# **Stellar Resources** ASX Announcement



6 March 2014

## **Heemskirk Tin Project: New Open Pittable Resource at St Dizier**

Stellar Resources is pleased to announce a Mineral Resource for the St Dizier tin deposit. This will add valuable shallow tin resources to the Heemskirk Tin Project.

#### The resource is 2.26 mt @ 0.61% tin, 23% iron and 0.04% tungsten.

- 1.2 mt @ 0.7% tin is classified as Indicated (8,250 t of contained tin).
- Indicated Resource represents open pit mining potential at a tin grade well in excess of the 0.2% to 0.5% range for open pit tin mines.
- St Dizier increases Heemskirk Tin mine-life to 9 years a 30% upgrade.
- St Dizier has the potential to generate a magnetite by-product and the possibility of a second revenue stream.
- Early metallurgical testwork shows that cassiterite is the predominant tin mineral, especially in the Indicated Resource.
- St Dizier is located just 20 km by sealed road from the proposed Heemskirk processing plant and has the potential to fast-track production.
- Drilling to test for increased tin resources along the 2.5km untested length of the St Dizier trend will commence this month.

Stellar CEO Peter Blight said "St Dizier could add significant value and flexibility to the Heemskirk Tin Project as either early stage feed or supplemental production to the underground operation. It is located in a previously worked alluvial tin field next to a sealed road and power line. In addition, the potential for additional resources at St Dizier will be tested with diamond drilling planned to start in March 2014."

ASX Code: SRZ

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Stellar Resources (SRZ) is an exploration and development company with assets in Tasmania and South Australia. The company is rapidly advancing its high-grade Heemskirk Tin Project, located near Zeehan in Tasmania, and plans to become Australia's second largest producer of tin.



#### **Mineral Resource Estimate**

The St Dizier Mineral Resource estimate was produced by Tim Callaghan of Resource and Exploration Geology and based on 43 historical diamond drill holes totalling 7,309 metres drilled by four companies between 1960 and the late 1980s. Stellar also drilled 3 confirmatory diamond holes totalling 317 metres in 2006. The Mineral Resource shown in Table 1 is reported in accordance with the 2012 edition of the JORC Code above a block cut-off grade of 0.3% Sn.

#### **Table 1: St Dizier Inferred and Indicated Mineral Resource**

Classification	Millions Tonnes	Sn%	Sol Sn%	WO <sub>3</sub> %	Fe %	<b>S%</b>
Indicated	1.20	0.69	0.09	0.04	23.70	2.64
Inferred	1.06	0.52	0.22	0.05	22.22	1.81
<b>Total Resource</b>	2.26	0.61	0.15	0.04	23.00	2.25

1. block cut-off grade of 0.3% Sn

2. tonnes rounded to reflect uncertainty of estimate

3. estimate prepared by Resource and Exploration Geology

The Indicated Mineral Resource of 1.2 million tonnes at an average grade of 0.69% Sn is based on drill hole spacing of 50 x 50 metres or less within the red areas shown in Figure 1. Tin mineralisation within the Indicated Mineral Resource is predominantly cassiterite.

The Inferred Mineral Resource occurs immediately to the east of the Indicated Mineral Resource from 345,220E to 345,475E. The drill spacing for the Inferred Resources is greater than 100 x 100 metres and tin occurs as a mixture of cassiterite and acid soluble schoenfliesite.



Figure 1: St Dizier Geological Plan and Diamond Drill Hole Traces



There is a high level of confidence in the geological model due to the large number of diamond drill holes, consistency in the location of the main geological boundaries and the distinctive host rock mineralogy. The skarn host rock dips vertically from the surface within a tight east-west trending synformal trough of sediments on the surface of the granite. The tin mineralisation varies between 3 and 40 metres in thickness and plunges steeply to the east within the skarn unit.

The highest tin grades occur towards the western end of the Mineral Resource and between the surface and a depth of 70 metres. This geometry is potentially favourable for low cost open pit mining, making St Dizier an attractive satellite deposit for the main Heemskirk Tin Project.

#### **Increased Resource Potential**

Exploration drilling will initially focus on shallow targets between the two red areas (See Figure 1) that define the Indicated Mineral Resource and immediately to the east of the largest red area. These targets were located by 3D geological modelling, are well placed for open pit mining and were poorly tested by historical drilling programs.

There are also regional exploration targets that remain to be tested. As Figure 2 shows, the St Dizier Mineral Resource occurs over 400 metres at the western end of a 3.0 kilometre skarn zone (green body shown in Figure 2). The skarn zone has variable mineralogy along its length but often hosts tin mineralisation in association with metamorphic minerals magnetite and phlogopite. Big H at the eastern end of the skarn has a magnetite/phlogopite horizon that will be drill tested during the current program.



Figure 2: Oblique Google Image Showing St Dizier Deposit and Tin Skarn Zone



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### **TECHNICAL MEMORANDUM**

#### **ST DIZIER RESOURCE ESTIMATION 2014**

The St Dizier Deposit is a carbonate hosted metasomatic skarn hosted in hornfelsed Precambrian sedimentary rocks on the northern edge of the Devonian Heemskirk Granite in Western Tasmania. The deposit forms a roof pendant located in a tight synformal trough on the surface of the granite. Hornfelsed quartzite forms the hangingwall to the skarn and hornfelsed slates the footwall. The skarn is a vertically dipping, east-west striking stratabound body extending to a depth in excess of 200m from surface. Mineralisation extends over a 400m strike length and varies between 3 and 40m in thickness. The skarn consists of magnetite-serpentinite-diopside and actinolite with minor pyrrhotite-pyrite-arsenopyrite-cassiterite-schoenfliesite-sheelite-bismuthinite. Tin mineralisation is zoned with dominantly cassiterite in the west and increasing amounts of schoenfliesite and other exotic tin species to the east.

Modern exploration commenced in the 1960's and continued until the late 1980's before depressed tin prices ended operations. Four separate companies, Placer, Minops, Cominco and Goldfields, completed four separate drilling programs. Stellar Resources acquired the deposit in 2003 when it was granted EL 46/2003 and recommenced exploration and technical studies.

The resource estimation is based mainly on historic diamond drilling including 43 holes for 7,309m with Stellar drilling 3 confirmatory holes for 317m in 2006. All the historical data was loaded into an access database and validated against historic sections and plans. The data was collated by reputable mining companies and is considered to be of high industry standards. Most drill collars were surveyed by licensed surveyors and down hole surveys were included in the longer drillholes completed by Goldfields.

Mineralised domains were modeled with Surpac<sup>(TM)</sup> software from historic cross sections using a 0.1% Sn boundary and a minimum width of 3m. Internal dilution was kept to a minimum of 3m with some allowances for continuity. Domains were split into a Western Lode, a Central Lode, comprising a northern and southern lens, and an Eastern Lode.

Drillhole data was composited on 1m intervals. Univariate statistical analysis was completed on all domains. Variogram modeling was completed on the well drilled Central Lode only.

Block modeled resource estimation was calculated using an Inverse Distance Squared algorithm. The resource is reported in accordance with the 2012 edition of the JORC Code above a block cutoff of 0.3% Sn (Table 1).

Table 1. St Dizier Skarn Inferred and Indicated Resource Sn>0.3% Cutoff						
Classification	MTonnes	Sn %	Sol Sn %	WO3 %	Fe %	S %
Indicated Resource	1.20	0.69	0.09	0.04	23.70	2.64
Inferred Resource	1.06	0.52	0.22	0.05	22.20	1.81
Total Resource	2.26	0.61	0.15	0.04	23.00	2.25

No bulk density measurements are available from recent or historic work. A bulk density of 3.3 was calculated from the mineralogical composition of the skarn. The calculation is considered to be conservative given Davis Tube recoveries for

magnetite from the metallurgical testwork suggest magnetite contents range from 30-40%.

The resource has been classified as Indicated Resource where the drill spacing is 50 x 50m or less and tin mineralisation is dominantly cassiterite. The Inferred Resource extends from 345220E to 345475E where the drill spacing is greater than 100m and where the tin occurs as a mixture of cassiterite and schoenfliesite. Low grade, deep and metallurgically difficult mineralisation east of 345475E has not been classified.

There is a high degree of confidence in the simple geological model. There is moderate confidence in the grade estimation at a global level given the high nugget effect and short range of variogram models and the reliance on historic data. Globally the resource tonnes and grade correlate well with the historic Goldfields polygonal estimation.

The resource is amenable to open cut mining and may form a satellite deposit for Stellar's Heemskirk Tin Project based in Zeehan. Historic metallurgical testwork suggests the cassiterite mineralisation in the Central and Western Lodes is amenable to conventional metallurgical processes including magnetic separation, sulphide floatation and gravity concentration. The mixed cassiterite-schoenfliesite mineralisation to the east is metallurgically difficult and requires more technical studies and drilling.

There is scope for additional resources through continued exploration along the 3km strike length of the skarn.





Figure 1. St Dizier Geological Plan and Drill Hole Locations





Figure 2. St Dizier Section 345150N





Figure 3. St Dizier Long Projection



Table 1. Sampling Techniques and Data				
Criteria	JORC Code Explanation	Commentary		
Sampling Techniques	<ul> <li>Nature and Quality of sampling (eg cut channels, random chips or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or hand held XRF instruments etc).</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverized to produce 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or sampling types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The St Dizier Tin Skarn has been sampled over five diamond drilling campaigns between 1969 and 2006 by five separate companies, Placer, Minops, Cominco, Goldfields and Stellar.</li> <li>Approximately 1m samples for 2-3kg were taken from the bulk of the program whilst respecting geological boundaries derived from diamond saw cut core for mineralised zones as per industry standard</li> </ul>		
Drilling Techniques	<ul> <li>Drill type (eg core, reverse circulation, open hole hammer, rotary air blast, auger, Bngka, sonic etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face sampling bit or other type, where core is oriented and if so by what method</li> </ul>	<ul> <li>46 diamond HQ, NQ and BQ (or equivalent) diamond core for 7,626m.</li> <li>Renison drill core triple tube HQ and NQ</li> <li>Core not oriented.</li> </ul>		
Sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximize sample recovery</li> </ul>	<ul> <li>Core reconstituted, marked up and measured in all drilling campaigns</li> <li>Generally excellent (95-100%) in un-weathered</li> </ul>		

### Appendix 1. JORC (2012) Table 1 report



	<ul> <li>and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred.</li> <li>skarn b zones</li> <li>No relationship exists between sample bias</li> </ul>	out poor to acceptable 50-80% in oxidised itionship between recovery and grade was ed
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative of quantitative in nature. Core (or costean, channel etc) photography.</li> <li>Core geologi</li> <li>Core geologi</li> <li>Standa mine lo</li> <li>RQD at the standa mine lo</li> <li>Historic in to accomplete the standa mine lo</li> </ul>	geologically logged by experienced sts over 5 campaigns. rd lithology codes derived from historic gs used for interpretation. nd recoveries logged c logs loaded into spreadsheets and loaded cess database.
Sub-Sample techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter of half taken.</li> <li>If non core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub sampling stages to maximize representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results of field duplicate/second half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled</li> </ul>	ord of historic sample preparation ore split by diamond saw on 1m samples especting geological contacts. If core delivered to ALS by Stellar staff core crushed and pulverized to 70 micron ie ALS laboratories.
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysics tools, spectrometers, hand held</li> </ul>	006 drill holes - XRF fusion disc for multi t analysis by ALS Laboratories 06 samples were reported to have been ed by pressed powder XRF at a range of prcial and company laboratories including



	<ul> <li>XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>the Aberfoyle and Renison laboratories</li> <li>No record of QAQC procedures were available for historic drilling. The majority of the exploration was completed by Renison, Aberfoyle and Placer which were reputable mining companies of the time employing industry standard methods.</li> </ul>
Verification of sampling and assaying	<ul> <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> <li>Duplicate assaying in independent laboratory by Goldfields in Renison Laboratories. Placer and Cominco holes demonstrate good correlation, Minops holes underestimating Sn. Renison Data used in estimation.</li> <li>Verification drillholes into Central deposit by Stellar 2006.</li> <li>No twinned holes were completed however verification drillholes into Central deposit were by Stellar 2006.</li> <li>Primary data was received electronically and stored by consultant geologist.</li> <li>All electronic data uploaded to access database</li> <li>Historic data loaded onto spreadsheets and uploaded to Access database.</li> <li>Data validation with Surpac software, basic statistical analysis and comparison with historic plans and sections.</li> <li>Negative results for below detection limit assay data has been entered as detection limit</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys) trenches, mine workings and other locations used in mineral resource estimation</li> <li>Specification of grid system used</li> </ul>	<ul> <li>All hole collar surveys by licensed surveyor with the exception of 10 Cominco drill holes.</li> <li>All coordinates in GDA94</li> <li>RL's as MSL +1000m</li> <li>Down hole surveys by downhole camera and</li> </ul>



	Quality and accuracy of topographic control.	<ul> <li>Tropari for Goldfields and Cominco drillholes</li> <li>Azimuths corrected for magnetic field in magnetite zones</li> <li>Topographic dtm created from lands department 10m contour maps adjusted for known survey</li> </ul>
Data Spacing and distribution	<ul> <li>Data spacing for exploration results</li> <li>Whether data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource and Ore Reserve estimation procedures and classifications applied.</li> <li>Whether sample compositing has been applied</li> </ul>	<ul> <li>points (eg. drill collars)</li> <li>Drill spacing approximately 50 x 50m or less in the better drilled part of Central lode.</li> <li>Drill spacing approximately 100 x 100m in the Eastern Lode.</li> <li>Drill spacing is considered to be appropriate for the estimation of Indicated to Inferred Mineral resources with the exception of the Eastern Lode.</li> <li>Samples have been composited to 1m intervals for the resource estimation.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between drilling orientation and the orientation of key mineralised structures is considered to have introduced sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The majority of DDH have been drilled north-south or south-north, sub-perpendicular to ore body strike.</li> <li>Early Minops hole M1 drilled down mineralised structure</li> <li>Drill hole orientation is not considered to have introduced any material sampling bias.</li> </ul>
Sample Security	The measures taken to ensure sample security	<ul> <li>Details of sample security were not available for historic data</li> <li>All data captured and stored in customised access database and validated and updated by REG 2013.</li> <li>All historic drill logs entered into excel spreadsheets prior to being downloaded into database. Lithology codes migrated to Stellar Resources codes.</li> </ul>



		<ul> <li>Data integrity validated with Surpac Software for EOH depth and sample overlaps.</li> <li>Manual check by reviewing cross sections with the historic drafted sections and plans.</li> <li>Basic statistical analysis reveals several database errors including data in the wrong fields or ppm recorded as %. All errors rectified.</li> </ul>
Audits or Reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data</li> </ul>	<ul> <li>No audits or reviews of sampling data and techniques completed, as the majority of the data is pre 1985.</li> </ul>



#### CRITERIA **STATUS EXPLANATION** • All data captured and stored in customised **Database Integrity** Measures to ensure the data has not been • corrupted by, for example transcription or keying Access database by Red Hill. errors, between its initial collection and its use Drop down menu validation in Access. • for Mineral Resource estimation. Digital data uploaded from laboratory reports to Data Validation and procedures used. Access database. ٠ Data integrity validated with Surpac Software for EOH depth and sample overlaps and transcription errors. Data validated against historic plans and sections ٠ Negative samples changed to detection limits Site Visits Comment on any site visits by the competent Several site visits were made during 2013 to • • person and the outcome of any of those visits. validate location, collars, historic workings, mineralisation styles and exploration potential. • If no site visits have been undertaken indicate why this is the case. Geological Interpretation Confidence in (or conversely the uncertainty of) High confidence in the simple geological model • the geological interpretation of the mineral Major mineralised domains demonstrate good deposit. sectional continuity. Mineralized Sn domains are delineated using a Nature of the data used and any assumptions 0.2% Sn boundary and a minimum downhole made. The effect if any of alternative interpretations on width of 3m with some allowances for geological Mineral Resource estimation continuity. • The use of geology in guiding and controlling Internal dilution was restricted to a maximum of the Mineral Resource estimation 3m where possible, again maintaining geological • The factors effecting continuity of both grade continuity. alternative geological interpretations and geology No • attempted. Geology model used for mineralised domain modeling. The St Dizier skarn consists of 3 tin lodes within a Dimensions The extent and variability of the mineral resource • ٠ expressed as length (along strike or otherwise) vertically dipping tabular sheet of magnetiteplan width and depth below surface to the upper serpentine-calcsilicate skarn. The skarn extends

#### Section 3, Reporting of Mineral Resource Estimations



	and lower limits of the Mineral Resource	over a strike length of 400m by 3-40m in width and 200m vertical extent.
Estimation and Modelling techniques	<ul> <li>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.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by products</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterization).</li> <li>In the case of blockmodel interpolation the block size in relation to the average sample spacing and search employed.</li> <li>Any assumptions about correlation between variables</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of the basis for using or not using grade cutting or capping</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and the use of reconciliation data if</li> </ul>	<ul> <li>Estimation completed with Surpac<sup>TM</sup> software</li> <li>Wire-framed solid models on east-west sections.</li> <li>Solid models snapped to drill holes</li> <li>Domain intercepts written to database</li> <li>Data composited on 1m down hole including Sn, Soluble Sn, S, Cu, Fe, Zn, WO<sub>3</sub> and As</li> <li>Top cutting of WO<sub>3</sub> to 0.5% in Central South lens and Soluble Sn to 0.5% on Central North Lens on the 97.5<sup>th</sup> percentile. No other domains cut.</li> <li>Good correlation between Sn, S, Fe and As.</li> <li>Moderate correlation between WO<sub>3</sub> and Sn. Ordinary kriged model constrained by geology solid model</li> <li>5,367,500N to 5,368,000N, 344,800E to 345,800E and 700mRL to 1,240mRL</li> <li>Block dimensions of 20mN x 20mE x 20mRL block size with sub-celling to 2.5m in the x and z and 1.25m in the y directions</li> <li>Variogram models for Sn have moderate nugget effect (10%) but short range to sill of 15m.</li> <li>Search ellipse set at 100m to ensure most blocks are interpolated.</li> <li>ID<sup>2</sup> interpolation of grades</li> <li>Block grades validated visually against input data</li> <li>Global grade compares favorably with basic statistics</li> <li>Good correlation with previous polygonal estimations</li> </ul>



	available.	
Moisture	<ul> <li>Whether the tonnages were estimated on a dry basis or with natural moisture, and the method of determination of moisture content.</li> </ul>	<ul><li>No moisture determinations completed.</li><li>Estimate based on a dry tonnage</li></ul>
Cut-off Parameters	<ul> <li>The basis of the adopted cutoff grades or cutoff parameters</li> </ul>	<ul> <li>Domain modeling based on 0.2% Sn boundary, which appeared to be the natural cutoff for mineralisation continuity within the deposit.</li> <li>The resource is reported at 0.3% Sn block cut off</li> </ul>
Mining Assumptions	<ul> <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 made when estimating Mineral Resources may not always be rigorous. When this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>Conventional open cut mine</li> <li>Haul 20km to proposed Heemskirk Mill in Zeehan.</li> <li>Potentially followed by decline accessed underground operation utilizing long-hole stoping techniques.</li> </ul>
Metallurgical assumptions	<ul> <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 methods, but the assumptions made regarding metallurgical treatment processes and parameters made when estimating Mineral Resources may not always be rigorous. When this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</li> </ul>	<ul> <li>Preliminary Mines Department (1972) test work suggests 50% recoveries from the Central Lode via treatment including magnetic separation, sulphide floatation and gravity concentration.</li> <li>Goldfields testwork suggests Eastern lode problematic with multiple tin species.</li> <li>Process plant designed for Heemskirk project located in Zeehan.</li> </ul>
Environmental assumptions	Assumptions made regarding possible waste	No formal environmental studies have been



	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 for 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.	<ul> <li>conducted at this stage. Historic mining activities have left minor environmental legacies including minor areas of acid rock drainage. Tailings storage facilities, reagent storage and waste rock storage facilities will need to be addressed.</li> <li>Standard waste rock and water management procedures in high rainfall areas are likely to be required.</li> </ul>
Bulk Density	<ul> <li>Whether assumed or determined. If assumed the basis for the assumptions. If determined the methods used, whether wet or dry, the frequency of measurements, the nature size and representativeness of the samples.</li> <li>The bulk density for bulk materials must have been measured by methods that adequately account for void spaces (vugs, porosity etc), moisture and difference 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> <li>Bulk Density determinations from mineralogical composition.</li> <li>An assumed SG of 3.3 was applied based on the mineralogical composition of the deposit, 30% Magnetite (SG = 5.2) + 50% Serpentine (SG = 2.2) + 10% Silicates (SG = 2.6) + 5% Siderite (SG = 3.9) + 5% Pyrite/Pyrrhotite (SG = 4.8)</li> <li>The bulk density estimate is considered to be conservative given the four samples used for the 1972 metallurgical testwork contained 35-50% magnetite determined from Davis Tube recoveries.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resource into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in continuity of Geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Persons view of the deposit.</li> </ul>	<ul> <li>The resource has been classified based on confidence in the geological continuity, drill hole spacing, location of bulk samples and the ratio of acid soluble tin to total tin.</li> <li>Higher ratios of total Sn to acid soluble Sn, suggest the likelihood of increasing metallurgical recoveries.</li> <li>The resource west of 345,220E been classified as</li> </ul>



		<ul> <li>Indicated Resource as it has close spaced drilling</li> <li>Higher grade zones of continuous mineralisation east of 345,220E and west of 345,475E have been classified as Inferred Resource.</li> <li>The lower grade, deeper and metallurgically difficult Eastern Lode was not classified.</li> <li>The estimated resource and its classification appropriately reflects the views of the Competent Person</li> </ul>
Audits or Reviews	<ul> <li>The results of any Audits or Reviews of the Mineral Resource estimates.</li> </ul>	<ul> <li>No audits or reviews have been completed for this estimation</li> </ul>
Discussion of relative accuracy/confidence	<ul> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>Estimation global resource grade reconciles well with previous estimations</li> <li>Typically high nugget effect for this style of mineralisation and the wide drill hole spacing result in low to moderate confidence in the relative accuracy of the estimation, particularly on a local level.</li> <li>There is moderate confidence in the data quality with no QAQC data for historic drilling</li> <li>The statement relates to the global estimation of the St Dizier Skarn.</li> <li>No production data is available for this deposit</li> </ul>



#### COMPETENT PERSONS' STATEMENT

This Mineral Resource Estimation report was prepared in accordance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Tim Callaghan. *Mr Callaghan 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 Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserve. Mr Callaghan consents to the inclusion in the report of matters based on his information in the form and context it appears.* 

#### FORWARD LOOKING STATEMENTS

Some statements in this announcement regarding estimates or future events are forward-looking statements. They involve risk and uncertainties that could cause actual results to differ from estimated results. Forward looking statements include but are not limited to, statements concerning the Company's exploration program, outlook, target sizes and mineralised material estimates. They include statements preceded by words such as "expected", "planned", "target", "scheduled", "intends", "potential", "prospective" and similar expressions.