

## Carriere de l'Este Maiden Mineral Resource Estimate

#### Highlights

- Initial Mineral Resource for the Carriere de l'Este Pegmatite is reported as 173 million tonnes at 1.58% Li2O, 785ppm Sn and 52ppm Ta
- 43% increase in Manono Project total Mineral Resources to 574 million tonnes @ 1.63% Li<sub>2</sub>O Cementing its place as the world's largest hard rock lithium deposit (Source www.mining.com)
- Independent Maiden Inferred Mineral Resource Estimate for the Carriere de l'Este deposit of 173Mt @ 1.58% Li<sub>2</sub>O, 785ppm Sn and 52ppm Ta containing 2.7 million tonnes of contained Li<sub>2</sub>O reported above a cut-off grade of 0.5% Li<sub>2</sub>O.
- The Carriere de l'Este Maiden Resource Estimate is based on surface mapping and sampling, an initial metallurgical test work programme and 11 wide spaced reconnaissance diamond drillholes for 3,853.31m of drilling.
- In addition to Sn, Ta and Li<sub>2</sub>O, CSA Global has also estimated Fe<sub>2</sub>O<sub>3</sub>, a potentially deleterious element, at an average of 1.04% Fe<sub>2</sub>O<sub>3</sub>.
- The Carriere de l'Este Maiden Mineral Resource was estimated over a 1.2 km strike length. The pegmatite body joins with the Malata Pegmatite to the north-east but remains open to the south-west and down dip.
- When combined with the existing Mineral Resource Estimate in respect of the Roche Dure deposit, the delineation of the Carriere de l'Este Mineral Resource represents a 135% increase in the total Inferred Resources for the Manono Project, from 128 to 301 million tonnes @ 1.61% Li<sub>2</sub>O.

#### Important information regarding ownership of the Carriere de l'Este deposit

On the 28th December 2016, PR13359 which authorises exploration and feasibility studies to be undertaken, was granted for a period of 5 years. On the 29th December 2016, PR13359 was transferred from La Congolaise d'Exploitation Miniere SA (Cominiere) to Dathcom Mining SA (Dathcom). On 4th May 2021, Dathcom applied to convert PR13359 into an exploitation permit (PE) which authorises mining. Upon lodging the PE application, PR13359's term was extended indefinitely to allow determination of the PE application.

Dathcom undertook the drilling of the Carriere de l'Este resource pursuant to PR 13359 between 2017 and 2021. Subsequently, disputes have emerged relating to the ownership of PR 13359. These disputes are the subject of various arbitration proceedings which are summarised in AVZ's ASX announcements dated October 30th, November 2nd, 15th and 17th 2023.

#### **ASX ANNOUNCEMENT**

18 December 2023

#### **AVZ Minerals Limited**

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ASX Code: AVZ OTC Code: AZZVF The allegation that Manono Lithium SAS holds PR 15775 over the northern portion of the Manono Project is without any legal foundation. This northern area includes the Carriere de l'Este, Malata and Kahungwe deposits, the rebuilt Colline Manono construction camp and administrative centre as well as the Dathcom core yard and core farm that hosts the sample library.

AVZ maintains that Dathcom is the holder of PR 13359 in respect of the entire Manono Project (including the northern area) and the applicant for a PE in respect of that land. AVZ has grounds to believe it has strong prospects of success and is confident of its position. The purpose of the ICSID proceedings which were commenced by AVZ on 8 May 2023 and registered on 8 June 2023 is to authoritatively establish this.

There is a reasonable prospect that a party, including the Company, will be granted a PE in respect of the Carriere de l'Este Mineral Resource. If Dathcom is granted a PE in respect of the Carriere de l'Este Mineral Resource, further negotiations will then be undertaken with the shareholders of Dathcom in relation to the terms of the mining joint venture.

**AVZ Minerals Limited** (ASX: AVZ, OTC: AZZVF) (**AVZ** or **Company**) is pleased to advise that it has confirmed the potential of its 75% owned Carriere de l'Este Prospect located within its Manono Lithium and Tin Project (**Manono Project** or **MLTP**) in the DRC's Tanganyika Province (Figure 1 and Appendix 2). This deposit, located less than 5 km from Roche Dure, is likely to underpin future resource upgrades and or be considered as a standalone source of feedstock for expanded operations at Manono subject to the results of ongoing studies.

The Manono Project overall Mineral Resources grows from 401 TO 574 million tonnes, an increase of 43%, cementing its place as the world's largest hard rock lithium project\*

<sup>\*</sup> Source - www.mining.com

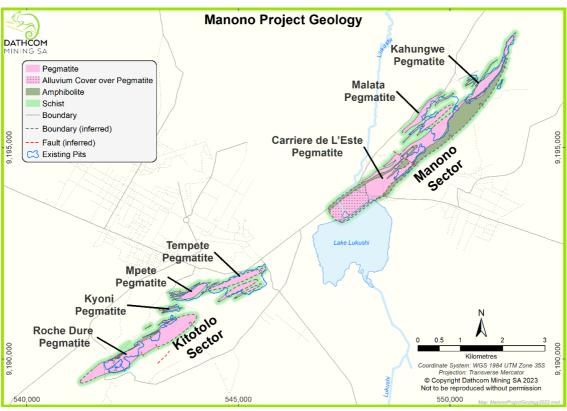


Figure 1. Pegmatite location map showing Carriere de l'Este located north of Lake Lukushi

#### Maiden Mineral Resource Estimate according to JORC 2012 Guidelines

The maiden Carriere de l'Este Mineral Resource was estimated by independent geological consultants CSA Global South Africa Pty Ltd (CSA Global), an ERM Group Company Mining & Metals (erm.com).

The Mineral Resource is reported in accordance with the guidelines of the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 Edition. The Mineral Resource (Table 1) is classified as Inferred and can be extracted by means of open pit mining and therefore meets the criteria required for reasonable prospects for eventual economic extraction.

The lithium Mineral Resource is reported above a cut-off grade of 0.5%  $\text{Li}_2\text{O}$  in the fresh pegmatite domain. The Mineral Resource comprises of 173 million tonnes of spodumene-rich fresh pegmatite at a grade of 1.58%  $\text{Li}_2\text{O}$ .

Fresh	Tonnes	Li <sub>2</sub> O	Sn	Та	Fe <sub>2</sub> O <sub>3</sub>	Li₂O
Pegmatite Category	(Millions)	%	ppm	ppm	%	Million tonnes
Inferred	173	1.58	785	52	1.04	2.7
Total	173	1.58	785	52	1.04	2.7

Table 1: Manono Carriere de l'Este – Maiden Mineral Resource estimate at a 0.5% Li<sub>2</sub>O cut-off *Note: Tabulated data have been rounded and as a result minor computational errors may occur.* 

A standalone tin Mineral Resource for the weathered pegmatite was not estimated yet as the immediate focus is on lithium hosted in the fresh pegmatite. Table 1 however, indicates that a significant tin Mineral Resource exists within the Carriere de l'Este fresh pegmatite although recovery for this mineral has not yet been determined at CdL.

#### Carriere de l'Este Exploration and Database

This reconnaissance style drill pattern was undertaken to determine the main aspects of the pegmatitic body such as the lithology of the pegmatite, deposit shape, dip and strike, and general tenor of mineralisation. The new geological model based on this information will be used to design future drilling programmes and potential future mine designs.

All drilling results have been reported previously (Appendix 2).

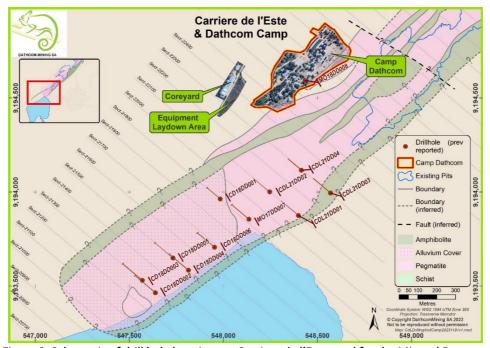


Figure 2. Schematic of drill hole locations at Carriere de l'Este used for the Mineral Resource

High grade surface samples recovered from the Lake Lukushi dam spillway<sup>ref2</sup> to the southwest of the most southerly drilling on Section 21,300mN (Figure 3) clearly indicates the potential for the deposit to extend further to the south-west towards the Tempete pegmatite, which is beyond the new geological

model boundary thus providing confidence in the possibility of the future discovery and delineation of further mineralised pegmatite.

The initial Mineral Resource at Carriere de l'Este includes assay data from 11 drill holes spaced over 1,200m of strike length (Figure 2) and geological data from a 12th drillhole combined with surface mapping and trenching<sup>ref1</sup> and rock chip sampling<sup>ref2</sup> to enable the interpretation of a first pass geological model and grade estimate. The majority of drillholes were completed in 2018 and a further 4 holes drilled in 2021 extended the known mineralisation further to the north-east of the deposit to where it merges with the Malata pegmatite (Figure 1). A total of 4,002.86m of diamond core, mostly HQ and PQ size, was drilled over the pegmatite in several campaigns summarized in Table 2.

Drilling Programme	Hole Series	Number of holes	Total metres	
		drilled at CdL	drilled	
2017 diamond drilling (due diligence)	MO17DD007	1	351	
2018 diamond drilling	CD18DD001-6	7	2,339.86	
	and MO18DD008*			
2021 Diamond Drilling	CD21DD001 - 4	4	1,312	
Totals		12	4,002.86	

Table 2. Summary of drilling conducted on CdL from 2017 to 2021. \*Note MO18DD008 was drilled as a vertical water borehole in 2018 and assays from this have not been used in the Mineral Resource Estimate

Core recoveries were in excess of 95% through the pegmatite intersections and 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. Higher core losses occurred in the upper weathered portions of the pegmatite, but this is not considered material to the results reported, since the majority of this material falls outside the mineralized pegmatite.

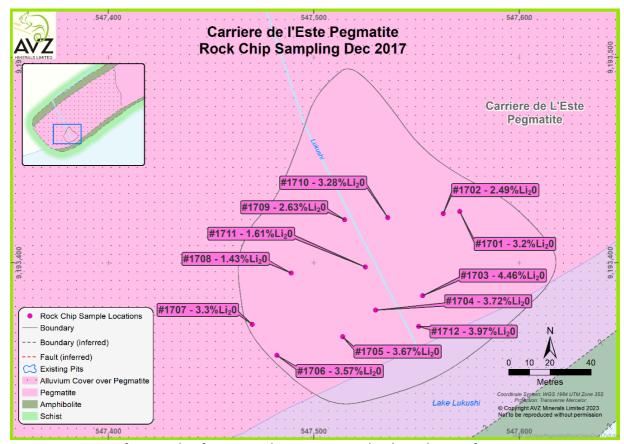


Figure 3. Surface sampling from exposed pegmatite immediately south-west of section 21,300mN

#### Core logging and sampling

Diamond drillholes were geologically logged, photographed and half core samples collected at the AVZ core yard in Manono. Drill core was logged by qualified geologists using a data-logger and the logs were

then uploaded into Geobank software, a part of the MICROMINE software system. The main database was managed and stored offsite in Perth by an independent consultant.

The pegmatite intersections were sampled from the hanging wall contact continuously through to the footwall contact at nominal 1 m sample intervals. In addition, the host-rocks extending 2 m from the contacts have also been sampled. Core samples were cut longitudinally in half and the intervals submitted for assay were determined by the geological boundaries. Samples were taken at nominal 1 m intervals but ranged from 0.25 m to 2.31 m. The samples were sealed in labelled bags and the samples dispatched by courier to the assay laboratory.

The half-core samples were prepared at ALS Lubumbashi, but later samples (from MO18DD021 onwards from Roche Dure and including CdL18DD001 onwards as well) were prepared at the ALS sample preparation facility on-site at Manono.

The half-core samples were oven dried, crushed and a 500 g aliquot was then pulverised. A 120 g aliquot of each sample was taken from the pulverised material and inserted into labelled bags with sample tickets, and QAQC samples were inserted at appropriate intervals. The complete sample batch was couriered to ALS laboratory in Perth, Australia for chemical analysis.

At ALS Laboratories in Perth, the analysis was done using methods ME-ICP89 and ME-MS91, a sodium peroxide (Na2O2) fusion and determination by AES or MS. 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 and 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. Li was 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  $P_2O_5$ .

Interlab check sample analyses were conducted by Nagrom in Perth as part of the QAQC programme and were assayed by method ICP005 (a multi-element analysis using sodium peroxide fusion/acid digest with ICP-OES and ICP-MS finish).

#### **Quality Assurance and Quality Control**

In addition to the assays laboratory's internal QA/QC programme routinely implemented using pulp duplicate analysis, sample replicate analysis and internal blank and standards, AVZ developed an internal QA/QC protocol comprising the insertion of certified reference materials ("CRM"), blanks and coarse crush duplicates on a systematic basis amongst the samples shipped to the analytical laboratories. The CRMs were sourced from Geostats (Pty) Ltd Western Australia and comprised GTA4, GTA5 and GTA6 with certified values for lithium and indicative values for tin. The blank comprised a milled basalt material,

The QC samples comprising (CRMs, blanks, duplicates and lab check samples) comprised 20% of all the samples submitted for assay by AVZ for the drilling at CdL. The Competent Person reviewed the QAQC protocols and performance of the QC samples and is satisfied that the results of the QAQC are acceptable and the assay data from ALS is suitable for use in Mineral Resource estimation.

#### Mineralogy and metallurgical test work

GLG912-2, also sourced from Geostats.

In 2019 fifty-four samples representing lithium mineralised and non-mineralised pegmatite covering a range of lithium grades from 0.009-4.13%  $\rm Li_2O$  and an average grade of 1.46%  $\rm Li_2O$  from drill holes CD18DD001, CD18DD002, CD18DD003 and CD18DD006 were submitted to ALS Laboratories (Perth) for quantitative X-ray diffraction (XRD) determinations. The mineralogy the CdL pegmatite is considered similar in composition to Roche Dure and the occurrence of the spodumene mineralisation similar to that observed at Roche Dure. The average mineralogical breakdown is summarised below.

- 24% quartz,
- 46% albite feldspar,
- 8% microcline feldspar,

- 5% muscovite mica/lepidolite,
- 14% spodumene and
- 3% comprising minor and traces of biotite/phlogopite, cassiterite, fluorite, clays, chlorite, beryl, apatite and iron oxides.

Subsequent first pass metallurgical work<sup>ref3</sup> was carried out on quarter core samples taken from the diamond drillholes and provided confidence in the technical ability to produce a potentially saleable spodumene concentrate product from the mineralized pegmatite at Carriere de l'Este. The results of this work were reported by AVZ Minerals' announcement dated 16 March 2020 titled "Preliminary Flotation Test Work Update and Initial Carriere de l'Este Metallurgical Results."

#### Concession Status and Carriere de l'Este Work Completed

Dathcom's application for the award of a Permite d'Exploitation (PE) remains valid as all aspects of the application were approved by the government appointed validation committee which approved Dathcom's documents. The favourable technical opinion was received in April 2022 and reported to the public in the AVZ ASX announcement (13 April 2022) — Favourable Technical Opinion Received Ahead of a Decision on the Mining Licence for the Manono Lithium and Tin Project.

As per the AVZ public announcement of the 30<sup>th</sup> October 2023, AVZ disputes claims by Zijin, their subsidiary Jinxiang Lithium and Cominiere that they have taken ownership of Dathcom's concession PR13359 and applied for a new PR over the northern portion with PR15775 – the Contested Area (Figure 4).

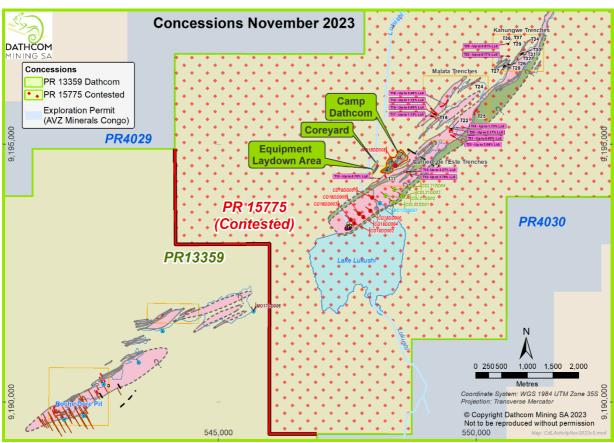


Figure 4. Contested area (stippled) shown relative to Dathcom's northern work areas Source: Cadastre Miniere DRC website

Furthermore, the mining tenement register maintained by CAMI operates to give notice to the public of decisions under the Mining Code regarding mining tenements but the recording of a decision in the register does not have any legal effect and does not otherwise serve to validate decisions which were contrary to the Mining Code - AVZ ASX announcement (30<sup>th</sup> October 2023) — Response to Zijin Announcement and Filing of Emergency Order Application.

Figure 6 shows a graphical summary of some of the exploration field work components completed over the "northern" portion of PR13359. This map, however, does not show other study components such as the results of LIDAR survey over Carriere de l'Este, Malata and Kahungwe deposits (Figure 5) or the results of the bulk sampling and sighter level metallurgical test programme that was completed in Perth using selected core from the drilling programme at CdL.

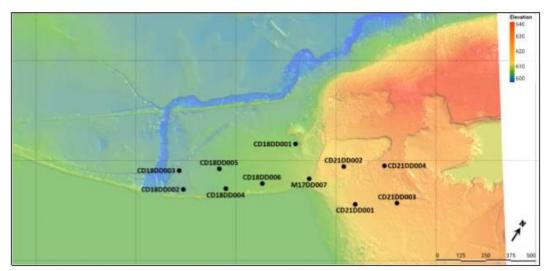


Figure 5. Typical LIDAR survey information from Carriere de l'Este Source: Dathcom Mining SA

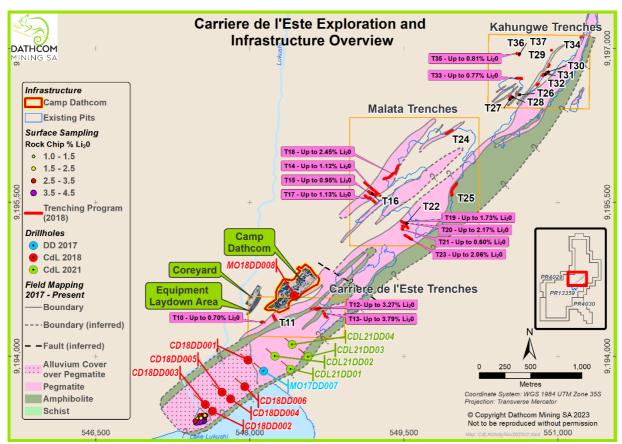


Figure 6. Summary map of work programmes since 2017 and currently underway in the northern Manono Sector Source: Dathcom Mining SA

Additional work currently underway also includes the collaborative scientific research programme being carried out on Carriere de l'Este drill core by the Department of Earth and Environmental Science at KU Lueven in Brussels under the supervision of Professor Dr. Anouk Borst (Appendix 3).

This research programme is designed to perform a detailed mineralogical and geochemical characterization of the Manono – Kitotolo pegmatites to better understand the mineralisation processes in granitic pegmatite systems and in particular how it might relate to other lithium bearing pegmatites in other parts of the DRC. This work is expected to assist in the discovery of new systems within the DRC Central African Kibara Belt. This ongoing work programme has already produced spectacular results for Dathcom and its stakeholders Cominiere SA which will greatly benefit the people of Manono and the country.

#### Mineral Resource Update - Comparison with Previous Mineral Resource Estimate

The previous lithium Mineral Resource for the Manono Lithium and Tin Project was announced via the ASX 24 May 2021 and was based on the additional drilling of the historical pit floor at Roche Dure after the pit had been dewatered. Whilst the Roche Dure and Carriere de l'Este deposits share similar geology, they remain geographically distinct, and this new Mineral Resource simply adds to the overall Mineral Resource inventory for the MLTP.

With the completion of the maiden Carriere de l'Este Mineral Resource estimate, the global Inferred Resources at the MLTP have increased significantly from 401 million tonnes to 574 million tonnes, a 43% increase (Table 3).

Note that these tonnes represent 100% of the MLTP's overall total tonnes, irrespective of the tonnes attributed to the Project's stakeholders held in country on their behalf by Dathcom Mining SA.

Inferred Resources for spodumene lithium Mineral Resources have increased from 128 million tonnes at 1.65% Li<sub>2</sub>O to 301 million tonnes at a slightly lower overall Inferred grade of 1.61% Li<sub>2</sub>O.

This increase in total Inferred tonnes due to CdL represents a robust 135% increase in the overall project's lowest confidence classification category (Table 3) demonstrating the globally significant potential of Dathcom's Carriere de l'Este deposit. The new block model has highlighted areas that could be upgraded to Indicated or Measured Mineral Resources with further exploration drilling when required, as well as the higher-grade zones that warrant follow-up work.

This is the second deposit at Manono after Roche Dure to have generated a significant maiden Mineral Resource Estimate and demonstrates the prospectivity of the Manono (northern) sector (Figure 1) in PR13359 for the first time. The CdL Mineral Resource estimate was concluded as part of the A\$25 million AVZ funded Early Works Programme<sup>ref4</sup>, which stated that one of the objectives of this work programme was "identifying high grade ore zones for initial feed to the plant, providing increased SC6 production volumes from the start of operations."

Carriere de l'Este, which has higher grade zones averaging greater than 2% Li<sub>2</sub>O was initially selected as a target that may generate significant quantities of high-grade material. This work and new Mineral Resource estimate has concluded that this may still be the case but that further exploration is required.

The new block model at CdL covers just over 1 kilometre of strike and the deposit has been shown to continue to the north-east for about another kilometre to the start of the historical Malata pit. To the south-east however the deposit has been mapped for only a few hundred metres before dipping under cover. The deposit therefore remains open along strike in both directions as well as down-dip.

Table 3: Manono 18 December 2023 and CY23 Mineral Resources (100% basis inclusive of Cominiere's 25% interest)

Difference 1st May 2021\* to 18th Dec

								2023	1100 131	iviay 2021 (0	Totti Dec
		1st May 2021*		18	3th Dec 2023		Arithmetic		Relative %		
Donosit	JORC Class	Mass	Li	<sub>2</sub> O	Mass	Li	<sub>2</sub> O	Mass	Li <sub>2</sub> O	Mass	Li <sub>2</sub> O
Deposit	JORC Class	(Mt)	%	(Mt)	(Mt)	%	(Mt)	(Mt)	(Mt)	(Mt)	(Mt)
Roche Dure	Measured	100	1.67	1.66	100	1.67	1.66	0	0	0%	0%
	Indicated	174	1.65	2.87	174	1.65	2.87	0	0	0%	0%
	Measured + Indicated	274	1.66	4.53	274	1.66	4.53	0	0	0%	0%
	Inferred	128	1.65	2.11	128	1.65	2.11	0	0	0%	0%
	Total	401	1.65	6.64	401	1.65	6.64	0	0	0%	0%
Carriere de l'Este	Measured				-	-	-	-			
	Indicated				-	-	-	-	-		
	Measured + Indicated				-	-	-	-	-		
	Inferred				173	1.58	2.7	173	2.7		
	Total				173	1.58	2.7	173	2.7		
PROJECT TOTAL	Measured	100	1.67	1.66	100	1.67	1.66	0	0		
	Indicated	174	1.65	2.87	174	1.65	2.87	0	0		
	Measured + Indicated	274	1.66	4.53	274	1.66	4.53	0	0		
	Inferred	128	1.65	2.11	301	1.61	4.81	173	2.7	135%	128%
	Total	401	1.66	6.64	574	1.63	9.34	173	2.7	43%	41%

#### Notes:

- \* MRE reported in ASX Announcement dated 24 May 2021 "Updated Mineral Resource Estimate Includes Pit Floor "Wedge" Drill Results"
- These MREs are reported using a 0.5%  $\text{Li}_2\text{O}$  cut-off.
- Li<sub>2</sub>O masses are in situ estimates and, as such, do not account for expected mining and metallurgical recovery losses.
- Zero values are reported as '-' symbol and where necessary more decimals are used to avoid reporting values that round to zero.
- Totals and averages are affected by rounding and as a result minor computational errors may occur

#### Carriere de l'Este Maiden Mineral Resource - Background

A maiden Mineral Resource was estimated for the CdL deposit which is part of the MLTP Pegmatites.

The Mineral Resource is supported by relatively wide-spaced drilling and was therefore classified as an Inferred Mineral Resource.

All work was carried out using:

- Leapfrog Geo version 2021.2.4
- Datamine Studio RM version 1.7.100.0
- JMP version 16.0.0
- Microsoft Office 365

The database was established by the collection, validation, recording, storing, and processing of data and forms the foundation for the MRE. Standard operating procedures were established by AVZ to govern the collection of all data, while a rigorous QAQC program is in place to support the database.

The Mineral Resource meets the minimum requirement of reasonable prospects for eventual economic extraction (RPEEE) as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition).

The Mineral Resource is based on geological premises, facts, interpretations, and technical information, and used appropriate estimation methods, parameters, and criteria for the deposit under consideration.

#### **Drillhole Database**

A total of 3,853.31 m from 11 diamond drillholes were available for the estimate (Figure 7).

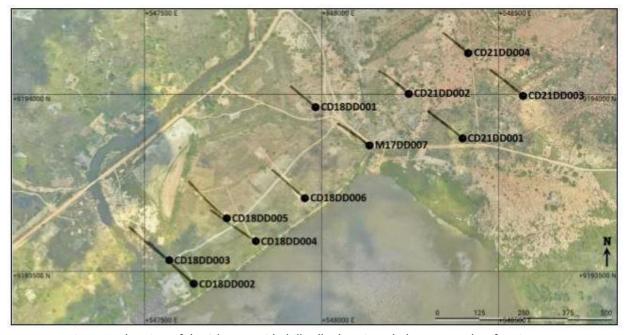


Figure 7. Plan view of the CdL area with drill collar locations, hole traces and surface imagery Source: CSA Global

Drillholes range from 268.2 m to 416.7 m in depth, with the average drilled depth at 350.3 m. The drillholes were generally oriented at 310° azimuth and 70° dip on NW-SE fence lines spaced 200 m apart. Drillholes are spaced at either 100 m or 200 m on fence lines. No more than two drillholes were available per line. Diamond drillholes were sampled at 1 m intervals at the AVZ core yard in Manono.

The relevant drilling data, hosted by iSpatial for AVZ, was supplied to the QP as an Access database on 16 August 2022 (AVZ\_CDL\_2022.mdb).

Drillholes were named according to deposit (CD), year drilled (17/18/21) and hole number for the year.

Downhole survey data were recorded and captured below the collar position. The planned azimuth and dip were captured at the collar position (0 m depth).

An extensive suite of elements was assayed: Li<sub>2</sub>O, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, MgO, P<sub>2</sub>O<sub>5</sub>, SiO<sub>2</sub>, Nb, Sn, Ta, Th and

Lithological data included rock type with typical description fields for colour, texture, and spodumene content. The main rock types logged were pegmatite, dolerite, mica schist and amphibolite. These four rock types account for 94% of the logged metres at CdL. Included with the lithological data was an interpretation of the state of weathering, which ranged from completely weathered (W4) to fresh (Fr).

Bulk density was mostly determined using the hydrostatic immersion technique on core samples. In some cases, volume and dry weight were used to determine density. A total of 241 bulk density determinations were carried out on core.

#### **Database Validation**

The data were reviewed and validated, with minor changes required for use in Mineral Resource estimation.

Assay and bulk density data were reviewed relative to expected values. The assay data contained no unexpected values. The bulk density data contained 10 unexpected low or high values. These were addressed when working with the bulk density data (detailed in Bulk Density).

#### Topography

A topographic digital terrain model (DTM) was constructed from surface elevation data acquired during an aerial Lidar survey of the entire Manono area. The drillhole collar locations were plotted relative to the DTM from which contour data can be easily generated (Figure 8) and their elevations checked against the DTM. The collar elevations were close to the elevation of the DTM in all instances. All collars were projected onto the DTM in Leapfrog Geo for further work.

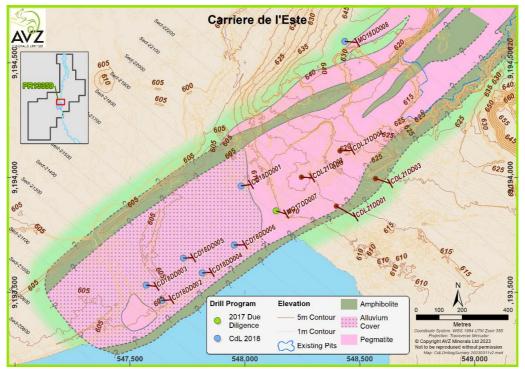


Figure 8. Plan view of the CdL area with drill collar locations relative to elevation

Source: Dathcom Mining SA

#### **Geological Interpretation**

The basic geological interpretation is that of an intrusive spodumene-bearing pegmatite hosted in mica schist/amphibolite country rock. Dolerite is common throughout the area. The area is overlain by unconsolidated soil and laterite.

Weathering is generally shallow, down to approximately 15 m and is an important consideration as it negatively impacts Li<sub>2</sub>O grade.

Due to the sparse drilling data available at CdL, the lithological logging data were initially simplified and grouped for modelling the pegmatite (Table 4). The drilling data were further coded (into the MCODE field) to refine the pegmatite model to include a weathered pegmatite domain (WPEG), fresh pegmatite domain (FPEG), internal low lithium grade domain (LPEG) and an internal waste/country rock/dolerite domain (INT) (Figure 9).

Table 4. Simplification of the logging data for modelling

Logged Lithology	Grouped Lithology	
Soil cover		
Laterite	Overburden	
Paleochannel; lithic fill		
Mica schist (numerous variations)	Carrette Bank	
Amphibolite	Country Rock	
Pegmatite	Pegmatite	
Dolerite	Dolerite	
Aplite	Aplite	
Greisen	Greisen	
Quartz vein	Quartz vein	
Lost core	Lest core/	
No return	Lost core	

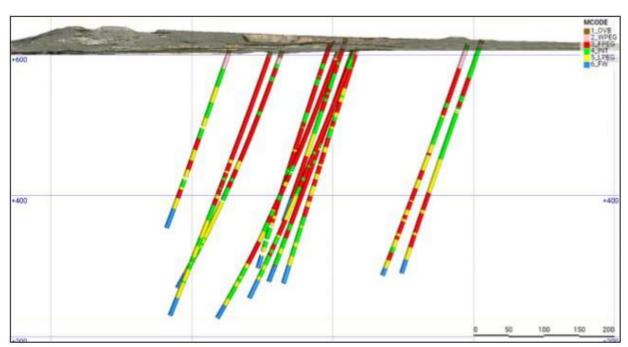


Figure 9. Cross section looking NE showing coded data for modelling the refined pegmatite. Source: CSA Global

All drillholes were interpreted as entering pegmatite below the overburden.

The fresh pegmatite is the primary host of economic grade lithium mineralisation; therefore, it was essential to distinguish between fresh pegmatite and other non-economic domains within the pegmatite model. Due to the sparse data available, the simplest method was to perform a final grouping of all non-fresh or lithium poor altered pegmatite intersections within the pegmatite. This grouping allowed for the modelling of two final domains within the pegmatite:

- 1. Fresh pegmatite
- 2. Other pegmatite (which includes weathered pegmatite, internal low lithium grade pegmatite and internal waste/country rock/dolerite)

The final model includes the overburden and footwall (Figures 10 and 11). The up and down dip extension of the pegmatite is not known with the limited drilling available. This includes the outcrop location of the footwall-pegmatite contact as well as the hanging wall-pegmatite contact. Additional drilling will be required to establish the outcrop locations.

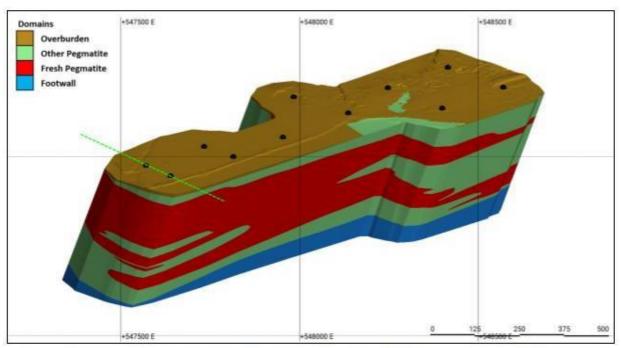


Figure 10. Oblique view looking north showing simplified domains clipped by Inferred classification limit (100m), note dashed line denoting location of cross section in Figure 11.

CD18DD003 CD18DD002

\*600

\*600

Domains

Overburden
Other Pegmatite
Fresh Pegmatite
Frootwall

Figure 11. Cross section looking NE showing simplified domains clipped by Inferred classification limit (100m)
Source: CSA Global

#### Further Information Relevant to the Mineral Resource

Density determinations were conducted onsite, using an Archimedes method of weighing drill core dry, and then submerged, on competent core. Where core was not sufficiently solid to be submerged, density was determined using a weight versus volume calculation. In total, 241 density determinations were conducted. Outliers were removed for density analysis which amounted to 10 values being excluded. The density samples were coded according to domain and mean values derived per domain. Density determinations were not conducted on overburden material, so a density value was therefore assigned based on the density of overburden at Roche Dure.

A block model was constructed with cell dimensions of 50 m x 50 m x 10 m (XYZ) within an area that covers the CdL pegmatite. The wireframes representing the domain boundaries were filled with cells to a minimum sub-cell size of 5 m x 5 m x 5 m. The blocks were coded according to the appropriate domain codes.

 $Li_2O$ , Sn, Ta,  $Fe_2O_3$  were estimated by inverse distance weighting (power 2) within the fresh pegmatite. The limited data did not warrant the calculation of semi-variograms and estimation by ordinary kriging.

The search neighbourhood to locate composites for estimation was set up based on drill spacing and orientation of geological features within the fresh pegmatite. A minimum of 20 and maximum of 40 composites were required for a block to be estimated, with no more than 10 composites used from a single drillhole (search volume 1). If the minimum 20 composites were not located in the search neighbourhood, the neighbourhood size was doubled and the search re-run (search volume 2). If the minimum composites were still not located, the original search neighbourhood was expanded by three times to locate composites (search volume 3). Most blocks were estimated within search volume 1.

The block model estimates were validated by:

- Global statistics and
- Swath analysis

#### Reasonable Prospects for Eventual Economic Extraction

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade, or quality and quantity that there are reasonable prospects for eventual economic extraction (RPEEE). To satisfy the requirement of RPEEE by open pit mining, reporting pit shells were determined based on conceptual parameters and costs (Table 5). Recovery would likely be achieved using a conventional dense media separation (DMS) and flotation circuit.

A long-term spodumene concentrate (6%  $\text{Li}_2\text{O}$ ) price of US\$1,500/t was selected for the determination of RPEEE; however, conceptual pit shells were also calculated at prices of US\$1,200/t and US\$2,000/t to assess the sensitivity of concentrate price. It was observed in most cases that the conceptual pit shells were similar, with increasing concentrate prices showing minor incremental increases in tonnage and  $\text{Li}_2\text{O}$  content.

A portion of the conceptual RPEEE pit shell is located in the shallow man-made Lake Lukushi (Figure 12). Technical issues concerning this will be addressed in future studies however it satisfies RPEEE criteria.

On the 28<sup>th</sup> December 2016, PR13359 which authorises exploration and feasibility studies to be undertaken, was granted for a period of 5 years.

On the 29<sup>th</sup> December 2016, PR13359 was transferred from La Congolaise d'Exploitation Miniere SA (Cominiere) to Dathcom Mining SA (Dathcom).

On 4th May 2021, Dathcom applied to convert PR13359 into an exploitation permit (PE) which authorises mining. Upon lodging the PE application, PR13359's term was extended indefinitely to allow determination of the PE application.

Dathcom undertook the drilling of the Carriere de l'Este resource pursuant to PR 13359 between 2017 and 2021.

Subsequently, disputes have emerged relating to:

- Whether AVZ Minerals still holds shares in Dathcom (and the percentage of shares it holds)
- Whether Dathcom still holds PR13359
- Whether the northern portion of PR13359 (including the Carriere de l'Este resource) was validly relinquished
- Whether PR15775 was validly granted to Manono Lithium SA in respect of the northern portion including the Carriere de l'Este resource; and
- Whether a PE in respect of the northern portion will be granted to Dathcom, Cominiere or Manono Lithium SA.

These disputes are the subject of various arbitration proceedings which are summarised in AVZ's ASX announcements dated October 30<sup>th</sup>, November 2<sup>nd</sup>, 15<sup>th</sup> and 17<sup>th</sup> 2023.

No opinion is expressed in relation to the outcome of these arbitration proceedings including which party will ultimately be granted a PE in respect of the Carriere de l'Este resource.

There is a reasonable prospect that a party will be granted a PE in respect of the Carriere de l'Este resource.

If Dathcom is granted a PE in respect of the Carriere de l'Este resource, further negotiations will then be undertaken with the shareholders of Dathcom in relation to the terms of the mining joint venture.

The land the subject of the Carriere de l'Este resource is not subject to any land interests, historical sites, wilderness or national park and environmental settings which may impair the ability for the resources to be extracted.

Other than described in this report, there are no other known environmental, taxation, socio-economic, marketing, political or other factors which would materially affect the MRE provided herein.

Table 5. Simplification of the logging data for modelling

Parameter	Value	Unit
Spodumene concentrate price (6% Li <sub>2</sub> O)	1,500	US\$/t
Royalties	3.5	%
Transport cost	249.13	US\$/t
Fixed mining cost	1.20	US\$/t
Total processing cost	22.80	US\$/t
Li₂O recovery	59	%
Pit Slope angle	45	degrees
Mining recovery	98	%
Mining dilution	5	%

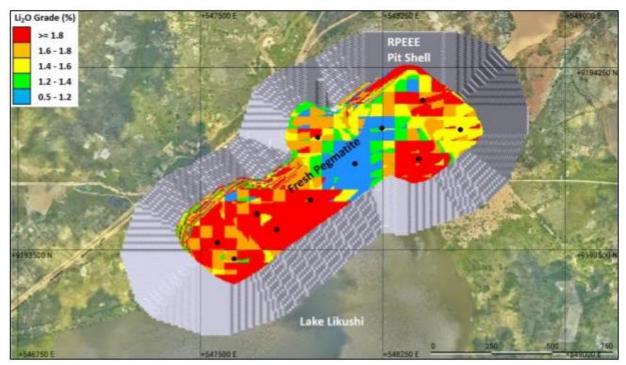


Figure 12. Plan View of the conceptual RPEEE pit shell and fresh pegmatite domain, note Lake Lukushi in the south Source: CSA Global

#### Mineral Resource Classification

The portion of the block model that satisfied RPEEE criteria i.e. material within the conceptual pit shell, was classified according to Mineral Resource confidence categories defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition).

The classification of the block model was based on confidence in the data, confidence in the geological model, grade continuity and the drill hole spacing. The main criteria in the classification are as follows:

- There is acceptable confidence in the accuracy and precision of the assay data.
- Average drill hole sample recoveries exceed 95%.
- Recently surveyed high quality topographic data were used in the estimate. This topographic data validated well against the collar positions that were surveyed using a DGPS.
- The overall variability of the grades is low. The drill hole spacing is sufficient to provide representative global estimates.

The Mineral Resource is classified as Inferred up to 100 m beyond the outermost drillhole data.

It is reasonable to expect that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

#### References

- 1. AVZ ASX Announcement (12 September 2017). AVZ Minerals Intersects 235m @ 1.66%  $\rm Li_2O$  at the Manono Lithium Project.
- 2. AVZ ASX Announcement (22 December 2017). Additional High Grade Surface Results Confirm Extension to Carriere de l'Este Pegmatite.
- 3. AVZ ASX Announcement (16 March 2020). Preliminary Flotation Test Work Update and Initial Carriere de l'Este Metallurgical Results.
- 4. AVZ ASX Announcement (10 February 2022). AVZ Commits AS25 M to Early Works & Exploration Drilling Program for Manono Lithium and Tin Project.

#### **Summary and Management Comment**

**AVZ's Managing Director, Nigel Ferguson said**: "We are delighted to confirm that this second area at Manono that we have evaluated has generated such a significant Maiden Mineral Resource Estimate. Its location in the northern portion of PR13359 confirms the results of the many and various work programmes, including the completion of the 2022 Early Works Programme, carried out there that have led to these highly encouraging JORC compliant resource figures. Carriere de l'Este is only one of 3 mapped outcropping pegmatites in the northern Manono Sector with the others being Malata and the Kahungwe Prospects, both of which were also mined for tin previously."

"These other significant mineralized pegmatites, Kahungwe for example has been mapped at over 2 kilometres long, will no doubt be evaluated by the Dathcom Mine Operations Team in the future to determine their suitability to provide further feedstock to the Company's processing plant or plants."



Figure 13. L-R AVZ Technical Director Graeme Johnston and Managing Director Nigel Ferguson Inspecting drilling operations at Roche Dure, Manono Lithium and Tin Project

#### **Competent Persons Statement**

The technical information in the document that relates to the geology of the Carriere de l'Este pegmatite is based upon information compiled by Mr. Michael Cronwright, who is a geologist with 24 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 22 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 Fellow 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 the Board of Directors of AVZ Minerals Limited.

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#### FORWARD LOOKING INFORMATION

This announcement contains certain forward-looking statements and comments about future events, Forward looking statements can generally be identified by the use of forward-looking words such as 'expect', 'anticipate', 'likely', 'intend', 'should', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target' and other similar expressions within the meaning of securities laws of applicable jurisdictions. Indications of, and guidance on, future earnings or financial position or performance are also forward-looking statements.

Forward looking statements involve inherent risks and uncertainties, both general and specific, and there is a risk that such predictions, forecasts, projections and other forward-looking statements will not be

achieved. Forward looking statements are provided as a general guide only and should not be relied on as an indication or guarantee of future performance. Forward looking statements involve known and unknown risks, uncertainty and other factors which can cause the Company's actual results to differ materially from the plans, objectives, expectations, estimates and intentions expressed in such forward looking statements and many of these factors are outside the control of the Company. As such, undue reliance should not be placed on any forward-looking statement. Past performance is not necessarily a guide to future performance and no representation or warranty is made by any person as to the likelihood of achievement or reasonableness of any forward-looking statements, forecast financial information or other forecast. Nothing contained in this announcement nor any information made available to you is, or shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of the Company.

Except as required by law or the ASX Listing Rules, the Company assumes no obligation to provide any additional or updated information or to update any forward-looking statements, whether as a result of new information, future events or results, or otherwise.

# Appendix 1: JORC Table 1

# Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

(Criteria in this section apply to all succeeding sections.)					
Criteria	JORC Code explanation	Commentary			
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>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.</li> <li>Supplementing the drilling data, surface samples were collected from outcrops, utilising channel sampling from trenches and point-source sampling of scattered outcrops.</li> <li>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.</li> <li>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.</li> <li>The submitted half-core samples typically had a mass of 3-4 kg.</li> </ul>			
Drilling techniques	<ul> <li>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).</li> </ul>	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 at 70° 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. Apart from drill hole MO18DD008 which was a vertical hole, all cores were oriented by the drilling contractor using an ACT II core orientation tool.			

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Drill core attained &gt;95% recovery in the pegmatite.</li> <li>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.</li> <li>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. Higher core losses occurred in the upper weathered portions of the pegmatite, but this is not considered material to the results reported, since the majority of this material falls outside the mineralized pegmatite.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>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.</li> <li>The drill core was logged for geology and geotechnical properties (RQD &amp; planar orientations).</li> <li>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.</li> <li>The entirety of all drillholes were logged for geological, mineralogical and geotechnical data.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Core is cut longitudinally, and half-core samples of a nominal 1 m length are submitted for assay.</li> <li>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 (and including CdL18DD001 onwards) onwards being prepared at Manono.</li> <li>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.</li> <li>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.</li> <li>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 prenumbered 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.</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For 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.</li> <li>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.</li> </ul>	<ul> <li>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 &amp; Nb. Samples from the drilling completed from 2018 onwards 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<sub>2</sub>O, Al as Al<sub>2</sub>O<sub>3</sub>, Si as SiO<sub>2</sub>, K as K<sub>2</sub>O, Mg as MgO, Fe as Fe<sub>2</sub>O<sub>3</sub> and P as P<sub>2</sub>O<sub>5</sub>.</li> <li>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.</li> <li>Sodium peroxide fusion is a total digest and considered the preferred method of assaying pegmatite samples.</li> <li>Geophysical instruments were not used in assessing the mineralisation.</li> <li>Interlab check samples are routinely conducted by Nagrom in Perth as part of the QAQC programme.</li> <li>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.</li> <li>The Competent Person is satisfied that the results of the QAQC are acceptabl</li></ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Company geologists and consultants observed the mineralisation in the majority of drill core on site.</li> <li>No check assaying was completed by CSA Global.</li> <li>Interlab check samples are routinely conducted by Nagrom in Perth.</li> <li>Jusdox Surveying observed and photographed the collar positions in the field, along with rigs that were drilling at the time of the site visit.</li> <li>Drilling data is stored on site as both hard and soft copy. Drilling data are validated by the onsite geological team 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.</li> <li>AVZ has not adjusted assay data.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>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.</li> <li>All angled holes were downhole surveyed using a digital multi-shot camera at approximately 30 m intervals.</li> <li>Vertical holes were not surveyed downhole.</li> <li>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).</li> <li>Coordinates are relative to WGS84 UTM Zone 35M.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	Resource drillhole spacing was completed on sections ranging from 180m to 240m along strike, and collars range from 100 m to 200 m apart on sections.

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between 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.</li> </ul>	<ul> <li>The drillhole orientation is designed to intersect the Carriere de l'Este at, or nearly at, 90° to the plane of the pegmatite.</li> <li>No material sampling bias exists due to drilling direction.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>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.</li> <li>At Lubumbashi, the prepared samples (pulps) are sealed in a box and delivered by DHL to ALS Perth directly.</li> <li>ALS issue a reconciliation of each sample batch, actual received vs documented dispatch.</li> </ul>
		<ul> <li>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.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>The sampling techniques were reviewed by the Competent Person during multiple site visits.</li> <li>The Competent Person considers that the exploration work conducted by AVZ was carried out using appropriate techniques for the style of mineralisation at Carriere de l'Este, and that the resulting database is suitable for Mineral Resource estimation.</li> </ul>

### 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	<ul> <li>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.</li> <li>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.</li> </ul>	On the 28 <sup>th</sup> December 2016, PR13359, which authorises exploration and feasibility studies to be undertaken, was granted for a period of 5 years. On the 29 <sup>th</sup> December 2016, PR13359 was transferred from La Congolaise d'Exploitation Miniere SA (Cominiere) to Dathcom Mining SA (Dathcom). On 4th May 2021, Dathcom applied to convert PR13359 into an exploitation permit (PE) which authorises mining. Upon lodging the PE application, PR13359's term was extended indefinitely to allow determination of the PE application. Dathcom undertook the drilling of the Carriere de l'Este Mineral Resource pursuant to PR 13359 between 2017 and 2021.  Subsequently, disputes have emerged relating to:  • Whether AVZ Minerals still holds shares in Dathcom (and the percentage of shares it holds)  • Whether Dathcom still holds PR13359  • Whether Dathcom still holds PR13359  • Whether PR15775 was validly relinquished  • Whether PR15775 was validly granted to Manono Lithium SA in respect of the northern portion including the Carriere de l'Este Mineral Resource: and  • Whether a PE in respect of the northern portion will be granted to Dathcom, Cominiere or Manono Lithium SA.  These disputes are the subject of various arbitration proceedings which are summarised in AVZ's ASX announcements dated October 30 <sup>th</sup> , November 2 <sup>nd</sup> , 15 <sup>th</sup> and 17 <sup>th</sup> 2023.  No opinion is expressed in relation to the outcome of these arbitration proceedings including which party will ultimately be granted a PE in respect of the Carriere de l'Este resource, further negotiations will then be undertaken with the shareholders of Dathcom in relation to the terms of the mining joint venture.  The land the subject of the Carriere de l'Este resource is not subject to any land interests, historical sites, wilderness or national park and environmental settings which may impair the ability for the resources to be extracted.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Within the area now covered by PR13359, historical 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.</li> <li>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 soft, weathered pegmatitic material was mined from three major pits and several other 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.</li> <li>Apart from the mining excavations and the drilling programme, there has been very limited historical exploration work within the Manono region prior to the exploration programmes of the project area carried out by Dathcom Mining SA, AVZ's 75% owned and operated DRC subsidiary.</li> </ul>

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 seems minor. The pegmatites are exposed in two areas; Manono in the northeast, and Kitotolo in the southwest. Thes

Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>See table in announcement for collar and survey data for newly acquired and modelled drill holes used in this Mineral Resource update.</li> <li>The assay and intersection details used have been the subject of previous ASX announcements by AVZ.</li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Exploration Results are not reported; therefore no data was aggregated for reporting purposes.</li> <li>No equivalent values are used or reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Exploration Results have previously been reported to the ASX.</li> <li>There is no relationship between mineralisation width and grade.</li> <li>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.</li> </ul>
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.

Criteria	JORC Code explanation	Commentary
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.
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.	<ul> <li>Preliminary metallurgical test work was completed by AVZ and demonstrated that the spodumene mineralisation at CdL is amenable to the production of a potentially saleable concentrate through standard industry processes. See AVZ ASX Announcement (16 March 2020).</li> <li>No other exploration data is available.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Diamond drill testing of the identified priority targets beyond Carriere de l'Este and Roche Dure is planned immediately along strike to the north-east of the current extent of drilling.</li> <li>Infill and strike extension drilling is planned at Carriere de l'Este.</li> <li>Further mining studies are planned on the basis of this MRE.</li> </ul>

### 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	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>The geology, grade and bulk density data were checked by the Competent Person.</li> <li>The data validation process used during Mineral Resource estimation consisted of:         <ul> <li>Examination of the assay, collar survey, downhole survey and geology data to ensure that the data were complete and usable for all drillholes.</li> <li>Examination of the desurveyed data in three dimensions to check for spatial errors.</li> <li>Examination of the assay data in order to ascertain whether they were within expected ranges.</li> <li>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.</li> </ul> </li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>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 Carriere de l'Este mineralisation. The Competent Person considers that the exploration work conducted by AVZ was carried out using appropriate techniques for the style of mineralisation.</li> <li>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 Carriere de l'Este mineralisation.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> </ul>	The quantity and spacing of drilling was sufficient to define the fresh pegmatite in the drilled area, however the shape and extents of the

Criteria	JORC Code explanation	Commentary
	<ul> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>pegmatite could not be interpreted with the limited data available. There is a reasonable degree of uncertainty in the interpretation as no more than 2 holes were drilled on each section line, and section lines are spaced 200 m apart.</li> <li>Geological logging and assay data were used to define estimation domains within the pegmatite.</li> <li>Geological logging was used to define the host rock domains i.e. overburden, hanging wall and footwall.</li> <li>No alternative geological models were interpreted, however it is likely that the interpretation would change with infill drilling.</li> </ul>
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 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.	<ul> <li>The area defined as a Mineral Resource is approximately 1,250 m along strike by approximately 390 m on dip and is limited by data extents to a maximum depth of approximately 330 m below surface.</li> <li>The fresh pegmatite Mineral Resource pinches out in places but can be up to 290 m thick.</li> <li>The dip of the Carriere de l'Este Pegmatite is unknown due to limited drilling in the area. The pegmatite outcrops on surface within the project area.</li> <li>The pegmatite is weathered to varying depths from 0 m to approximately 15 m below surface.</li> </ul>
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> </ul>	<ul> <li>Leapfrog Geo 2021.2.4 was used to model the geology and weathering surfaces.</li> <li>Datamine Studio RM 1.7.100.0 was used to estimate grades.</li> <li>Samples were composited to 1 m intervals using length weighting.</li> <li>The geological wireframes were filled with parent cells of 50 mN by 50mE by 10 mRL and sub-cells of 5 mN by 5mE by 5 mRL and coded according to the geological zones.</li> <li>The fresh pegmatite was the only domain that was estimated. A hard boundary was used for estimation.</li> <li>No top cuts were applied for estimation due to the nature of the distributions.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Li<sub>2</sub>O, Sn, Ta, and Fe<sub>2</sub>O<sub>3</sub> were estimated into the block model using inverse distance weighting (power 2).</li> <li>Density was assigned based on mean values per domain.</li> <li>The search ellipse was aligned with internal pegmatite features and was sized to locate composites for estimation and therefore considered the drill spacing.</li> <li>A minimum of 20 and maximum of 40 composites were used to estimate a block, with the maximum number per hole used to estimate being 10. Should sufficient samples not be located in the first search, then the search was expanded two times, and finally 3 times to ensure all model blocks were estimated. Most of the Mineral Resource is estimated within the first search volume.</li> <li>Estimates were validated by comparing global mean values and swath analysis of input composites versus output estimates.</li> </ul>
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.	<ul> <li>A cut-off grade of 0.5% Li<sub>2</sub>O 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.</li> <li>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.</li> </ul>
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.	<ul> <li>It is assumed that the Mineral Resource will be extracted by open pit mining.</li> <li>A high-level observation is that the entire Mineral Resource could likely be extracted from an open pit. The Mineral Resource is reported to a depth of 330 m below surface as it is reasonable to expect economic extraction to this depth.</li> </ul>

Criteria	JORC Code explanation	Commentary
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.	<ul> <li>Mineral characterisation and metallurgical studies have demonstrated that the economically significant lithium mineral present is spodumene, with negligible quantities of other lithium species present.</li> <li>Metallurgical test work was carried out on bulk samples derived from pegmatite intersections at Roche Dure, approximately 6 km along strike, and tests can therefore be considered representative since it is the same pegmatite system.</li> </ul>
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	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>A total of 241 bulk density determinations have been carried out on Carriere de l'Este drill core.</li> <li>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.</li> <li>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.</li> <li>In-situ bulk density assigned to the various domains based on mean values.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>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 acceptable practices and are reliable.</li> <li>The Mineral Resource is classified Inferred and is not extrapolated more than 100 m beyond the outermost drillhole traces.</li> <li>The classification reflects the Competent Persons view of the deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>It is reasonable to expect that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>The following review work was completed by the CPs during a site visit in April 2018 and in December 2019:</li> <li>A site-based review of the drillhole data processes and data collection protocols,</li> <li>Inspection of the drill core used in the Mineral Resource estimate,</li> <li>A complete inspection of all drilling data available at the time.</li> </ul>
Discussion of relative accuracy/confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>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.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The Mineral Resource is classified entirely as Inferred and reflects the low confidence in the geological model and estimate. The low confidence is related to the limited data (11 drillholes) and spacing thereof (200 m x 100 m collar spacing with no more than 2 drillholes per section line).</li> <li>Inferred Mineral Resources are global in nature, as is the case for Carriere de l'Este estimate. These Inferred Mineral Resources are the lowest confidence category and must not be converted to Ore Reserves.</li> <li>Due to the near normal distribution of Li<sub>2</sub>O grade values in the fresh pegmatite, it is reasonable to assume that the estimate of Li<sub>2</sub>O grade has a reasonable degree of confidence.</li> <li>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.</li> <li>Apart from artisanal tin mining of the weathered pegmatite, no modern mining has taken place, and therefore no production data are available for comparison to the Mineral Resource.</li> </ul>

## Appendix 2: Map and Geological Cross Sections

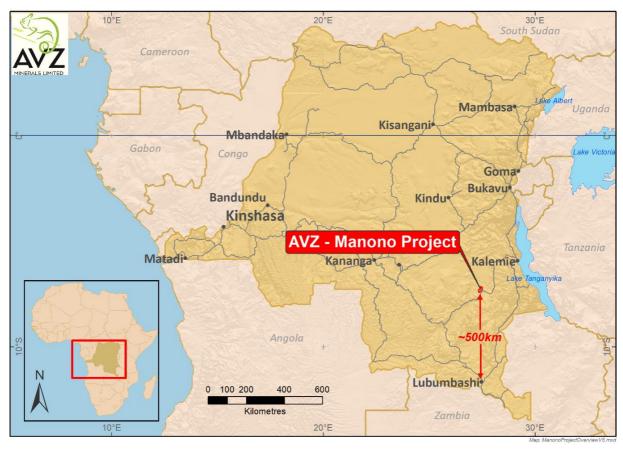


Figure 14 - Location Plan of Manono Lithium Project

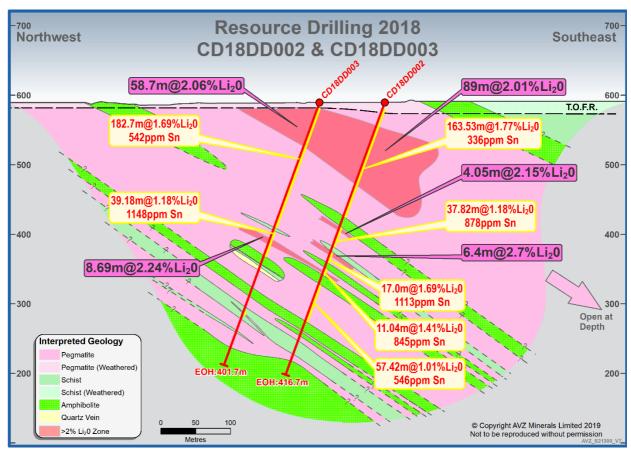


Figure 15 – Carriere de l'Este Mineral Resource drilling results, Section 21,300mN

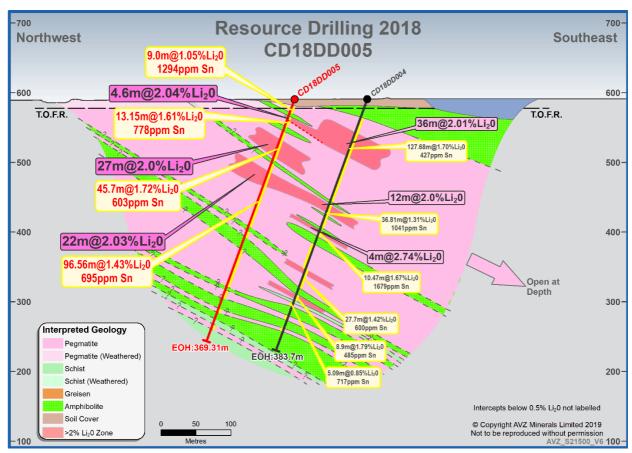


Figure 16 - Carriere de l'Este Mineral Resource drilling results, Section 21,500mN

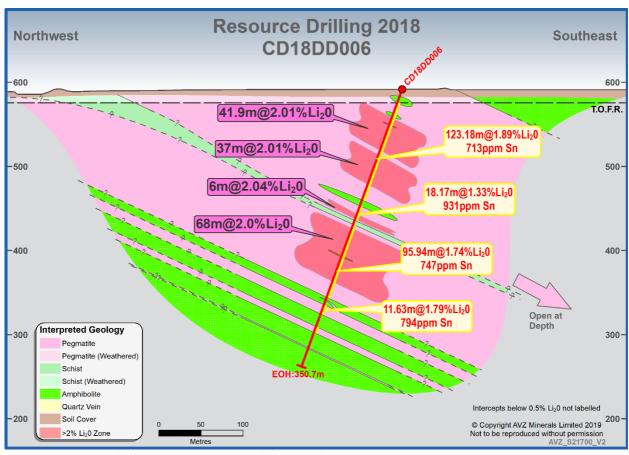


Figure 17 - Carriere de l'Este Mineral Resource drilling results, Section 21,700mN

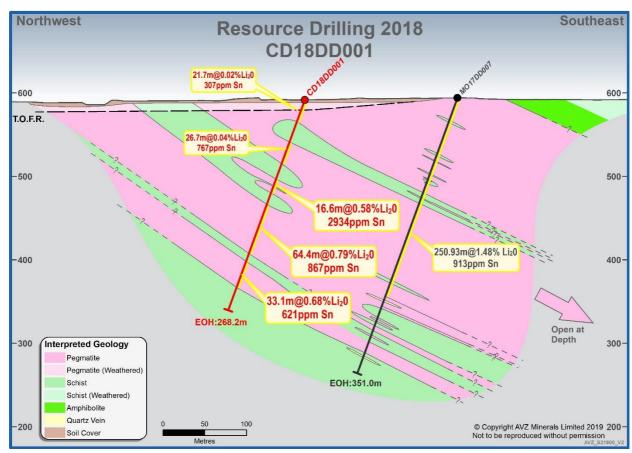


Figure 18 - Carriere de l'Este Mineral Resource drilling results, Section 21,900mN

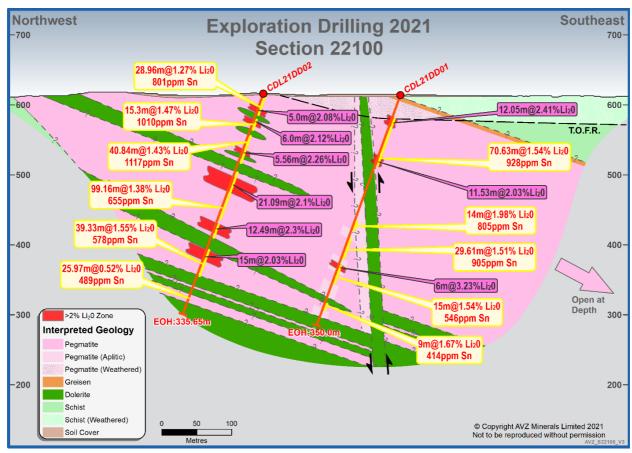


Figure 19 - Carriere de l'Este Mineral Resource drilling results, Section 22,100mN

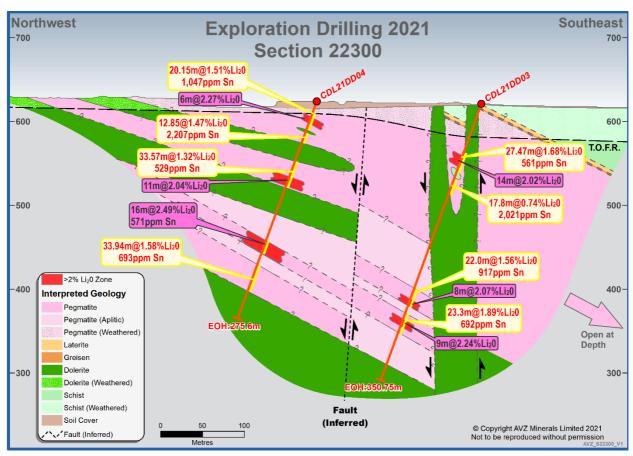


Figure 20 – Carriere de l'Este Mineral Resource drilling results, Section 22,300mN



Figure 21 – Part of the Carriere de l'Este core in storage, Dathcom Mining's Core Yard



Figure 22 – Dathcom Mining's Senior Exploration Geologist Mr. Papy Ilunga showing diamond core to AVZ's co-Company Secretary Ben Cohen at Dathcom Mining's core yard, 2023.

## Appendix 3: Request for Core Samples from Carriere de l'Este by the Department of Earth and Environmental Science, KU Lueven, Brussels





From: Prof Dr Anouk Borst **FEDTWIN ZAP Assistant Professor** Department of Earth and Environmental Science, KU Leuven Celestiinenlaan 200E 3001 HEVERLEE Belgium

OUR REFERENCE AVZ Sample request for Research Project KU Leuven

YOUR REFERENCE NA

LEUVEN 11/04/2023

Title: Request for drill core samples in support of pegmatite research project

Dear AVZ board of directors,

Following up on previous communications, I would like to submit this official request for sample material from the Roche Dure Extension Drilling Program at the Dathcom Manono Lithium and Tin Project, for mineralogical and geochemical analyses within the scope of my research on Central African pegmatites and an MSc thesis project supervised by me at KU Leuven and the Royal Museum of Central Africa.

We are particularly interested in studying the internal zonation and mineralogical distribution across the drill core profiles to better understand the mineralogical and compositional variability, and the processes involved in the distribution of the lithium, tin and tantalum (including greisenisation, muscovitisation, albitisation and kaolinisation) across the pegmatite. As such, we will perform a detailed mineralogical and geochemical characterization of the Manono-Kitotolo pegmatites. This information can help us, in the research community, to better understand the mineralisation processes in granitic pegmatite systems, and to compare the Manono-Kitotolo pegmatites to other Li-pegmatite occurrences within the Central African Kibara belt, as well as other pegmatite systems globally. For AVZ/Dathcom, our studies can provide valuable mineralogical insights that will help to optimize flowsheets for geometallurgical processing.

To facilitate these studies, we would like to request a set of quarter core samples of c. 15-20 cm length each. Based on available drillhole data from the AVZ ASX announcements, we make the following four suggestions for our sample request:

1) To account for variations along strike, we would like to request samples from 3 drill holes with significant lateral spacing along the pegmatite. For example, this could be one sample set from a 2018 drill hole from the south-western end of Roche Dure (such as section 6700/6800, encircled in Fig 1), one from the 2022 drilling campaign of the north-eastward resource extension at Roche Dure (for example from section 8200-8400, Fig 1) and one drill hole from Carriere De l'Est.

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