JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

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.*	• Diamond core drilling sampling for a previously known and drilled vein type spodumene pegmatite deposit targeting to confirm previous drilling and analytical results and to lift the resource category to indicated + inferred
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).*	• Core drilling, core diameter size 50,7 mm / WL 66, driller Oy KaTi Ab, (Onram 1000), standard tube and bit, core orientated every 10 meter by "wax stick"
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Core recovery has all the time been > 99 %, mean RQD is 89,1%. In pegmatites RQD is typically 100%.
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.*	• Lithological logging, RQD measurements, • Photographing of core boxes showing analytical boundaries and analytical numbers, • All the core logged, and all the target mineralization type core (spodumene pegmatite) sampled and analyzed,

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	• *The total length and percentage of the relevant intersections logged.*	
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Drill core (diameter 50,7 mm) cut to two identical halves using a diamond saw, the other half sent for analysis, • Sampling boundaries are based on mineralogical homogeneity, varying from 0,2 m to 2,5 m, • Every 20th sample is replicate to test precision, in which the remaining core half is cut to a quarter sample for analysis, • Every 20th sample is a reference sample to test accuracy, • The primary sample size for analysis (cut half core) is 2,4 kg/m, • The sample size is too small for the grain size (1 cm), but the amount of the mineral (spodumene) in the cut off boundary is about 7 %, varying from 7 to 40 %, degreasing the sample size effect, tested by replicate samples,
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The half core samples were sent for preparing and analysis to Labtium / Finland, • First the samples are dried and crushed to – 6 mm, split to 0,7 kg, which is totally pulverized to the analytical and storage sample, • Analyzed using sodium peroxide fusion followed by ICPOES (sample size 0,5 g of pulp), which is a total technique and considered as the most suitable for spodumene and beryl, • The laboratory (Labtium) results have been tested in two independent international laboratories (ALS, SGS), acceptable levels of both accuracy and precision have been established and the results were reported,
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.*	• All the drill holes are logged and verified by the company geologists Aki Manninen and Esa Sandberg (competent person by SveMin & FinnMin), the core boxes were photographed and are available for verification in Kaustinen, • Logging and analytical data were written to Excel sheets for further use,
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.*	• The collar locations were measured by accurate GPS (accuracy 2-3 cm), • Start azimuths were measured for all the holes using GPS, for longer holes (>100 m) deviation was surveyed by Deviflex instrument, in short holes only dip was measured (by DeviDip instrument),
Data spacing	• *Data spacing for reporting of Exploration Results.*	• The vein deposit structure and orientation is known and most of the

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and distribution	• *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.*	drill holes were drilled close to perpendicular to the deposit, • No sample compositing were applied in the primary data,
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 sampling orientation varies, but the spodumene distribution inside the deposit is quite homogenous. Thus no special mineralised structures exist inside the deposit indicating unbiased sampling net,
Sample security	• *The measures taken to ensure sample security.*	• Keliber personnel or dril contractors transport diamond core to the core logging facilities where Keliber geologists log the core. Samples are transported to the sample preparation laboratory and then on to the analysis laboratory using contract couriers or laboratory personnel. Keliber employees have no further involvement in the preparation or analysis of samples.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• A review of the sampling techniques and data was carried out during the site visit by Markku Meriläinen and Pekka Lovén in September 2014. The conclusion made was that sampling and data capture are to industry standards.

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.*	• Laboratory assay results are loaded as electronic files direct from the laboratory so there is little potential for transcription errors. • The data base is systematically audited by Keliber geologists. • Outotec (Finland) Oy also performed data audits in Surpac and checked collar coordinates, down hole surveys and assay data for errors. No errors were found.

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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.*	• The most recent site visit was conducted by Markku Meriläinen (Outotec) and Pekka Lovén (Outotec) in September 2014. Drilling, logging, and sampling procedures were viewed and it was concluded that these were being conducted to best industry practice.
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 use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation at each deposit is considered to be good and is based on the reports by Keliber Oy. • Drill hole logging by Keliber geologists, through direct observation of drill samples have been used to interpret the geological setting. • The continuity of the main mineralised lens is clearly observed by Li2O grades within the drill holes. The nature of the lens-like structures would indicate that alternate interpretations would have little impact on the overall Mineral Resource estimation. • The mineralization is related to pegmatite veins.
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 Syväjärvi Mineral Resource area extends over a strike length of 400 m, has a maximum width of 200 m and includes the 100 m vertical interval from the 80 m level to the -40 m level.
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 (eg 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.*	• Inverse Distance Squared (ID2) interpolation with an oriented 'ellipsoid' search was used for the estimates. Surpac software was used for the estimations. • Three dimensional mineralised wireframes were used to domain the Li2O data. Sample data was composited to 2.0m down hole lengths using the 'best fit' method.The Li2O values in intervals with no assays were set to zero. • Base on the statistical analysis there is no need for grade capping • The maximum distance of extrapolation from data points was 70 m.. • An orientated 'ellipsoid' search was used to select data and was based on the observed lens geometry. The search ellipses was

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	• *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.*	orientated to the average strike, plunge, and dip of lens. • The parent block dimensions used were 10m x 10m x 5m with sub-blocks of 5m x 5m x 2.5m. The parent block size was selected on the basis of being approximately 25% of the average drill hole spacing. • The block model size used in the Mineral Resource estimate was based on drill sample spacing and pegmatite lens geometry. Selective mining units were not modelled. • A three step process was used to validate the models. A qualitative assessment was completed by slicing sections through the block models in positions coincident with drilling. A quantitative assessment of the estimates was completed by comparing the average Li2O grades of the composite data against theLi2O block model output for all the mineralised wireframes. A trend analysis was completed by comparing the interpolated blocks to the sample composite data. This analysis was completed for northing across the deposit. Validation plots showed good correlation between the composite grades and the block model grades.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages and grades were estimated on a dry in situ basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The Mineral Resource has been reported at a 0.5% Li2O cut-off. The cut-off grade corresponds to the average site operating cost. •
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.*	• It is assumed that the Syväjärvi deposit will be mined using open-pit mining methods.
Metallurgical	• *The basis for assumptions or predictions regarding metallurgical*	• There is no metallurgical test work done for the Syväjärvi pegmatite

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factors or assumptions	*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.*	material. But it is assumed that the Syväjärvi pegmatite shows about a similar metallurgical performance than the well tested Länttä pegmatite.
Environmen-tal 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.*	• No assumptions have been made by Outotec (Finland) Oy regarding possible waste and process residue disposal options. •
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.*	• Bulk densities have been determined by Keliber and Labtium using water displacement method.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Mineral Resource have been classified in accordance with the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC, 2012). • The Syväjärvi Mineral Resource was classified as Indicated and Inferred Mineral resource. • The Mineral Resource estimates appropriately reflect the view of the Competent Person. •

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Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• No audits have been done
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.*	• The Mineral Resource statement relates to global estimates of tonnes and grade. •