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## MINERALOGICAL RESULTS RECEIVED AND BULK SAMPLE COMPLETED AT SWANSON Ta/Li PROJECT

### HIGHLIGHTS

- Bench-scale metallurgical test-work completed from 5.45 tonne sample using industry standard gravity separation equipment
- 76% spiral and 90% multi gravity separator recoveries were achieved
- Main tantalum bearing minerals are Tantalite and Microlite
- Between 70% - 80% of tantalum minerals are liberated at 300µm
- Initial recovery results indicate the prospect of producing a Ta<sub>2</sub>O<sub>5</sub> concentrate of >20% Ta<sub>2</sub>O<sub>5</sub> at an overall recovery of c. 68%
- 60 tonne bulk sample taken, crushed, and transported for commercial size plant test-work to simulate flowsheet, optimise stage recoveries and to provide results for final plant design

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**Philip le Roux, the CEO of Arcadia commented** as follows: *“The results confirm that excellent recoveries of the economic minerals associated with the Swanson resource are possible using conventional gravity separation techniques and that the production of a 25% Ta<sub>2</sub>O<sub>5</sub> concentrate is likely to be possible at Swanson. The larger 60t bulk sample will now be the subject of large-scale recovery test work utilising Coremet’s gravity separation equipment and techniques to confirm that the production of a 25% Ta<sub>2</sub>O<sub>5</sub> concentrate is possible.”*

**Arcadia Minerals Ltd (ASX:AM7)** (Arcadia or the Company) is pleased to announce that it has received a Minerology and Metallurgical Report from Coremet Mineral Processing (Pty) Ltd (CoreMet) from a 5.45 tonne bulk sample taken over the Swanson Project. The sample that was sent to CoreMet was collected from three well-exposed fresh F pegmatite faces A (2 634 kg), B (2 478 kg) and C (338 kg), refer to Figure 1. The sample consisted of a combination of in-situ chip/channel and proximal debris sub-samples. The sample was created as follows:

- In-situ material was collected by the chipping method using a hammer and a chisel
- Furthermore, numerous channels, across the entire width of the exposed pegmatite faces, was cut with a diamond blade grinder.
- Proximal debris material was collected by hand-picking large pegmatite clasts which could reasonably assumed to be derived from the proximal pegmatite face of interest.

From mixing the in-situ and proximal debris material a sample weight of approximately 5.45 tonne was obtained. The sample consisted of numerous boulder sized clasts ranging from 50mm to 400mm in diameter with an average clast size estimated at about 200mm.

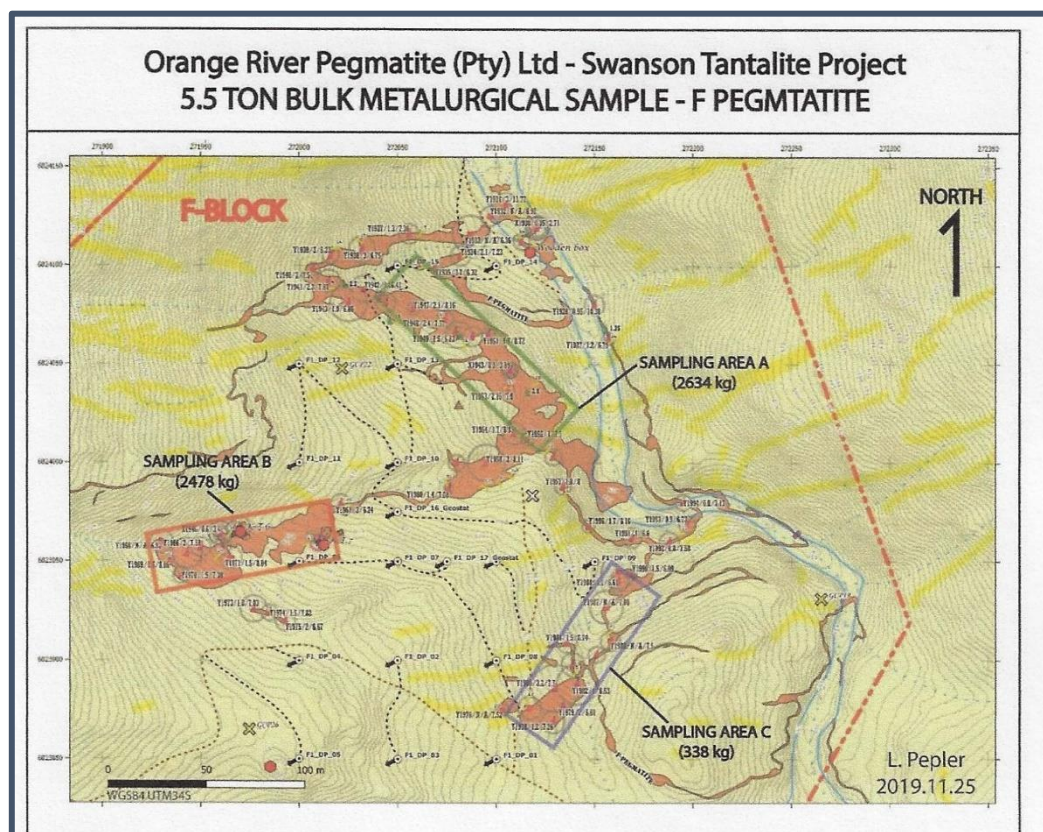


Figure 1: Bulk sample location

In addition, the Company's 80% owned Namibian subsidiary, Orange River Pegmatite (Pty) Ltd (ORP), has taken a 100-tonne bulk sample (see announcement dated 21 July 2021) of which 60 tonnes were sent to South Africa to be crushed and transported to CoreMet's facility for commercial scale test-

work with the purpose of determining optimised recoveries and to simulate flowsheets for final plant design. No Covid-19 related delays have been experienced or are expected.

### **Mineralogical Results**

ORP sent a bulk sample of 5.45 tonnes to CoreMet to perform initial metallurgical test-work to determine initial bench-scale results pertaining to crushability, liberation, recoveries, expected yields and to generate initial data for flowsheet development. The mineralogy was performed by LightDeepEarth located in Pretoria, South Africa and all sample analyses was done at SGS in Randfontein South Africa.

The initial mineralogical characterisation indicated that the main tantalum bearing mineral is tantalite. The mineralogy also indicated that the majority of tantalum is being liberated at a grind-particle size of 300µm. It was established that care should be taken during crushing to minimise overgrinding. Due to the inherent low concentrations of tantalum ore minerals, initial mineralogical data was limited to a small number of tantalum particles. To increase confidence in the analysis, further mineralogy was performed on the gravity concentrates generated during the metallurgical test-work. At much higher tantalum concentrations, it was determined that the main tantalum bearing minerals are tantalite-Mn and microlite. This does impact the processing since microlite is not susceptible to magnetic separation.

The metallurgical test-work flowsheet is indicated in Figure 2.

The main findings from metallurgical study were that:

- i. Spiral recoveries on the rougher spirals expected to range from 70% to 80%. The loss of Ta<sub>2</sub>O<sub>5</sub> to the middlings and tailings appear to be due to both liberation characteristics and particle size. Additional work on the middlings and tailings are required to better understand how to optimise primary recovery.

- ii. The multi-gravity separator (MGS) achieved recoveries of 90% and should be able to produce final product quality if the feed grade to the MGS is above 4% Ta<sub>2</sub>O<sub>5</sub>. This could not be confirmed in the bench-scale test work as insufficient material existed to produce the correct feed grade to the MGS from a cleaner spiral run.
- iii. Magnetic separation work indicated that it is not possible to selectively recover Tantalum bearing minerals, however most of the garnets are concentrated to the high magnetic fractions.
- iv. Recoveries achieved in the bench-scale study of 76% (for spiral recoveries) and 90% (for MGS recoveries). Consequently, it was deemed possible to produce a concentrate of >20% Ta<sub>2</sub>O<sub>5</sub> at an overall recovery of approximately 68%. This result excludes potential optimisation and scavenger stages that may be included in the spiral and MGS circuits, and;
- v. A bulk sample of 60 tonnes will be required to simulate the complete flowsheet and test various optimisation options.

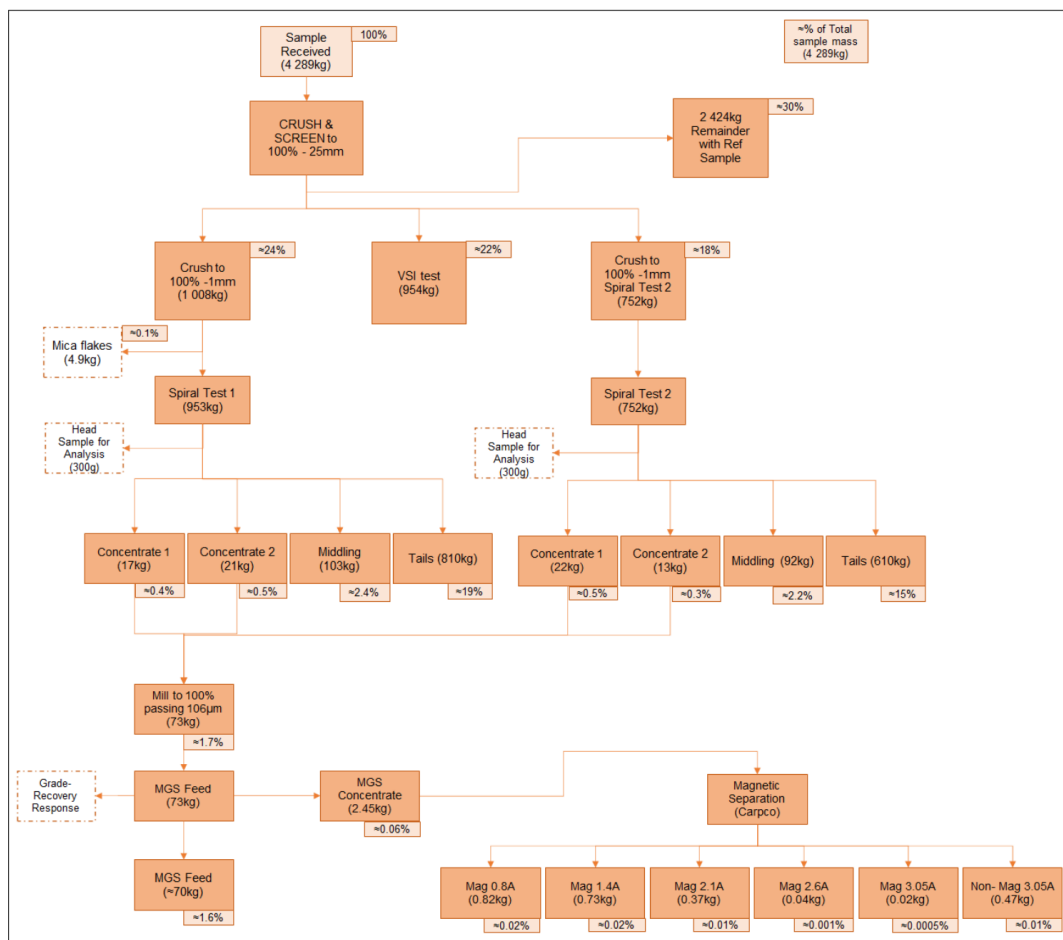


Figure 2: Metallurgical process flowsheet.

This announcement has been authorised for release by the directors of Arcadia Minerals Limited.

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## COMPETENT PERSONS' STATEMENT & PREVIOUSLY REPORTED INFORMATION

The information in this announcement that relates to Exploration Results and Mineral Resources listed in the table below is based on, and fairly represents, information and supporting documentation prepared by the Competent Person whose name appears, who is either an independent consultant to the Company and a member of a Recognised Professional Organisation or a director of the Company. The persons named below has sufficient experience relevant to the style of mineralisation and types of deposits under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012.

Competent Person	Membership	Report/Document
Mr Eugene Nel	Professional Engineering Technologist: Engineering Council of South Africa (ECSA), Reg no 200570019 Member: South African Institute Mining & Metallurgy (SAIMM), Reg no 700867 Member: Mine Metallurgical Managers' Association (MMMA), Reg no 1217	Review of Coremet Mineral Processing Report titled "Orange River Pegmatite Metallurgical Report" Compiling JORC Tables - Sections 1 & 2.
Mr Philip le Roux	South African Council for Natural Scientific Professions #400125/09	This announcement

The information relating to Exploration Results and Mineral Resources in this announcement is extracted from the Company's Replacement Prospectus that can be found at [www.arcadiaminerals.global](http://www.arcadiaminerals.global). The Company confirms that it is not aware of any new information or data that materially affects the Exploration Results and Mineral Resource information included in the Prospectus and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the Prospectus continue to apply and have not materially changed. The Company confirms that the form and context in which the applicable Competent Persons' findings are presented have not been materially modified from the Prospectus.

### DISCLAIMER

Some of the statements appearing in this announcement may be forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the

industries in which Arcadia operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Arcadia's control.

The Company does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of Arcadia, its directors, employees, advisors or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward-looking statement. The forward-looking statements in this announcement reflect views held only as at the date of this announcement.

This announcement is not an offer, invitation, or recommendation to subscribe for, or purchase securities by the Company. Nor does this announcement constitute investment or financial product advice (nor tax, accounting, or legal advice) and is not intended to be used for the basis of making an investment decision. Investors should obtain their own advice before making any investment decision.

## **BACKGROUND ON ARCADIA**

Arcadia is a Namibia-focused diversified metals exploration company, which is domiciled in Guernsey. The Company explores for a suite of Gold and battery metals (Nickel, Lithium and Copper) and owns the advanced Swanson Tantalum & Lithium project. Some of the Company's projects are located in the neighbourhood of established mining operations and significant discoveries.

The mineral projects include-

1. The Swanson Project – advanced tantalum and lithium project with early development potential
2. Kum-Kum Project – prospective for nickel, copper, and platinum group elements
3. Karibib Project – prospective for copper and gold
4. Bitterwasser Project – prospective for lithium-in-brines and lithium-in-clays.

For more details, please visit [www.arcadiaminerals.global](http://www.arcadiaminerals.global)

## ANNEXURE 1

### JORC 2012 TABLES

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition) requirements for the reporting of Exploration Results and Mineral Resources at the Swanson Project.

#### Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	<p>The sample that was sent to CoreMet was collected from three well-exposed fresh F pegmatite faces A (2 634 kg), B (2, 478kg) and C (338 kg), refer to sample location map. The sample consisted of a combination of in-situ chip/channel and proximal debris sub-samples. The sample was created as follows:</p> <ul style="list-style-type: none"> <li>• In-situ material was collected by the chipping method using a hammer and a chisel</li> <li>• Furthermore, numerous channels, across the entire width of the exposed pegmatite faces, was cut with a diamond blade grinder.</li> <li>• Proximal debris material was collected by hand-picking large pegmatite clasts which could reasonably assumed to be derived from the proximal pegmatite face of interest.</li> </ul> <p>From mixing the in-situ and proximal debris material a sample weight of approximately 5.45 tonne was obtained. The sample consisted of numerous boulder sized clasts ranging from 50mm to 400mm in diameter with an average clast size estimated at about 200mm.</p>
<b>Drilling techniques</b>	<p><i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and</i></p>	<p>Bulk sample was not taken from any drill core</p>



	<i>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.).</i>	
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	Not applicable as sample was taken from three outcrop of the F pegmatite and is therefore accepted as representative of the F pegmatite outcrop.
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature.</i></p> <p><i>Core (or costean, channel, etc.) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	The site geologist made sure that only pegmatite material was sampled as part of the bulk sample.
<b>Subsampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</i></p> <p><i>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.</i></p>	All the samples were combined in a single sample of 5,45 tons.

	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>The bulk sample of 5.45 tonnes to CoreMet was used to perform initial metallurgical test-work to determine initial bench-scale results pertaining to crushability, liberation, recoveries, expected yields and to generate initial data for flowsheet development.</p> <p>The mineralogy was performed by Light Deep Earth located in Pretoria, South Africa.</p> <p>All sample analyses were done by SGS in Randfontein, using XRF and ICP analyses techniques.</p>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>Not applicable as sample was taken from three outcrop of the F pegmatite and is therefore accepted as representative of the F pegmatite outcrop.</p>
<b>Location of data points</b>	<p><i>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>Sample was collected within the three areas and no sample point for any sample was recorded.</p>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity</i></p>	<p>The sample was taken from three outcrop of the F pegmatite and is therefore accepted as representative of the F pegmatite outcrop.</p>

	<i>appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<i>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.</i>	Not applicable as sample was taken from three outcrop of the F pegmatite and is therefore accepted as representative of the F pegmatite outcrop.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	The sample was loaded into 1 ton bags, that was sealed and well-marked, and the necessary export permits was obtained and the sample was sent to South Africa, where the CoreMet representative made sure that all the bags was still sealed when it arrived.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Eugene Nel an independent metallurgist conducted a review of all the metallurgical test work results.

## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<i>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.</i>	EPL 5047 is located in the Karas region, southern Namibia, near the South African border, and approximately 15 km to the north of the Orange River.  The EPL is held by ORP and is 14,671 hectares in size. ORP also obtained an Environmental Clearance Certificate on 4 April 2019 from the Ministry of Environmental and Tourism. A land-use agreement, including access to the property for exploration has been signed with the owners of the farms Norechab 130, Kinderzit 132 and Umeis 110

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Swanson Enterprises held various claims on the farms Kinderzit and Umeis on EPL 5047 and mined tantalite, beryl, spodumene and tungsten on these claims in the 1970s to early 1990s. A Canadian company, Placer, also conducted detailed exploration in this area between 1980 and 1982. The Geological Survey of Namibia in collaboration with the Council of Geoscience of South Africa conducted a detailed mapping program (1: 50,000 scale) over large parts of Southern Namibia including EPL 5047 (2012 to 2017).
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	Mineralisation is in the form of pegmatites of the lithium-caesium-tantalum (LCT) type which intruded granitic gneisses, metasediments and gabbroic-troctolitic rocks of the Tantalite Valley Complex. The primary mineral commodities occurring are tantalum (Ta <sub>2</sub> O <sub>5</sub> ) and spodumene LiAl(SiO <sub>3</sub> O) <sub>2</sub> .
<b>Drillhole information</b>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</i></p> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drillhole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</i> <ul style="list-style-type: none"> <li>• <i>dip and azimuth of the hole</i></li> </ul> </li> <li>• <i>downhole length and interception depth</i> <ul style="list-style-type: none"> <li>• <i>hole length.</i></li> </ul> </li> </ul> <p><i>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.</i></p>	All drillhole information results is available in the report Independent Geological Report on the Tantalum and Lithium Mineralization within EPL 5047, Warmbad District, NAMIBIA, by Creo that was part of the listing documents of Arcadia.
<b>Data aggregation methods</b>	<i>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.</i>	Information about data aggregation is not stated in the available documents.

Criteria	JORC Code explanation	Commentary
	<p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	
<p><b>Relationship between mineralisation widths and intercept lengths</b></p>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').</p>	<p>Not applicable as sample was taken from three outcrop of the F pegmatite and is therefore accepted as representative of the F pegmatite outcrop.</p>
<p><b>Diagrams</b></p>	<p>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.</p>	<p>Refer to Figure 1 for the location of the bulk sample material.</p>
<p><b>Balanced reporting</b></p>	<p>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.</p>	<p>This report has been prepared to present the obvious targets and results of historical and recent exploration activities</p>
<p><b>Other substantive exploration data</b></p>	<p>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.</p>	<p>In November 2020, Coremet Mineral Processing analysed a 5.45-tonne bulk sample and concluded that</p> <p>The ore was easily crushed but is highly abrasive.</p> <p>The spiral recoveries on the rougher spirals can be expected to be in the range of 70% to 80%. The lower recovery seems to be due to both liberation and particle size.</p> <p>At 76% spiral recovery and 90% MGS recovery, it will be possible to produce a Ta<sub>2</sub>O<sub>5</sub> concentrate of above 20% Ta<sub>2</sub>O<sub>5</sub> at a recovery of approximately 68%. This is without any optimisation and scavengers. This recovery value is slightly higher than the 65% recovery projected in the process plant study.</p>



Criteria	JORC Code explanation	Commentary
<p><b>Further work</b></p>	<p><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>The company is currently conducting a second phase of drilling and a 100 ton bulk sample has been taken and send for further metallurgical test work.</p>