Updated Mineral Resource Estimate Includes Pit Floor "Wedge" Drill Results

ASX ANNOUNCEMENT
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Market Cap
$436M
ASX Code: AVZ

Highlights

- Pit floor drilling of the "wedge" has successfully upgraded Inferred Resource material to predominantly Indicated Resource category.
- Total Mineral Resource tonnage and grades are similar to previous estimates, however Indicated Resources increase by 12 million tonnes and combined Measured and Indicated Resources increase to 274 million tonnes.
- The depth of the Roche Dure pit was shallower than anticipated, following a drone survey of the dewatered mine which confirmed previously mined volumes.
- Lower strip ratio and increased ore mined over the optimised Life of Mine (LoM) plan expected to have a positive financial impact on the optimised DFS due for completion next month.
- An updated tin resource in remnant weathered pegmatite has been generated, requiring further investigation.

AVZ Minerals Limited (ASX: AVZ) is pleased to announce it has updated the Mineral Resource of the Manono Lithium and Tin Project ("Manono Project") after including results from the recent pit floor drilling programme.

AVZ's Managing Director, Mr Nigel Ferguson, said: "Geological modelling of the pit floor has confirmed the presence of high grade, fresh pegmatite in all of the nine resource holes drilled on sections 7100mN to 7300mN at Roche Dure.

"This additional information has resulted in the upgrade of some 12 million tonnes of Inferred Resources to Indicated Resources. These additional tonnes, located at shallow depth in the existing pit, are expected to result in fundamental improvements to the mine design and mining schedule as the optimised mine model will treat the wedge material as ore, rather than waste."

"The lower strip ratio resulting from the increase in ore mined over the optimised mine plan, coupled with lower LOM cost assumptions, is expected to have a positive impact on the optimised DFS to be completed next month which will greatly assist our discussions with prospective financiers."

Wedge Drilling

The pumping of water from the Roche Dure pit was completed in February 2020. This provided drill rig access to determine the nature of the mineralisation in the area beneath the pit floor. This area is referred to as the "wedge" and was a portion of the Mineral Resource previously classified as Inferred that could not be accurately evaluated with data acquired in the earlier drilling phases.

A total of nine diamond drill holes, inclined to the northwest and ranging between 72 m and 276 m in depth, were completed during 2020 and 2021. All holes were collared in pegmatite and fresh spodumene-bearing pegmatite was encountered within the first 10 m, with the exception of hole MO20DD007, which intersected fresh pegmatite from 16 m. The drilling has confirmed the continuity of the pegmatite and mineralisation within the "wedge" (Figure 1 and Table 1).

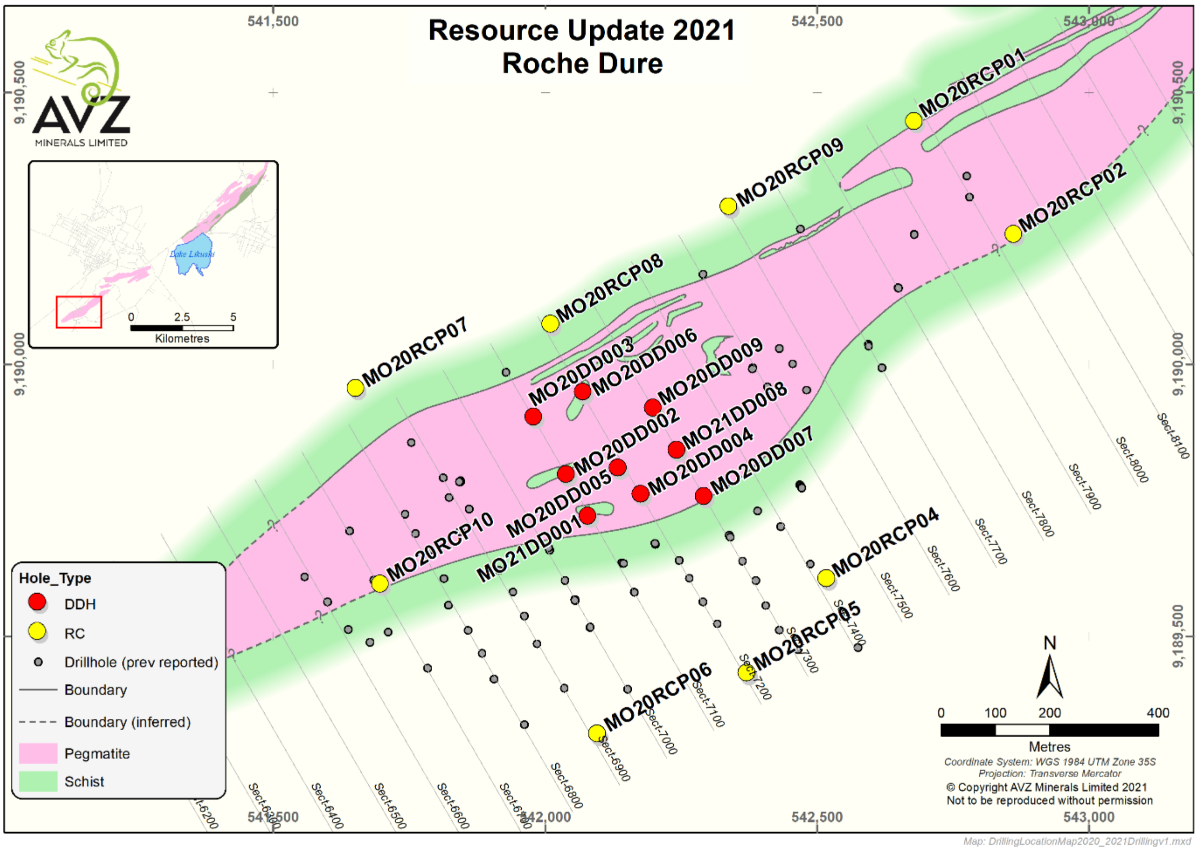

Figure 1: Plan view showing drill hole locations

Table 1: Additional diamond drill holes used for the Mineral Resource estimate

Hole ID	Easting (mE)	Northing (mN)	Elevation (m)	Dip (degrees)	Azimuth (degrees)	Depth (m)
MO20DD002	542038.1	9189797.7	635.9	-50	330	167.35
MO20DD003	541977.6	9189904.1	625.1	-50	330	92.38
MO20DD004	542175.1	9189761.7	632.8	-60	330	250.00
MO20DD005	542133.5	9189815.1	640.1	-60	330	204.10
MO20DD006	542069.2	9189950.2	623.6	-60	330	72.03
MO20DD007	542294.9	9189753.4	632.9	-60	330	276.30
MO20DD009	542198.3	9189923.1	643.4	-60	330	146.70
MO21DD001	542079.0	9189723.6	634.9	-55	330	245.85
MO21DD008	542242.7	9189843.9	625.3	-60	330	200.55

Nine reverse circulation hydrology holes were drilled for piezometer installation around the perimeter of the Stage 3 Life of Mine open pit. Five of the holes intersected pegmatite and were sampled and used in the interpretation of the geological model (Table 2). Apart from MO20RCP02, assay data from these reverse circulation drill holes were not used for Mineral Resource estimation. MO20RCP02 is a relatively isolated drill hole in the eastern part of the project with no surrounding diamond drill holes (Figure 1).

Table 3: Reverse circulation drill holes

Hole ID	Easting (mE)	Northing (mN)	Elevation (m)	Dip (degrees)	Azimuth (degrees)	Depth (m)
MO20RCP01	542678.8	9190450.9	641.8	-90	0	100.00
MO20RCP02	542860.9	9190239.9	642.2	-90	0	100.00
MO20RCP04	542516.8	9189606.8	658.6	-90	0	100.00
MO20RCP05	542370.4	9189433.1	658.3	-90	0	100.00
MO20RCP06	542093.3	9189321.7	671.5	-90	0	100.00
MO20RCP07	541649.8	9189958.8	648.6	-90	0	100.00
MO20RCP08	542008.8	9190074.8	646.6	-90	0	100.00
MO20RCP09	542337.4	9190290.8	643.9	-90	0	100.00
MO20RCP10	541695.6	9189596.6	640.2	-90	0	100.00

Drone Survey of Roche Dure Pit

Jusdox Consulting was commissioned to conduct a high-resolution drone survey of the empty Roche Dure pit which took place from 30 October to 7 November 2020 and to provide an updated digital terrain model. The survey covered an area of 85.05 ha and was completed using a P540-UAV Survey Drone with control points tied to local benchmarks using a DGPS Hi-Target V90 plus Trimble Board in RTK mode (Jusdox, 2020) (Figure 2 and Figure 3).

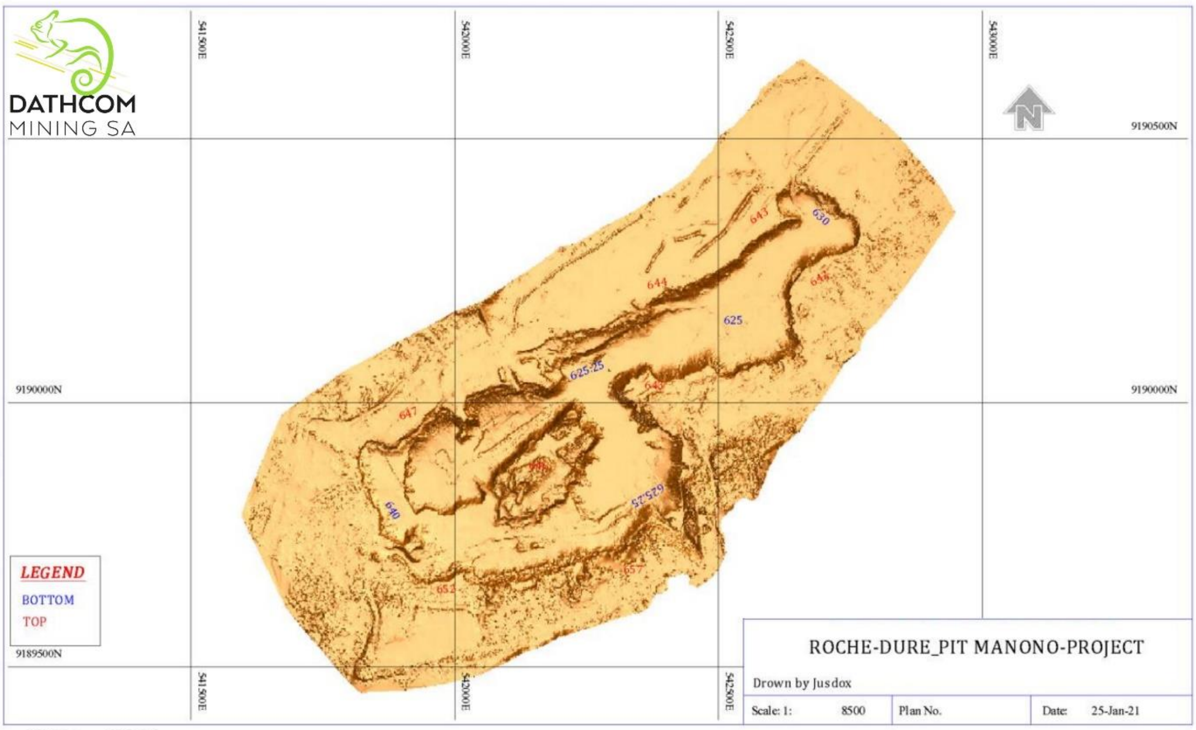

Figure 2: Processed digital terrain model for the Roche Dure pit

Figure 3: Drone image taken by Jusdox of the drained Roche Dure pit looking northeast

Mineral Resource Estimate

The Mineral Resource was estimated by CSA Global (Pty) Ltd ("CSA Global"), an independent mining consulting company (www.csaglobal.com).

The Mineral Resource included an updated geological model, based not only on the additional data, but also from a reinterpretation of previous data. The Mineral Resource estimate made use of an updated digital terrain model which was informed by the survey of the pit floor.

The primary aim of the update was to upgrade the Inferred Resource material in the wedge to at least an Indicated Resource category. The addition of the nine diamond holes drilled from the pit floor resulted in the wedge material being upgraded to Indicated Mineral Resources (Figure 4).

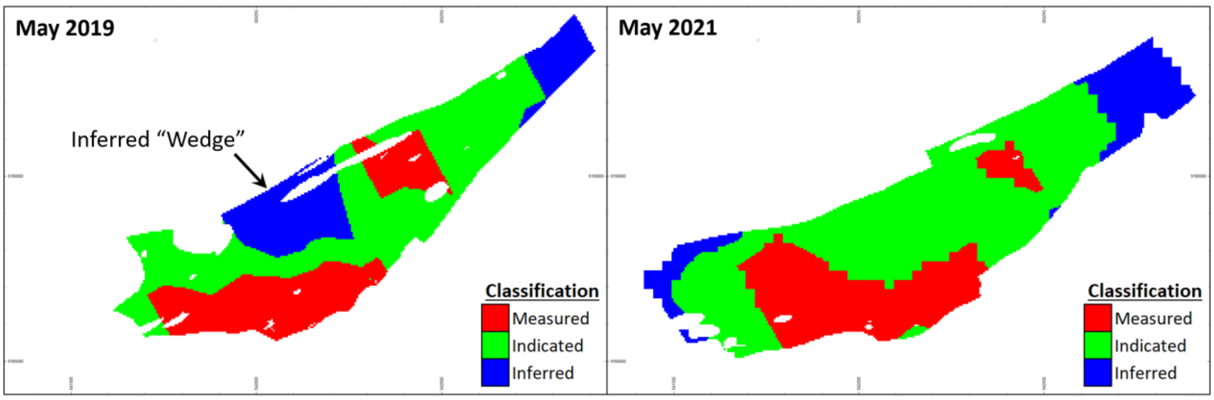

Figure 4: Plan view at 590 m elevation, showing the comparison of the Mineral Resource classification

The Mineral Resource is reported in accordance with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code).

The Roche Dure Mineral Resource occurs over approximately 1,600 m of strike length that has been drilled and sampled. The pegmatite dips at approximately 45° to the southeast. Li_2O, Sn, Ta, Fe_2O_3 and

P_2O_5 have been estimated by ordinary kriging, with density assigned based on mean values in each domain. Areas have been classified as Measured, Indicated or Inferred Resources in accordance with the guidelines of the JORC Code (2012).

The Mineral Resource is classified as Measured where blocks are within a drillhole spacing of 100 m by 50 m and occur less than 25 m downdip of the nearest drillhole. Indicated Mineral Resources are defined as those blocks within a drillhole spacing of 100 m by 100 m and are within 75 m of the nearest drillhole. Inferred Mineral Resources are extrapolated to approximately 125 m from the general drilling grid.

The maximum depth of the Mineral Resource is approximately 550 m below surface, beneath which there is insufficient information with which to model the mineralisation and therefore the Mineral Resource can be considered open at depth. Previous study work (Manono Lithium and Tin Project DFS Announcement, April 2020) has demonstrated that the Mineral Resource can be extracted by means of open pit mining and therefore meets the criteria required for reasonable prospects for eventual economic extraction.

The Mineral Resource is reported above a cut-off grade of 0.5% Li_2O (Table 4). This cut-off grade is consistent with that of similar lithium projects. The Mineral Resource comprises 401 million tonnes of spodumene-rich fresh pegmatite at a grade of 1.65% Li_2O. Weathered pegmatite has not been reported as part of the lithium Mineral Resource as it is generally below the cut-off grade.

Table 4: Roche Dure Mineral Resource at a cut-off of 0.5% Li_2O as at 1 May 2021

Category	**Tonnes** *(millions)*	**Li_2O** *%*	**Sn** *ppm*	**Ta** *ppm*	**Fe_2O_3** *%*	**P_2O_5** *%*	**Li_2O Tonnes** *(millions)*
Measured	100	1.67	870	35	0.93	0.30	1.66
Indicated	174	1.65	807	35	0.97	0.29	2.87
Meas + Ind	**274**	**1.66**	**830**	**35**	**0.96**	**0.29**	**4.53**
Inferred	128	1.65	585	31	1.01	0.28	2.11
Total	**401**	**1.65**	**752**	**34**	**0.97**	**0.29**	**6.64**

Tabulated data have been rounded and as a result minor computational errors may occur.
Fe_2O_3 and P_2O_5 are potentially deleterious elements.

A tin Mineral Resource in the weathered pegmatite (Figure 5) is reported in Table 5. In determining reasonable prospects for eventual economic extraction, it was considered that the weathered pegmatite would be mined in order to extract the lithium Mineral Resource in fresh pegmatite below. Given the marginal costs involved in mining the weathered material, the generally low cost of creating a high-value tin concentrate from weathered cassiterite-bearing rock, and the additional value that could be derived from tantalum, it is considered to have reasonable prospects for eventual economic extraction. The lithium in the weathered pegmatite is associated with spodumene alteration minerals and is therefore unlikely to be recovered. The tin Mineral Resource is classified as Indicated and Inferred based on drill spacing, such that Indicated weathered material is supported by drilling at a 100 m by 100 m spacing. The tin Mineral Resource in the weathered pegmatite is reported above a cut-off grade of 500 ppm, and the average grade is comparable to other projects of this nature.

Table 5: Roche Dure tin Mineral Resource at a cut-off of 500 ppm Sn as at 1 May 2021

Category	**Tonnes** *(millions)*	**Sn** *ppm*	**Li_2O** *%*	**Ta** *ppm*	**Fe_2O_3** *%*	**P_2O_5** *%*	**Sn Tonnes** *(thousands)*
Indicated	8.3	1,071	0.37	45	0.77	0.11	8.9
Inferred	3.1	1,147	0.44	45	0.70	0.08	3.5
Total	**11.3**	**1,092**	**0.39**	**45**	**0.75**	**0.11**	**12.4**

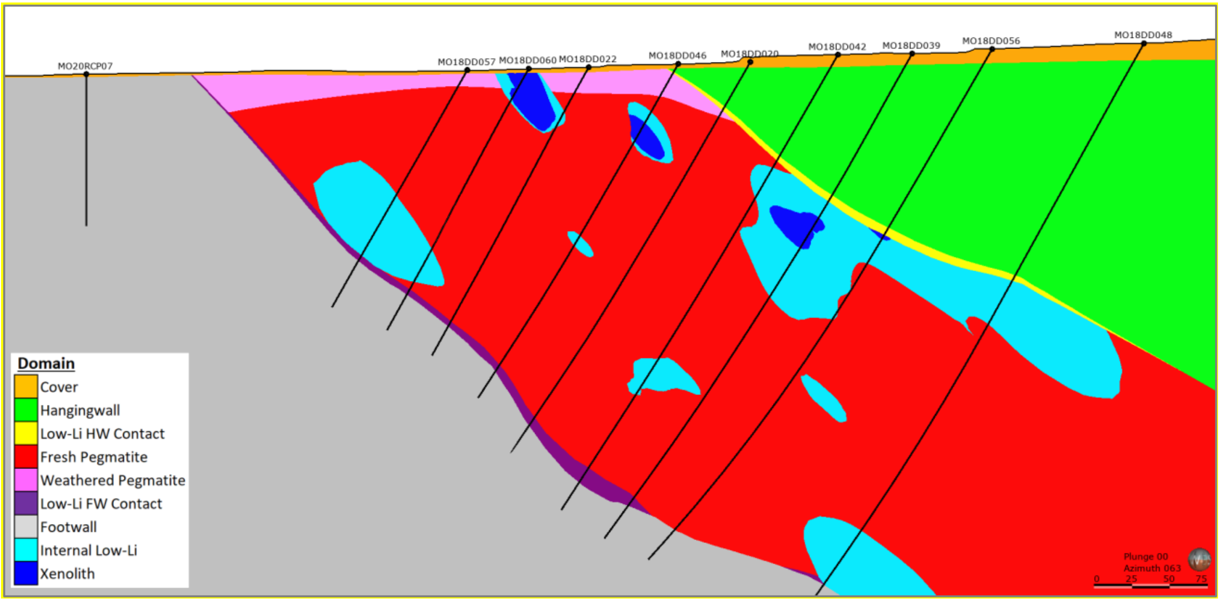

Figure 5: Cross section showing the weathered pegmatite relative to the fresh pegmatite

References

Jusdox Consulting, 2020. Boreholes Collar Position, Geotechnical Pit Tests Positions and Roche Dure Survey Report, Manono Mine Site Project, Dathcom Mining SA, November 2020. 7pp.

Competent Persons Statement

The technical information in the document to which this statement is attached that relates to the geology of the Roche Dure pegmatite is based upon information compiled by Mr Michael Cronwright, who is a geologist with 22 years' experience in exploration, is a fellow of The Geological Society of South Africa (GSSA) and Pr. Sci. Nat. (Geological Sciences) registered with the South African Council for Natural Professions (SACNASP). Mr Cronwright is a Principal Consultant with CSA Global Pty Ltd (an independent consulting company). Mr Cronwright has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the JORC Code.

The Mineral Resource estimate has been completed by Mr Anton Geldenhuys (BSc Hons, MEng) who is a geologist with 20 years' experience in exploration and mining as well as Mineral Resource evaluation and reporting. He is a Principal Resource Consultant for CSA Global Pty Ltd (an independent consulting company), is a member in good standing with the South African Council for Natural Scientific Professions (SACNASP) and is a Member of the Geological Society of South Africa (GSSA). Mr Geldenhuys has the appropriate relevant qualifications and experience to be considered a Competent Person for the activity being undertaken as defined in the 2012 edition of the JORC Code.

Michael Cronwright Pr. Sci. Nat.

Principal Consultant – CSA Global (Pty) Ltd

Anton Geldenhuys Pr. Sci. Nat.

Principal Resource Consultant – CSA Global (Pty) Ltd

This release was authorised by Nigel Ferguson, Managing Director of AVZ Minerals Limited.

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Section 1 Sampling Techniques and Data

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

	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*	**Diamond Core Drilling** • Diamond drilling which produces drill core has been utilised to sample the pegmatite below ground surface. This method is recognised as providing the highest quality information and samples of the unexposed geology. • Supplementing the drilling data, surface samples were collected from outcrops, utilising channel sampling from trenches and point-source sampling of scattered outcrops. • Based on available data, there is nothing to indicate that drilling and sampling practices were not to normal industry standards at the time within the Manono licence PR13359. The pegmatite has been sampled from the hanging wall contact continuously through to the footwall contact. In addition, the host-rocks extending 2 m from the contacts have also been sampled. • Diamond drilling was used to obtain core samples which have then been cut longitudinally. Intervals submitted for assay have been determined according to geological boundaries. Samples were taken at 1 m intervals. • The submitted half-core samples typically had a mass of 3-4 kg. **Reverse Circulation (RC) Drilling** • Reverse circulation percussion drilling, producing pulverised rock samples, was utilised to sample the pegmatite below ground surface. This method is recognised as providing high quality information and samples of the unexposed geology. • Based on available data, there is nothing to indicate that drilling and sampling practices were not to normal industry standards at the time within the Manono licence PR13359. • Reverse Circulation percussion drilling has been used to obtain samples which were then split to smaller representative samples using an on-site riffle splitter. Intervals submitted for assay have been determined according to geology. Samples were taken at 1 m intervals. • The submitted 1 m split samples typically had a mass of 1-2 kg.

	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).*	• The **diamond core drilling** was completed using diamond core rigs with PQ sized drill rods used from surface to sample through to fresh or unbroken rock and HQ sized drill rods used after the top-of-fresh-rock had been intersected. Most holes are angled between 50° and 75° and collared from surface. All collar locations were surveyed after completion. All holes were downhole surveyed using a digital multi-shot camera at approximately 30 m intervals. All core was oriented. • The **RC drilling** was completed using a reverse circulation drill rig with a 5.5 inch steel percussion hammer to drill from surface to 100 m depth. Samples were taken at 1 m intervals from the start to the end of the hole. All holes were drilled at 90° (vertical). All collar locations were surveyed after completion. Reverse circulation holes are relatively short and were therefore not surveyed down the hole.

	JORC Code explanation	Commentary
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.*	**Diamond Core Drilling** • Drill core attained >97% recovery in the pegmatite. • Based upon the high recovery, AVZ did not have to implement additional measures to improve sample recovery and the drill core is considered representative and fit for sampling. • For the vast majority of drilling completed, core recovery was near 100% and there is no sample bias due to preferential loss or gain of fine or coarse material. **RC Drilling** • A visual estimate of recoveries was made with a general observation that minor recovery losses were usually near the top of the hole in loose soil and cover on top of weathered rock. The samples are considered a reasonable representation of the mineralisation. • Based upon the high recovery, AVZ did not have to implement additional measures to improve sample recovery and the samples are considered representative and fit for sampling for lithium content. • There may be a bias in reported Fe_2O_3 results due to abrasion of steel from both drill rods and the face of the percussion hammer. This may give a higher iron content than expected due to contamination. Due to the small number of reverse circulation samples included in the database it is not expected that they will materially affect the total iron content reported in any future Mineral Resource estimates. • For the vast majority of drilling completed, there was negligible sample loss. It is considered that there is no sample bias due to preferential loss or gain of fine or coarse material.

	JORC Code explanation	Commentary
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.*	• Drill core was logged by qualified geologists using a data-logger and the logs were then uploaded into Geobank which is a part of the Micromine software system. A complete copy of the data is held by an independent consultant. • The drill core was logged for geology and geotechnical properties (RQD & planar orientations). • All core was logged, and logging was by qualitative (lithology) and quantitative (RQD and structural features) methods. All core was also photographed both in dry and wet states, with the photographs stored in the database. • The entirety of all drillholes were logged for geological, mineralogical and geotechnical data. • A library of drill chips was collected down each hole at 1 m intervals and were logged by qualitative (lithology) methods. All drill chips were photographed both in dry and wet states, with the photographs stored in the database. • The entirety of all RC drillholes were logged for geological and mineralogical data.

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.*	**Diamond Core Drilling** • Core is cut longitudinally, and half-core samples of a nominal 1 m length are submitted for assay. • The sample preparation for drill core samples incorporates standard industry practice. The half-core samples have been prepared at the onsite sample preparation facility at Manono, with holes from MO18DD021 onwards being prepared at Manono. • At AVZ's onsite sample preparation facility the half-core samples of approximately 4-5 kg are oven dried, crushed to -2 mm with a 500 g sub-sample being split out. This 500 g sub-sample is then pulverised to produce a pulp with 85% passing -75μm size fraction. A 120 g sub-sample is then split from this, the certified reference material, blanks and duplicates are inserted at appropriate intervals and then the complete sample batch is couriered to ALS Perth for assay. • Standard sub-sampling procedures are utilised by ALS Lubumbashi and ALS Manono at all stages of sample preparation such that each sub-sample split is representative of the whole it was derived from. • Duplicate sampling was undertaken for the drilling programme. After half-core samples were crushed at the Manono preparatory facility, an AVZ geologist took a split of the crushed sample which is utilised as a field duplicate. The geologist placed the split into a pre-numbered bag which was then inserted into the sample stream. It is then processed further, along with all the other samples. The drilling produced PQ and HQ drill core, providing a representative sample of the pegmatite which is coarse-grained. Sampling was mostly at 1 m intervals, and the submitted half-core samples typically had a mass of 3-4 kg. **RC Drilling** • The drilling produced bags of pulverised rock material at 1 m intervals weighing approximately 30 kg. The 1 m bulk percussion samples were riffle split on a 75% : 25% splitter down to 1-2 kg sub-samples and sent to the onsite sample preparatory facility for sample preparation. • These samples were recovered from a standalone reverse circulation programme consisting of 9 holes which were then cased as piezometer water table monitoring holes.

	JORC Code explanation	Commentary
		• The sample preparation for reverse circulation samples incorporates standard industry practice. The split samples were dried and prepared at the onsite facility at Manono prior to being couriered to ALS Perth for assay. • At AVZ's onsite sample preparation facility the 1 m riffle split samples of approximately 1-2 kg are oven dried, crushed to -2 mm with a 500 g sub-sample being split out. This 500 g sub-sample is then pulverised to produce a pulp with 85% passing -75µm size fraction. A 120 g sub-sample is then split from this, the certified reference material, blanks and duplicates are inserted at appropriate intervals and then the complete sample batch is couriered to ALS Perth for assay. • Standard sub-sampling procedures are utilised by the Manono sample preparation facility at all stages of sample preparation such that each sub-sample split is representative of the whole it was derived from. • Duplicate sampling was undertaken for the drilling programme. After riffle split samples were crushed at the Manono preparatory facility, an AVZ geologist took a split of the crushed sample which is utilised as a field duplicate. The geologist placed the split into a pre-numbered bag which was then inserted into the sample stream. It is then processed further, along with all the other samples.

	JORC Code explanation	Commentary
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• Sample pulps were couriered to Australia and analysed by ALS Laboratories in Perth, Western Australia using a sodium peroxide fusion of a 5 g charge followed by digestion of the prill using dilute hydrochloric acid thence determination by AES or MS, i.e. methods ME-ICP89 and ME-MS91. Samples from the drilling completed in 2017 i.e. MO17DD001 and MO17DD002, were assayed for a suite of 24 elements that included Li, Sn, Ta & Nb. Samples from the drilling completed in 2018 were assayed for a suite of 12 elements; Li, Sn, Ta, Nb, Al, Si, K, Fe, Mg, P, Th and U, with Li reported as Li_2O, Al as Al_2O_3, Si as SiO_2, K as K_2O, Mg as MgO, Fe as Fe_2O_3 and P as P_2O_5. • Peroxide fusion results in the complete digestion of the sample into a molten flux. As fusion digestions are more aggressive than acid digestion methods, they are suitable for many refractory, difficult-to-dissolve minerals such as chromite, ilmenite, spinel, cassiterite and minerals of the tantalum-tungsten solid solution series. They also provide a more-complete digestion of some silicate mineral species and are considered to provide the most reliable determinations of lithium mineralisation. • Sodium peroxide fusion is a total digest and considered the preferred method of assaying pegmatite samples. • Geophysical instruments were not used in assessing the mineralisation. • Interlab check samples are routinely conducted by Nagrom in Perth as part of the QAQC programme. • For the drilling, AVZ incorporated standard QAQC procedures to monitor the precision, accuracy, and general reliability of all assay results from assays of drilling samples. As part of AVZ's sampling protocol, CRMs (standards), blanks and duplicates were inserted into the sampling stream. In addition, the laboratory (ALS Perth) incorporated its own internal QAQC procedures to monitor its assay results prior to release of results to AVZ. • The Competent Person is satisfied that the results of the QAQC are acceptable and that the assay data from ALS is suitable for Mineral Resource estimation.

	JORC Code explanation	Commentary
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.*	• Company geologists and consultants observed the mineralisation in the majority of chip samples and drill core on site, although no check assaying was completed by CSA Global. • Interlab check samples are routinely conducted by Nagrom in Perth. • Jusdox Surveying observed and photographed several collar positions in the field, along with rigs that were drilling at the time of the site visit. • Twinned holes for the verification of historical drilling, were not required. Short vertical historical holes were drilled within the pit but are neither accessible nor included within the database used to estimate the Mineral Resource. • Drilling data is stored on site as both hard and soft copy. Drilling data are validated onsite before being sent to data management consultants in Perth where the data are further validated. When results are received, they are loaded to the central database in Perth and shared with various stakeholders via the cloud. QC results are reviewed by both independent consultants and AVZ personnel at Manono. Hard copies of assay certificates are stored in AVZ's Perth offices. • AVZ has not adjusted assay data.
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 drillhole collars have been located by a registered surveyor using a Hi-Target V30 Trimble differential GPS with an accuracy of ±0.02 m, unless otherwise noted. • All angled holes were downhole surveyed using a digital multi-shot camera at approximately 30 m intervals. • Vertical holes were not surveyed downhole. • For the purposes of geological modelling and estimation, the drillhole collars were projected onto the topographic surface. In most cases adjustments were within 1 m (in elevation). • Coordinates are relative to WGS84 UTM Zone 35M.
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.*	• Resource drillhole spacing was completed on sections 100 m apart, and collars were less than 100 m apart on section where possible. • The reverse circulation drillholes were located at roughly regular intervals around the life of mine open pit to be used for water table monitoring over the period of the operating mine.

	JORC Code explanation	Commentary
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 drillhole orientation is designed to intersect the Roche Dure Pegmatite at, or nearly at, 90° to the plane of the pegmatite. • No material sampling bias exists due to drilling direction.
Sample security	• *The measures taken to ensure sample security.*	• When utilizing ALS Perth, chain of custody is maintained by AVZ personnel onsite to Lubumbashi. Samples are stored onsite until they are delivered by AVZ personnel in sealed bags to the laboratory at ALS Perth. The ALS laboratory checked received samples against the sample dispatch form and issues a reconciliation report. • At Lubumbashi, the prepared samples (pulps) are sealed in a box and delivered by DHL to ALS Perth. • ALS issue a reconciliation of each sample batch, actual received vs documented dispatch. • The ALS Manono site preparation facility is managed by in house ALS trained personnel who supervise the sample preparation. Prepared samples are sealed in boxes and transported by air to the Malabar clearing agency in Lubumbashi and are accompanied by an AVZ employee, where export documentation and formalities are concluded. DHL couriers the samples to ALS in Perth.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The sampling techniques were reviewed by the Competent Person during multiple site visits. • The Competent Person considers that the exploration work conducted by AVZ was carried out using appropriate techniques for the style of mineralisation at Roche Dure, and that the resulting database is suitable for Mineral Resource estimation.

Section 2 Reporting of Exploration Results

(Criteria listed in the previous 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 Manono licence was awarded as Research Permit PR13359, issued on the 28th December 2016 to La Congolaise d'Exploitation Miniere SA (Cominiere). It is valid for 5 years. On the 2nd February 2017, AVZ formed a joint-venture (JV) with Cominiere and Dathomir Mining Resources SARL (Dathomir) to become the majority partner in a JV aiming to explore and develop the pegmatites contained within PR 13359. Ownership of the Manono Lithium Project is AVZ 60%, Cominiere 25% and Dathomir 15%. • AVZ manages the project and meets all funding requirements. • All indigenous title is cleared and there are no other known historical or environmentally sensitive areas.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Within PR13359 exploration of relevance was undertaken by Geomines whom completed a programme of drilling between 1949 and 1951. The drilling consisted of 42 vertical holes drilled to a general depth of around 50-60 m. Drilling was carried out on 12 sections at irregular intervals ranging from 50-300 m, and over a strike length of some 1,100 m. Drill spacing on the sections varied from 50-100 m. The drilling occurred in the Roche Dure Pit only, targeting the fresh pegmatite in the Kitotolo sector of the project area. • The licence area has been previously mined for tin and tantalum through a series of open pits over a total length of approximately 10 km excavated by Zairetain SPRL. More than 60 Mt of material was mined from three major pits and several subsidiary pits focused on the weathered upper portions of the pegmatites. Ore was crushed and then upgraded through gravity separation to produce a concentrate of a reported 72% Sn. There are no reliable records available of tantalum or lithium recovery as tin was the primary mineral being recovered. • Apart from the mining excavations and the drilling programme, there has been very limited exploration work within the Manono region.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Project lies within the mid-Proterozoic Kibaran Belt - an intracratonic domain, stretching for over 1,000 km through Katanga and into southwest Uganda. The belt strikes predominantly SW-NE and is truncated by the N-S to NNW-SSE trending Western Rift system. The Kibaran Belt is comprised of a sedimentary and volcanic sequence that has been folded, metamorphosed and intruded by at least three separate phases of granite. The latest granite phase (900 to 950 million years ago) is assigned to the Katangan cycle and is associated with widespread vein and pegmatite mineralisation containing tin, tungsten, tantalum, niobium, lithium and beryllium. Deposits of this type occur as clusters and are widespread throughout the Kibaran terrain. In the DRC, the Katanga Tin Belt stretches over 500 km from near Kolwezi in the southwest to Kalemie in the northeast comprising numerous occurrences and deposits of which the Manono deposit is the largest. The geology of the Manono area is poorly documented and no reliable maps of local geology were available. Recent mapping by AVZ has augmented the overview provided by Bassot and Morio (1989) and has led to the following description. The Manono Project pegmatites are hosted by a series of mica schists and by amphibolite in some locations. These host rocks have a steeply dipping penetrative foliation that appears to be parallel to bedding. There are numerous bodies of pegmatite, the largest of which have sub-horizontal to moderate dips, with dip direction being towards the southeast. The pegmatites post-date metamorphism, with all primary igneous textures intact. They cross-cut the host rocks but despite their large size, the contact deformation and metasomatism of the host rocks by the intrusion of the pegmatites seems minor. The absence of significant deformation of the schistosity of the host rocks implies that the pegmatites intruded brittle rocks. The pegmatites constitute a pegmatite swarm in which the largest pegmatites have an apparent en-echelon arrangement in a linear zone more than 12 km long. The pegmatites are exposed in two areas; Manono in the northeast, and Kitotolo in the southwest. These areas are separated by a 2.5 km section of alluvium-filled floodplain which contains Lake Lukushi. At least one large pegmatite extends beneath the floodplain. The pegmatites are members of the LCT-Rare Element group of pegmatites and within the pegmatite swarm there are LCT albite-spodumene pegmatites and LCT Complex (spodumene sub-type) pegmatites.

Criteria	JORC Code explanation	Commentary
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.*	• See table in announcement for collar and survey data for newly acquired drill holes used in this Mineral Resource update. • Previously used assay and intersection details have been the subject of previous ASX announcements by AVZ.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration Results are not reported; therefore no data was aggregated for reporting purposes. • No equivalent values are used or reported.
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 (e.g. 'down hole length, true width not known').*	• Exploration Results have previously been reported to the ASX. • There is no relationship between mineralisation width and grade. • The geometry of the mineralisation is reasonably well understood however the pegmatite is not of uniform thickness nor orientation. Consequently, most drilling intersections do not represent the exact true thickness of the intersected pegmatite, although intersections are reasonably close to true thickness in most cases.
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.*	• The relevant figures are included in this document.
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 are not reported.

Criteria	JORC Code explanation	Commentary
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.*	• No other exploration data is available.
Further work	• *The nature and scale of planned further work (e.g. 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.*	• Diamond drill testing of the identified priority targets beyond Roche Dure is planned immediately along strike to the north-east of the current extent of drilling. • Infill and strike extension drilling is planned at Roche Dure including the north-east where access problems previously prevented down dip extension drilling. • Further mining studies are planned on the basis of this MRE.

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.*	• The geology, grade and bulk density data were checked by the Competent Person. • The data validation process used during Mineral Resource estimation consisted of: - Examination of the assay, collar survey, downhole survey and geology data to ensure that the data were complete and usable for all drillholes. - Examination of the desurveyed data in three dimensions to check for spatial errors. - Examination of the assay data in order to ascertain whether they were within expected ranges. - Checks for "FROM-TO" errors, to ensure that the sample data did not overlap one another or that there were no unexplained gaps between samples.
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 Competent Person for the Mineral Resource, Mr Anton Geldenhuys (Principal Resource Consultant employed by CSA Global), conducted a site inspection in April 2018 to inspect the cores, review the exploration processes and further his understanding of the Roche Dure mineralisation. The Competent Person considers that the exploration work conducted by AVZ was carried out using appropriate techniques for the style of mineralisation. • The Competent Person for the data and geology, Mr Michael Cronwright (Principal Geologist employed by CSA Global), has visited the Manono Project site in April 2018 and December 2019. The visits comprised of inspecting the cores, reviewing the exploration processes and the Roche Dure Mineralisation as well as existing and planned Roche Dure pit, existing and future site infrastructure locations, proposed plant site location, operating drill rigs, and diamond drill core.

Criteria	JORC Code explanation	Commentary
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 quantity and spacing of drilling is sufficient to define the shape and extents of the pegmatite to a reasonable level of confidence. • Geological logging and assay data were used to define estimation domains within the pegmatite. • Geological logging was used to define the host rock domains i.e. overburden, hangingwall and footwall. • No alternative geological models are likely given the geological and grade continuity of the pegmatite.
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 area defined as a Mineral Resource is approximately 1,600 m along strike by approximately 700 m on dip and is limited by data extents to a maximum depth of approximately 550 m below surface. • The Mineral Resource is between approximately 170 m and 370 m thick. • The Roche Dure Pegmatite dips approximately 45° to the southeast and outcrops on surface within the Manono project area. • The pegmatite is weathered to varying depths from 0 m to 100 m below surface.
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.*	• Leapfrog Geo 5.0.4 was used to model the geology and weathering surfaces. • Datamine Studio RM 1.6.75.0 was used to estimate grades. • Samples were composited to 1 m intervals using length weighting. • The geological wireframes were filled with blocks of 25 mN by 25mE by 10 mRL and coded according to the geological zone. • The blocks were sub-celled to a minimum of 5 mN by 5mE by 0.1 mRL to accurately fill the geological model. • The different pegmatite domains were estimated separately from each other using hard boundaries due to distinct grade and orientation differences between the sub-domains. • Top cuts were applied to Sn, Ta and Fe_2O_3. • Li_2O, Sn, Ta, Fe_2O_3 and P_2O_5 were estimated into the block model using ordinary kriging. • Density was assigned based on mean values per domain.

Criteria	JORC Code explanation	Commentary
	• *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.*	• Search ellipses were aligned with the range of the modelled semi-variograms, which in turn was aligned with the plane of the pegmatite. • A minimum of 5 and maximum of 16 composites were used to estimate a block, with the maximum number per hole used to estimate being 4. Should sufficient samples not be located in the first search, then the search was expanded two times, and finally 5 times to ensure all model blocks were estimated. Most of the Mineral Resource is estimated within the first and second search volumes. • Estimates were validated using visual checks of the drillhole grades against the model, comparing global mean values and swath analysis of input composites versus output 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 were estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 0.5% Li_2O was applied for the reporting of the Mineral Resource. This is based on other hard rock lithium projects but will be investigated in future through robust economic assessments. • The parameters used in the assessment of reasonable prospects for eventual economic extraction (RPEEE) are not definitive and should not be misconstrued as an attempt to estimate an Ore Reserve for which economic viability would be required to be demonstrated.
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 Mineral Resource will be extracted by open pit mining. • A high-level observation is that the entire Mineral Resource could likely be extracted from an open pit with a worst case final waste:ore stripping ratio of 1:1. Due to this observation the Mineral Resource is reported to a depth of 550 m below surface as it is reasonable to expect economic extraction to this depth.
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*	• Mineral characterisation and metallurgical studies have demonstrated that the economically significant lithium mineral present is spodumene, with negligible quantities of other lithium species present. • Metallurgical test work was carried out on bulk samples derived from

Criteria	JORC Code explanation	Commentary
	rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	the complete Main Pegmatite intersections of drillholes, and tests can therefore be considered representative. • Mineral characterisation work covered selected samples chosen to verify mineral species in, for example, varying grades of mineralisation, hydrothermally altered spodumene and greisen. • Test work has confirmed that the cassiterite in the tin Mineral Resource is extractable by low cost gravity separation techniques. The weathered material containing the cassiterite is assumed to have similar metallurgical characteristics to that extracted during the operational period of the historical tin mine.
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.*	• A Definitive Feasibility Study level Environmental and Social Impact Assessment report for the entire concession (PR13359) has been completed by company consultants in the DRC and subsequently lodged with DRC government department Cadastre Minier in the capital, Kinshasa in May 2021.
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.*	• A total of 3,295 bulk density determinations have been carried out on Roche Dure drill core. • Most of these determinations were done on fresh pegmatite material by the Archimedes principal of weighing the assay sample in air and then submerged in water. • A calliper was used to measure and calculate the volume of drillhole core that was too weathered to submerge in water. This material was then weighed and the density calculated from its volume and mass. • In-situ bulk density assigned to the various domains based on mean values.
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*	• The data that inform the grade estimate were derived from AVZ drillholes only and no historical data were used. In the Competent Person's opinion, these data have been collected using industry

Criteria	JORC Code explanation	Commentary
	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.*	acceptable practices and are reliable. • The Mineral Resource is classified as Measured in areas where the drillhole spacing is 100 m by 50 m and are not extrapolated more than 25 m downdip from assay data. • Indicated Mineral Resources are defined in areas where the drillhole spacing is 100 m by 100 m and are not extrapolated more than 75 m away from assay data. • Inferred Mineral Resources are extrapolated to approximately 125 m from the drilling grid. • The classification reflects the Competent Persons view of the deposit.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The following review work was completed by the CPs during a site visit in April 2018 and in December 2019: - A site-based review of the drillhole data processes and data collection protocols, - Inspection of the drill core used in the Mineral Resource estimate, - A complete inspection of all drilling data available at the time. - Core photos of the "wedge" drill holes were also inspected.
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.*	• Quantification of relative accuracy was not carried out, however parameters were output from the estimation of Li_2O that provide an indication of the reliability of the estimate. These were checked relative to the Mineral Resource classification and support the classification. • Due to the near normal distribution of Li_2O grade values in the fresh pegmatite, it is reasonable to assume that the estimate of Li_2O grades have a high degree of confidence. • Caution should be placed on the Inferred estimates as they are based on limited data and are not suitable to support technical and economic studies and can be considered global in nature. • Apart from historical mining of the weathered pegmatite for tin, no modern mining has taken place at Roche Dure, and therefore no production data are available for comparison to the Mineral Resource.