

ASX ANNOUNCEMENT

28 February 2017

CLEVELAND - GROUND MAGNETIC SURVEY GENERATES NEW EXPLORATION TARGETS

Highlights:

- Identification of exploration target along strike from historical mine workings
- Identification of additional exploration targets within the mine sequence
- Further potential is open along strike within untested mine sequence stratigraphy
- 3D modelling of magnetic anomalies to be used to further define drill targets
- Drilling work programme submitted to MRT for approval on shallow potential open cut targets

Elementos Limited (ASX: ELT) ("Elementos" or the "Company") is pleased to announce the identification of new exploration targets following the completion of a ground magnetic survey at Cleveland. The ground magnetic survey has identified a number of new exploration targets along strike from the historical workings and within the mine sequence to the north of the historical workings. The Company recently announced a new exploration strategy to define additional potential open cut resources for the proposed staged re-development of the Cleveland tin, copper and tungsten project in Tasmania. The completion of the ground magnetic survey is the first objective of that strategy. As has previously been highlighted, ELT's Board of Directors have been working to define the optimum path to economically sustainable production where maximum shareholder value can be achieved.

GROUND MAGNETIC SURVEY

The ground magnetic survey was carried out under contract by Modern Mag in January 2017. The survey was completed using man portable magnetometers traversing a grid that had been constructed over the survey area. The survey covered a total of 32 line kilometres at a 30m line spacing. The narrow line spacing was used to maximise the potential to collect high resolution data from near surface features. Figure 1 is an image of the Total Magnetic Intensity after the original data was corrected for cultural objects left over from historical mining activities. The TMI image (Figure 1) displays the previously mined ore lenses projected to the surface (in white). These ore lenses were identified in a ground magnetic survey completed in 1954 by the Tasmanian Government prior to being mined by underground operations by Aberfoyle from 1968 to 1986.

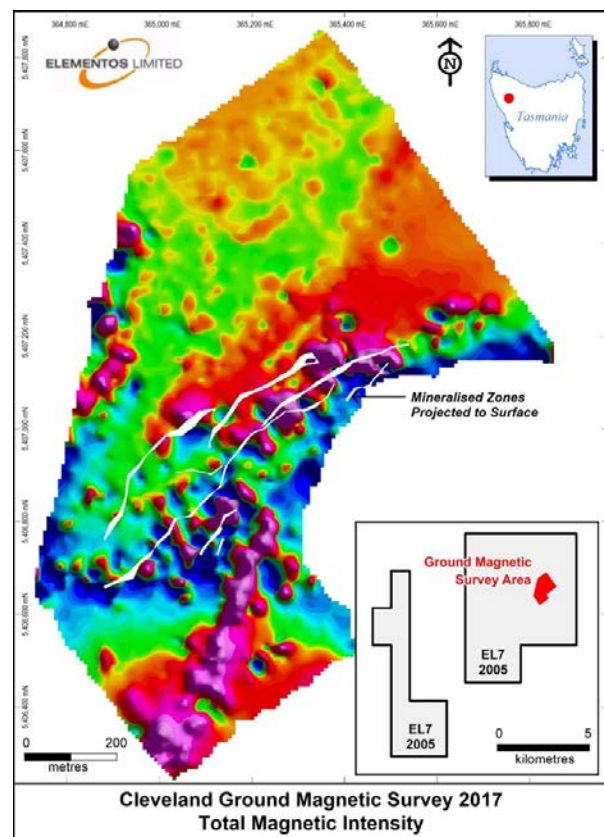


Figure 1. Cleveland Ground Magnetic Survey TMI Image

The tin mineralisation at Cleveland occurs largely as cassiterite within a replacement sulphide orebody hosted by a carbonate rich sedimentary horizon. The sulphide mineralisation is predominantly pyrrhotite, which is magnetic.

The ground magnetic data has been processed to highlight and better define magnetic responses, controlling structures and lithological variations. The enhanced magnetic images have been combined with pre-existing geological data to generate new exploration targets and are presented in Appendix 1. The pre-existing data included drill hole data, mineralised tin lode boundaries (pre-underground mining), underground development and mined stopes, and surface workings. Initial interpretation of the combined data has highlighted new exploration targets that warrant 3D modelling and drill testing.

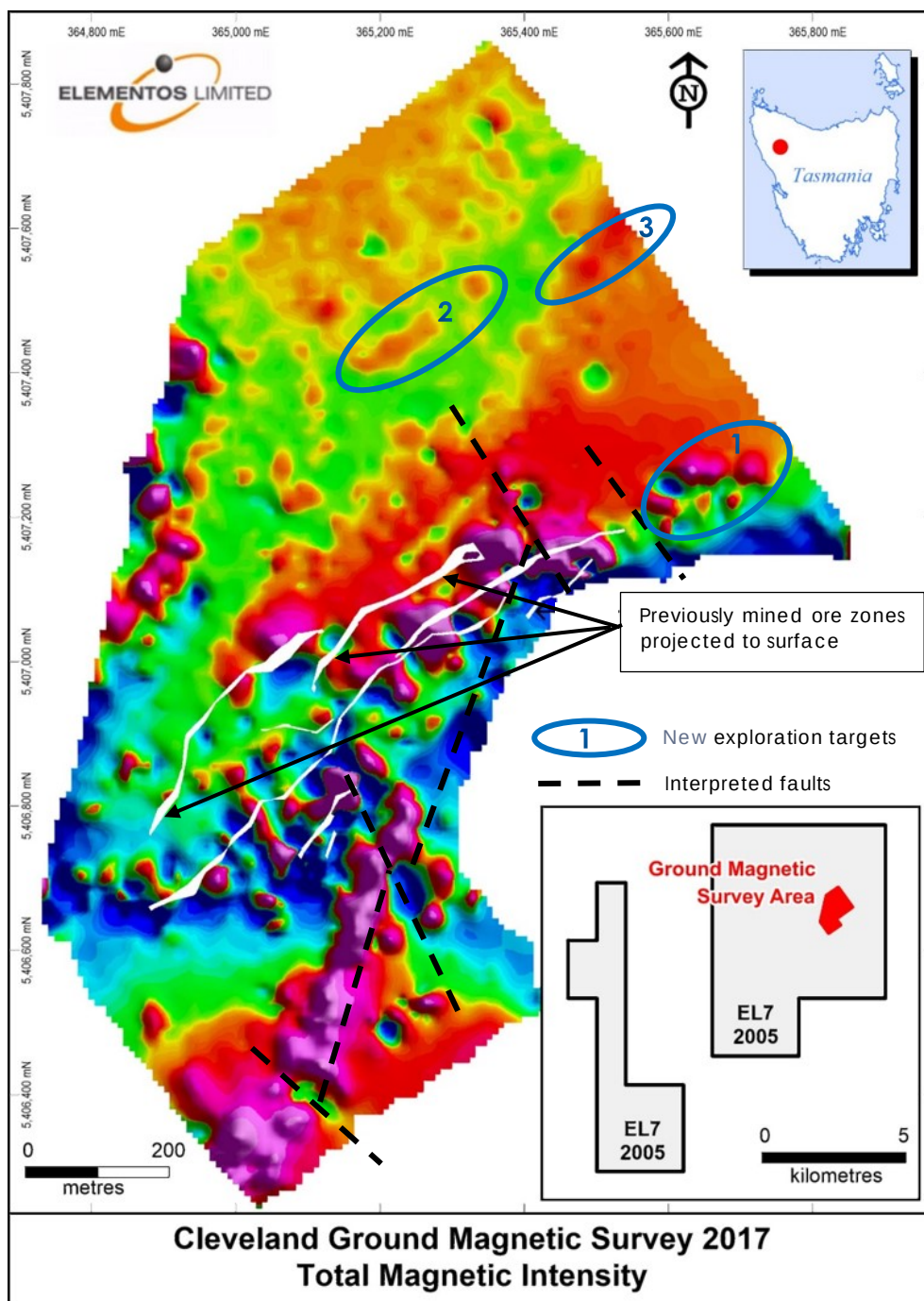


Figure 2. TMI magnetic image with new exploration targets highlighted.

A potential extension to the mineralised lodes has been identified from the ground magnetic survey to the east-northeast of the historical workings (Target No. 1, Figure 2). Previous workers have identified a significant fault that offsets the mineralised lodes in the historical underground workings. This feature and the effect it has had on the mineralised lodes can be seen in Figures 5 & 6. The fault has a north-northeast strike with a moderate dip to the southeast. Lesser southeast-northwest oriented structures, offsetting the mine sequence, have been identified within the images generated from the ground magnetic survey and confirm work recorded by previous workers. No exploration drilling has been recorded as being carried out in this area. This potential extension to the mineralised lode system is open to the east and held by Elementos under EL7/2005.

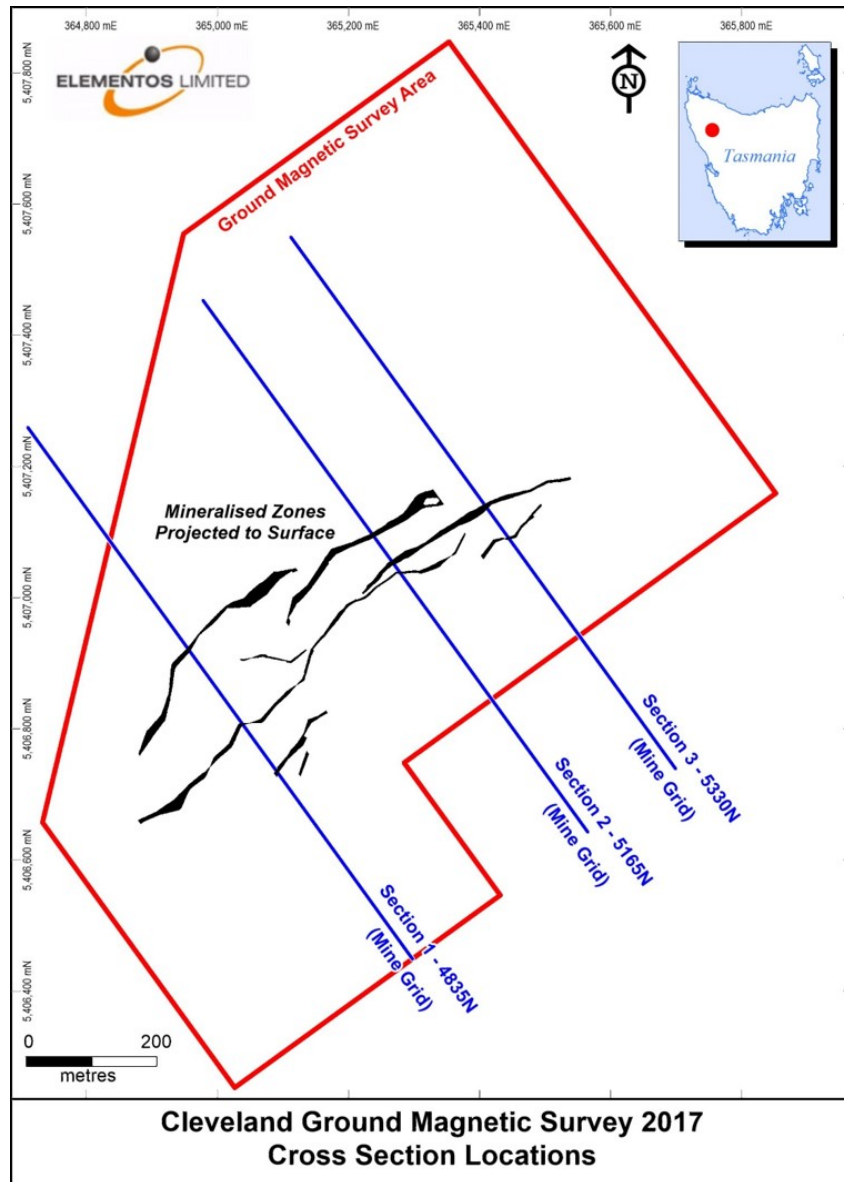


Figure 3. Location of cross-sections depicted in Figures 4-6.

The three images in 3D depicted in Figures 4-6 are of sectional slices through the Cleveland deposit looking towards the northeast. The location of the sections are depicted in Figure 3.

Section 1 (Figure 4) shows the wireframe outlines of the original ore lenses (in red) before they were mined by Aberfoyle in underground mining operations between 1968 and 1986. The ore lenses have been projected to surface (white) and appear on a topographical surface with the enhanced magnetic image (1vd over 2vd RTP) draped over the topographical surface. The potential extension to the mineralised lodes is shown to the east of the historical workings.

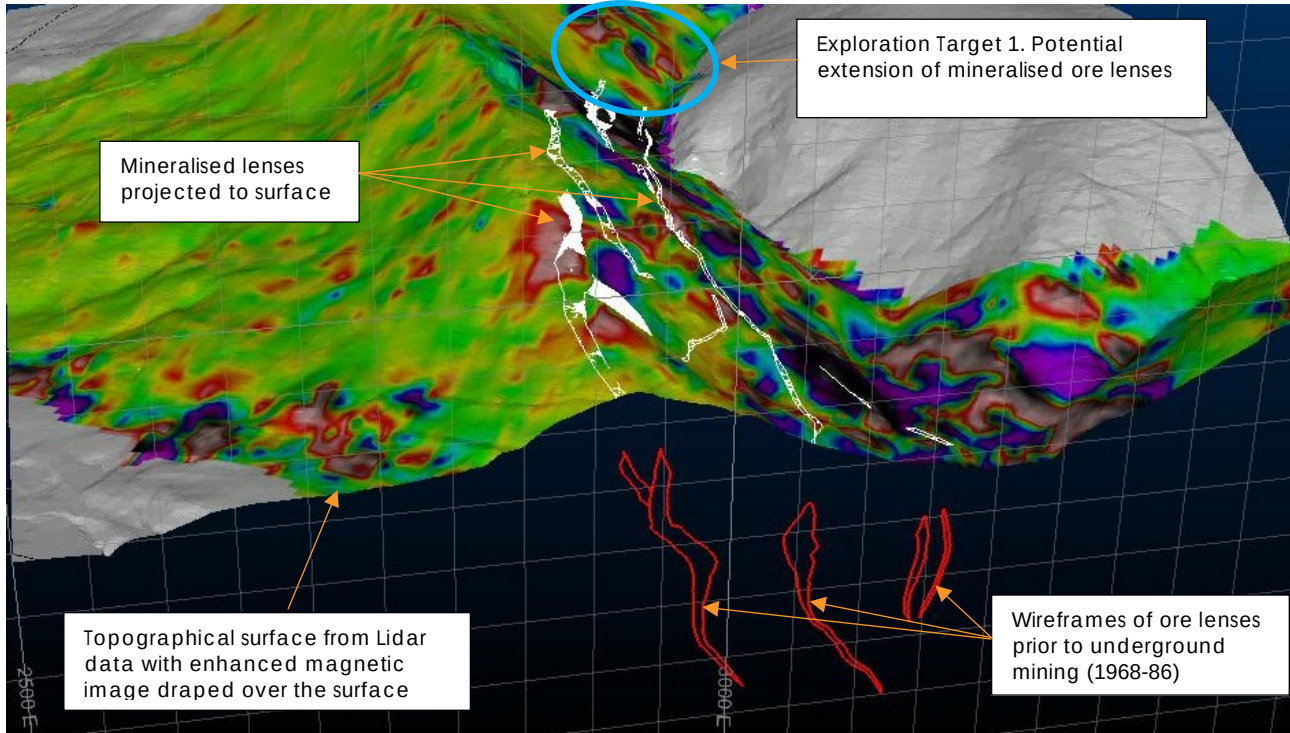


Figure 4. Section 1, Cleveland deposit in 3D, looking northeast

Section 2 (Figure 5), approximately 400m to the northeast of Section 1, shows the influence of a north-northeast striking fault zone on the mineralised lodes as it cross-cuts and displaces the lodes. The fault zone appears on sections and plans from the historical mine records.

Section 3 (Figure 6) depicts a separation of the lodes by the fault. The potential continuation of the lodes beyond the fault zone is highlighted to the east of this section.

Two magnetic anomalies (Target Nos. 2 & 3, Figure 2) have been identified approximately 300m to the north of the historically mined area. These anomalies display a similar orientation to the mineralised lodes previously mined at Cleveland, namely northeast striking with a south-easterly dip. These anomalies, if combined, occur over a strike length of approximately 400m and are open to the north east, beyond the current survey boundaries.

The orientation of the underground fault is sub-parallel to a strongly magnetic linear feature located in the southern portion of the recently completed ground magnetic survey. Geological mapping of this anomaly has identified a magnetically anomalous dolerite dyke that may have been intruded along a parallel structure.

3D modelling of all the anomalies, on a line by line basis, will be carried out to more accurately determine the orientation and depth of the anomalies prior to planning a drilling programme to test these anomalies for tin mineralisation.

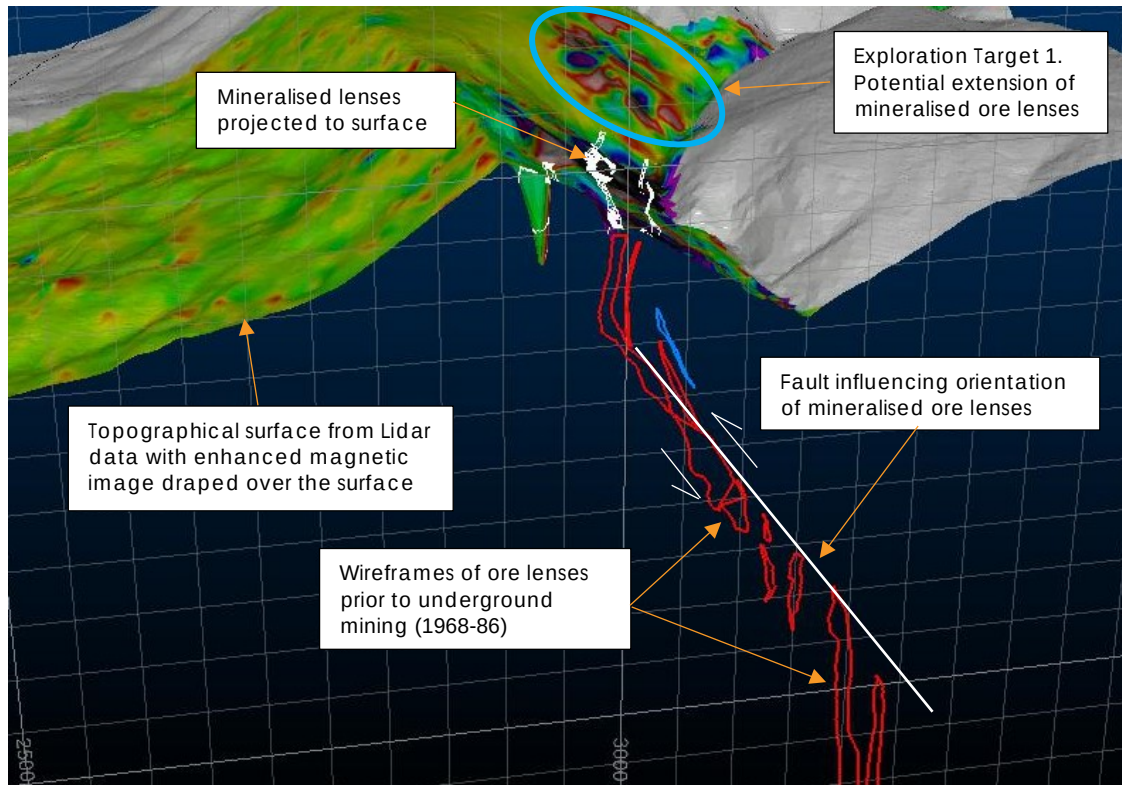


Figure 5. Section 2, Cleveland deposit in 3D, looking northeast

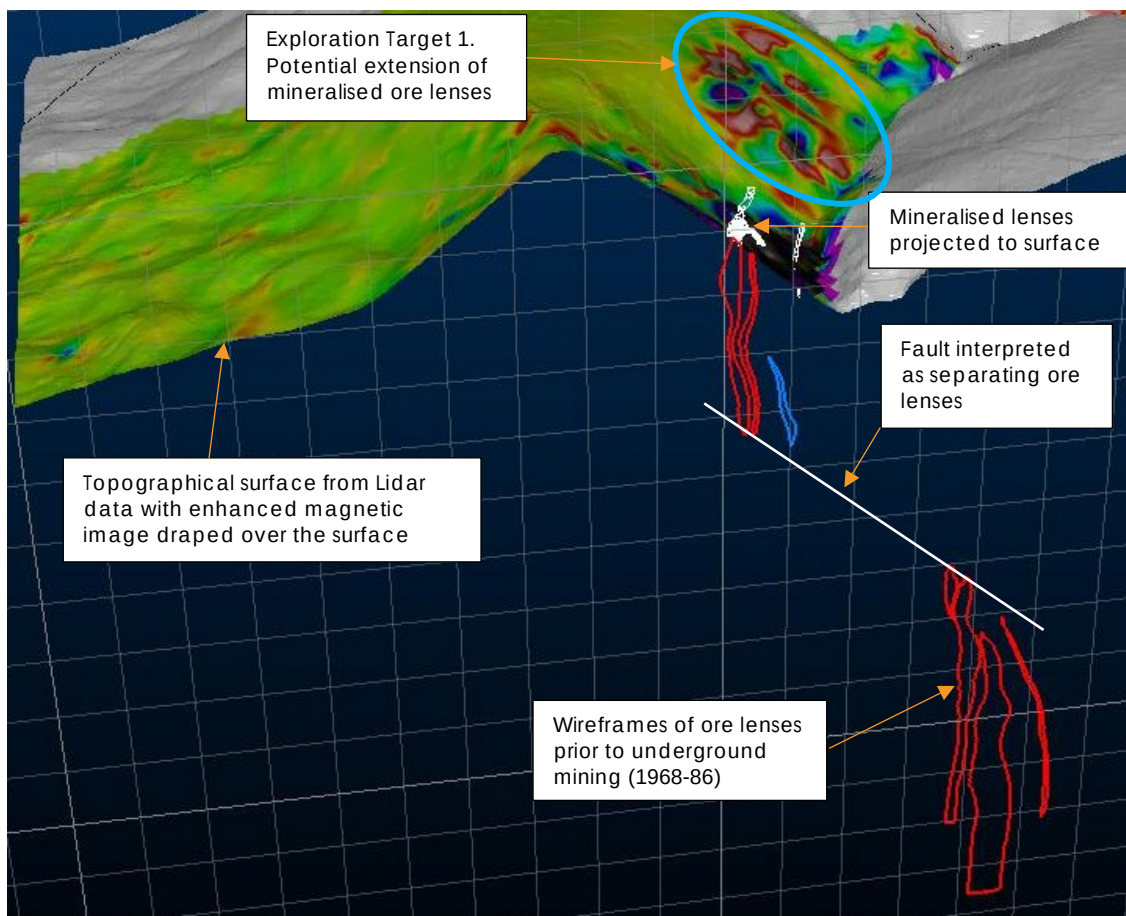


Figure 6. Section 3, Cleveland deposit in 3D, looking northeast

Potential Open Cut Resource Extension Drilling Programme.

A proposal to carry out a 16 hole shallow diamond drilling programme, to locate near surface extensions to the existing open cut resource, has been submitted to Mineral Resources Tasmania for approval. The programme has been prepared utilising information from the recently completed ground magnetic survey, a geological mapping programme and historical drilling and mining data.

The Chief Executive Officer of Elementos, Mr Chris Creagh, said “the ground magnetic survey has identified several new exploration targets at Cleveland. These results are very encouraging and indicate a potential extension to the known mineralised horizon, plus the potential for additional new zones of mineralisation within the mine sequence. This represents a successful completion of the first phase of the new exploration programme at Cleveland. Elementos will drill test these new targets as soon as possible and commence planning to extend the ground magnetic survey to the east along strike from these new targets”.

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COMPETENT PERSONS STATEMENT

The information in this report that relates to Exploration Results is based on information compiled by Chris Creagh, who is the Chief Executive Officer for Elementos Limited and a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy, a full time employee of Elementos and who consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Chris Creagh has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012).

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

Mineral Resources and Ore Reserves

Mineral Resources and Ore Reserves

Elementos confirms that Mineral Resource and Ore Reserve estimates used in this document were estimated, reported and reviewed in accordance with the guidelines of the Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 edition.

Elementos confirms that it is not aware of any new information or data that materially affects the Mineral Resource or Ore Reserve information included in the following announcements:

- “Cleveland Tailings Ore Reserve” released on the 3 August 2015;
- “Cleveland JORC Resource Significantly Expanded” announced to the ASX on 5 March 2014; and
- “Cleveland Open Pit - High-Grade Mineral Resource Defined” announced on 3 March 2015.

The Company also confirms that all material assumptions and technical parameters underpinning the estimates in the Cleveland Mineral Resources and Reserves continue to apply and have not materially changed. Elementos also confirms the form and context in which the Competent Person’s findings are presented have not been materially modified from the date of announcement.

CAUTIONARY STATEMENTS

Forward-looking statements

This document may contain certain forward-looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the company’s control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement.

The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward-looking statements will be or are likely to be fulfilled.

Elementos undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements).

The information in this document does not take into account the objectives, financial situation or particular needs of any person or organisation. Nothing contained in this document constitutes investment, legal, tax or other advice.

MINERAL RESOURCES AND ORE RESERVES

Tailings Ore Reserve (at 0% Sn cut-off)

Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Probable	3.7 Mt	0.29%	11,000t	0.13%	5,000t

Table subject to rounding errors; Sn = tin, Cu = copper

Total Tin-Copper Mineral Resource (at 0.35% Sn cut-off)

Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Indicated	5.00 Mt	0.69%	34,500t	0.28%	14,000t
Inferred	2.44 Mt	0.56%	13,700t	0.19%	4,600t

Table subject to rounding errors; Sn = tin, Cu = copper

Open Pit Tin-Copper Mineral Resource (at 0.35% Sn cut-off)

NOTE: this Open Pit Tin-Copper Mineral Resource is a sub-set of the Total Tin-Copper Mineral Resource noted above

Category	Tonnage	Sn Grade	Contained Sn	Cu Grade	Contained Cu
Indicated	0.80 Mt	0.81%	6,500t	0.27	2,300t
Inferred	0.01 Mt	0.99%	140t	0.34	50t

Table subject to rounding errors; Sn=tin, Cu=copper

Underground Tungsten Mineral Resource (at 0.20% WO₃ cut-off) ¹

Category	Tonnage	WO ₃ Grade
Inferred	4 Mt	0.30%

Table subject to rounding errors; WO₃ = tungsten oxide

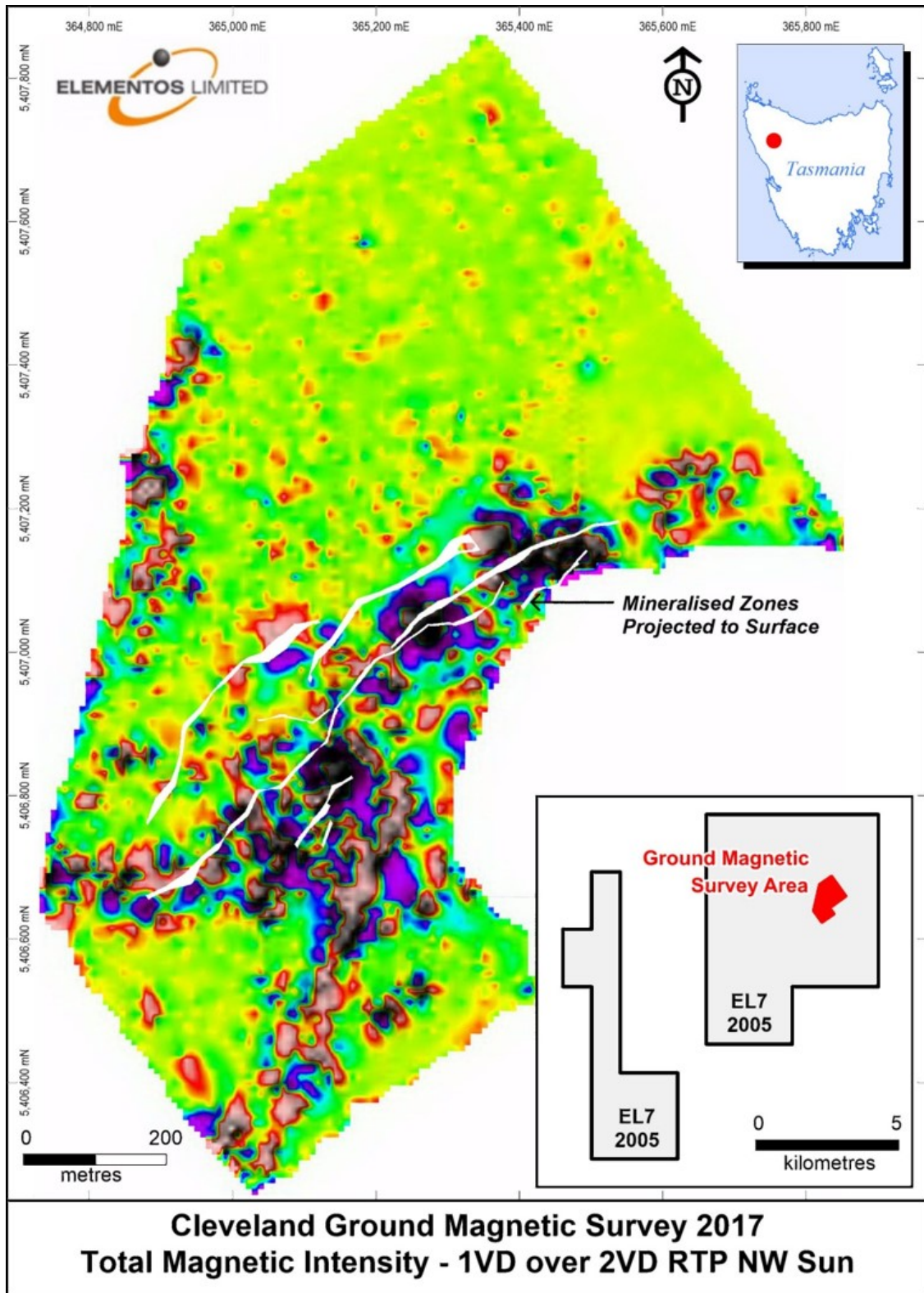
¹ This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported.

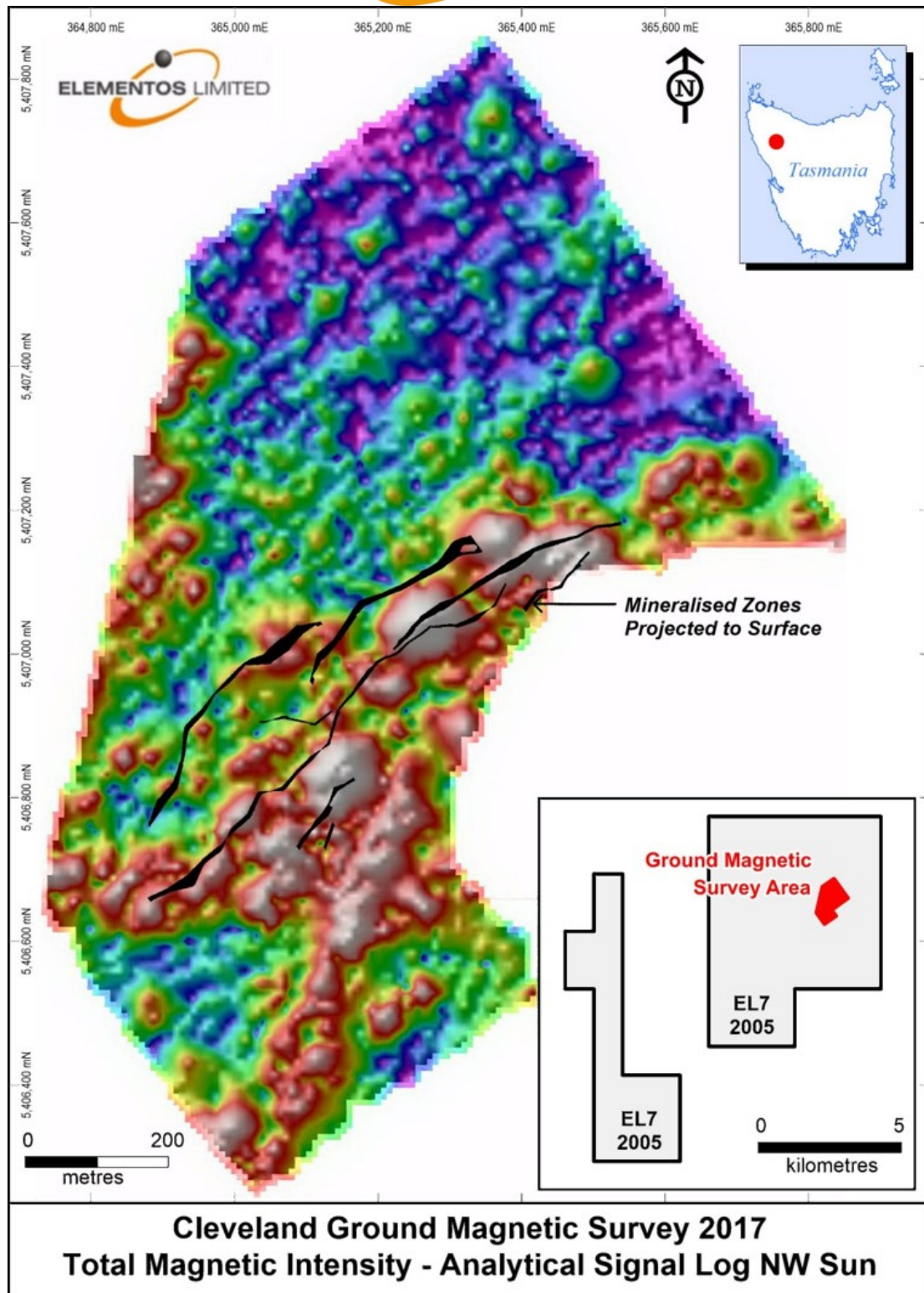


APPENDIX 1

CLEVELAND GROUND MAGNETIC SURVEY

ENHANCED IMAGES





JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Ground Magnetic Survey – Cleveland Grid

Criteria	JORC Code explanation	Commentary
Sampling techniques	- 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. - 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 (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.	- A ground magnetic survey was conducted over approximately 32km of grid lines that were constructed centred on the historical Cleveland tin mine. The survey was carried out using GPS located man portable magnetometers. The survey was carried out under contract by ModernMag. - The tin mineralisation at Cleveland occurs as predominantly cassiterite associated with pyrrhotite which has replaced carbonate rich sediments. The pyrrhotite is magnetic.
Drilling techniques	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).	
Drill sample recovery	- Method of recording and assessing core and chip sample recoveries and results assessed. - Measures taken to maximise sample recovery and ensure representative nature of the samples. - Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	

Criteria	JORC Code explanation	Commentary
	- Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. - The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	- If core, whether cut or sawn and whether quarter, half or all core taken. - If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. - For all sample types, the nature, quality and appropriateness of the sample preparation technique. - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. - Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. - Whether sample sizes are appropriate to the grain size of the material being sampled.	
Quality of assay data and laboratory tests	- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. - For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. - Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	- GEM GSMP-35 Potassium magnetometer – roving (sampled every 1 second) - GEM GSM-19 overhauser – base (sampled every 10 seconds) - Median magnetic value for the grid – 61,401.197nT - Novatel GPS
Verification of sampling and assaying	- The verification of significant intersections by either independent or alternative company personnel. - The use of twinned holes. - Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. - Discuss any adjustment to assay data.	- Data has been provided in the following formats and is stored on a remote server - Point data – Grid point data as *.ply files - Line data – Geosoft database, Ascii *.xyz file, ASEG_GDF2 data suitable for government submission, Grid outlines and Survey path in ArcMap, Mapinfo and DXF files - Grid data – Geosoft grids, ERMMapper grids, Mapinfo and ArcMap tiiffs
Location of data points	- Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. - Specification of the grid system used. - Quality and adequacy of topographic control.	- DTM created using GPS located data with average number of satellites = 4 - Located in MGA94 Zone 55. - Line spacing = 30m

Criteria	JORC Code explanation	Commentary
		Line direction = 140 °
Data spacing and distribution	- Data spacing for reporting of Exploration Results. - Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. - Whether sample compositing has been applied.	
Orientation of data in relation to geological structure	- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. - If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	The measures taken to ensure sample security.	
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	

Section 2 Reporting of Exploration Results

Ground Magnetic Survey at Cleveland

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	- Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. - The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	- Exploration Licence EL7/2005 centred on the historical Cleveland tin mine in Tasmania. EL7/2005 is held by Rockwell Minerals Pty Ltd, a 100% subsidiary company of Elementos Limited. - The project lies within Forest Tasmania Managed Land
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	This is the first surface geophysical survey recorded in the area since the Tasmanian Government reported the completion of a limited ground magnetic and self-potential survey in 1954.
Geology	Deposit type, geological setting and style of mineralisation.	The Cleveland mineralisation is hydrothermal mineralisation associated with Devonian-Carboniferous granite intrusives, which outcrop within 5 kilometres of the historical workings. Gravity survey

Criteria	JORC Code explanation	Commentary
		data suggests the granite occurs approximately 4km below the historical workings • The host sedimentary rocks were intruded by the Devonian-Carboniferous Meredith Granite. A quartz-porphyry dyke occurs approximately 350m below the land surface. • The tin/copper mineralization occurs as semi-massive sulphide lenses consisting of pyrrhotite and pyrite with cassiterite with lesser stannite, chalcopyrite, quartz, fluorite and carbonates. Sulphide minerals make up approximately 20-30% of the mineralisation. • The semi-massive sulphide lenses have formed by the replacement of carbonate rich sediments and are geologically similar to tin bearing massive to semi-massive sulphide mineralisation at Renison and Mt Bischoff.
Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: - o easting and northing of the drill hole collar - o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - o dip and azimuth of the hole - o down hole length and interception depth - o hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	•
Data aggregation methods	• 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.	•
Relationship between mineralisation	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole	•

Criteria	JORC Code explanation	Commentary
<i>widths and intercept lengths</i>	<i>angle is known, its nature should be reported.</i> <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>	<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>	
<i>Balanced reporting</i>	<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>	
<i>Other substantive exploration data</i>	<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>	- Images depicting the ground magnetic survey results are shown in Appendix 1. - Total Magnetic Image (TMI) The raw data corrected for cultural and gaps in the data due to difficult terrain. The ground magnetic data has been processed in an attempt to highlight and better define controlling structure, lithological variations and magnetic responses. The various filters applied were; First vertical derivative (1VD). – is theoretically the rate of change of magnetic field with increasing height. It tends to sharpen and separate magnetic anomalies and makes the mean background level of data equal to zero. Second vertical derivative (2VD) – is essentially completing the first vertical derivative twice. It sharpens and separates anomalies even further. Analytic Signal (AS) – is the square root of the sum of the square of the derivatives in the three principal components. It converts all magnetic responses to positive features. Tilt Derivative (TDR) – normalizes data ranges, enhancing subtle features. Reduction to Pole (RTP) – takes into account the magnetism due to the earth's magnetic field and correct for this. The result is the magnetic anomaly is shifted so that it is over the source.

Criteria	JORC Code explanation	Commentary
<i>Further work</i>	<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>	- The magnetic anomalies arising from this survey will be modelled in 3D to assist in targeting for a drilling programme to test the magnetic anomalies.. - Future work will involve extending the ground magnetic survey in a northeasterly direction, along strike from the historical workings.

Section 3 Estimation and Reporting of Mineral Resources

n/a

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i> <i>Data validation procedures used.</i>	
<i>Site visits</i>	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> <i>If no site visits have been undertaken indicate why this is the case.</i>	
<i>Geological interpretation</i>	<i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i> <i>Nature of the data used and of any assumptions made.</i> <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i> <i>The use of geology in guiding and controlling Mineral Resource estimation.</i> <i>The factors affecting continuity both of grade and geology.</i>	
<i>Dimensions</i>	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	
<i>Estimation and modelling techniques</i>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i> <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>	

Criteria	JORC Code explanation	Commentary
	<i>The assumptions made regarding recovery of by-products.</i> <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i> <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i> <i>Any assumptions behind modelling of selective mining units.</i> <i>Any assumptions about correlation between variables.</i> <i>Description of how the geological interpretation was used to control the resource estimates.</i> <i>Discussion of basis for using or not using grade cutting or capping.</i> <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	
Moisture	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	•
Cut-off parameters	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	•
Mining factors or assumptions	<i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i>	•
Metallurgical factors or assumptions	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i>	•

Criteria	JORC Code explanation	Commentary
<i>Environmental factors or assumptions</i>	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	
<i>Bulk density</i>	- Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. - The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. - Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	
<i>Classification</i>	- The basis for the classification of the Mineral Resources into varying confidence categories. - Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). - Whether the result appropriately reflects the Competent Person's view of the deposit.	
<i>Audits or reviews</i>	The results of any audits or reviews of Mineral Resource estimates.	
<i>Discussion of relative accuracy/confidence</i>	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	

Criteria	JORC Code explanation	Commentary
	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i> <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	

Section 4 Estimation and Reporting of Ore Reserves

n/a

Criteria	JORC Code explanation	Commentary
<i>Mineral Resource estimate for conversion to Ore Reserves</i>	<i>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</i> <i>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</i>	n/a
<i>Site visits</i>	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i> <i>If no site visits have been undertaken indicate why this is the case.</i>	
<i>Study status</i>	<i>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.</i> <i>The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.</i>	
<i>Cut-off parameters</i>	<i>The basis of the cut-off grade(s) or quality parameters applied.</i>	
<i>Mining factors or assumptions</i>	<i>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</i> <i>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</i> <i>The assumptions made regarding geotechnical parameters (eg pit</i>	

Criteria	JORC Code explanation	Commentary
	slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods.	
Metallurgical factors or assumptions	• The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	•
Environmental	• The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.	•
Infrastructure	• The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	•
Costs	• The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges.	•

Criteria	JORC Code explanation	Commentary
	- The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. - The allowances made for royalties payable, both Government and private.	
Revenue factors	- The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. - The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.	•
Market assessment	- The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. - A customer and competitor analysis along with the identification of likely market windows for the product. - Price and volume forecasts and the basis for these forecasts. - For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	•
Economic	- The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. - NPV ranges and sensitivity to variations in the significant assumptions and inputs.	•
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	•
Other	- To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: - Any identified material naturally occurring risks. - The status of material legal agreements and marketing arrangements. - The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.	•

Criteria	JORC Code explanation	Commentary
Classification	- The basis for the classification of the Ore Reserves into varying confidence categories. - Whether the result appropriately reflects the Competent Person's view of the deposit. - The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	•
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	•
Discussion of relative accuracy/ confidence	- Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. - The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. - Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. - It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	•

Section 5 Estimation and Reporting of Diamonds and Other Gemstones

n/a

Criteria	JORC Code explanation	Commentary
Indicator minerals	Reports of indicator minerals, such as chemically/physically distinctive garnet, ilmenite, chrome spinel and chrome diopside, should be prepared by a suitably qualified laboratory.	•

Criteria	JORC Code explanation	Commentary
Source of diamonds	Details of the form, shape, size and colour of the diamonds and the nature of the source of diamonds (primary or secondary) including the rock type and geological environment.	•
Sample collection	- Type of sample, whether outcrop, boulders, drill core, reverse circulation drill cuttings, gravel, stream sediment or soil, and purpose (eg large diameter drilling to establish stones per unit of volume or bulk samples to establish stone size distribution). - Sample size, distribution and representivity.	•
Sample treatment	- Type of facility, treatment rate, and accreditation. - Sample size reduction. Bottom screen size, top screen size and re-crush. - Processes (dense media separation, grease, X-ray, hand-sorting, etc). - Process efficiency, tailings auditing and granulometry. - Laboratory used, type of process for micro diamonds and accreditation.	•
Carat	One fifth (0.2) of a gram (often defined as a metric carat or MC).	•
Sample grade	- Sample grade in this section of Table 1 is used in the context of carats per units of mass, area or volume. - The sample grade above the specified lower cut-off sieve size should be reported as carats per dry metric tonne and/or carats per 100 dry metric tonnes. For alluvial deposits, sample grades quoted in carats per square metre or carats per cubic metre are acceptable if accompanied by a volume to weight basis for calculation. - In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive sample grade (carats per tonne).	•
Reporting of Exploration Results	- Complete set of sieve data using a standard progression of sieve sizes per facies. Bulk sampling results, global sample grade per facies. Spatial structure analysis and grade distribution. Stone size and number distribution. Sample head feed and tailings particle granulometry. - Sample density determination. - Per cent concentrate and undersize per sample. - Sample grade with change in bottom cut-off screen size. - Adjustments made to size distribution for sample plant performance	•

Criteria	JORC Code explanation	Commentary
	and performance on a commercial scale. • If appropriate or employed, geostatistical techniques applied to model stone size, distribution or frequency from size distribution of exploration diamond samples. • The weight of diamonds may only be omitted from the report when the diamonds are considered too small to be of commercial significance. This lower cut-off size should be stated.	
Grade estimation for reporting Mineral Resources and Ore Reserves	• Description of the sample type and the spatial arrangement of drilling or sampling designed for grade estimation. • The sample crush size and its relationship to that achievable in a commercial treatment plant. • Total number of diamonds greater than the specified and reported lower cut-off sieve size. • Total weight of diamonds greater than the specified and reported lower cut-off sieve size. • The sample grade above the specified lower cut-off sieve size.	•
Value estimation	• Valuations should not be reported for samples of diamonds processed using total liberation method, which is commonly used for processing exploration samples. • To the extent that such information is not deemed commercially sensitive, Public Reports should include: - o diamonds quantities by appropriate screen size per facies or depth. - o details of parcel valued. - o number of stones, carats, lower size cut-off per facies or depth. • The average \$/carat and \$/tonne value at the selected bottom cut-off should be reported in US Dollars. The value per carat is of critical importance in demonstrating project value. • The basis for the price (eg dealer buying price, dealer selling price, etc). • An assessment of diamond breakage.	•
Security and integrity	• Accredited process audit. • Whether samples were sealed after excavation. • Valuer location, escort, delivery, cleaning losses, reconciliation with recorded sample carats and number of stones. • Core samples washed prior to treatment for micro diamonds. • Audit samples treated at alternative facility. • Results of tailings checks.	•

Criteria	JORC Code explanation	Commentary
	• <i>Recovery of tracer monitors used in sampling and treatment.</i> • <i>Geophysical (logged) density and particle density.</i> • <i>Cross validation of sample weights, wet and dry, with hole volume and density, moisture factor.</i>	
Classification	• <i>In addition to general requirements to assess volume and density there is a need to relate stone frequency (stones per cubic metre or tonne) to stone size (carats per stone) to derive grade (carats per tonne). The elements of uncertainty in these estimates should be considered, and classification developed accordingly.</i>	•