JORC Code, 2012 Edition – Table 1 Tellerhäuser Project

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• Sampling was by core drilling and underground channel sampling. • Core drilling was a minimum of 56mm diameter and was split in half using a core splitter. Drilling was conducted from surface and underground during the period 1969-71 and from underground only from 1971 to 1991. No percussion, RC or other drilling types were used. • Channel samples were cut with an angle grinder and the intervening 10cm chiseled out with a compressed air jack-hammer. • The samples were assayed using the same techniques, methodology and QAQC as the drill holes (see below).
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• All drilling was by the diamond core technique, generally with a diameter of 56mm (between HQ and NQ) and occasionally with a larger diameter, particularly in areas with poor ground conditions. • A total of 141,341.6m of core was drilled in 2112 drill-holes. • Channel samples consist of two by 2cm slots, 10cm apart, cut with an angle grinder and the intervening 10cm chiseled out with a compressed air jack-hammer. • A total of 3,082.9m were sampled in 1,336 channels, generally at 1m intervals unless lithology changed within the one meter interval, in which case the sample stopped at the lithological boundary.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure*	• Recoveries were recorded for every drill-hole as a decimal fraction of the measured length and the average recovery was over 97% for both core and channel sampling.

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	representative nature of the samples. • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• No bias with either the sampling method or the tin grade is observed.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Logging consisted of handwritten hardcopy log sheets that have been transcribed to digital data. This included using numeric codes for the different lithotypes. The quality of the logging is good and includes the added bonus of graphic logs. • No core remains available for viewing. Some channels are still available for viewing underground. • All core and channels were logged using the same logging codes and techniques.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Core was marked up for sampling under geological control, generally using a 1m sample interval but with occasionally larger and often smaller samples being marked due to samples being restricted to a single lithotype. • The core was cut to these intervals and then split into halves using a core splitter. One half was kept and the other used for analysis. • Channels were collected at regular intervals underground from top to bottom of the side face of the excavation, designed to complete a geologically continuous sample between upward and downward oriented drill holes drilled within the excavation. • The sample for analysis was crushed in 2-3 stages depending on its consistency. In the first stage, the entire sample was crushed to 100% passing 10mm using a double toggle jaw crusher. In the second and third stages, the sample was crushed to minus 1mm using a single toggle jaw crusher. After homogenization, the sample was divided until a representative 400g sub-sample was achieved. • This 400g sub-sample was then pulverised to 95% passing 65 micrometres using a vibratory disc mill (this criterion was tested internally and externally at regular intervals). From this powder, different splits were collected for the various assay techniques. • The procedure for channel samples was essentially the same from the crushing stage above.
Quality of assay data	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered*	• A total of 60,085 sample records have been recorded. Of these, 47,582 have been assayed for tin. A total of 39,044 were assayed

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and laboratory tests	*partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	using gamma-ray absorption spectroscopy the "EFA" method, which is also known as Mossbauer Spectroscopy. 13,588 samples, including duplicates, have been assayed for tin using a wet chemical technique, at a separate external laboratory offsite. The chemical assays were undertaken on another 5g split of the original 400g pulverised drill core sample. • The Mossbauer Spectroscopy technique is similar to the chemical XRF technique but uses gamma rays rather than X-rays. Due to the higher energy of gamma rays compared with X-rays, it is considered to be more precise. It is generally used as a scientific tool rather than for routine assaying. The technique appears to be very accurate up to 10% Sn maximum detection limit. • An additional split of the original pulverised sample was collected at regular intervals (approximately 1 in 10) and sent to an external laboratory at Grüna (Central laboratory of SDAG Wismut) where it was analysed by a wet chemical method. The working routine was started with an alkali fusion with Na2O2/NaOH fluxing reagent (sample/reagent = 1/10). Leaching was undertaken with distilled water and neutralized with HCl. Three grams of aluminium were added to this solution to create reducing conditions. Small grains of calcite were added to ensure the production of CO2 and thus prevent the influence from oxygen in the air. This tin solution then underwent a titration process with iodine utilizing the reaction $Sn^{2+} + I_2 \rightarrow Sn^{4+} + 2\ I$. By adding small drops of 0.01M (molar) iodine solution to the dissolved sample, an abrupt colour change from transparent to blue appears at a certain level of added iodine. Each 1 ml of added reagent corresponds to 0.5935 mg Sn in the sample. By using the simple rule of proportion, the tin grade of the original sample was thus calculated. • Many of the samples were analysed for tin and other elements using arc atomic emission spectroscopy (AES) or optical emission spectrometry (OES). However, due to the very low upper detection limit for tin (~1000ppm) only low tin grade samples were reported and digitised. A powdered sample (mixed with graphite to make it conductive) was put through an electric arc where the sample was heated to a high temperature to excite the atoms within it. The excited atoms emit light at characteristic wavelengths that is

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		dispersed with a monochromator and detected on a photographic plate (monochrome). The intensity of the characteristic spectral lines was used to determine the concentration of certain elements in the sample. These analyses have not been used in the tin resource estimation. The following elements were analysed by the above method: Cu, Sn (not used), W, Pb, Ag, Mo, B, Sb, Be, Cd, Bi, As, Ge, In, Nb and Ta. Over range assays comprised >1000ppm for Zn, Cu, Pb & Bi, >500ppm for W, >200ppm for Bi & Cd, >100ppm for Be and >50ppm for Ag. Over range analysis was done chemically. • Total iron and zinc were analysed by FAAS with iron reported as Fe_2O_3 as a proxy for magnetite. This will tend to understate the amount of magnetite, as hematite has slightly less iron compared to magnetite (approx 69% cf 72%). The conversion of Fe to Fe_2O_3 also assumes that all the iron is present as magnetite. Other iron minerals reported in the skarn mineralogy include amphiboles, garnets, chlorite and iron-rich sphalerite. • All analytical machines in the laboratories of Wismut underwent a calibration process before the first sample of the day, at noon and generally at the end of the day to ensure accuracy. These calibrations were undertaken using different standards at different grades. • Within sample batches, a minimum of 1 standard per 20 samples was dictated but it was actually mostly undertaken at a rate of 1 in 10. These standards were made of different matrix and had different grades to check the accuracy. Standard measurements were logged in the laboratory and stored in the archive. Only sample results were reported to the client (here the exploration geology department). • **Duplicates:** A total of 11,408 results from internal control samples as lab duplicates for the EFA method are available, ie the results come from a second 5g split from the original 400g pulp. This represents about 30% of the total EFA analyses or roughly 1 in 3 samples. Also excluded were samples above 10% Sn as this is the limit of accuracy for the EFA method. The first analysis was completed at a laboratory on site and the second/check analysis was completed at the same laboratory. Statistical analysis of this data shows that there is a bias in the data but the bias is not considered significant and will not impact negatively on the resource estimate classification. The

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		samples mentioned in this section have been termed duplicates but there is some argument that they are replicates. However it is concluded that the homogenisation of the sample preparation is acceptable and the assays are repeatable. • **Analytical Method Check:** A total of 5,066 samples were assayed for tin using both the onsite EFA method and an offsite laboratory for the wet chemical technique. These check samples comprised a 5g split from the original 400g pulverised sample. 4,808 samples were used for comparison of the accuracy between the two methods. This represents about 10% of the total EFA analyses. Statistical analysis of this data shows that there is a modest elevated bias in the assay associated with the chemical technique. The data suggests that the EFA method might be slightly conservative but the bias is not considered significant enough to impact negatively on the resource estimates. The conclusion is that both sets of assays can be combined into a single 'preferred' tin assay in the drillhole database. • **Third Laboratory Check:** A total of 592 external control samples for the chemical method were collected and assayed at a third laboratory at the Ehrenfriedersdorf tin mine. The analytical method was the same wet chemical technique as used at the primary lab. The samples are another 5g split of the original 400g pulverised sample and hence provide control on the repeatability and accuracy of the chemical technique and the laboratory. After allowing for detection limits and labelling issues a total of 186 samples were analysed representing about 1.5% of the total chemical analyses or roughly 1 in 75 samples. A bias can be seen in the data, which is due to higher values associated with the check laboratory. The difference between the means for the two datasets is about 17%, which is a significant difference. It is also apparent that the discrepancy between samples appears to increase with grade. As the chemical assays from the primary laboratory compare favourably with the EFA data, the lack of repeatability with the chemical check assays is not considered critical but it does create some uncertainty. It is also difficult to resolve the issue as the pulps have been destroyed and so further check assaying is not possible. • The assay techniques are considered appropriate • The QAQC suggests that there are no obvious problems with the assay data

Criteria	JORC Code explanation	Commentary
		that would have a significant impact on the resource estimates
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• As the drilling was undertaken during the period 1969-1991 during the era of the German Democratic Republic (GDR), personal verification is not possible. However, channels from which samples were collected are still visible underground and will be sampled for future verification. • No twinned holes have been located but several areas of close spaced drilling were undertaken as a test of small scale variability. It was concluded during the GDR era that the small scale variability was as expected from this style of deposit. • Some testwork was also completed to examine if the core size had an impact on the tin grade. This involved some closed spaced drilling of 46mm, 59mm and 76mm core sized holes from underground. The conclusion in the GDR era was that there was no bias. • All data was in hardcopy format and has been digitised by local consultants (Beak Consultants GmbH). Checks by both Beak and Saxore has found only minor errors and the digital data is considered to be of good quality. Indium was not assayed for every sample and hence default values of 1ppm were inserted for samples not assayed. It is highly unlikely that all samples not assayed were this low and hence this is considered to be conservative. Confirmation work is currently in progress designed to obtain a more realistic average value for samples not assayed.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• In the 1976 to 1981 drilling campaign, drill collars were surveyed in using a closed loop theodolite method tied in to the national grid (Gauss-Kruger Zone 4). It is uncertain if this method was used for the earlier or later drilling campaigns. • To facilitate the resource modelling the data was rotated 50^{o} clockwise to a local N-S grid:

GK Zone 4 Coordinates		**Local Grid Coordinates**	
Y1	5,590,386.380	Y1	50,000
X1	4,561,666.202	X1	10,000
Y2	5,590,769.402	Y2	50,000

Criteria	JORC Code explanation	Commentary
		X2 | 4,561,987.596 | X2 | 10,500 • A topographic surface was supplied by Beak as a 3D solid representing the sediments between the ground surface and the deep granite contact. The surface data was based on 20m centres but its use as a surface is limited. Visual comparison of surface drillhole collars with respect to the topography indicates that there are small differences which should be further investigated, but at this stage the issue does not have a serious impact on the resource estimates but will have an impact on the classification of the estimates. • Downhole surveys for the early drilling were measured using a Multigraph Inclinometer at 10 to 25m intervals. This apparatus had an accuracy of 0.5° for the dip angle and 3° for the azimuth. The final phase of drilling saw the use of camera surveys although no details are known.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Exploration results are not being reported • Drillhole spacing comprised two different regimes a) detailed drilling of the order of 30 by 10m or 60 by 15m, and b) widespaced drilling often on fencelines up to 100 to 200m apart with hole spacing on the lines at 50 to 100m. • The data spacing and distribution is sufficient to establish and suitably classify Mineral Resource Estimates. • No sample compositing has been undertaken.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The drill orientation is approximately perpendicular to the main mineralised seams and hence is considered to be optimal. • The schist mineralisation at Hammerlein has both a sub-vertical and sub-horizontal component and hence the mainly sub-vertical drilling may not be optimal for some of the sub-vertical structures.
Sample security	• *The measures taken to ensure sample security.*	• This was an active uranium mining area during GDR times and security was thus very tight. No reason to suspect any security issues can be found.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Audits and reviews were conducted at regular intervals during the GDR era but results are not currently available. The GDR era estimates are classified between C1 and Delta category which require audits by the central authorities.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The mineralisation is secured by the Breitenbrunn Erlaubnis (exploration permit) that is valid up to 31st December 2017. It is 100% owned by Saxore Bergbau GmbH. This licence is valid for Sn, W, Mo, Ta, Be, Cu, Pb, Zn, Ag, Au, Ge, In Fe, Fluorite and Baryte. • A pre-existing Bewilligung (mining permit) exists over radioactive minerals but this is owned by Wismut GmbH, a Federal Government company tasked with clean-up of previous uranium mining activities which is not allowed to undertake any mining activities. It is currently only treating water run-off from the old mine. • The area is in a region of secondary pine and mixed forest and farmland and the environment has been downgraded in the past by extensive previous mining activities. No immediate environmental impediments are obvious.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Significant work was undertaken by a Soviet – East German joint venture and these activities for the basis of the current resource estimate. No other activities are known in the project area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The mineralisation consists of skarn, overprinted skarn, and schist hosted sub-vertical and sub-horizontal greisen veins. It is hosted within Cambrian to Ordovician meta-sediments intruded by Carboniferous to Permian aged granites. Metamorphism is generally under greenschist to amphibolite facies conditions. The granites are generally accepted as the source of the tin mineralising fluids which have subsequently deposited tin and other associated elements in chemically and structurally favourable settings when pressure, temperature and physico-chemical conditions were optimal. In particular, originally calcareous beds have acted as a very good chemical trap for the ascending tin rich fluids, being metasomatised to a skarn assemblage. However, a significant, later, retrograde event associated with chlorite minerals, has deposited a significant amount of coarse cassiterite (SnO_2) and hence the deposit is not a "typical" skarn tin deposit. • The overprinted skarn seams are sub-horizontal zones between 1m

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		and 15m true thickness (averaging about 3m) that are several hundred metres wide and several thousand metres long. These consist of amphibole, garnet, pyroxene, feldspar, magnetite, cassiterite, sphalerite and other sulphides. These have been subsequently partially metasomatised under retrograde conditions which has resulted in chloritic alteration fronts with coarse quartz-cassiterite segregations and veins. Cassiterite has been deposited in both the prograde and retrograde metasomatic events and occurs in both coarse and fine grained (less than 50 micrometres) forms. • These seams are very continuous geologically and can be traced over several kilometres. However, several generations of mineralisation are evident and the paragenesis is complex. • The Hämmerlein seam has associated schist hosted greisen style mineralisation that occurs as both sub-vertical and sub-horizontal quartz-feldspar-tourmaline-cassiterite veins immediately below the main seam. These form a sheeted to stockwork vein array which has been located up to 30m below the main seam and is open at depth. It is suspected that this zone may have significant depth potential due to its partially sub-vertical disposition but has not been adequately drill tested below about 30m beneath the Hämmerlein Seam.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Exploration results not being reported

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade*	• Exploration results not being reported

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	results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• Exploration results not being reported
Diagrams	• *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.*	• Exploration results not being reported
Balanced reporting	• *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.*	• Exploration results not being reported
Other substantive exploration data	• *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.*	• Exploration results not being reported
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• It is planned to repeat the underground channel sampling wherever accessible in order to further confirm previous work, especially assaying, and to ascertain the background concentration of the elements that were not always assayed (e.g. indium). • Some underground drilling is also planned to further constrain the assaying and to examine the local variability. • Subsequent to this, additional drilling is planned from both surface and underground to increase confidence levels and thus the category of resource.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *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.* • *Data validation procedures used.*	• *Saxore contracted Beak Consulting GmbH, a German geological consultancy, to compile a drillhole database in MS Access. Data was exported from the supplied database by H&S Consultants (H&SC) and loaded into a new Access database adapted for use with mineral resource estimation. Various data checks were completed with the loading into the new database e.g. duplicate samples.* • *Limited validation was conducted by H&SC to ensure the drill hole database is internally consistent. Validation included checks for overlapping or duplicated samples, checking that no assays, density measurements or geological logs occur beyond the end of hole and that all drilled intervals have been geologically logged. The minimum and maximum values of assays and density measurements were checked to ensure values are within expected ranges.* • *H&SC has not performed detailed database validation and Saxore personnel take responsibility for the accuracy and reliability of the data used to estimate the Mineral Resources.*
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• *Regular site visits have been carried out by Tony Truelove & Dr Marco Roscher, Technical Director and Managing Director for Saxore, who act as the Competent Person with responsibility for the integrity and validity of the database on which resource estimates were conducted.* • *A site visit was undertaken in May 2014 by Simon Tear of H&SC, Competent Person for the reporting of the resource estimates. This included underground inspection of parts of Hammerlein for both the skarn and schist mineralisation, a visit to the GDR archive at Wismut to review hardcopy data and discussion with geologists who carried out the exploration work. Discussions with Beak were also held over the geological interpretations.*
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.*	• *The Tellerhauser tin deposits are stratabound with the mineralisation generally limited to easily identified skarn host rocks comprising calc-silicates with pyroxenes and amphiboles, massive magnetite, all hosted within mica schists.* • *The interpreted mineral zones were based primarily on logged skarn*

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	• *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	*lithology. The interpretations for the three seams are reasonable but modest alternative interpretations are possible for Dreiberg and Zweibach.* • *The lateral terminations to mineralisation are uncertain but generally are based on a lack of drilling information. Up and down dip terminations are based on a lack of drilling* • *Tin mineralisation comprises veinlets, blebs and finer disseminations of cassiterite throughout the skarn host. There is no consistent structural control to the tin mineralisation.* • *The distribution of tin mineralisation within the skarn units is not well understood. Different types of skarn have been identified but with no definitive correlation with the tin mineralisation. Other possible payable elements e.g. zinc, indium and magnetite have no correlation with tin or with each other.* • *The continuity of tin mineralisation is modest, however high grades appear to be patchy. The patchiness appears to have some degree of regularity that may be due to either localised NE/SW oriented fold hinges or some function of structure emanating from the granite batholith below.* • *At Hammerlein vertically dipping sheeted vein swarms exist in the footwall schist beneath the skarn.* • *3D geological interpretations in the form of wireframes were completed on 30m sections for Hammerlein, 50m sections for Dreiberg and 100m sections for Zweibach.* • *A wireframe solid was constructed for Hammerlein by Beak Consulting outlining the mineralisation based on drillhole lithology with an acknowledgement to tin grades.* • *Wireframe surfaces representing the base and top of mineral/skarn zones were created for Dreiberg and Zweibach by H&SC These surfaces represent a moderately constrained geological interpretation based on logged lithology, tin grade and geological sense. This interpretation relied on the skarn contact being clear cut which was deemed appropriate based on observations made from the site visit.* • *Essentially a lithological model was used to guide and control the Mineral Resource Estimate with wireframes outlining the zone of mineralisation that were used to select samples and constrain the*

Criteria	JORC Code explanation	Commentary
		estimates.
Dimensions	• *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.*	• *The Hammerlein seam is relatively flat lying with a dip of about 10^o to the SE in the southern half of the deposit. Mineralisation is interpreted to measure 1.7km down dip and 1.0km across strike. It ranges in thickness from 2 to 15m.* • *The Dreiberg seam is relatively flat lying with a dip of about 10^o to the SE in the northern half of the deposit. Mineralisation is interpreted to measure 3.5km down dip and 0.7km across strike. It ranges in thickness from 2 to 10m* • *The Zweibach seam is relatively flat lying with a dip of about 10^o to the SE in the southern half of the deposit. Mineralisation is interpreted to measure 2.3km down dip and 0.6km across strike. It ranges in thickness from 2 to 8m*
Estimation and modelling techniques	• *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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• *The tin, zinc, indium and 'magnetite' (converted to Fe_2O_3 from iron assays) were independently estimated using Ordinary Kriging on 1m composites in the GS3M software. The modelled data was then loaded into a Surpac block model for resource reporting and display. H&SC considers Ordinary Kriging (with top cuts when relevant) to be an appropriate estimation technique for the type of mineralisation and extent of data available at the Tellerhauser prospects.* • *A total of 8,098 tin composites were used for the Hammerlein skarn, 14,970 for the schist deposit, 1,927 tin composites for Dreiberg and 664 tin composites for Zweibach. 1m composites were used, extracted using the mineral wireframes. Zinc, indium and magnetite generally had lesser number of composites than tin, often considerably so.* • *Previous estimates for all three seams were completed by the GDR-Russian JV in the early 1990s. The estimation method was a sectional polygonal one. The GDR spatial limits for the mineral estimates for the Dreiberg deposit were used to constrain the reporting of the new resource estimates.* • *No assumptions were made regarding the recovery of by-products.* • *Deleterious elements were not estimated.* • *Block dimensions for Hammerlein are 15 x 10 x 2m (strike, down dip and vertical respectively). The strike dimension was chosen as a reflection of the drillhole fenceline spacings; the down dip was a*

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		function of the drillhole spacing along fencelines and the vertical dimension was chosen to reflect the thickness of the mineralisation and sample spacing. Block sizes for Dreiberg and Zweibach were 30 x 10 x 2m with the 30m strike direction a reflection of the drillhole fenceline spacing. No sub-blocking was used. • *Each element was estimated separately. The modelling strategy involved three runs of 3 pass searches with progressively larger search radii and decreasing data point criteria. Search radii were based on drillhole spacing. The strategy is not ideal but was done to try and accommodate both the detailed drilled areas and the wider spaced drilling, whilst at the same time maintaining control on the interpolated grades, and the extrapolation of grades beyond drillholes, and to allow for a measure of any exploration potential. In all three seams some blocks within the interpreted solid/surfaces had no block grades estimated due to a lack of drilling data.* • *For the resource estimates the first pass for Hammerlein used radii of 30 x 20 x 4m (strike, down dip and across mineralisation respectively) with a minimum of 12 data points for a minimum of 4 octants. The second pass used 48 x 32 x 5.2m with a minimum of 12 data points for a minimum of 4 octants. The third pass used the same larger search but with a minimum of 6 data points and a minimum of 2 octants. For Dreiberg and Zweibach the first pass search used radii of 60 x 20 x 3m (strike, down dip and across mineralisation respectively) with a minimum of 12 data points for a minimum of 4 octants. The second pass used 90 x 30 x 4.5m with a minimum of 12 data points for a minimum of 4 octants. The third pass used the same larger search but with a minimum of 6 data points and a minimum of 2 octants. Runs 2 and 3 used increasingly larger searches and decreased minimum number of data points. For Hammerlein the largest search pass was 120 x 120 x 16m with a minimum of 6 data points and 2 octants. For Dreiberg it was 225 x 225 x 15m with a minimum of 6 data and 2 octants, whilst for Zweibach the maximum search was 150 x 150 x10m with a minimum number of 6 data points and 2 octants.* • *Each deposit comprised two search domains, generally a flat-dipping domain and a slightly steeper dipping domain derived from the geometry of the mineral zone. These domains were also used to*

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		control the loading of the block model with the modelled data. The divisions between the domains were treated as soft boundaries. • *The minimum thickness of the wireframe solid is around two metres which is assumed to be larger than the minimum mining width and can therefore be selectively mined.* • *No significant correlation was found to occur between concentrations of the estimated elements.* • *Modelling using the GS3M software generated interpolated grades as text files which were loaded into the block model. The loading controls placed block grades into blocks which had a partial percent volume adjustment >0. The volume adjustment percentage was based on the amount of the block inside the 3D solid for the Hammerlein mineralisation or the amount of the block between the upper and lower surfaces for the skarn interpretation of Dreiberg and Zweibach. An additional control was the relevant northing value to separate the different search domains based on the dip angles associated with each seam.* • *The maximum extrapolation of estimated resources is about 250m.* • *A review of summary statistics for composites for all seams indicated moderately high coefficients of variation for tin, zinc and indium (not magnetite). Experimentation with applying top cuts indicated minimal effect for tin and indium, but showed a greater impact for zinc. Thus top-cutting was applied to zinc as the effects of very high values on the Mineral Resource Estimates were considered by H&SC to be significant. The number of samples affected by top cutting was <10 .* • *The block model was reviewed visually by H&SC and Saxore geologists and it was concluded that the block model fairly represents the grades observed in the drill holes. H&SC also validated the block model statistically using cumulative frequency plots and summary statistics. No issues for tin were noted. Modelling of the zinc composites for Dreiberg and Zweibach tended to produce a modest localised overstatement of block grades due to isolated higher grade samples. This is reflected in the classification of the zinc estimates*
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• *Tonnages of the Mineral Resource are estimated on a dry weight basis.*

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Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• *The tin resource estimates are reported at a cut-off of 0.2% Sn. This value was based on information supplied by Saxore. The previous GDR work had used a cut-off of 0.15% Sn.* • *Zinc and indium resources are reported separately as a series of estimates reflecting the disparate nature of the number of assays relative to the tin values and to each other.* • *A partial percent volume adjustment i.e. block correction factor was applied to all deposits.* • *At Dreiberg the overall GDR resource outline (C1, C2 and Delta categories) was used to constrain the reporting of the resource estimates. This was due to the wide drillhole spacing and to provide some control on the localised high grade zones in the drilling.* • *The schist material at Hammerlein was reported using a partial percent volume adjustment generated from the base of skarn surface and a newly interpreted (by H&SC) base-of-assaying surface.*
Mining factors or assumptions	• *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.*	• *The Mineral Resources were estimated on the assumption that the material will be mined by an appropriate underground method e.g. room and pillar.* • *Minimum mining dimensions are envisioned to be around 5 x 5 x 2.5m (along strike, down dip, vertical respectively).* • *The resource estimation includes some internal dilution.* • *Over 60km of development has been completed for the three seams. Dreiberg and Zweibach are flooded but part of Hammerlein is accessible* • *Ground conditions for Hammerlein appear to be very good.*
Metallurgical factors or assumptions	• *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.*	• *A substantial amount of historic metallurgical testwork has been completed by the GDR-Russian JV.* • *The mineralogy of the schist mineralisation is simple, with tin occurring almost exclusively as relatively coarse cassiterite. This can be economically extracted to a plus 45% tin concentrate with 60-70% recovery using simple gravity techniques such as jigs and shaking tables. It is likely that the schist mineralisation can be pre-concentrated underground using simple coarse crushing to between 2mm and 20mm, and a dense media separator. This has potential to upgrade mineralisation with a 0.19% Sn head grade by a factor of 50 to a plus 9% Sn concentrate with concomitant reduction in total mass*

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		of over 95% and tin recovery of 80-85%. • *While the mineralogy of the skarn mineralisation is more complex, there are several options available which suggest that the tin and other metals can be extracted economically. It appears likely that all skarn low in magnetite and sphalerite could be treated with a simple coarse crush and DMS to at least double the grade and half the mass with good tin recovery. Potential to produce a moderate grade concentrate underground by coarse crushing and DMS separation is considered to be high. Tin recovery from this process could be around 75-85%. This would again have the added benefits of reduced volume of material requiring transport to surface, a smaller surface plant for further processing and less waste and tailings.* • *If it proves to be too expensive to produce a high grade tin concentrate, preliminary investigations suggest it is possible to economically recover tin from a 10% tin concentrate (already proven to be possible by previous testwork) by pyro-metallurgical techniques and there are several existing smelting operations nearby that could potentially be modified to enable this.* • *The magnetite-sphalerite rich skarn mineralisation could also be upgraded while still underground using magnetic separation techniques. This would also significantly increase the overall grade of material going through the main plant.* • *Indium is expected to report to a copper sulphide concentrate that will be recoverable via simple flotation techniques (Saxore report that the indium occurs as roquesite, a copper-indium-sulphide). Ongoing work is currently looking at options for separating indium from the copper concentrate.*
Environmental factors or assumptions	• *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.*	• *The environmental factors have not been investigated for the purposes of the Resource Estimate reported here.* • *The area comprises rolling hills with woodland and farming.* • *Climate is temperate with moderate rainfall typical of central northern Europe* • *Underground mining has previously occurred in the immediate area* • *More work is required in order to quantify the environmental factors but H&SC are not aware of any critical issues at this stage.*

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Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• *Determination of density used the selection of individual pieces of unsealed core or rock being subject to the immersion in water weighing method (Archimedes Principle).* • *A total of 568 core-derived samples and 726 channel-derived samples were collected. The samples were assigned a lithology code with the result that 5 subsets of the density data existed. This constituted the vast majority of the rock types associated with the mineral zone. Each subset exhibited a substantial range in density values reflecting perhaps the complex mineralogy associated with the skarn.* • *Average density values for the 5 subsets were calculated by H&SC. These average values were then allocated to lithologies within the drillhole database and subsequently modelled for the mineral zones using the Inverse Distance Squared method. A total of 8,719 data points were modelled for Hammerlein, 2,436 for Dreiberg and 841 for Zweibach.* • *Subsequent resource reporting indicated average density values between 3 and 7% lower than the average values used in the GDR resource estimates (which are based on a lot fewer data points).*
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• *The resources are classified entirely as Indicated and Inferred* • *Classification of the resource estimates is primarily based on the search pass used in the grade interpolation and is ultimately a function of the data point distribution i.e. the drillhole spacing and the spatial continuity of the grade as per the variogram ranges.* • *Classification has also taken into consideration the assessment of other impacting factors such QAQC outcomes, density measurements, potential variations with the geological model, the understanding of the mineral species and their distribution controls and previous resource estimates.* • *H&SC consider that appropriate account has been taken of all relative factors and the Mineral Resource Estimates fairly represent the Competent Person's view of the deposits within the confidence of Indicated and Inferred Resources.* • *H&SC has not assessed the reliability of input data and Saxore personnel take responsibility for the accuracy and reliability of the data used to estimate the Mineral Resources.*

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Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• *The estimation procedure was reviewed as part of an internal H&SC peer review and the block model was reviewed visually by Saxore geologists.* • *No audits of the Mineral Resource estimates have been completed.* • *A comparison with the original GDR resource estimates at a 0.15% Sn cut off indicated higher GDR grades for all three areas that are primarily attributed to the over-constraining effect of the sectional polygonal method.*
Discussion of relative accuracy/ confidence	• *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.* • *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.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• *No statistical or geostatistical procedures were used to quantify the relative accuracy of the resource.* • *All Resources are classified as Indicated and Inferred. Resolving issues with metallurgical recovery, QAQC, collar locations and the geological interpretations may allow for an upgrading of the classification of the estimates to include Measured Resource.* • *The Mineral Resource Estimates are considered to be accurate globally, but there is some uncertainty in the local estimates due to the current drillhole spacing.* • *The Mineral Resource Estimates of the Tellerhauser deposits are sensitive to spatial distribution of isolated higher grade intercepts, particularly zinc.* • *The Mineral Resource Estimates of the Tellerhauser deposits are sensitive to the cut-off grade applied. Closer spaced drilling would raise the confidence in the Mineral Resource Estimates by confirming grade continuity and providing more information on the structure or distribution of the mineralisation.* • *A small amount of production data for Hammerlein exists, mainly as trial bulk samples. However it is difficult to ascertain exactly what was mined as ore and what was waste, such that comparison with the estimates whilst it indicates some comparability, the amount of material involved is very small. It is worth pointing out that whilst it was difficult to match the tonnes extracted, the grade of the mined material was reasonably close to the resource estimate grades for both the skarn and schist material i.e. <10% difference.*