

27 October 2023

## Copper and Lithium Targets Identified at the Sandover Project

- Surface sampling at the Sandover Project in the Northern Territory has identified five new prospects.
- Copper target with mineralisation of up to 0.12% identified. Tungsten and bismuth enrichments may suggest potential for Tennant Creek iron oxide copper-gold ("IOCG") style deposit.
- Four lithium targets identified which show potential for lithium-caesium-tantalum ("LCT") style mineralisation.
- Further on-ground mapping and sampling at Sandover is planned to start in November 2023.
- Tivan will apply for a grant in Round 17 of the NT Government Geophysics and Drilling Collaborations program to supplement future exploration drilling campaigns.

The Board of Tivan Limited (ASX: TVN) ("Tivan" or the "Company") is pleased to provide a further update on the Company's 100% owned Sandover Project in the Northern Territory, following a recent review of Tivan's exploration portfolio in the Territory (see ASX announcement of 13 October 2022).

### Sandover Project

The Sandover Project is located 100km north of Alice Springs in the Northern Territory and covers an area of approximately 8,000km<sup>2</sup> across two contiguous blocks of Exploration Licences in the Northern Arunta Pegmatite Province (five granted, eight under application) (refer to Figure 1 below).

The Sandover Project is considered prospective to host lithium-bearing pegmatites, as seen elsewhere in the Northern Arunta Pegmatite Province, and also sediment-hosted copper and iron oxide copper-gold ("IOCG") deposits, following recent work by the Northern Territory Geological Survey.

As previously announced, Tivan entered into an Exploration Alliance Agreement ("Agreement") with EARTH AI to advance exploration activities at the Sandover Project under a success based model providing access to innovative artificial intelligence ("AI") capability for targeting and testing (see ASX announcement of 7 March 2023).

### Copper and Lithium Targets

Tivan is pleased to announce the identification of five new prospects at the Sandover Project. Assay results from surface sampling have confirmed the following:

1. Copper target confirmed by initial assay results with a maximum of 0.12% Cu. The copper mineralisation is present within an epidote rich alteration rock. Tungsten and bismuth enrichments are present alongside copper, consistent with the Tennant Creek IOCG-style source signature.

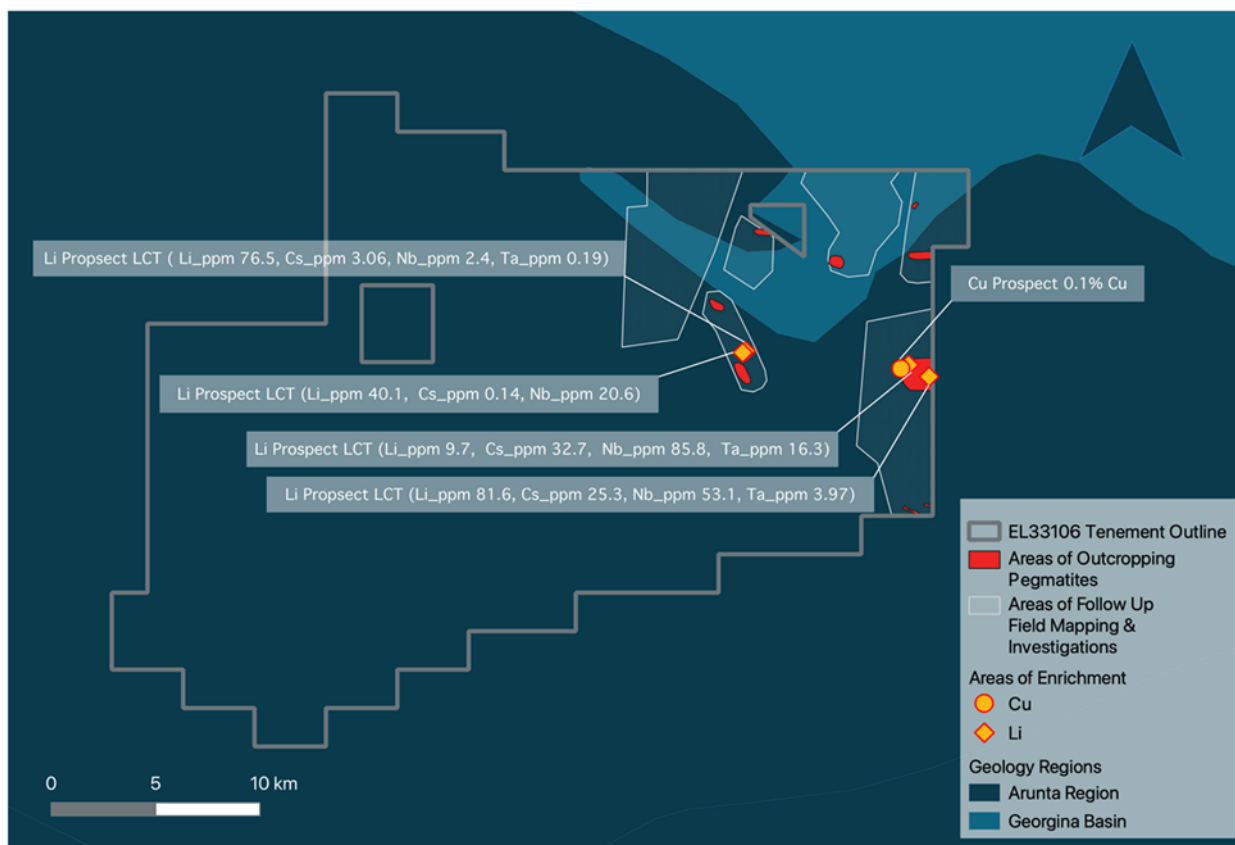
2. Lithium target confirmed by enrichments in the lithium-caesium-tantalum (“LCT”) style association (lithium 82ppm, caesium 25ppm, niobium 53ppm and tantalum 4ppm). The lithium mineralised samples display enrichments in caesium, niobium and tantalum, characteristic of the LCT metal signature. The fine-grained rocks analysed in this area contrast with the outcropping pegmatites located a few hundred meters away, which lack these enrichments. Ongoing research into the zonation of pegmatites may provide valuable insights into the local geology.
3. In addition, three more targets confirmed standalone lithium enrichment of 20-80ppm.

Tivan and EARTH AI are encouraged by the early results and have agreed to advance these prospects to the next stage of work. This involves geological and alteration mapping, geochemical analysis, and thin section and electron microscopy studies. Subsequent actions will entail the development of drill hypotheses, in parallel with securing the relevant approvals for drilling, processes that can be completed during the upcoming wet season.

To supplement expected future drilling programs on the recently identified prospects, Tivan will apply for Round 17 of the Northern Territory Government Geophysics and Drilling Collaborations program. The Sandover Project is targeting commodities that are on the Northern Territory’s current and emerging critical minerals list and offers significant potential to advance exploration activity and support the discovery and development of resources in the Territory.



**Figure 1: Location map for the Sandover Project showing areas of active exploration**



**Figure 2: Location map for EL33106 showing newly identified prospects**

SampleID	East	North	Cu%	Li_ppm	Cs_ppm	Ta_ppm	Bi_ppm	Nb
ESD2308011R	520003.096	7499357.47	0.00056	<b>76.5</b>	3.06	0.19	0.06	2.4
ESD2308012R	520152.217	7499427.41	0.00114	<b>40.1</b>	0.43	0	0.5	0.6
ESD2308022R	527589.49	7498576.38	<b>0.1156</b>	3.7	0.14	0.12	<b>8.18</b>	1.6
ESD2308042R	528943.363	7498189.17	0.00026	<b>81.6</b>	<b>25.3</b>	<b>3.97</b>	0.32	<b>53.1</b>
ESD2308046R	528623.213	7497629.33	0.00524	<b>22</b>	0.98	0.1	0.35	1.4
ESD2308251R	527961.23	7498758.36	0.00012	9.7	<b>32.7</b>	<b>16.3</b>	0.09	<b>85.8</b>

**Table 1 Location and Cu, Li, Cs, Ta, Bi, and Nb assay results from surface rock chip sampling at Sandover.**

*Note: Rock chips are random, subject to bias and often unrepresentative for the typical widths required for economic consideration. Measures specified in ASX LR 5.7 relating to drill-hole collar, dip and azimuth are not relevant for surface sampling.*

**Comment from Tivan Executive Chairman**

Mr Grant Wilson commented:

*“Consistent with Tivan’s firmwide policy of timely and forthright communications, we are providing this update today to ensure shareholders are informed on progress at Sandover that is regarded as material. We will provide future updates on this basis and continue on the fastest track in our Alliance with EARTH AI.”*

This announcement has been approved by the Board of the Company.

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### **Competent Person's Statement**

Tivan's exploration activities in the Northern Territory are being overseen by Mr Stephen Walsh (BSc). The information that relates to exploration results in this announcement is based on and fairly represents information and supporting documentation prepared and compiled by Mr Walsh, a Competent Person, who is the Chief Geologist and an employee of Tivan, and a member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Walsh has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results. Mr Walsh consents to the inclusion in this announcement of the matters based on information compiled by him in the form and context which it appears.

### **Forward looking statement**

This announcement contains certain "forward-looking statements" and comments about future matters. Forward-looking statements can generally be identified by the use of forward-looking words such as, "expect", "anticipate", "likely", "intend", "should", "estimate", "target", "outlook", and other similar expressions and include, but are not limited to, the timing, outcome and effects of the future studies, project development and other work. Indications of, and guidance or outlook on, future earnings or financial position or performance are also forward-looking statements. You are cautioned not to place undue reliance on forward-looking statements. Any such statements, opinions and estimates in this announcement speak only as of the date hereof, are preliminary views and are based on assumptions and contingencies subject to change without notice. Forward-looking statements are provided as a general guide only. There can be no assurance that actual outcomes will not differ materially from these forward-looking statements. Any such forward looking statement also inherently involves known and unknown risks, uncertainties and other factors and may involve significant elements of subjective judgement and assumptions that may cause actual results, performance and achievements to differ. Except as required by law the Company undertakes no obligation to finalise, check, supplement, revise or update forward-looking statements in the future, regardless of whether new information, future events or results or other factors affect the information contained in this announcement.



## JORC Code, 2012 Edition – Table 1 report

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>Rock chip and grab samples were taken from numerous locations throughout prospective areas.</li> <li>Our sampling methodology was primarily rock chip and grab sampling of visible outcrop and float. The nature of this sampling method does not constrain grade across significant areas.</li> <li>This type of first pass rock chip sampling is considered standard and appropriate for assessing tenor of across the prospective areas. The laboratory methods are appropriate.</li> <li>Samples taken weighed up to several kilograms.</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 drilling is reported in this release.</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 drilling is reported in this release.</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 drilling is reported in this release. Logging of rock chip samples record lithology, mineralogy, mineralisation, structures, textures, and other noticeable features. Rock chip samples are photographed for reference.</li> </ul>
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 maximize 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>Samples were delivered to ALS Geochemistry, Pooraka SA for laboratory analysis. Sample preparation will comprise of an industry standard of drying, jaw crushing and pulverising to - 75 microns (85% passing) (ALS code PUL-21 and PUL-22). Pulverisers are washed with QAQC tests undertaken (PUL-QC). Samples are dried, crushed and pulverized to produce a homogenous representative sub-sample for analysis.</li> <li>Laboratory QC procedures for rock sample assays involve the use of internal certified reference material as</li> </ul>



		<p>assay standards, along with blanks and duplicates.</p> <ul style="list-style-type: none"> <li>Representative sampling/measurements are not appropriate for this stage of explorations.</li> <li>The size of the rock chip samples is appropriate for this stage of exploration</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>All samples were sent to ALS Geochemistry, Pooraka SA for analysis.</li> <li>Samples are pulverised to 85% passing 75 microns. An 48 element suite are analysed using 4-acid digest and a ICP finish (ALS code: ME-MS61r). The lower detection limit for Cu and Li is 0.2 ppm which believed to be a reasonable detection limit. Additionally samples were analysed for precious elements (ALS code: PGM-ICP23).</li> <li>Standards and blanks were used as standard practices by ALS Global following standard QAQC protocols.</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>No drilling is reported in this release.</li> <li>Primary field data is recorded on an iphone using Fieldmove Clino application. Assay data analysis and interpretation is performed on a laptop using Excel. This encompasses geological logs, sample details, and QA/QC insights. This information, alongside the assay results, is saved locally and uploaded to a central online database. Every primary assay result is obtained from the lab in the form of digital files and incorporated into the sampling database, ensuring verification processes. Each lab report undergoes a QAQC review.</li> <li>Primary assay data gathered for reporting on assay grades and mineralized intervals will not be subject to any modifications or calibrations. In the analysis of geological components, recognized standards and factors might be employed to estimate the oxide form of assayed elements or determine the levels of minerals free from volatile compounds within rock specimens.</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>An iPhone 14 dual frequency GPS was used to pick up locations of samples with an accuracy of 1m to 5m</li> <li>The grid system used is WGS84</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</li> </ul>	<ul style="list-style-type: none"> <li>Rock chip sampling is applicable to this level of reconnaissance of this work</li> <li>No mineral resource or reserve calculation have been applied.</li> </ul>



	<ul style="list-style-type: none"> <li>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>No sample compositing have been applied.</li> </ul>
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>Sampling was conducted in linear sampling profiles. Due to the early stage of the prospects and poor understanding of geology, the relation of sampling relative to geological structures is unknown.</li> <li>No previous historic drilling has been conducted.</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 samples are placed into labeled calico bags and transported in a box stored inside a car. Samples are sent via courier to ALS Geochemistry laboratory in Pooraka SA. All sample submissions are documented via the ALS tracking system with results reported via email.</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>Sampling and data methodologies and practices are regularly reviewed internally. To date, no external audits have been completed on this project.</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 prospective areas lie within the exploration license EL33105, part of the Sandover Project. This license is held by Tivan Limited. Tivan and EARTH AI are in a success based exploration alliance, where EARTH AI can earn royalties in the event of drilling and meeting a qualified drilling intersection. There are no royalties or encumbrances over the tenement areas at present.</li> <li>The land is primarily pastoral leases land. There are no native titles within the license area.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>Historical exploration included:</p> <ul style="list-style-type: none"> <li>The previous exploration undertaken across the whole project area is outside the scope of this announcement; therefore, the previous work relating to the findings are presented here.</li> <li>CRA Exploration Pty Ltd – stream and soil samples were taken and analysed for base metals. Airbourne magnetic survey was also conducted.</li> <li>FAR Resources Pty Ltd – soil and rock chip samples were taken and assayed for Pb, Cu and Zn; magnetic and radiometric geophysical surveys were conducted.</li> <li>Roebuck Resources – stream, soil, and rock chip sampling.</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>The project is located in the Arunta Pegmatite Province, in southern-central</li> </ul>





Northern Territory, Australia. The Arunta Pegmatite province is situated within the Archean to Paleoproterozoic-aged Arunta Block of the North Australian Craton. During this time the Arunta Block experienced multiple episodes of orogenic deformation and the formation of granitic intrusions. In the Mesoproterozoic the Arunta Block was intruded by a pegmatite swarm which emplaced into the granitic and metamorphic hosts. This was followed by further deformation and metamorphism during the Neoproterozoic to Palaeozoic periods which formed a series of schists, gneisses, and migmatites. An extensional tectonic regime in the Mesozoic caused basins to form, resulting in the deposition of sedimentary units. The Arunta Block was uplifted and exhumed in the Cenozoic resulting in the formation of numerous REE rich alluvial deposits.

- The project area is located in the Northern Arunta Pegmatite Province which is dominated by metamorphic and granitic rocks that formed approximately 1800 million years ago during the Paleoproterozoic era. The pegmatites in the Northern Arunta Pegmatite Province are primarily located within the Aileron Province and are thought to have formed as a result of the intrusion of granitic magma into pre-existing rock formations.
- Not enough is known about the newly discovered prospects to accurately determine the style of mineralisation, however geochemical elemental enrichment patterns suggest Tennant Creek IOCG-style for the copper prospect as well a LCT-style for the lithium prospect. Regarding prospects standalone lithium enrichments, more research is required to determine mineralisation style.

*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
- No drilling is reported in this release.



	<i>detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable. No aggregation.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable, no drilling reported in this release.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures in the body of the text.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>See the body of the report.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li><i>All material or meaningful data collected has been included in this report. Geological results are further discussed in the text of the report.</i></li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>See body of report</li> <li>See figures in body of report</li> <li>Future exploration will be planned on results attained from geologic mapping and sampling.</li> </ul>