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Holdings Limited**

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ASX Code: EMH

CDIs on Issue: 60.8M

Market Cap: \$14.9M



**EUROPEAN METALS**

**1 MAY 2015**

**ASX ANNOUNCEMENT**

**CINOVEC INDICATED RESOURCE DEFINED AND SCOPING STUDY  
COMPLETED**

**HIGHLIGHTS**

European Metals Holdings Limited (“**European Metals**” or “**The Company**”) (ASX: **EMH**) is pleased to announce that based on its recent drilling, a portion of the previously announced Inferred Tin Mineral Resource has been converted to Indicated category and that it has completed the Scoping Study for the Cinovec Lithium-Tin-Tungsten Project (“**the project**” or “**Cinovec**”) in the Czech Republic.

**Key Points:**

- **Maiden Indicated Mineral Resource of 7.0Mt @ 0.23% Sn, 0.03% W and 0.21% Li at a 0.1% Sn cutoff grade**
- **Derived from assumptions in the Scoping Study, Cinovec has the potential to be technically and financially viable**
- **Mine design work suggests Cinovec could be a bulk underground mining operation**
- **Processing to produce tin and tungsten concentrates via traditional gravity plant**
- **Tails from gravity plant fed to lithium processing plant, with battery grade Li<sub>2</sub>CO<sub>3</sub> produced via atmospheric leach**
- **Majority of tailings returned underground as paste fill**
- **Cost estimates in the study were calculated by independent consultants and are based on data from recent projects and industry standard estimating factors**
- **Planning in progress for a Pre-feasibility Study, targeting completion H1 CY2016**

**CAUTIONARY STATEMENT**

The Scoping Study referred to in this announcement is based on low level technical and economic assessments and is of insufficient certainty, under the JORC Code and ASX Listing Rules and guidance, to permit the technical and economic parameters required to imply economic viability. Investors should note that for the Company to establish economic viability of the Cinovec Project, the Company would need to upgrade an appropriate portion of its Inferred and Indicated Mineral Resources to a higher level of confidence with sufficient consideration of mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors. There is no assurance of an economic development case at this stage, or any certainty that conclusions of the study will be realised. The Scoping Study is based on the

Company's Indicated and Inferred Tin Mineral Resource and should not be solely relied upon by investors when making investment decisions.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the conversion of Inferred Mineral Resources to Indicated or Measured categories.

Having regard to the above, the Scoping Study considered a number of alternative scenarios and identified two propositions for future consideration. The Company has set out, within this announcement, certain statements which have been extracted from the Scoping Study in relation to different production rates which were used as inputs for the purposes of the preparation of the Scoping Study. This has been clearly identified throughout the announcement. These statements are not intended in any way to imply that Cinovec will produce at these production rates (being 1.5MMtpa and 2Mtpa), or at any rates inside or outside of those figures, or at all, at any time in the near or distant future. The production rates of 1.5Mtpa and 2Mtpa have been used solely as inputs to determine the potential viability of the Cinovec Project at those rates. Accordingly, the Company cautions readers from using any data derived from the input of the above production rates as the basis for investment decisions regarding Shares in the Company. The information derived from the input of the above production rates has been included solely to enable parties to better understand the potential of the Cinovec Project.

**European Metals CEO Mr Keith Coughlan said** "I am delighted to announce a maiden Indicated Mineral Resource and that the Cinovec Scoping Study is complete. These are significant milestones for the company, which come less than 18 months after we acquired the project.

Outcomes of the Scoping Study confirm what we have assumed since the acquisition - that Cinovec has the potential to be a robust, high value project. The Scoping Study culminated in the precipitation of battery grade lithium carbonate from a sample of Cinovec drill core. With an estimated production cost of less than US\$2,000 per tonne of lithium carbonate (after sulphate of potash credit) and accounting for revenue from production of tin and tungsten, Cinovec has the potential to be one of the lowest cost producers of battery grade lithium carbonate in the world. This is exceptional and underscores Cinovec's potential to generate significant income for the company.

We will continue with our development program at Cinovec to make the most of forecast demand and price rises for lithium carbonate and tin. To this end, planning for a Pre-feasibility Study (PFS) at Cinovec has commenced. Targeted outcomes of the PFS will be improved levels of confidence in resources, mining, processing and marketing. The aim is to have the PFS complete by the end of the first half CY2016. I look forward to providing updates as information comes to hand."

### **Mineral Resource Upgrade**

Lynn Widenbar of Widenbar and Associates compiled the initial Inferred Mineral Resource estimate for Cinovec South in February 2012 (prior to European's acquisition of the project) and updates to the tin-tungsten and lithium Mineral Resource models to include data from three core holes drilled in 2014 (*refer to ASX announcements 4 November 2014 and 9 February 2015*). The 2015 update to the lithium Mineral Resource also reflects revised estimation parameters based on a new interpretation of lithium distribution and accounts for Strategic Metallurgy's process for extraction of lithium, which affects the modifying factors used to define the economics of the Mineral Resource.

The database used for the 2012 Mineral Resource estimate incorporated information derived from a total of 769 underground and surface diamond drillholes and 41,560 assay intervals, which includes 7,367 underground channel samples. Assay data for the three holes drilled in 2014 was included in

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the database for the 2015 update, adding 342 assay intervals. Historically, core samples were either split or consumed entirely, with intervals ranging from 0.03 to 10.5m; more than 99.75% of historical drill samples fall in a range between 0.1 and 3m long. Historical channel samples were collected across 1m intervals. Samples collected from 2014 drillholes comprised half core and honoured geological contacts and mineralised domains, ranging from 0.5 to 2.1m long. Historical analytical methods included XRF and wet chemical techniques; samples collected from the 2014 drillholes were analysed by fusion or 4 acid digest with ICP finish. Assay data were composited to 1m intervals prior to Mineral Resource estimation.

Sample spacing used for Mineral Resource estimation for tin ranges from continuous channel sampling up to about 100m. The range reflects the density of historical work - samples are very closely spaced in areas of underground development and trial mining, less so in areas sampled only by surface or underground drillholes. Sample spacing used for lithium Mineral Resource estimation is significantly wider, as development samples were not assayed for lithium; sample spacing ranges from about 100m to more than 500m. Note that blocks in the lithium model which had an average distance to samples used of less than 100m were assigned to the Inferred Mineral Resource, with the remainder considered to form part of an Exploration Target (*refer to ASX announcement 9 February 2015*).

The Sn-W-Li mineralisation is hosted in a granite dome. Geological data were compiled during the 2012 Mineral Resource estimate (*refer to ASX announcement 18 December 2013*) to generate a surface representing the top contact of the granite with overlying rhyolite. Tin-tungsten-lithium mineralisation has been constrained to within the granite-greisen domain in the cupola of the granite.

Statistical and variographic assessment highlighted that tin-tungsten behaves very differently to lithium mineralisation, with different controls and constraints. As a result, in the 2015 Mineral Resource update (*refer to ASX announcement 9 February 2015*) distinct models were generated for tin-tungsten and for lithium.

For tin-tungsten, the model used a 75m x 75m x 7.5m search with a variable search ellipse orientation which essentially followed a combination of the geological framework as understood from historical interpretations and the top-of-granite surface. For lithium, the primary search ellipse was 150m (north-south) by 150m (east-west) by 7.5m vertically with estimation carried out in "unfolded" space. A second pass for lithium with a search ellipse of 300m x 300m x 12.5 was used to fully inform the model.

An inverse distance cubed interpolation methodology was used for all models, using Micromine 2014 SP3 V15 software. Section and plan views of the models were reviewed to ensure interpolation had proceeded correctly.

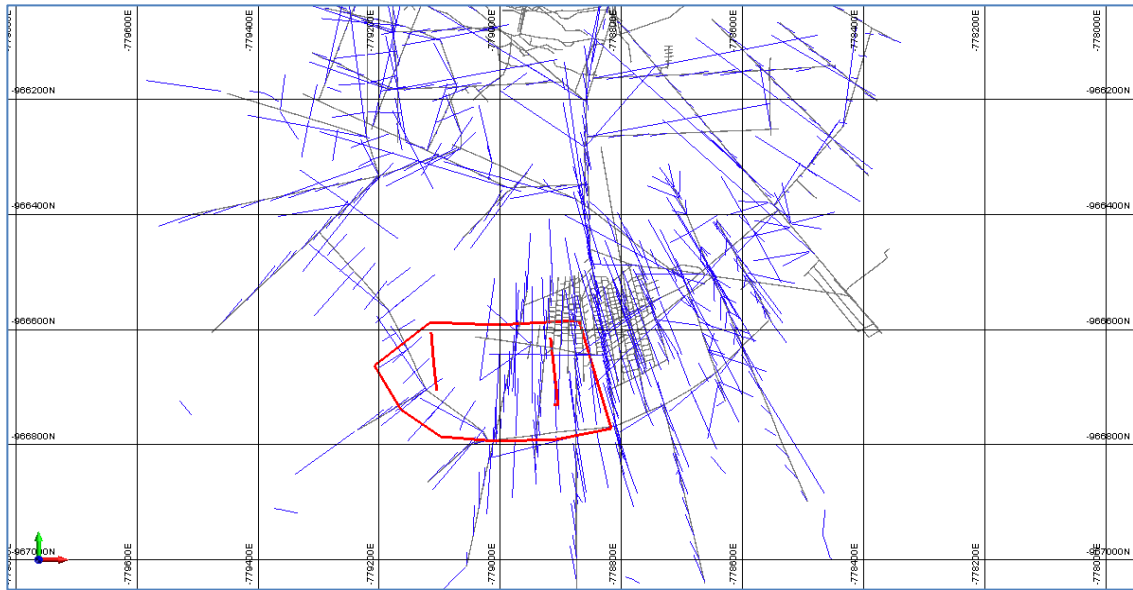
Densities applied for Mineral Resource tonnage calculations are based on historical bulk density measurements of 2.57 for granite and 2.70 for greisen.

As data are primarily historical, with only limited descriptions of sampling, sample preparation and analytical techniques plus limited database management or validation and QA/QC information, previous tin Mineral Resource estimates were classified as Inferred Mineral Resources. Based on results of the 2014 drill campaign, a small portion of the tin Mineral Resource has been upgraded from Inferred Mineral Resource to Indicated Mineral Resource, because:

- sampling, sample preparation, analytical techniques, database management/validation and QA/QC is known for the 2014 holes and followed industry standards for the style of deposit
- tonnages and grades for Mineral Resources estimated with and without data for the 2014 holes are similar

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A comparison of the Mineral Resources in a limited area affected by the 2014 drillholes was conducted; the area concerned is shown below, outlined in red.



A summary of the two Mineral Resources (with and without recent drillholes; updated versus original model) is presented below.

Cutoff Grade	Original Model		Updated Model		Percentage Change	
	Tonnes	Sn%	Tonnes	Sn%	Tonnes	Sn%
0.1	6,843,217	0.24	6,978,147	0.23	2.0%	-3.2%

There is a rise in tonnage, with tin grade marginally lower. All changes are, however, well within the +/- 10% to 15% limits expected for conversion from an Inferred Mineral Resource to an Indicated Mineral Resource.

Summaries of the tin and lithium Mineral Resources are shown in tables 1, 2 and 3 below.

**Table 1: Tin Indicated Mineral Resource**

CINOVEC APRIL 2015 TIN INDICATED RESOURCE				
Sn Cutoff	Tonnes	Sn	W	Li
%	(Millions)	%	%	%
0.10	7.0	0.23	0.03	0.21

**Table 2: Tin Inferred Mineral Resource**

CINOVEC APRIL 2015 TIN INFERRED RESOURCE				
Sn Cutoff	Tonnes	Sn	W	Li
%	(Millions)	%	%	%
0.10	72.7	0.23	0.03	0.21

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**Table 3: Lithium Inferred Mineral Resource**

<b>CINOVEC JANUARY 2015 LITHIUM INFERRED RESOURCE</b>				
<b>Li Cutoff</b>	<b>Tonnes</b>	<b>Li</b>	<b>W</b>	<b>Sn</b>
<b>%</b>	<b>(Millions)</b>	<b>%</b>	<b>%</b>	<b>%</b>
0.10	514.8	0.20	0.01	0.03

### Scoping Study

#### Overview

EMH commissioned expert consultants to undertake and report on each component of the Scoping Study as outlined below:

- |                                                               |                             |
|---------------------------------------------------------------|-----------------------------|
| • Geology and Mineral Resources                               | Widenbar and Associates     |
| • Mining                                                      | Bara Consulting             |
| • Metallurgical testing, process design and costing – tin     | GR Engineering Services Ltd |
| • Metallurgical testing, process design and costing – lithium | Cobre Montana NL            |

#### Assumptions and Parameters

Important assumptions and parameters for the Scoping Study are summarised below.

- Mineral Resources were estimated based on extensive historical data collated from drillholes and underground development and information derived from three diamond drill holes completed by the Company in 2014
- Mine design was completed at production rates of 1.5Mtpa and 2Mtpa to determine the optimum mining method. Assumed mining and production schedules were developed based on the individual mine design layouts. This statement is not intended in any way to imply that Cinovec will produce at these production rates, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future
- A conceptual process flowsheet for tin and tungsten concentrate production was developed based on metallurgical testwork conducted on a sample of Cinovec drill core
- A conceptual process flowsheet for lithium carbonate production was developed based on metallurgical testwork conducted on a sample of tails from tin-tungsten testwork and a larger sample of Cinovec drill core
- Indicative capital and operating cost estimates were based on the mining and processing production scenarios using data from relevant projects and industry standard estimating factors and accounted for infrastructure requirements

#### Mineral Resources

Lithium and tin Mineral Resources were estimated by Widenbar and Associates (*refer to ASX announcement 9 February 2015 and current release and upgrade in this announcement*).

#### Mining

Bara Consulting was engaged by EMH to undertake the mining and mine infrastructure portions of the Scoping Study. The scope of work included:

- Geotechnical assessment
- Determination of mining method
- Derive conceptual mine layout and schedule
- Plan for underground and mining-related surface infrastructure and services
- Estimate mining capex and opex

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Evaluation was centred on production rates of 1.5Mtpa and 2Mtpa; pay limit grades were calculated in the resource area for both scenarios. The higher production rate was selected as the preferred option because it allows implementation of lower cost bulk mining methods. This statement is not intended in any way to imply that Cinovec will produce at these production rates, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future, or that the project will prove to be viable and have a mine life within the period represented.

Based on the geotechnical assessment and mining rate, the study assumed mechanised longhole open stoping with cemented paste backfill. Haulage could proceed via a central shaft with truck haulage to that point; mine development planned to use existing underground workings to limit costs.

Equipment productivities were estimated and applied to generate a mine schedule. Modifying factors used to generate the studies' mining inventory from the Mineral Resource are: planned dilution and losses of 7%; unplanned dilution and losses of 3%; mineralisation within 100m vertical of surface was excluded from the mine plan based on geotechnical advice.

Mining capital and operating costs for a 2Mtpa operation are estimated by Bara Consulting to be US\$90 million and US\$27.04 per tonne mined, respectively, exclusive of VAT and with a base date of December 2014. Costs were determined from quotes and estimates based on similar operations. This statement is not intended in any way to imply that Cinovec will produce at 2Mtpa, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future.

#### *Processing - tin*

The process design for tin and tungsten was derived by GR Engineering Services Ltd (GRES) based on the previously announced metallurgical testwork (*refer to ASX announcement 29 January 2015*) conducted on a sample of Cinovec drill core at the ALS facility in Burnie, Tasmania. The design utilises standard gravity concentration processes for recovery of tin and tungsten

The proposed plant will treat tin-tungsten bearing mineralisation via the following process:

- two stage crushing and screening
- primary grinding and classification
- de-sliming and hydraulic classification
- gravity concentration
- regrind of gravity middling product
- sulphide and tin flotation
- concentrate thickening, filtration and thermal drying
- magnetic and electrostatic separation to produce separate tin and tungsten products
- tailings disposal

Key assumptions in the cost estimates are:

- Feed rate 2Mtpa (this statement is not intended in any way to imply that Cinovec will produce at this production rate, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future)
- Tin recovery of 80% with a concentrate grade of 50% (inferred from characterisation and testwork performed on 12kg sample of Cinovec drill core)
- WO<sub>3</sub> recovery of 53% with a concentrate grade of 60% WO<sub>3</sub> (inferred from characterisation and testwork performed on 12kg sample of Cinovec drill core)

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GRES estimated capital and operating costs for the tin-tungsten processing plant at US\$72.44 million and US\$11.24 per tonne treated, respectively. Costs were estimated based on procuring new equipment to a level of accuracy of +/-30% and expressed in Q1 2015 US dollars.

#### *Processing - lithium*

EMH has an MOU with Cobre Montana Ltd (ASX:CXB) accessing a proprietary atmospheric leach process to recover lithium from mica (*refer to ASX announcement 14 December 2014*). Metallurgical testwork and process design for lithium was managed by CXB, with battery grade lithium carbonate successfully precipitated from a sample of Cinovec drill core.

Feed for the lithium process plant comprises tailings from the tin-tungsten treatment process. The plant will treat lithium-bearing mineralisation via the following process:

- flotation to concentrate zinnwaldite (lithium mica)
- atmospheric leach to capture lithium in solution
- precipitation of battery grade lithium carbonate and sulphate of potash
- tailings disposal

Key assumptions in the cost estimates are:

- Feed rate 2Mtpa of tailings material (this statement is not intended in any way to imply that Cinovec will produce at these production rates, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future)
- Lithium recovery 70%

Based on these inputs, Cobre estimated the capital cost for the lithium processing plant at US\$164 million and the estimated operating cost is US\$39.14 per tonne treated, which results in a cost of less than \$2,000 per tonne of lithium carbonate produced after sulphate of potash credits (*refer Cobre Montana Ltd release 20 April 2015*).

#### *Services*

Capital and operating costs have been estimated for services, including water and power supply, required for both the mining and processing operations. Additional surface infrastructure accounted for in estimates includes:

- Management offices
- Changehouse facilities
- Medical station
- Workshops
- Stores and storage yards
- Access control and parking
- Heating units for underground air ventilation
- Fire prevention
- Oil storage and handling
- Catchment, pumping, settling, storage and handling of potable, sewage, storm and dirty water
- Reagent mixing and storage
- Laboratory

#### *Capital and Operating Costs*

All costs were estimated according to generally accepted desktop levels of accuracy or higher and are included in US dollar terms. Mining capex includes pre-production costs and costs incurred during ramp-up to full production. Capital costs are summarised in table 4.

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**Table 4: Pre-production Capital costs**

Mining	US\$90 million
Processing - tin	US\$72 million
Processing - lithium	US\$164 million
<b>Total</b>	<b>US\$326 million</b>

Operating costs for each phase of the operation have been estimated, shown in table 5.

**Table 5: Operating costs**

Mining	US\$27.04	per tonne mined
Processing – tin	US\$11.24	per tonne treated
Processing - lithium	US\$39.14	per tonne treated

#### *Conceptual Economics*

As a large portion of the Mineral Resource is classified as Inferred, the Company believes that to fully comply with listing rules and guidance notes, it is not in a position to release production targets including NPVs and IRRs. However, to enable parties to better understand the potential of the project, the following conceptual annual production has been estimated using the mining inventory associated solely with the Indicated Mineral Resource. This inventory represents 16% of the material modelled in the Study but is used solely in the conceptual estimates below. These numbers are not intended in any way to imply that Cinovec will produce at these production rates, or at any rates inside or outside of those figures, or at all, at any time in the near or distant future.

Feed Rate: 2Mtpa

Feed Grade: Average mining inventory grade of the Indicated Mineral Resource area with modifying factors applied of; planned dilution and losses of 7%; unplanned dilution and losses of 3%

Mining Cost: US\$27.04/t

Gravity Processing Cost: US\$11.24/t

Lithium Carbonate Processing Cost: US\$39.14/t

Tin Recovery: 80%

Tungsten Recovery: 70%

Lithium Recovery: 70%

Royalty: 2%

Smelter Terms for Tin: Standard industry charges

Conceptual tin production: 4,200 tpa

Conceptual tungsten production: 800 tpa

Conceptual lithium carbonate production: 19,400 tpa

Conceptual total yearly operating cost: US\$125m

Conceptual total yearly revenue: US\$233m (using US\$22,500/t Sn, US\$330/mtu W APT, US\$6,500/t lithium carbonate)

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## PROJECT OVERVIEW

### Cinovec Tin Project

Cinovec is an historic tin mine incorporating a significant undeveloped tin resource with by-product potential including tungsten, lithium, rubidium, scandium, niobium and tantalum. Cinovec is one of the largest undeveloped tin deposits in the world, with a total Inferred and Indicated Mineral Resources of 30.1Mt grading 0.37% Sn for 111,370 tonnes of contained tin. Cinovec also hosts a partly-overlapping hard rock lithium deposit with a total Inferred Mineral Resource of 514.8Mt @ 0.43% Li<sub>2</sub>O. The Mineral Resource estimates are based primarily on exploration completed by the Czechoslovakian Government in the 1970s and 1980s, including 83,000m of drilling and 21.5km of underground exploration drifting. The deposit is amenable to bulk underground mining and has had over 400,000 tonnes trial mined as a sub-level open stope. Historical metallurgical testwork, including the processing of the trial mined mineralisation through the previous on-site processing plant, indicates the mineralisation can be treated using simple gravity methods with good recovery rates for tin and tungsten of approximately 75%. Recent metallurgical testwork on tin indicates the potential for upwards of 80% recovery; initial results of testwork on lithium extraction using proprietary technology has been highly encouraging, with the capability to produce battery grade lithium carbonate. Cinovec is very well serviced by infrastructure, with a sealed road adjacent to the deposit, rail lines located 5km north and 8km south of the deposit and an active 22kV transmission line running to the mine. As the deposit lies in an active mining region, it has strong community support.

### COMPETENT PERSON

Information in this release that relates to exploration results is based on information compiled by European Metals Director Dr Pavel Reichl. Dr Reichl is a Certified Professional Geologist (certified by the American Institute of Professional Geologists), a member of the American Institute of Professional Geologists, a Fellow of the Society of Economic Geologists and is a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Dr Reichl consents to the inclusion in the release of the matters based on his information in the form and context in which it appears. Dr Reichl holds shares in European Metals.

The information in this report that relates to Mineral Resources has been compiled by Mr Lynn Widenbar. Mr Widenbar, who is a Member of the Australasian Institute of Mining and Metallurgy, is a full time employee of Widenbar and Associates and produced the estimate based on data and geological information supplied by European Metals. Mr Widenbar has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012 Edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Widenbar consents to the inclusion in this report of the matters based on his information in the form and context that the information appears.

### CAUTION REGARDING FORWARD LOOKING STATEMENTS

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

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Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the company's business and operations in the future. The company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the company or management or beyond the company's control.

Although the company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.

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**COMPANY SECRETARY**

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**Table 1**
**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, the Company conducted a core drilling program and collected samples from core splits in line with JORC Code 2012 Edition guidelines. Sample intervals honoured geological or visible mineralisation boundaries.</li> <li>• Between 1952 and 1989, the Cinovec deposit was sampled in two ways: in drill core and underground channel samples.</li> <li>• Channel samples, from drift ribs and faces, were collected during detailed exploration between 1952 and 1989 by Geoindustria n.p. and Rudne Doly n.p., both Czechoslovak State companies. Sample length was 1 m, channel 10x5cm, sample mass about 15kg. Up to 1966, samples were collected using hammer and chisel; from 1966 a small drill (Holman Hammer) was used. 14179 samples were collected and transported to a crushing facility.</li> <li>• Core and channel samples were crushed in two steps: to -5mm, then to -0.5mm. 100g splits were obtained and pulverized to -0.045mm for analysis.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• <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 what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, three core holes were drilled for a total of 940m.</li> <li>• The core size was HQ3 (60mm diameter) in upper parts of holes; in deeper sections the core size was reduced to NQ3 (44mm diameter). Core recovery was high (average 98%).</li> <li>• Historically only core drilling was employed, either from surface or from underground.</li> <li>• Surface drilling: 80 holes, total 30,340 meters; vertical and inclined, maximum depth 1596m (structural hole). Core diameters from 220mm near surface to 110 mm at depth. Average core recovery 89.3%.</li> <li>• Underground drilling: 766 holes for 53,126m; horizontal and inclined.</li> </ul>

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Criteria	JORC Code explanation	Commentary
		Core diameter 46mm; drilled by Craelius XC42 or DIAMEC drills.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Core recovery for historical surface drill holes was recorded on drill logs and entered into the database.</li> <li>• No correlation between grade and core recovery was established.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, core descriptions were recorded into paper logging forms by hand and later entered into an Excel database.</li> <li>• Core was logged in detail historically in a facility 6 km from the mine site. The following features were logged and recorded in paper logs: lithology, alteration (including intensity divided into weak, medium and strong/pervasive), and occurrence of potentially economic minerals expressed in %, macroscopic description of congruous intervals and structures and core recovery.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <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></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, core was washed, geologically logged, sample intervals determined and marked then the core was cut in half. One half was delivered to ALS Global for assaying after duplicates, blanks and standards were inserted in the sample stream. The remaining drill core is stored on site for reference.</li> <li>• Sample preparation was carried out by ALS Global in Romania, using industry standard techniques appropriate for the style of mineralisation represented at Cinovec.</li> <li>• Historically, core was either split or consumed entirely for analyses.</li> <li>• Samples are considered to be representative.</li> <li>• Sample size and grains size are deemed appropriate for the analytical techniques used.</li> </ul>
<i>Quality of assay data</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used</i></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, core samples were assayed by ALS Global. The most appropriate</li> </ul>

Criteria	JORC Code explanation	Commentary
and laboratory tests	<p>and whether the technique is considered partial or total.</p> <ul style="list-style-type: none"> <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>	<p>analytical methods were determined by results of tests for various analytical techniques.</p> <ul style="list-style-type: none"> <li>The following analytical methods were chosen: ME-MS81 (lithium borate fusion or 4 acid digest, ICP-MS finish) for a suite of elements including Sn and W and ME-4ACD81 (4 acid digest, ICP-AES finish) additional elements including lithium. Samples with over 1% tin were analysed by XRF.</li> <li>Standards, blanks and duplicates were inserted into the sample stream. Initial tin standard results indicated possible downgrading bias; the laboratory repeated the analysis with satisfactory results.</li> <li>Historically, tin content was measured by XRF and using wet chemical methods. W and Li were analysed by spectral methods.</li> <li>Analytical QA was internal and external. The former subjected 5% of the sample to repeat analysis in the same facility. 10% of samples were analysed in another laboratory, also located in Czechoslovakia. The QA/QC procedures were set to the State norms and are considered adequate. It is unknown whether external standards or sample duplicates were used.</li> <li>Overall accuracy of sampling and assaying was proved later by test mining and reconciliation of mined and analysed grades.</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>During the 2014 drill campaign the Company indirectly verified grades of tin and lithium by comparing the length and grade of mineral intercepts with the current block model.</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>In 2014, drill collar locations were surveyed by a registered surveyor.</li> <li>Down hole surveys were recorded by a contractor.</li> <li>Historically, drill hole collars were surveyed with a great degree of precision by the mine survey crew.</li> <li>Hole locations are recorded in the</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>local S-JTSK Krovak grid.</p> <ul style="list-style-type: none"> <li>• Topographic control is excellent.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Historical data density is very high.</li> <li>• Spacing is sufficient to establish Indicated and Inferred Mineral Resources (see notes on classification below). The Mineral Resource was initially estimated using MICROMINE software in Perth, 2012 and updated in 2015.</li> <li>• Areas with lower coverage of Li% assays have been identified as exploration targets.</li> <li>• Sample compositing has not been applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• In 2014, drill hole azimuth and dip was planned to intercept the mineralized zones at near-true thickness. As the mineralized zones dip shallowly to the south, drill holes were vertical or near vertical and directed to the north.</li> <li>• The Company has not directly collected any samples underground because the workings are inaccessible at this time.</li> <li>• Based on historic reports, level plan maps, sections and core logs, the samples were collected in an unbiased fashion, systematically on two underground levels from drift ribs and faces, as well as from underground holes drilled perpendicular to the drift directions. The sample density is adequate for the style of deposit.</li> <li>• Multiple samples were taken and analysed by the Company from the historic tailing repository. Only lithium was analysed (Sn and W too low). The results matched the historic grades.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• In the 2014 program, only the Company's employees and contractors handled drill core and conducted sampling. The core was collected from the drill rig each day and transported in a company vehicle to the secure Company premises where it was logged and cut. Company geologists supervised the process and logged/sampled the core. The samples were transported by</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<p>Company personnel in a Company vehicle to the ALS Global laboratory pick-up station. The remaining core is stored under lock and key.</p> <ul style="list-style-type: none"> <li>Historically, sample security was ensured by State norms applied to exploration. The State norms were similar to currently accepted best practice and JORC Code guidelines for sample security.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Review of sampling techniques possible from written records. No flaws found.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Cinovec exploration rights held under two licenses Cinovec and Cinovec 2. Former expires 30/7/2019, the latter 31/12/15.</li> <li>100% owned, no royalties, native interests or environmental concerns.</li> <li>There are no known impediments to obtaining an Exploitation Permit for the defined resource.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>There has been no acknowledgment or appraisal of exploration by other parties.</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Cinovec is a granite-hosted tin-tungsten-lithium deposit.</li> <li>Late Variscan age, alkalic rift-related granite.</li> <li>Tin and tungsten occur in oxide minerals (cassiterite and wolframite). Lithium occurs in zinwaldite, a Li-rich muscovite</li> <li>Mineralisation in a small granite cupola. Vein and greisen type. Alteration is greisenisation, silicification.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li><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> <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</i></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Reported previously.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> <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>● <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></li> </ul>	
<b>Data aggregation methods</b>	<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>● Reporting of exploration results has not and will not include aggregate intercepts.</li> <li>● Metal equivalent not used in reporting.</li> <li>● No grade truncations applied.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>● Intercept widths are approximate true widths.</li> <li>● The mineralization is mostly of disseminated nature and relatively homogeneous; the orientation of samples is of limited impact.</li> <li>● For higher grade veins care was taken to drill at angles ensuring closeness of intercept length and true widths</li> <li>● The block model accounts for variations between apparent and true dip.</li> </ul>
<b>Diagrams</b>	<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>● Appropriate maps and sections have been generated by the Company, and independent consultants. Available in customary vector and raster outputs, and partially in consultant's reports.</li> </ul>
<b>Balanced reporting</b>	<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>● Balanced reporting in historic reports guaranteed by norms and standards, verified in 1997, and 2012 by independent consultants.</li> <li>● The historic reporting was completed by several State</li> </ul>

Criteria	JORC Code explanation	Commentary
		institutions and cross validated.
<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>Data available: bulk density for all representative rock and ore types; petrographic and mineralogical studies, hydrological information, hardness, moisture content, fragmentation etc.</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>Grade verification sampling from underground or drilling from surface. Historically-reported grades require modern validation in order to improve the resource classification.</li> <li>The number and location of sampling sites will be determined from a 3D wireframe model and geostatistical considerations reflecting grade continuity.</li> <li>The geologic model will be used to determine if any infill drilling is required.</li> <li>The deposit is open down-dip on the southern extension, and locally poorly constrained at its western and eastern extensions, where limited additional drilling might be required.</li> <li>No large scale drilling campaigns are required.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li><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></li> <li><i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>Assay and geologic data were compiled by the Company staff from primary historic records, such as copies of drill logs and large scale sample location maps.</li> <li>Sample data were entered in to Excel spreadsheets by Company staff in Prague.</li> <li>The database entry process was supervised by a Professional Geologist who works for the Company.</li> <li>The database was checked by independent competent persons</li> </ul>

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Criteria	JORC Code explanation	Commentary
		(Lynn Widenbar of Widenbar & Associates, Phil Newell of Wardell Armstrong International).
Site visits	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The site was visited by Mr Pavel Reichl who has identified the previous shaft sites, tails dams and observed the mineralisation underground through an adjacent mine working.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The overall geology of the deposit is relatively simple and well understood due to excellent data control from surface and underground.</li> <li>• Nature of data: underground mapping, structural measurements, detailed core logging, 3D data synthesis on plans and maps.</li> <li>• Geological continuity is good. The grade is highest and shows most variability in quartz veins.</li> <li>• Grade correlates with degree of silicification and greisenisation of the host granite.</li> <li>• The primary control is the granite-country rock contact. All mineralization is in the uppermost 200m of the granite and is truncated by the contact.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The Cinovec South deposit strikes north-south, is elongated, and dips gently south parallel to the upper granite contact. The surface projection of mineralization is about 1 km long and 900 m wide.</li> <li>• Mineralization extends from about 200m to 500m below surface.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Block estimation was carried out in Micromine using Inverse Distance Cubed (ID3) interpolation.</li> <li>• The upper granite contact was interpolated as a surface from drill hole data.</li> <li>• A geological domain model was then generated using an Indicator Methodology which divided the data into greisen and granite domains beneath the granite contact. This was used to assign density to the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <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></li> </ul>	<p>model (2.57 for granite, 2.70 for greisen and 2.60 for all other material).</p> <ul style="list-style-type: none"> <li>• Analysis of sample lengths indicated that compositing to 1m was necessary.</li> <li>• Search ellipse sizes and orientations for the estimation were based on drill hole spacing and the known orientations of mineralisation.</li> <li>• An “unfolding” search strategy was used which allowed the search ellipse orientation to vary with the locally changing dip and strike.</li> <li>• ID3 Indicator modelling at 0.1% Sn threshold was used to generate a solid model of Sn mineralisation.</li> <li>• ID3 Indicator modelling at 0.08% Li threshold was used to generate a solid model of Li mineralisation.</li> <li>• After statistical analysis, a top cut of 5% was applied to both Sn% and Li%.</li> <li>• Sn% and Li% were then estimated by ID3 but only within the mineralisation solids generated by the indicator modelling.</li> <li>• The search ellipse for Sn% modelling was 75m along strike, 75m down dip and 7.5m across the mineralisation. A minimum of 2 composites and a maximum of 16 composites were required.</li> <li>• A larger search ellipse was used for Li% modelling as this mineralisation is unrelated to Sn% and more pervasive in nature.</li> <li>• Primary search (based on variography) was 150m along strike, 150m down dip and 7.5m across the mineralisation. A minimum of 2 composites and a maximum of 16 composites were required. The search was double to inform blocks to be used as the basis for an exploration target.</li> <li>• Block size was 5m (E-W) by 5m (N-S) by 2.5m</li> <li>• Validation of the final resource has been carried out in a number of ways including section comparison of data versus model, and</li> </ul>

Criteria	JORC Code explanation	Commentary
		production reconciliation.
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are estimated on a dry basis using the average bulk density.</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>A series of alternative cutoffs was used to report tonnage and grade: Sn 0.1%, 0.2%, 0.3% and 0.4%. Lithium 0.1%, 0.2%, 0.3% and 0.4%.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Mining is assumed to be by underground methods. A Scoping Study has determined the optimal mining method.</li> <li>Limited internal waste will need to be mined at grades marginally below cutoffs. Mine dilution and waste are expected at minimal levels and the vast majority of the Mineral Resource is expected to convert to an Ore Reserve.</li> <li>Based on the geometry of the deposit, it is envisaged that a combination of drift and fill mining and longhole open stoping will be used</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Recent testwork on 2014 drill core indicates a tin recovery of 80% can be expected.</li> <li>Testwork on lithium is complete, with 70% recovery of lithium to lithium carbonate product via flotation concentrate and atmospheric leach.</li> <li>Extensive testwork was conducted on Cinovec South mineralisation in the past. Testing culminated with a pilot plant trial in 1970, where three batches of Cinovec South mineralisation were processed, each under slightly different conditions. The best result, with a tin recovery of 76.36%, was obtained from a batch of 97.13t grading 0.32% Sn. A more elaborate flowsheet was also investigated and with flotation produced final Sn and W recoveries of better than 96% and 84%, respectively.</li> <li>Historical laboratory testwork</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<p>demonstrated that lithium can be extracted from the mineralisation (lithium carbonate was produced from 1958-1966 at Cinovec).</p>
<p><i>Environmental factors or assumptions</i></p>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Cinovec is in an area of historic mining activity spanning the past 600 years. Extensive State exploration was conducted until 1990.</li> <li>The property is located in a sparsely populated area, most of the land belongs to the State. Few problems are anticipated with regards to the acquisition of surface rights for any potential underground mining operation.</li> <li>The envisaged mining method will see much of the waste and tailings used as underground fill.</li> </ul>
<p><i>Bulk density</i></p>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul style="list-style-type: none"> <li>Historical bulk density measurements were made in a laboratory.</li> <li>The following densities were applied: <ul style="list-style-type: none"> <li>2.57 for granite</li> <li>2.70 for greisen</li> <li>2.60 for all other material</li> </ul> </li> </ul>
<p><i>Classification</i></p>	<ul style="list-style-type: none"> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>Following a review of a small amount of available QAQC data, and comparison of production data versus estimated tonnage/grade from the resource model, and given the close spacing of underground drilling and development, the majority of Sn% resource was classified in the Inferred category as defined by the JORC Code 2012 Edition.</li> <li>The new 2014 drilling has confirmed the mineralisation model and a part of this area has been upgraded to the Indicated category.</li> <li>The Li% mineralisation has been assigned to the Inferred category where the average distance to</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<p>composites used in estimation is less than 100m. Material outside this range is unclassified but has been used as the basis for an Exploration Target.</p> <ul style="list-style-type: none"> <li>The Competent Person (Lynn Widenbar) endorses the final results and classification.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>Wardell Armstrong International, in their review of Lynn Widenbar's initial resource estimate stated "the Widenbar model appears to have been prepared in a diligent manner and given the data available provides a reasonable estimate of the drillhole assay data at the Cinovec deposit".</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li><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.</i></li> <li><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></li> <li><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>In 2012, WAI carried out model validation exercises on the initial Widenbar model, which included visual comparison of drilling sample grades and the estimated block model grades, and Swath plots to assess spatial local grade variability.</li> <li>A visual comparison of Block model grades vs Drillhole grades was carried out on a sectional basis for both Sn and Li mineralisation. Visually, grades in the block model correlated well with drillhole grade for both Sn and Li.</li> <li>Swath plots were generated from the model by averaging composites and blocks in all 3 dimensions using 10m panels. Swath plots were generated for the Sn and Li estimated grades in the block model, these should exhibit a close relationship to the composite data upon which the estimation is based. As the original drillhole composites were not available to WAI. 1m composite samples based on 0.1% cut-offs for both Sn and Li assays were</li> <li>Overall Swath plots illustrate a good correlation between the composites and the block grades. As is visible in the SWATH plots, there has been a</li> </ul>

Criteria	JORC Code explanation	Commentary
		large amount of smoothing of the block model grades when compared to the composite grades, this is typical of the estimation method.