralization 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, Mineral Resources and Ore Reserves (JORC Code). Mr. Little consents to inclusion in this document of the information in the form and context in which it appears.

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**JORC Code, 2012 Edition, Table 1**

**Section 1: Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• The EM survey within the Saints area was conducted by GEM Geophysics, an external geophysical contractor.</li> <li>• The EM system used Transmitter Technologies TTX-1 transmitter (using 0.25Hz frequency) and a 3-component B-field Fluxgate EM sensor.</li> <li>• EM data receiver stations were spaced at 50m intervals along angled lines and each line was spaced at 200m intervals over the survey area.</li> <li>• Data quality was of a high standard for the whole of the survey and consistent with the type of target being sought.</li> </ul>
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p>	<ul style="list-style-type: none"> <li>• Internal checks of equipment was conducted prior to and during the survey to ensure the sensor is measuring correctly and would therefore give the best representative sample results for this type of survey.</li> </ul>
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<p><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g 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.</i></p>	<ul style="list-style-type: none"> <li>• EM Transmitter loops were 200m x 200m in size using a moving-loop and slingram survey method. In the slingram configuration the receiver was positioned 100m in front of the loop edge. This type of system and loop configuration is considered appropriate for the survey area and for the target size of any potential mineralisation.</li> </ul>
<p><i>Drilling techniques</i></p>	<p><i>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</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>what method, etc).</i>	
<i>Drill sample recovery</i>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>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.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
<i>Logging</i>	<i>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.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>The EM system used Transmitter Technologies TTX-1 transmitter (using 0.25Hz frequency) and a 3-component B field fluxgate magnetometer. EM Transmitter loops were 200m x 200m in size.</li> </ul>
	<i>Nature of quality control procedures adopted (eg 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"> <li>Not relevant to this report</li> </ul>
<i>Verification of sampling and assaying</i>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<i>The use of twinned holes.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
<i>Location of data points</i>	<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</i>	<ul style="list-style-type: none"> <li>Electromagnetic survey lines and reading stations located with a handled GPS. Coordinates are recorded in GDA94 Zone 51 co-ordinate system.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>estimation.</i>	
	<i>Specification of the grid system used.</i>	<ul style="list-style-type: none"> <li>GDA94 Zone 51</li> </ul>
	<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
<i>Data spacing and distribution</i>	<i>Data spacing for reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>Ground EM data collected on 200m lines with station spacing of 50m. This spacing is deemed appropriate for exploration targeting purposes and allows for robust geophysical modelling.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
	<i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<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>	<ul style="list-style-type: none"> <li>Ground EM survey lines are orientated across the interpreted dominant strike direction of the targeted rock units.</li> </ul>
	<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"> <li>Not relevant to this report</li> </ul>
<i>Sample security</i>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>Not relevant to this report</li> </ul>
<i>Audits or reviews</i>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>Geophysical contractor GEM Geophysics and Minotaur's in-house Geophysicist's reviewed the EM data referred to in the Report. No external audits have been undertaken.</li> </ul>



## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>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.</i>	<ul style="list-style-type: none"> <li>The ground EM surveying reported herein was undertaken on WA mining licences M29/245 and M29/246 which form part of the Scotia tenement package owned by Minotaur Gold Solutions Ltd (MinAuSol). MinAuSol is a wholly owned subsidiary of Minotaur Exploration.</li> <li>Sandstorm Gold retains 2.5% net smelter return on M29/245 in relation to all ores, mineral concentrates and other products containing nickel, copper and platinum group elements.</li> <li>There are no material issues with regard to access.</li> <li>There are no existing impediments to operate on any tenement within the Scotia Project.</li> </ul>
	<i>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.</i>	<ul style="list-style-type: none"> <li>All tenements related to information in this table are secure and compliant with their respective Conditions of Grant. There are no impediments to obtaining a licence to operate</li> </ul>
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>Significant exploration drilling has been conducted previously by Western Mining Corporation (WMC), Scotia Nickel / LionOre and Breakaway Resources as the Saints Ni deposit, including AC, percussion / RC and diamond core drilling.</li> <li>Data collected by these entities has been reviewed in detail by MEP.</li> </ul>
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Saints Ni deposit is regarded as an Archaean Kambalda-style komatiite-hosted massive nickel sulphide deposit. The deposit occurs within the Menzies-Bardoc tectonic zone in ultramafic units equivalent to the Highway Ultramafics.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Drill hole Information</i>	<p><i>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:</i></p> <ul style="list-style-type: none"> <li>▪ <i>easting and northing of the drill hole collar</i></li> <li>▪ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>▪ <i>dip and azimuth of the hole</i></li> <li>▪ <i>down hole length and interception depth</i></li> <li>▪ <i>hole length.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drill data is presented in this report. Data relating to the EM survey results is sufficiently explained in other sections above.</li> </ul>
	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• No drill data is presented in this report. Data relating to the EM survey results is sufficiently explained in other sections above.</li> </ul>
<i>Data aggregation methods</i>	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<p><i>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.</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
	<p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with</i></p>	<ul style="list-style-type: none"> <li>• Not relevant to this report</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>respect to the drill hole angle is known, its nature should be reported.</p> <p>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').</p>	
Diagrams	<p>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.</p>	<p>The location of the EM survey area is presented in Figure 1 of this report and a long section showing the St Patricks resource and modelled EM conductor plates and drilling is presented in Figure 2 of the report.</p>
Balanced reporting	<p>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.</p>	<ul style="list-style-type: none"> <li>Information presented in this report is relatively brief due to the nature of the geophysical data collected and interpretation produced.</li> </ul>
Other substantive exploration data	<p>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.</p>	<ul style="list-style-type: none"> <li>No substantive exploration data has been omitted</li> </ul>
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	<ul style="list-style-type: none"> <li>Follow-up work is proposed to the northwest of St Particks to aid characterisation of the St Julian EM conductor.</li> <li>Refer to Figure 1 and 2 in the report that shows the size and location of the EM targets.</li> </ul>