JORC Code, 2012 Edition – Table 1

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.*	• All holes in the estimate were diamond drill holes. Core was 50.5mm in diameter, samples usually at 1-2m intervals within pegmatite or to geological boundaries. • Drilling was on a nominal 40m by 40m spacing. • Collar surveys are carried out using precision GPS with an accuracy of 2-5cm. • A down-hole survey for each hole was completed using electronic multishot equipment. • The lithium mineralisation is in the form of spodumene-bearing pegmatite veins which vary in thickness from 2m to 20m.
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 50.5mm / WL 66, driller Oy KaTi Ab, using mainly the drill rig Kati-1 (Onram 1000), standard tube and bit, core orientated every 10m by "wax stick" and recently every 3m by Reflex ACT3.
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 was measured and was found to be generally excellent. • Also RQD was usually 90-100 %. In certain places, a shallow zone at surface is variably weathered and in those intervals rock can be totally broken.
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.*	• Core was logged in detail in a logging facility. • Lithological logging with RQD measurements, and more recently included more detailed geotechnical logging. • Based on oriented core observations, rock type contacts, fissures and joints were measured by goniometer, and recently using a modern Reflex IQ-Logger instrument.

Criteria	JORC Code explanation	Commentary
	• *The total length and percentage of the relevant intersections logged.*	• All core was photographed whole and cuts with photographs showing analytical boundaries and analytical numbers. • All holes were logged in full, and all the target mineralisation type core (spodumene pegmatite) sampled and analysed.
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 50.5mm) was cut to two identical halves using a diamond saw, with one half sent for analysis. • Sampling boundaries are based on mineralogical homogeneity, varied from 0.2m to 2.5m, with the most usual sample length being from 1m to 2m. • Every 20th sample is a field duplicate to test precision, in which the remaining core half is cut to a quarter sample for analysis. • Field duplicates were used to test repeatability of the sub-sampling and were found to be satisfactory. • Every 20th sample is a certified reference sample to test accuracy. • Every effort was made to ensure that the samples were representative and not biased in any way. • The primary sample size for analysis (cut half core) is 2.4 kg/m. • The sample size is small for the grain size (ca. 1 cm), but the amount of the mineral (spodumene) in the mineralised pegmatites is about 7%, varying from 7 to 40 %, which decreases the sample size effect, and confirmed 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 preparation and analysis to Labtium Oy (Finland), recently Eurofins Labtium Oy. • First the samples are dried and crushed to – 6mm, split to 0.7kg, which is totally pulverised to the analytical and storage sample. • The samples were analysed using sodium peroxide fusion followed by ICPOES (sample size 0.5g of pulp), which is a total technique and considered as the most suitable for spodumene and beryl. • The laboratory (Labtium) results have been tested by two independent international laboratories (ALS, SGS), acceptable levels of both accuracy and precision have been established. • A QA/QC review of all information indicated that sampling and assaying procedures were satisfactory.
Verification of sampling	• *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*	• Keliber's experienced geologists supervised all processes. • The core boxes were photographed and are stored in warehouses. • All field data is captured electronically and subsequently validated as it is imported into the centralised Access database.

Criteria	JORC Code explanation	Commentary
and assaying	*verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Electronic copies of logs, survey and sampling data are stored in the local office. • Results were reported as Li (ppm) and were converted to a percentage by dividing by 10 000 and then to Li_2O% by multiplying by 2.153.
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 planned positions of drill holes were located by accurate precision GPS survey. • All completed collars were subsequently surveyed using a precision GPS with an accuracy of 2-5cm. • Start azimuths were measured for all the holes using precision GPS, for longer holes (exceeding 100 m) deviation was surveyed by Deviflex instrument, in short holes only dip was measured by DeviDip instrument • The grid system is Finnish KKJ Grid Zone 2. • Topographic control was based on wireframe surface constructed from drill hole collars.
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.*	• Drilling was on a nominal 40m by 40m spacing. • Drill spacing of 40m by 40m is considered sufficient to demonstrate geological and grade continuity in the dyke-type deposit where structure and continuity readily identified. • Compositing to 2m has been applied prior to resource estimation.
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 pegmatite structure and orientation are known and most of the drill holes were drilled close to perpendicular to the deposit. • Intersections were close to true width for the main pegmatite veins. • No orientation-based sampling bias has been identified in the data.
Sample security	• *The measures taken to ensure sample security.*	• Samples were delivered to a courier and chain of custody is managed by Keliber's geologists. • Sample numbers and boundaries are marked in the core photos. A sample ticket follows the sample all the time in the preparation processes.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Internal company auditing and a review by PayneGeo during the October 2018 site visit found that all data collection and QA/QC procedures were conducted to industry standards.

JORC Code, 2012 Edition – Table 1

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. • The Competent Person also completed database validation of selected holes with field checking of drill hole collars and data verification against original records for assays and down hole surveys. No errors were found.
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 Paul Payne in October 2018. 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 of the major pegmatites is considered to be good and is based on the available assay, lithological and the contact measurement data together with the sufficiently dense and homogenous drilling pattern. • A degree of uncertainty exists in the interpretation of minor pegmatites and this is reflected in the Mineral Resource classification. • 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 pegmatites is clearly observed by Li_2O grades within the drill holes. The nature of the spodumene pegmatite veins would indicate that alternate interpretations would have little impact on the overall Mineral Resource estimation. • The mineralisation is related to spodumene pegmatite veins intruded parallel to primary bedding of the host rocks. Spodumene alteration to muscovite at the contacts of the host rock is minimal, from a few centimeters to tens of centimeters.
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 Rapasaari Mineral Resource area extends over a strike length of 1,000m NS, has a maximum width of 900m EW and includes the 235m vertical interval from 85mRL to -150mRL.

Criteria	JORC Code explanation	Commentary
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.* • *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.*	• Ordinary Kriging ("OK") interpolation with an oriented ellipsoid search was used for the estimation of the major pegmatites. • Minor pegmatites defined by no more than five drill holes were estimated using inverse distance squared ("ID2") interpolation. • A minimum of 4 and maximum of 15 samples were used with a 60m search radius which filled 87% of the block model. The search was increased to fill the remaining blocks. • Surpac software was used for the estimation. • Three dimensional mineralised wireframes were used to domain the Li_2O data. Sample data was composited to 2.0m down hole lengths using the 'best fit' method. The Li_2O values in intervals with no assays were set to zero prior to compositing. • The maximum distance of extrapolation from data points was 40m. • An orientated 'ellipsoid' search was used to select data and was based on the observed lens geometry with a plunge direction determined by variogram analysis. The search ellipses were orientated to the average strike and dip of each lens. • The parent block dimensions used were 10m N by 5m E by 5m RL with sub-blocks of 2.5m by 1.25m by 1.25m. 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. • The block size of 10m by 5m by 5m approximates the expected Selective Mining Unit size. • The orebody model wireframes were used as hard boundaries to control the estimation process. • Due to the absence of high grade outliers in the Li_2O data, high grade cuts were not required. • The block model was validated visually and statistically by comparing the basic statistics of the composited data and block 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 reporting cut-off grade of 0.5% Li_2O reflects the likely open pit mining breakeven cut-off for the project. This will be reviewed as operating cost parameters and processing performance are defined in the DFS.

Criteria	JORC Code explanation	Commentary
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 Rapasaari deposit will be mined using a combination of open pit and underground methods.
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.*	• Metallurgical test work – including the locked cycle tests – have been done for the Rapasaari pegmatite material, using composite ore samples collected from drill cores in 2016-2017. • The Rapasaari pegmatite shows similar metallurgical performance to the previously-tested Länttä and Syväjärvi pegmatites.
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 Competent Person regarding possible waste and process residue disposal options. This will be clarified during the DFS.
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.*	• Bulk densities have been determined by Keliber and Labtium using the water displacement method on drill core samples. All samples measured were from fresh rock and an assumed value has been used for the minor amount of transitional (partially weathered) rock at the project. • Bulk density values of 2.70t/m^3 and 2.60t/m^3 have been used for fresh and transitional mineralisation respectively.

Criteria	JORC Code explanation	Commentary
	• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	
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 portion of the deposit where continuity of geology and mineralisation are excellent and where the drill hole spacing is no greater than 40m by 40m has been classified as Measured Mineral resource. • The portion of the deposit where continuity of geology and mineralisation are good and where the drill hole spacing is approximately 40m by 40m has been classified as Indicated Mineral resource. • Minor pegmatite zones with uncertain geometry or continuity, and those zones defined by 80m spaced drilling have been classified as Inferred Mineral Resource • The Mineral Resource estimates appropriately reflect the view of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• A rigorous internal audit procedure has been conducted by Payne Geological Services which verified the procedures and results reported for the Mineral Resource.
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.