

## MAIDEN JORC RESOURCE AT SWANSON Ta/Li PROJECT

### HIGHLIGHTS

- Maiden JORC Resource of 1,2Mt (Indicated and Inferred) at an average grade of 412ppm Ta<sub>2</sub>O<sub>5</sub>, 76ppm Nb<sub>2</sub>O<sub>5</sub> and 0.29% Li<sub>2</sub>O declared over 4 outcropping LCT pegmatites at Swanson Project
- Resource estimated over 4 of 15 known LCT pegmatites that lie within the Swanson Project area of 83ha out of a total 1010ha of areas that are known to contain pegmatites in the license area
- 1,100m drilling program ongoing over 11 of the 15 LCT pegmatites at the Swanson Project, with a third drill rig planned to commence drilling shortly
- Resource update expected in Q1/2022

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**Jurie Wessels, Executive-Chairman of Arcadia commented:** *“We are pleased to have progressed the Swanson Project to a maiden JORC resource so rapidly after listing. This first resource demonstrates Arcadia’s determination to fulfil its exploration objectives, and the ongoing drilling program exhibits our expectation that the Swanson Project may realise the Company’s aspirations to become an early cash flow generator. As this first resource is stated by Snowden to be potentially amenable to opencast mining, it could also allow Arcadia to consider conducting further studies after successful completion of the ongoing drill-program at Swanson”.*

**Philip le Roux, the CEO of Arcadia added:** *“The bulk of mineralisation at the Swanson Project was found to be disseminated and is contained in four gently dipping, tabular and sub-horizontal pegmatites with generally uniform thicknesses of between 1.5m-2.5m thick. This bodes well for exploitation possibilities and geological continuity and makes us expectant of seeing similar results from the ongoing drilling program where we are currently drilling for additional resources over eleven pegmatites within the Swanson swarm of pegmatites.”*

**Arcadia Minerals Ltd (ASX:AM7)** (Arcadia or the Company) is pleased to announce the declaration of a maiden resource at its advanced Swanson Tantalum/Lithium

exploration project (the “Swanson Project”) situated in Tantalite Valley, Namibia through its 80% owned Namibian subsidiary Orange River Pegmatite (Pty) Ltd (“ORP”). Snowden Mining Industry Consultants (“Snowden”) have delivered a JORC mineral resource estimate report to ORP styled “Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites, September 2021.”

### **Mineral Resource**

A total of 15 Ta<sub>2</sub>O<sub>5</sub> mineralised pegmatites have been identified in the Swanson Swarm pegmatites on the Orange River Pegmatite (Pty) Ltd (ORP) property. The Swanson Project comprises an area of 83ha out of a total 1010ha are known to contain pegmatites in the license area. This Mineral Resource estimate (MRE) has quantified the outcropping and shallow resources on four of the 15 pegmatites, namely the D0, D1, D2 and F pegmatites.

These pegmatites are of uniform thickness (generally about 1.5–2.5 m thick), are tabular, non-zoned, gently dipping, and contain tantalum, niobium and lithium mineralisation, together with quartz, sugary albite, spodumene and a number of other minerals. Mineralogically, the four main constituents of the pegmatites are white to grey massive quartz, crystalline perthitic feldspar, lithium muscovite, and sugary albite. Minor constituents are spodumene, beryl, lepidolite, muscovite, apatite, fluorite, biotite, tantalite and microlite.

The pegmatites intruded into competent meta-gabbros and are bound on the northern side by a northwest trending mylonitic zone. The pegmatites outcrop on surface and have been mapped and sampled in outcrop and through vertically drilled shallow diamond drillholes.

The pegmatites exhibit clearly defined and sharp hanging wall and footwall contacts and show very good geological continuity in outcrop, and as interpreted from surface intersections. They are uniform in thickness over large distances. Tantalum and niobium grades are uniformly distributed spatially, although there are areas of higher and lower grades. Higher lithium grades are confined to certain areas and are not associated with higher tantalum grades.

An initial drilling program completed in August 2020<sup>1</sup> was undertaken after a detailed mapping and sampling programme was conducted by ORP over exposed outcrop, which tested several pegmatites in the Swanson pegmatite swarm.

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<sup>1</sup> Independent Geologist Report in Arcadia Replacement Prospectus 15 April 2021

Fifteen Lithium Caesium and Tantalum (LCT) well-mineralised pegmatite bodies were identified and alpha-numerically (A1 to F1) named for ease of reference (see figure 5 in Annexure 4). The initial drilling program, which consisted of 23 diamond drilling holes for a total of 349.85m was conducted over three of the 15 pegmatites, namely D1, D2 and F1, of which results are shown in Annexure 1<sup>2</sup>. The Mineral Resource estimate stated in this announcement has been quantified from the outcropping and shallow resources on four of the 15 pegmatites, namely the D0, D1, D2 and F pegmatites. In addition, this estimate has incorporated all geological knowledge and exploration information up to 21 September 2021.

A total of 23 vertical diamond drillholes were drilled at three pegmatites. The drillholes are HQ with a 63.5 mm core. The holes were drilled with a 50 m strike spacing and 50 m on dip spacing on drill lines and have a total core length of 349.85 m. The depth of the holes ranged from 4 m to 33 m. The holes were logged, and half core sawn samples were sampled and analysed on a 1 m sample length.

At the laboratory the samples were crushed to 2 mm. A 200 g subsample of the crushed material was taken to be milled in a carbon milling pot to 90% <75 micron. Samples consisted of half core, with the core being split using a saw. Approximately 200–220 g of sample was taken per drilled mineralised metre was recovered. Half core samples were also taken for comparison purposes. 0.25 g of the milled material was prepared and analysed through inductively coupled plasma-optical emission spectroscopy (ICP-OES) analysis for tantalum, niobium, and lithium. ORP added a total of 19 standards and the laboratory added an additional nine standards to the samples.

A total of 22 blanks AMIS0439 (Blank Silica Chips) were added to the samples. Geological continuity of the pegmatites has been established through mapping and sampling (chip and channel) of surface exposures, and the extension of these pegmatites under shallow cover has been established by diamond drilling.

The thickness of the pegmatites has been established through modelling of the hanging-wall and footwall contacts in Leapfrog software. Where bifurcation was present in the D pegmatites this was modelled. Minor northwest-southeast faults, with displacements of <2 m, were modelled. Each pegmatite was modelled separately, and as no zoning was apparent, either physically or from the chemistry, these were grade modelled as a single unit. The interpolation parameters were based on the variogram parameters. The Snowden Supervisor software was used for exploratory data analysis and for the variography. Ordinary kriging was used to estimate grades.

The block size used was 10 m x 10 m x 2 m.

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<sup>2</sup> Independent Geological Resource Estimate “Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites”, Snowden’s, September 2021

Ta<sub>2</sub>O<sub>5</sub> ppm, Nb<sub>2</sub>O<sub>5</sub> ppm and Li<sub>2</sub>O% grades have been estimated using ordinary kriging, with geostatistical continuity of the Ta<sub>2</sub>O<sub>5</sub> grades being established through variographic analysis.

The following kriging variogram parameters was used for resource estimation.

Pegmatite	Nugget	Sill	Range (m)
D1	0.52	0.12	50
D2	0.6	0.20	54
F1	0.33	0.22	50

It was assumed that the SMU would be equivalent to the block size. As the entire pegmatites were considered to be economic, no selective mining is envisaged.

The cut-off grade is based on reasonable costs, and on the recovery of tantalum alone, with recovery assumptions of 67% Ta based on metallurgical testwork. Although economic concentrations of lithium are present, these were not considered. Niobium is present in solid solution in the tantalum, and this was taken into account in the metallurgical testwork.

The Mineral Resources were classified as Indicated from outcrop to the last line of surface boreholes. Up to 50 m beyond the last line of holes was classified as Inferred. The Inferred Mineral Resource is based on extrapolation of 50 m beyond the last line of drilling. The Inferred Resource is entirely based on extrapolated information, on the basis of demonstrated lateral continuity of the pegmatites from outcrop positions, and extrapolated up to the range of the variogram. The Inferred Resource comprises 45 % of the total resource, by tonnage. For a visual demonstration of lateral continuity please refer to Figure 3.

Mining is expected to be by standard truck and shovel mining, with the same trucks hauling ore to the process plant situated about 5 km away from the furthest expected mining area. Mining is expected to commence on the higher-grade F pegmatite and progress to the lower grade, but thicker, D pegmatites. The stark colour contrast between the white pegmatites and the dark host rock indicates that mining dilution will be low.

In November 2020, Coremet Mineral Processing analysed a 5.45-tonne bulk sample and concluded that the ore was easily crushed but is highly abrasive. 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.

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.

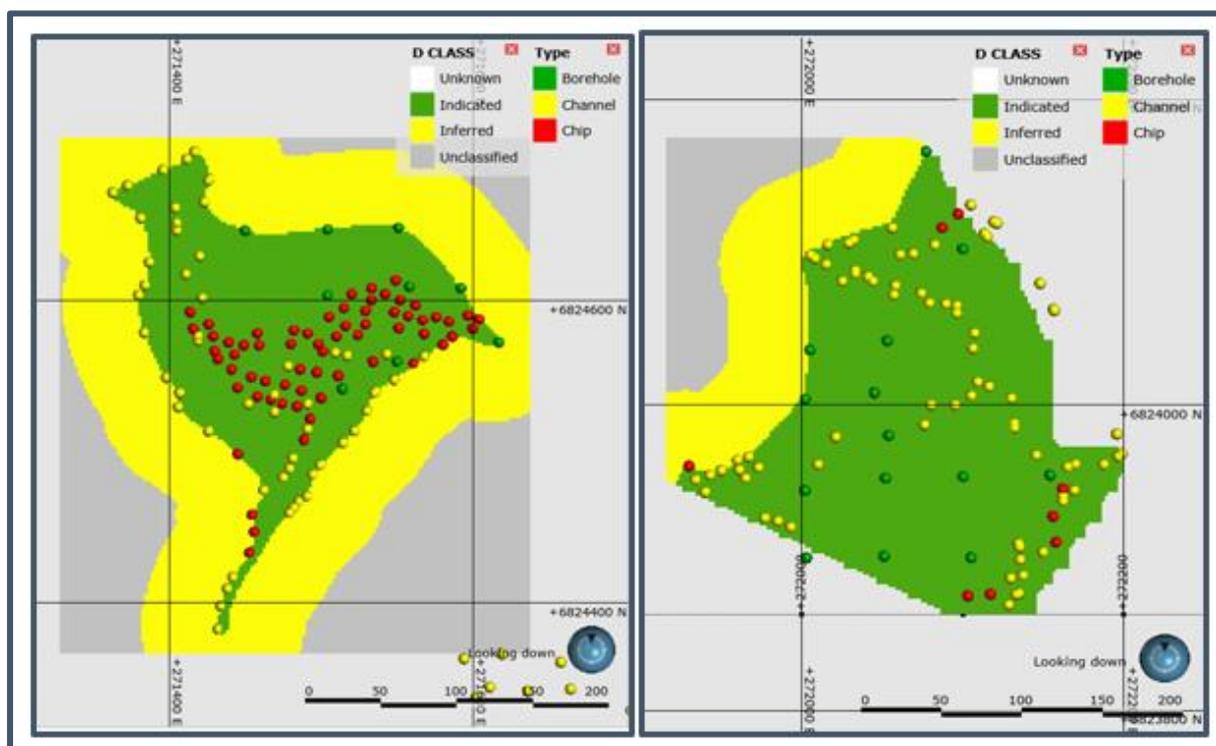
The total Indicated and Inferred Resources are estimated at 1,214 kt (1,2Mt) at an average grade of 412 ppm Ta<sub>2</sub>O<sub>5</sub>, 76 ppm Nb<sub>2</sub>O<sub>5</sub>, and 0.29% Li<sub>2</sub>O and otherwise details in Table 1 below. The resources were estimated above 1 m thickness, and at a cut-off grade of 236 ppmTa<sub>2</sub>O<sub>5</sub>.

Classification	Pegmatite	Mass (kt)	Ta <sub>2</sub> O <sub>5</sub> (ppm)	Nb <sub>2</sub> O <sub>5</sub> (ppm)	Li <sub>2</sub> O (%)
Indicated	D0	4.6	289	77	1.06
	D1	221.1	372	82	0.55
	D2	280.5	439	82	0.20
	F1	157.4	504	57	0.03
	<b>Total</b>	<b>663.5</b>	<b>431</b>	<b>76</b>	<b>0.28</b>
Inferred	D0	79.7	354	54	0.87
	D1	188.4	337	85	0.34
	D2	214.0	407	80	0.13
	F1	61.9	527	55	0.01
	<b>Total</b>	<b>544.0</b>	<b>389</b>	<b>75</b>	<b>0.30</b>
Indicated + Inferred	D0	84.3	351	55	0.88
	D1	409.5	356	83	0.45
	D2	494.4	425	81	0.17
	F1	219.2	510	56	0.02
	<b>Total</b>	<b>1,207.5</b>	<b>412</b>	<b>76</b>	<b>0.29</b>

**Table 1: Mineral Resource Estimate for the D and F pegmatites at ORP's Swanson Project.**

**Notes:** Mineral Resources were classified as Indicated where information by outcrop positions, outcrop sampling, and borehole intersections at < 50 m spacing were available.

The Inferred Mineral Resource is based on extrapolation of 50 m beyond the last line of drilling. The Inferred Resource is entirely based on extrapolated information, on the basis of demonstrated lateral continuity of the pegmatites from outcrop positions, and extrapolated up to the range of the variogram. The Inferred Resource comprises 45 % of the total resource, by tonnage. Please refer to Figure 3 for a visual demonstration of lateral continuity.



**Figure 1: Resource classification diagrams of the D and F pegmatites. The D Pegmatite is shown on the left, and the F Pegmatite on the right.**

The Mineral Resource estimate has quantified the opencast mining potential of a total of 663 kt (~663,000 tons) of Indicated Resources, at an average grade of 431 ppm Ta<sub>2</sub>O<sub>5</sub>, 76 ppm Nb<sub>2</sub>O<sub>5</sub> and 0.28% Li<sub>2</sub>O, and a total of 551 kt (~551,000 tons) of Inferred

**Ongoing Drilling Program**

A drilling program comprising 22 diamond drill holes with a total planned meterage of 1,100m covering the Swanson pegmatite swarm is currently underway (*refer to ASX announcement on 1 September 2021*). The drilling program is aimed at exploring eleven of the 15 pegmatites identified at the Swanson Project and at defining the opencast and up-dip underground potential of the pegmatites (see figure 6 in Annexure 5). Down-dip exploration and the mineralisation of the remaining undrilled pegmatites at Swanson remains open for future exploration.

Snowden is expected to provide the Company with a report based on the current drilling program early in Q1/2022 that could contain an updated Tantalum and Lithium JORC resource for the Swanson Project.

### Additional Information

The information relating to Exploration Results and Mineral Resources in this announcement is extracted from a report styled “*Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites, September 2021*” and can be found at [www.arcdiaminerals.global](http://www.arcdiaminerals.global).



Figure 2: Clustered tantalite crystals (F) and the hanging wall contact of the F pegmatite<sup>3</sup>



Figure 3: View looking west of the E pegmatite swarm<sup>4</sup> The distance across the figure is about 1 km

<sup>3</sup> Independent Geological Resource Estimate “Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites”, Snowden’s, September 2021



Figure 4: An example of mineralised D0 pegmatite clearly showing spodumene crystals<sup>4</sup>

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

For further information please contact:

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<sup>4</sup> Independent Geologist Report in Arcadia Replacement Prospectus 15 April 2021

### COMPETENT PERSON'S STATEMENT & PREVIOUSLY REPORTED INFORMATION

The information in this announcement that relates to Exploration Results and Mineral Resources listed in Annexure 1 below is based on, and fairly represents, information and supporting documentation prepared by the Competent Persons whose names appear, and who are either independent consultants to the Company and members 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.

The information in this announcement that relates to Mineral Resources complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and that has been compiled, assessed, and created under the supervision of Mr Matt Mullins BSc (Hons) Geology who is a Fellow of the Australasian Institute of Mining and Metallurgy (membership number 209421) and is an Executive Consultant of Snowden, which is a consultant to ORP. Mr Mullins has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Persons as defined in the 2012 Edition of the JORC Code. Mr Mullins is the competent person for the estimation and has relied on provided information and data from the Company, including but not limited to the geological model, database and expertise gained from site visits. Mr Mullins consents to the inclusion in this announcement of matters based on his information in the form and context in which it appears. The Mineral Resource is based on standard industry practises for drilling, logging, sampling, assay methods including quality assurance and quality control measures as detailed in Annexure 3.

Competent Person	Membership	Report/Document
Mr Matt Mullins	Australasian Institute of Mining and Metallurgy (AusIMM) no 209421	Geology and Mineral Resources of the D and F Pegmatites. An independent geologist report containing the Mineral Resource estimates of the D and F pegmatites dated September 2021. Mineral Resources, Table 1, Section 3
Dr Johan Hattingh	South African Council for Natural Scientific Professions #400112/93	Exploration Results: Table 1, sections 1 and 2

Mr Konstant Petzer	South African Council for Natural Scientific Professions 400446/11	Geological modelling: Mineral Resource Estimate.
Mr Matthew Jarvis	Southern African Institute of Mining and Metallurgy no 701853	Mine planning, financial analysis and project leader.
Mr Philip le Roux	South African Council for Natural Scientific Professions #400125/09	This announcement.

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 this announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the aforesaid report 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 aforesaid report.

#### **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 several 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



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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.

## ANNEXURE 1

## MINERAL RESOURCE STATEMENT

AS AT 21 SEPTEMBER 2021 ABOVE 236ppm Ta<sub>2</sub>O<sub>5</sub> CUT-OFF AND 1m THICKNESS

Classification	Pegmatite	Mass (kt)	Ta <sub>2</sub> O <sub>5</sub> (ppm)	Nb <sub>2</sub> O <sub>5</sub> (ppm)	LiO <sub>2</sub> (%)
Indicated	D0	4.6	289	77	1.06
	D1	221.1	372	82	0.55
	D2	280.5	439	82	0.20
	F1	157.4	504	57	0.03
	<b>Total</b>	<b>663.5</b>	<b>431</b>	<b>76</b>	<b>0.28</b>
Inferred	D0	79.7	354	54	0.87
	D1	188.4	337	85	0.34
	D2	214.0	407	80	0.13
	F1	61.9	527	55	0.01
	<b>Total</b>	<b>544.0</b>	<b>389</b>	<b>75</b>	<b>0.30</b>
Indicated + Inferred	D0	84.3	351	55	0.88
	D1	409.5	356	83	0.45
	D2	494.4	425	81	0.17
	F1	219.2	510	56	0.02
	<b>Total</b>	<b>1,207.5</b>	<b>412</b>	<b>76</b>	<b>0.29</b>

Table 1: Mineral Resource Estimate for the D and F pegmatites at ORP's Swanson Project

Notes:

The Mineral Resource Estimate was completed using the following parameters:

Style of Mineralisation	Pegmatite
Description of Drilling	<p>ORP's first drilling phase of 23 vertical diamond drill holes comprising 349.85 m of HQ (63.5 mm core) commenced in June 2020 and was completed in August 2020. Drilling was limited to pegmatites. The holes were drilled at two locations targeting three pegmatites (D1, D2 and F1) with drilling sections spaced 50 m apart with a 50 m strike spacing on drill lines.</p> <p>Most of the 23 boreholes drilled during Phase 1 intersected the target pegmatite bodies with only one hole at F1 that was drilled as a confirmation hole did not intersect a pegmatite body and another that stopped short of the D2 body due to excessive water loss.</p> <p>A total of 112 samples based on lithological logging of the core were taken. The average thickness from the drilling of the F1 pegmatite is 2.1 m of the D1 pegmatite is 4.27 m, and of the D2 pegmatite is 4.50 m, all markedly thicker than that measured in outcrop.</p> <p>A marked increase in true thickness of some 10% for the F1 pegmatites and 100% for and 86% for the D1 and D2 pegmatite respectively was observed from the drilling</p>

Style of Mineralisation	Pegmatite
	results. The whole pegmatite intersection was used for thickness and grade calculations.
Samples analyses	<p>D Pegmatites: A total of 216 samples were taken. Tantalum, niobium and lithium were measured for all borehole, channel and chip samples, while the boreholes included assays from a suite of elements.</p> <p>F Pegmatite: There is a total of 91 data points, comprising 13 boreholes, 70 channel samples, and eight chip samples. From these, a total of 120 samples were taken. Tantalum, niobium and lithium were measured for all borehole, channel and chip samples, while the boreholes included assays from a suite of elements.</p>
Quality control protocols	<p>ORP added a total of 19 AMIS standards, and the laboratory added an additional nine standards to the two batches of samples. This represents 9.9% standards that were added to the 283 field samples. Table 6.1 in the Independent Geological Resource Estimate “Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites” September 2021 (available on the Company’s website) shows details of material type, source and accepted grades (medium) and two standard deviations (low, and high) for the various standards. In all cases, the analysed values for all three elements of interest (tantalum, niobium, lithium) fall within two standard deviations.</p> <p>Blanks: A total of 22 blanks AMIS0439 (Blank Silica Chips) were added to the two batches of samples. The blanks were added at the start of each batch as well as at the start samples of a new pegmatite. This represents 7.8% of the total number of samples. All the blanks reported were below the detection limited for both tantalum and niobium (&lt;10 ppm) and less than 0.0041% Li. The results for blanks show no serious indications of systematic cross-contamination.</p>
Drillholes - grid (WGS84 projection) and UTM Zone 335	WGS84 34S was used to coordinate all sampling information
Azimuth / Dip / Vertical	Vertical holes were drilled
Cut-off grade to construct geological domains	<p>A 1 m minimum width cut-off was used</p> <p>A Ta<sub>2</sub>O<sub>5</sub> grade of 236 ppm was used as a cut-off</p>
Intersections used in the interpretation	are listed in Annexure 2.
Geostatistical methods used to estimate block grades	Ordinary kriging was used to estimate grades
Constraining of model	The tabular pegmatites were constrained by modelling the well-defined hanging-wall and footwall contacts. The northeast the pegmatites pinch out against a sub-vertical mylonitic shear zone. The south and southwest the thinning

Style of Mineralisation	Pegmatite
	pegmatites were excluded due to not meeting the minimum 1 m thickness requirement
Block model software used for the estimate and block sizes and sub-blocking	Leapfrog was used for geological modelling. Sample composites were exported to Supervisor where statistical and geostatistical analysis was undertaken. Variogram and search parameters were re-input to Leapfrog, where ordinary kriging was undertaken.
Bulk density values and source of values.	<p>ORP determined the specific gravity (SG) of the samples by using the Archimedes principle on 147 chip samples that were collected from all six pegmatites from the targeted pegmatite swarm. The SG of each sample was calculated using the formula <math>SG = (\text{weight in air}) / (\text{weight in air} - \text{weight in water})</math>.</p> <p>This technique measures the volume of a sample by water displacement and density is then calculated as the ratio of mass to volume. No bulk density has been measured because the SG is considered appropriate as an input into the orebody model. It was found that the 147 samples have an average SG of 2.60 g/cm<sup>3</sup></p>
The deposit has been classified as an Indicated and Inferred Mineral Resource based on data quality and sample spacing.	

These notes should be read in conjunction with the information detailed in Annexure 3.

## ANNEXURE 2

DRILLHOLE INTERCEPTS USED IN MINERAL RESOURCE ESTIMATE<sup>5</sup>

TABLE 2 OF DRILLING AND SAMPLING RESULTS

Hole No.	Pegmatite	X	Y	Z	EOH	From	To	Thickness	Ta2O5_ppm
F1_DP_02	F1	272052	6823952	703.0	11.67	6.05	8.14	2.09	343.07
F1_DP_03	F1	272100	6823953	695.0	11.31	9.71	10.78	1.07	506.71
F1_DP_04	F1	272002	6823944	709.0	9.25	NO	Drilled as confirmation		
F1_DP_05	F1	272002	6824004	706.4	4.36	1.06	2.93	1.87	618.41
F1_DP_06	F1	272154	6823954	682.0	7.73	3.75	5.18	1.43	398.75
F1_DP_07	F1	272045	6824008	698.0	12.14	6.24	8.44	2.20	275.17
F1_DP_08	F1	272005	6824036	703.1	11	6.33	8.92	2.59	458.95
F1_DP_09	F1	272051	6823901	713.0	12.39	10.38	11.89	1.51	665.19
F1_DP_10	F1	272054	6823980	693.4	7.33	0.23	2.88	2.65	272.18
F1_DP_11	F1	272105	6823900	698.3	12.2	9.30	11.97	2.67	309.34
F1_DP_12	F1	272053	6824042	689.0	14.13	3.68	6.24	2.56	374.41
F1_DP_13	F1	272100	6824102	660.0	4.97	0.43	2.59	2.16	361.18
F1_DP_14	F1	272003	6823900	720.0	7.89	2.70	4.82	2.12	421.27
F1_DP_16	F1	272077	6824166	656.1	9.7	4.77	7.10	2.33	518.55
D_DP_01	D1	271550	6824560	612.5	20.87	3.63	7.76	4.13	227.81
D_DP_02	D1	271514	6824542	611.6	20.73	2.21	6.08	3.87	339.00
D_DP_03	D1	271450	6824647	656.0	33.19	8.47	15.70	7.23	398.04
D_DP_04	D1	271551	6824649	641.0	27.68	10.75	12.16	1.41	349.61
D_DP_05	D1	271504	6824648	646.3	30.41	4.08	9.33	5.25	458.05

<sup>5</sup> Independent Geological Resource Estimate "Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites", Snowden's, September 2021

Hole No.	Pegmatite	X	Y	Z	EOH	From	To	Thickness	Ta2O5_ppm
D_DP_06	D1	271504	6824604	632.1	21.31	1.54	9.53	7.99	272.70
D_DP_07	D1	271558	6824610	625.2	21.51	0.00	8.67	8.67	168.79
D_DP_08	D1	271592	6824609	626.5	8.09	1.50	2.73	1.23	412.69
D_DP_09	D1	271617	6824573	614.7	29.99	5.04	5.77	0.73	357.75
D_DP_01	D2	271550	6824560	612.5	20.87	13.05	18.05	5.00	436.81
D_DP_02	D2	271514	6824542	611.6	20.73	11.61	13.16	1.55	426.60
D_DP_03	D2	271450	6824647	656.0	33.19	25.19	29.37	4.18	324.72
D_DP_04	D2	271551	6824649	641.0	27.68	20.90	27.09	6.19	288.44
D_DP_05	D2	271504	6824648	646.3	30.41	25.52	28.92	3.40	395.52
D_DP_06	D2	271504	6824604	632.1	21.31	13.02	16.03	3.01	236.77
D_DP_07	D2	271558	6824610	625.2	21.51	16.21	17.50	1.29	252.74
D_DP_08	D2	271592	6824609	626.5	8.09	7.80	Stop due to	water loss	356.53
D_DP_09	D2	271617	6824573	614.7	29.99	9.58	19.13	9.55	259.84

**Notes:**

- All coordinates are in UTM Zone 34S (WGS 84).
- Z denotes elevation in meters
- EOH denotes "End of Hole"
- All holes are vertical (-90 dip).
- Results should be read in conjunction with the data provided in Annexure 3.

### ANNEXURE 3

#### JORC 2012 TABLES<sup>6</sup>

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
Sampling techniques	<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>Sampling was undertaken using industry standard practices and consist of large-scale chip and channel sampling and diamond drilling by ORP during 2019 and 2020.</p> <p>All drillholes were drilled vertically.</p> <p>112 samples were taken from the core of the drilling campaign.</p> <p>Orange River Pegmatite (Pty) Ltd (ORP) conducted reconnaissance chip sampling and channel sampling during 2018. Samples were between 220 g and 6 kg.</p> <p>A total of 283 samples consisting of 204 channel and 79 chip samples were taken from 15 pegmatites during 2019. The average sample weight is 7.5 kg.</p> <p>Three additional samples were taken for mineralogy testwork.</p> <p>An additional 15 samples collected from different pegmatite feldspar types.</p> <p>All drillhole and sample locations are mapped in WGS84 UTM zone 34S.</p> <p>During 1981 Placer Development Ltd (Placer) collected 91 channel samples with an average weight of 14.22 kg.</p> <p>Bulk samples were taken at four locations, with 3–5 tonnes of material being obtained through drilling and blasting.</p>

<sup>6</sup> Independent Geological Resource Estimate "Report for Orange River Pegmatite (Pty) Ltd, Geology and Mineral Resources of the D and F Pegmatites", Snowden's, September 2021

Criteria	JORC Code explanation	Commentary
<b>Drilling techniques</b>	<i>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.).</i>	<p>23 vertical diamond drillholes were drilled at three pegmatites.</p> <p>The drillholes are HQ with a 63.5 mm<math>\varnothing</math> core.</p> <p>The holes were drilled with a 50 m strike spacing on drill lines and have a total core length of 349.85 m.</p> <p>The depth of the holes ranged from 4 m to 33 m.</p>
<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>	<p>Core recovery in the mineralised pegmatite was more than 90% due to the competent nature of the pegmatite bodies and even in the fractured country rock minimal core loss was recorded.</p> <p>Core loss was recorded as part of the operational procedures where the core loss was calculated from the difference between actual length of core recovered and penetration depth measured as the total length of the drill string after subtracting the stick-up length.</p> <p>Measures taken to maximise sample recovery and ensure representative nature of the samples is not recorded in available documents.</p> <p>No apparent bias was noted between sample recovery and grade.</p>
<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. Core (or costean, channel, etc.) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>All drillholes were fully logged and are qualitative.</p> <p>The core, channel and chip samples have been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies; although a mineral resource was not estimated from this data.</p> <p>The total length of the intersected pegmatite logged is 1.93 m and the percentage is 29%.</p> <p>It is assumed that the Placer samples have been logged according to industry standards at the time; however, the specific logging techniques used are not stated in available documents.</p>

Criteria	JORC Code explanation	Commentary
<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> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Three field duplicate samples of previously field channel sample F1_3, F1_25 and F1_37 were collected on the F pegmatite.</p> <p>The samples were dry.</p> <p>At the laboratory the samples were crushed to 2 mm. A 200 g subsample of the crushed material was taken to be milled in a carbon milling pot to 90% &lt;75 micron.</p> <p>Samples consisted of half core, with the core being split using a saw.</p> <p>Approximately 200–220 g of sample was taken per drilled mineralised metre was recovered.</p> <p>Half core samples were also taken for comparison purposes.</p> <p>No information is available on subsampling techniques and sample preparation by Placer, because such procedures are not recorded in available documents.</p>
<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 samples were analysed at Scientific Services (Pty) Ltd, a laboratory based in Cape Town, South Africa.</p> <p>At the laboratory, the samples were crushed to 2 mm. A 200 g subsample of the crushed material was taken to be milled in a carbon milling pot to 90% &lt;75 micron.</p> <p>0.25 g of the milled material was prepared and analysed through inductively coupled plasma-optical emission spectroscopy (ICP-OES) analysis for tantalum, niobium, and lithium.</p> <p>The samples are measured against standards.</p> <p>ORP added a total of 19 standards and the laboratory added an additional nine standards to the samples.</p> <p>The standards used are AMIS0339, AMIS0340, AMIS0342, AMIS0355 and AMIS0408.</p> <p>A total of 22 blanks AMIS0439 (Blank Silica Chips) were added to the samples.</p>



Criteria	JORC Code explanation	Commentary
		<p>The two samples were submitted to the Sci-Ba Laboratories in England where the samples were subjected to petrographic and x-ray diffraction (XRD) analyses at the University of Southampton. The Standard method BS EN 12407-2007, natural stone method was used for a petrographic investigation of the samples.</p> <p>All quality assurance/quality control (QAQC) samples plotted within acceptable analytical limits as defined for their type (i.e. certified reference materials – CRMs).</p> <p>No reporting issues were identified with any labs in question.</p> <p>It is assumed that industry best practices were used by the laboratories to ensure sample representivity and acceptable assay data accuracy, however, all the QAQC procedures used are not recorded in available documents.</p>

Criteria	JORC Code explanation	Commentary
<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>All samples and data were verified by the ORP exploration geologist.</p> <p>The database was structured in a format suitable for importing into ArcGIS and Micromine 3D modelling software.</p> <p>Creo reviewed all available sample and assay reports and is of the opinion that the electronic database supports the field data in almost all aspects and suggests that the database can be used for resource estimation.</p> <p>Verification was done by comparing drilling results with the closest channel sample data for each borehole.</p> <p>All sample material was bagged and tagged on site as per the specific pegmatite it was located on. The sample intersections were logged in the field and were weighed at the sampling site.</p> <p>All hard copy data-capturing was completed at the sampling locality.</p> <p>All sample material was stored at a secure storage site at the company site office.</p> <p>The original assay data has not been adjusted.</p> <p>No twin holes were drilled.</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>The sample locations are global positioning system (GPS) captured using WGS84 UTM zone 34S.</p> <p>The drillholes were surveyed by a qualified surveyor, with the accuracy being 20 cm.</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 appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>The drillholes were drilled at the two locations involving three pegmatites with sections spaced 50 m apart with 50 m strike spacing on drill lines.</p> <p>For the channel and chip samples, each sampling point was carefully selected according to the physical quality of a sample point, normally on a 15 m, 25 m or 50 m interval, depending on the sample density required.</p>

Criteria	JORC Code explanation	Commentary
		<p>The data spacing and distribution of the drillholes channel and chip sampling is insufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <p>Where pegmatites had a true thickness of &gt;2 m, the channel samples were accordingly split into an equal length “top” and “bottom” channel sample. ORP prioritised the importance of bulk-pegmatite properties. Therefore, these channel sampling results were composited (i.e. weighted average of the entire intersection).</p> <p>The Placer samples were spaced on a 100 m grid.</p>
<p><b>Orientation of data in relation to geological structure</b></p>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>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></p>	<p>The holes were all drilled vertical.</p> <p>The channel and chip samples were also taken vertically from top to bottom of the pegmatites.</p> <p>Channel sampling conducted on pegmatite faces approximate right-angle intersections relative to the dip of the pegmatite at that specific location and thereof are unbiased by excessively oblique intersections.</p> <p>The tantalite is very fine and mostly not visible; therefore, no bias could take place when selecting the sample position.</p> <p>Orientation of the Placer sampling data in relation to the geological structure is not known, because it is not recorded in available documents.</p>
<p><b>Sample security</b></p>	<p><i>The measures taken to ensure sample security.</i></p>	<p>ORP maintained strict chain-of-custody procedures during all segments of sample handling, transport and samples prepared for transport to the laboratory are bagged and labelled in a manner which prevents tampering. Samples also remain in ORP’s control until they are delivered and released to the laboratory.</p> <p>An export permit was obtained from the Namibian Mining Department to transport the samples across the border.</p>

Criteria	JORC Code explanation	Commentary
		Measures taken by Placer to ensure sample security have not been recorded in available documents.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p>The deposit was visited by the Creo Competent Person during 2019. The visit was specifically to review the recent sampling campaign, and to review the sampling and assay procedures being used by the Company.</p> <p>Creo considers that given the general sampling program, geological investigations, check assaying and, in certain instances, independent audits, the procedures reflect an appropriate level of confidence.</p>

## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><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.</i></p> <p><i>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></p>	<p>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.</p> <p>The EPL is held by ORP and is 14,671 hectares in size.</p> <p>ORP also obtained an Environmental Clearance Certificate on 4 April 2019 from the Ministry of Environmental and Tourism.</p> <p>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</p>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<p>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.</p> <p>A Canadian company, Placer, also conducted detailed exploration in this area between 1980 and 1982.</p> <p>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).</p>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>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.</p> <p>The primary mineral commodities occurring are tantalum (Ta<sub>2</sub>O<sub>5</sub>) and spodumene LiAl(SiO<sub>3</sub>)<sub>2</sub>.</p>

Criteria	JORC Code explanation	Commentary
<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> <ul style="list-style-type: none"> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</i></li> <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>	<p>Drill results have been described in the report. All relevant data is included in the report.</p>
<b>Data aggregation methods</b>	<p><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></p> <p><i>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.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p>Information about data aggregation is not stated in the available documents.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></p> <p><i>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’).</i></p>	<p>The drillholes were all drilled vertical, with the pegmatites dipping on average 12.33° to the southeast.</p> <p>The pegmatite thickness intercepted range from 1.07 m to 9.55 m.</p>
<b>Diagrams</b>	<p><i>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.</i></p>	<p>The appropriate diagrams and tabulations are supplied in the main report.</p>
<b>Balanced reporting</b>	<p><i>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.</i></p>	<p>This report has been prepared to present the obvious targets and results of historical and recent exploration activities</p>

Criteria	JORC Code explanation	Commentary
<b>Other substantive exploration data</b>	<i>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.</i>	<p>ORP conducted reconnaissance and later detailed geological mapping to identify and prioritise targets.</p> <p>ORP appointed Asset Mapping Solutions (Pty) Ltd, a Cape Town based company, to conduct a detail drone survey of the Swanson prospect area in 2018.</p>
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	<p>The next exploration and assessment phases should be aimed at establishing a resource base into hopefully an “Indicated” category, as well as undertaking the necessary research into markets and recovery processes in order to support a feasibility assessment for the project.</p> <p>The pegmatite bodies not drilled yet should be the next drilling target to expand the existing resources base.</p>

## Section 3: Estimation and reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<i>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.</i>  <i>Data validation procedures used.</i>	<p>A copy of the RAW database provided by the client was kept unedited for auditing purposes of edits conducted.</p> <p>Overlapping intervals, duplicates and other errors were flagged by Leapfrog modelling software and corrected.</p> <p>Collar elevations were checked relative to the LiDAR-generated topographic surface.</p> <p>Further visual checks were also conducted to ensure a clean database for modelling and estimation; that data was in spatially in valid locations.</p> <p>Statistical analyses were carried out to see if data lies within valid ranges, and to identify possible outliers.</p>
<b>Site visits</b>	<i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i>  <i>If no site visits have been undertaken indicate why this is the case.</i>	<p>Matt Mulins (Competent Person – Mineral Resources) undertook a site visit on 17–19 August 2021. He was accompanied by site personnel, senior company executives, and by Matthew Jarvis from Snowden. The borehole core, overall geological setting, and the nature and mineralisation in the pegmatites was observed in detail.</p>
<b>Geological interpretation</b>	<i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i>  <i>Nature of the data used and of any assumptions made.</i>  <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	<p>The geological interpretation is that the tabular pegmatite bodies were formed by anatexis within existing fracture planes in the host gabbroic orebody.</p> <p>The data used comprised borehole diamond drilling, channel sampling of outcrops, and chip sampling.</p>

Criteria	JORC Code explanation	Commentary																
	<p><i>The use of geology in guiding and controlling Mineral Resource estimation.</i></p> <p><i>The factors affecting continuity both of grade and geology.</i></p>	<p>The pegmatites are sub-horizontal tabular orebodies within the host gabbro, with clearly defined and sharp hanging wall and footwall contacts. Mineral Resources were defined within the well explored D and F pegmatite zones.</p> <p>The pegmatites show very good geological continuity in outcrop, and as interpreted from surface intersections. They are uniform in thickness over large distances. Tantalum and niobium grades are uniformly distributed spatially, although there are areas of higher and lower grades. Higher lithium grades are confined to certain areas and are not associated with higher tantalum grades.</p>																
<b>Dimensions</b>	<p><i>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.</i></p>	<p>The pegmatite orebodies show a high degree of lateral continuity and can be traced in outcrop over the kilometre scale. The extension of the pegmatite bodies beyond the outcrop positions has been confirmed by diamond drilling.</p>																
<b>Estimation and modelling techniques</b>	<p><i>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.</i></p> <p><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></p> <p><i>The assumptions made regarding recovery of by-products.</i></p> <p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></p> <p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p> <p><i>Any assumptions behind modelling of selective mining units.</i></p> <p><i>Any assumptions about correlation between variables.</i></p> <p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p> <p><i>Discussion of basis for using or not using grade cutting or capping.</i></p> <p><i>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</i></p>	<p>The pegmatite hangingwall and footwall contacts were modelled in Leapfrog software. Where bifurcation was present in the D pegmatites this was modelled. Minor northwest-southeast faults, with displacements of &lt;2 m, were modelled. Each pegmatite was modelled separately, and as no zoning was apparent, either physically or from the chemistry, these were grade modelled as a single unit. The interpolation parameters were based on the variogram parameters. The Snowden Supervisor software was used for exploratory data analysis and for the variography.</p> <p>Ordinary kriging was used to estimate grades. The variogram information that was used for resource estimates were:</p> <table border="1"> <thead> <tr> <th>Pegmatite</th> <th>Nugget</th> <th>Sill</th> <th>Range (m)</th> </tr> </thead> <tbody> <tr> <td>D1</td> <td>0.52</td> <td>0.12</td> <td>50</td> </tr> <tr> <td>D2</td> <td>0.60</td> <td>0.20</td> <td>54</td> </tr> <tr> <td>F1</td> <td>0.33</td> <td>0.22</td> <td>50</td> </tr> </tbody> </table> <p>No mining has taken place.</p> <p>The economics are based on the recovery of tantalum alone. Recovery assumptions are 67% Ta. Although economic concentrations of lithium are present, these were not considered.</p> <p>Niobium is present in solid solution in the tantalum. This was taken into account in the metallurgical testwork.</p> <p>The block size used was 10 m x 10 m x 2 m. It was assumed that the SMU would be equivalent to the block size. As the entire pegmatites were considered to be economic, no selective mining is envisaged.</p>	Pegmatite	Nugget	Sill	Range (m)	D1	0.52	0.12	50	D2	0.60	0.20	54	F1	0.33	0.22	50
Pegmatite	Nugget	Sill	Range (m)															
D1	0.52	0.12	50															
D2	0.60	0.20	54															
F1	0.33	0.22	50															

Criteria	JORC Code explanation	Commentary
		<p>The pegmatites exhibit extremely sharp hangingwall and footwall contacts with the country rock, and these contacts were modelled as accurately as possible in the Leapfrog software.</p> <p>Any issues picked up during the validation were fixed immediately in the source data, to prevent reloading the same errors at a later stage. However, no edits were made to the copy of raw data.</p>
<b>Moisture</b>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	The tonnages are estimated on a dry basis.
<b>Cut-off parameters</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	The minimum cut-off was determined to be 237 ppm Ta <sub>2</sub> O <sub>5</sub> .
<b>Mining factors or assumptions</b>	<i>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.</i>	It is assumed that the mining method would be by opencast mining. Because of the extremely sharp contacts, and the clear colour differential between the orebody and the host rock, no mining dilution was included.
<b>Metallurgical factors or assumptions</b>	<i>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.</i>	<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
<b>Environmental factors or assumptions</b>	<i>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.</i>	<p>An independent environmental assessment concluded that:</p> <p>The potential negative impacts associated with the proposed mineral exploration project are expected to be low to medium in significance, apart from air quality, groundwater and some social impacts.</p> <p>Provided that the relevant mitigation measures are successfully implemented by the proponent, there are no environmental reasons why the proposed project should not be approved.</p> <p>The project will have significant positive economic impacts that would benefit the local, regional and national economy of Namibia.</p>
<b>Bulk density</b>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	<p>ORP determined the specific gravity (SG) of the samples by using the Archimedes principle on 147 chip samples that were collected from all six pegmatites from the targeted pegmatite swarm. The SG of each sample was calculated using the formula <math>SG = (\text{weight in air}) / (\text{weight in air} - \text{weight in water})</math>.</p> <p>This technique measures the volume of a sample by water displacement and density is then calculated as the ratio of mass to volume. No bulk density has been measured because the SG is considered appropriate as an input into the orebody model. It was found that the 147 samples have an average SG of 2.60.</p>
<b>Classification</b>	<p><i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></p> <p><i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></p> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<p>The Mineral Resources were classified as Indicated from outcrop to the last line of surface boreholes. Up to 50 m beyond the last line of holes was classified as Inferred. The Inferred Mineral Resource is based on extrapolation of 50 m beyond the last line of drilling. The Inferred Resource is entirely based on extrapolated information, on the basis of demonstrated lateral continuity of the pegmatites from outcrop positions, and extrapolated up to the range of the variogram. The Inferred Resource comprises 45 % of the total resource, by tonnage. For a visual demonstration of lateral continuity please refer to Figure 3.</p>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	No audits or reviews were conducted.
<b>Discussion of relative accuracy/confidence</b>	<i>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.</i>	<p>The relative accuracy of the estimate is based on the geological and statistical continuity of the tabular pegmatites.</p> <p>The pegmatites can be traced in outcrop over tens to hundreds of metres, and their continuity has been confirmed by surface boreholes.</p> <p>Grade continuity has been confirmed through geostatistical analysis.</p> <p>The Indicated Resource forms a firm basis for global mine planning and for economic assessment of the orebodies.</p>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p> <p><i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></p>	



ANNEXURE 4

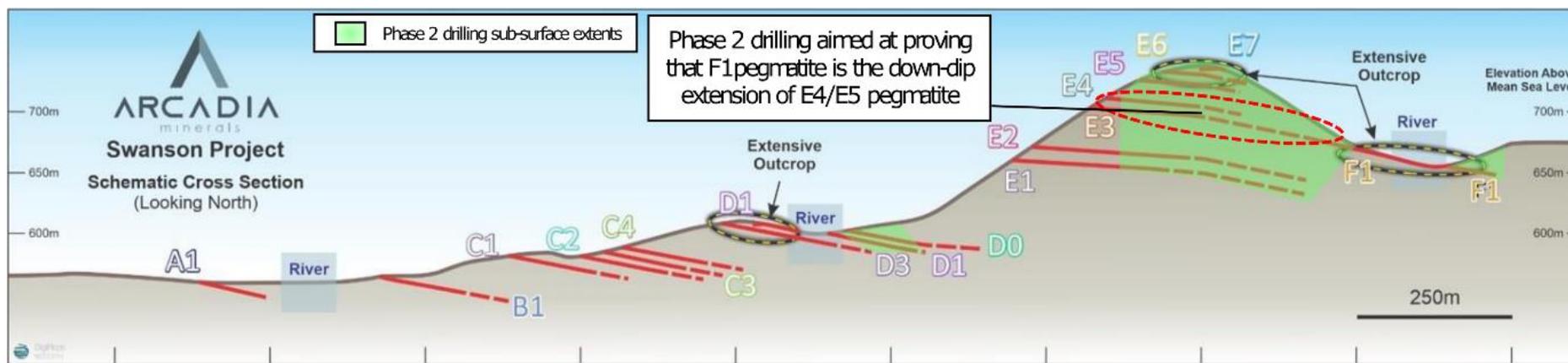


Figure 5: Map indicating longitudinal section of the Swanson Swarm of pegmatites indicating (in hatched ovals) the areas at which outcrop sampling and drilling was conducted from which the resource estimate is calculated. Areas hatched in green is where phase 2 of a drilling campaign, which is currently underway (see announcement 1 September 2021) is undertaken.

ANNEXURE 5

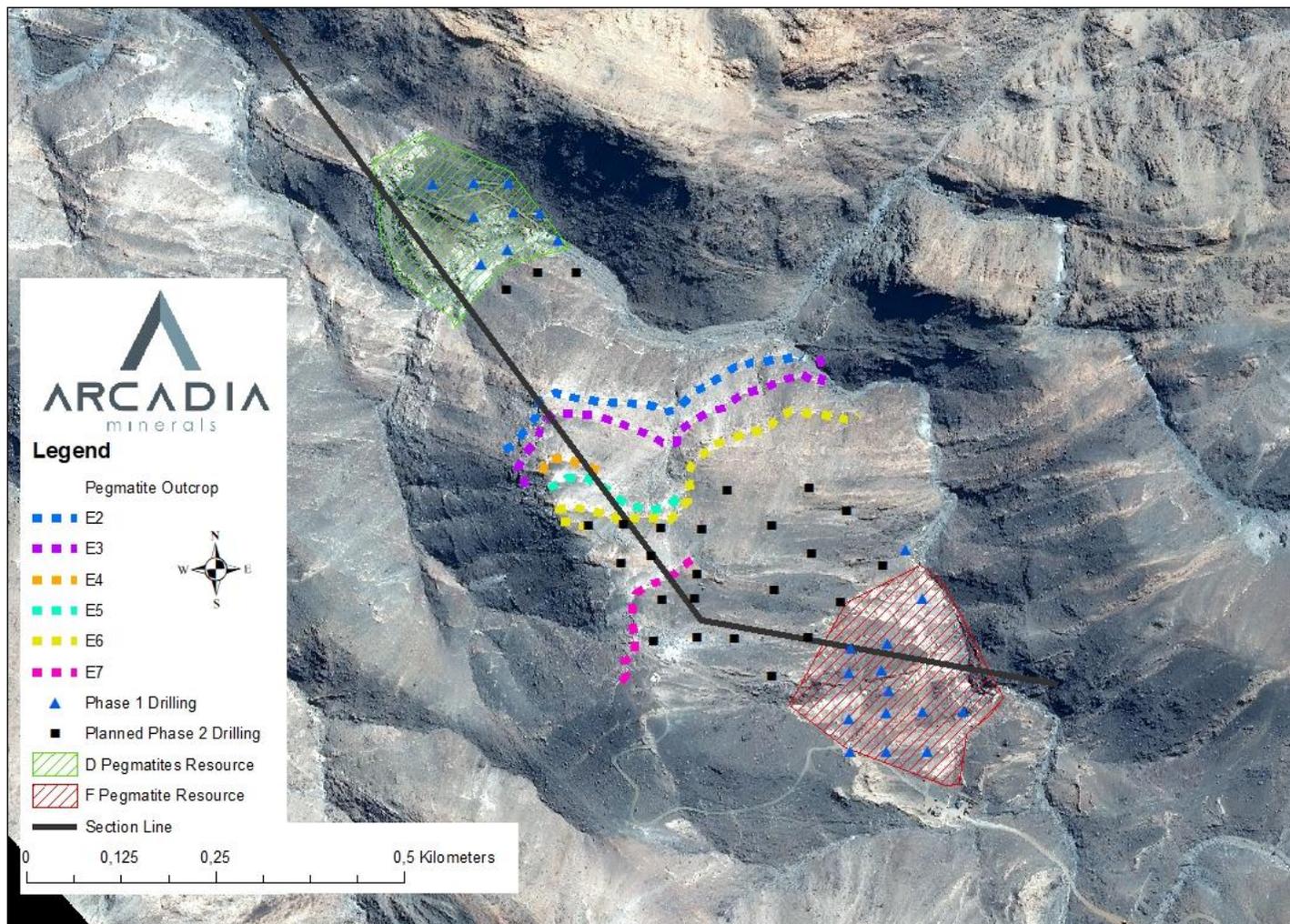


Figure 6: Satellite view indicating pegmatite outcrops in relation to resource diagrams of the F and D pegmatites, including locations of drill holes used for the purposes of estimating the resource identified as “Phase 1 Drilling” and locations of drill holes of the on-going drilling program shown as “Planned Phase 2 Drilling”.