

# FINAL LITHIUM DRILLING ASSAY RESULTS RECEIVED AT BITTERWASSER

## **HIGHLIGHTS**

- Assay results for the outstanding 32 drill holes received from the 64-hole follow-up auger drilling campaign over 100% of the Eden Pan at Bitterwasser
- Holes were drilled from surface to a maximum depth of 9.6 m
- All samples submitted for assay returned significant Lithium mineralisation
- Results suggest potential for a significant increase of the existing JORC Mineral Resource (Currently 15.1 million tons at 828 ppm Li, which covered only 24% of the Eden Pan surface area)
- As expected, best individual drillhole intersections for the high-grade middle green clay unit were located in the centre of the pan at shallow depths:
  - BMC33: From 4.8 to 9.4 m, 4.6 m @ 811 ppm Li
  - BMC32: From 3.8 to 6.6 m, 2.8 m @ 796 ppm Li
  - BMC28: From 4.2 to 9.4 m, 5.2 m @ 760 ppm Li
  - BMC36: From 3.4 to 5.6 m. 2.2 m @ 744 ppm Li
- Revised Mineral Resource estimate expected by end of Q2/2022
- Bench scale test work for Lithium extraction using both organic and sulphuric acids underway with the aim of assessing the production of a battery grade lithium product
- Exploration drilling is planned over the remaining exposed pans in the Bitterwasser Pan District, which area represents 400% of the size of the exposed area of the Eden Pan
- Option exercised to initiate acquisition of up to 100% of the Bitterwasser
   Pan District
- Bitterwasser land package currently under investigation by Arcadia comprises 4,031 Km<sup>2</sup> in extent

Arcadia Minerals Ltd (ASX:AM7, FRA:8OH) (Arcadia or the Company), the diversified exploration company targeting a suite of projects aimed at Tantalum, Lithium, Nickel, Copper



and Gold in Namibia, is pleased to announce final drill results from the Eden Pan at its Bitterwasser Lithium clay project.

Philip le Roux, the Chief Executive of Arcadia stated: "The drilling results bode well for a significant increase to the existing Mineral Resource of 15Mt, especially considering that the maiden Mineral Resource was derived from 16 drill holes (i.e. 24% of Eden Pan area) and that 43 holes of the 64-hole follow-up auger drilling campaign intersected the Middle Green Clay Unit, all of which were significantly mineralised to a similar tenor than what we've seen from our first drilling campaign at the Eden Pan. The work to declare a revised Mineral Resource is being run concurrently with bench-scale test work (expected to be finalised by Q3/2022) for Lithium extraction using both organic and sulphuric acids with the aim of investigating the possibilities of production of a battery grade lithium product".

## **Exploration Results**

Assay results for the outstanding 32 drill holes from the 64-hole follow-up auger drilling campaign completed on 9 February 2022 <sup>1</sup> over the Eden Pan was received. All the drill holes commenced in the mineralised Upper Brown Clay Unit and every hole, except two drill holes where thin clay units were intercepted at the edges of the Eden Pan, were sampled from top to bottom up to a depth of 9.60m. Notably, the entire sequence of the drill holes sampled (i.e. Upper Brown Clay Unit and Middle Green Glay Unit) returned lithium mineralisation<sup>2</sup>.

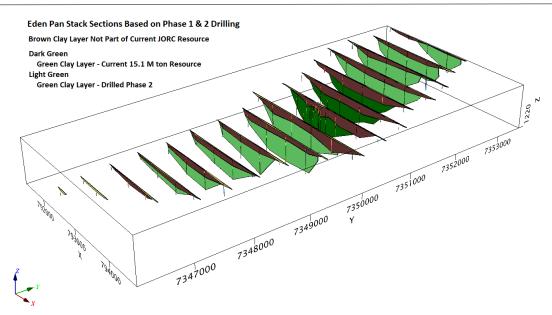
The Middle Green Clay Unit, lithologically named the Middle-Unit (MU), comprises the dominant lithological unit from which the maiden Mineral Resource<sup>3</sup> was derived. This green clay unit was intersected in 18 of the 32 drill holes from which assay results were received and extended from a depth of 1.4 m below surface to the maximum End-of-Hole (EOH) depth of 9.60m. A total of 43 holes from the 64-hole follow-up auger drilling campaign intersected the Middle Green Clay Unit at similar depths.

<sup>&</sup>lt;sup>1</sup> Refer to ASX Announcement dated 10 March 2022 titled "*Encouraging lithium drilling assay results at Bitterwasser*".

<sup>&</sup>lt;sup>2</sup> Refer to Annexures 1 and 2 for a location map and table of the reported drill hole intercepts.

<sup>&</sup>lt;sup>3</sup> Refer to ASX Announcement dated 3 November 2021 titled "Arcadia acquires lithium project with JORC Mineral Resources".





**Figure1:** Stacked cross section of the Eden Pan depicting drill-hole interpretation with reference to the existing Mineral Resource (green layers) and clay units intercepted in the follow-up auger drilling program.

As expected, the best individual drillhole intersections for the high-grade Middle Green Clay Unit were located in the centre of the pan. These results are:

- BMC33: From 4.8 to 9.4 m, 4.6 m @ 811 ppm Li
- BMC32: From 3.8 to 6.6 m, 2.8 m @ 796 ppm Li
- BMC28: From 4.2 to 9.4 m, 5.2 m @ 760 ppm Li
- BMC36: From 3.4 to 5.6 m. 2.2 m @ 744 ppm Li

The Company has appointed Creo Design, who previously prepared the maiden Mineral Resource estimate<sup>3</sup>, to update and revise the JORC Mineral Resource estimate for the Eden Pan. The updated Mineral Resource estimate, if any, is expected during the latter part of Q2 of 2022.

# **Acquisition of Bitterwasser Pan District**

Through its local subsidiary, Brines Mining and Exploration Namibia (Pty) Ltd (BME), Arcadia has exercised a first option in terms of an acquisition agreement to acquire up to 100% of Bitterwasser Lithium Exploration (Pty) Ltd (BLE), which acquisition agreement was approved by shareholders on 5 April 2022<sup>4</sup>. By exercising the first option, Arcadia has acquired 25% of BLE in return for a consideration of approximately A\$92,000. Arcadia holds an additional option for 2 years from 12 April 2022 to acquire the remaining 75% of BLE (and thereby own 100% of the Bitterwasser Pan district) in consideration of approximately A\$184,000.

<sup>&</sup>lt;sup>4</sup> Refer ASX Announcements dated 14 March 2022 and 5 April 2022 respectively titled "Notice of General Meeting/Proxy Form" and "Results of Meeting"



Combined with the 3,438Km<sup>2</sup> owned by BME and the BLE licenses, the land holding currently under investigation by Arcadia comprises 4,031Km<sup>2</sup> in extent.

#### **Additional Pans**

In addition to the drilling program the Company undertook a regional study to identify other potential exposed pans within the license area. Satellite and aerial photo interpretation of the Bitterwasser license areas identified 7 additional pans bringing the exposed surface pans to a total of 14, all of which, when combined, cover 9,594 hectares (95.94Km²) in extent. This land package compares favourably with the total surface area under investigation by Bacanora Minerals Ltd at its Sonora Lithium Project (for 8,154ha) in Mexico<sup>5</sup>, and operations in Clayton Valley (Cypress Development Corp. for 2,197 ha) in Nevada, United States<sup>6</sup>.

The focus of exploration to date was conducted over the Eden Pan (noted as Pan 5 in Annexure 2), which is 2km by 5km in extent and constitutes 19% of all the exposed pan surface areas identified to date at the Bitterwasser Lithium Project.

Except for the Eden pan, all the pans located over the eastern edge of the Kalkrand half-graben<sup>7</sup> remains to be tested for Lithium mineralisation in the clays. However, the location of the pans and the mineralisation model of the Eden pan, indicates that the pans located along the Western edge of the deep-seated tectonic structure located at the Eastern extremities of the Kalkrand half-graben could have been mineralised through geothermal activity from rising brines and may be similarly mineralised as the Eden pan. If mineralisation becomes evident over these pans in similar mode and tenor to that what exists at the Eden pan, it could significantly increase the potential for an increase in the Mineral Resource tonnage associated with the Bitterwasser Project.

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

For further information please contact:
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<sup>&</sup>lt;sup>5</sup> Refer to s. 4.1 of a Technical Report on the Feasibility Study for the Sonora Lithium Project, Mexico at https://bacanoralithium.com/\_userfiles/pages/files/documents/bacanorafstechnicalreport25012018\_compres sed.pdf

<sup>&</sup>lt;sup>6</sup> Refer to s. 4.2 of a NI 43-101 Technical Report styled "*Prefeasibility Study Clayton Valley Lithium Project*" to be found at https://cypressdevelopmentcorp.com/site/assets/files/3532/cyp\_pfs\_amended\_march\_15th-2021.pdf

<sup>&</sup>lt;sup>7</sup> Refer to Asx Announcement dated 10 March 2022 titled "Encouraging lithium drilling assay results at Bitterwasser"



#### COMPETENT PERSONS STATEMENT & PREVIOUSLY REPORTED INFORMATION

The information in this announcement that relates to Exploration Results listed in Appendices 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 quality as a Competent Person as defined in the JORC Code 2012.

Competent Person	Membership	Report/Document
Mr Philip le Roux	South African Council for Natural Scientific	This announcement and JORC Tables
(Director, Arcadia	Professions #400125/09	
Minerals)		

The Company confirms that the form and context in which a Competent Person's previous findings, as noted in footnotes 1, 3 and 7, including findings in a report styled *Independent Geological Report on the Lithium Resource* at the Bitterwasser Pan, Hardap Region, Namibia, Dr. Johan Hattingh, Nov. 2021, as announced in previous announcements and presented in this announcement have not been materially modified from the original market announcements.

Release Date	ASX Announcements.
<sup>1,7</sup> 10.03.2022	Encouraging Lithium Drilling Assay Results received at Bitterwasser
<sup>3</sup> 03.11.2021	Arcadia acquires adjacent lithium project with JORC Mineral Resources

#### **MINERAL RESOURCE ESTIMATES**

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Bitterwasser Mineral Resource estimate and all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 3 November 2021 *Arcadia Acquires Lithium Project with JORC Mineral Resources*. The Company confirms the form and context in which the Competent Person's findings are presented and have not been materially modified from the original market announcement.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Swanson Mineral Resource estimate and all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 1 September 2021 *Arcadia Mineral Resource Estimate*. The Company confirms the form and context in which the Competent Person's findings are presented and have not been materially modified from the original market announcement.

The Swanson project is currently undergoing a feasibility study. The Swanson and the Bitterwasser Projects contain JORC Mineral Resources. At Swanson, a JORC Mineral Resource of 1.2Mt at an average grade of 412g/t Ta2O5, 76g/t Nb2O5 and 0.29% Li2O was announced on the 23rd of September 2021, which was derived from 23 drillholes completed in September 2020 over 3 pegmatites. See the table below for more details of the Swanson mineral resource.



# SWANSON TANTALUM PROJECT MINERAL RESOURCE (JORC 2012).

Classification	Pegmatite	Mass (kt)	Ta <sub>2</sub> O <sub>5</sub> (ppm)	Nb <sub>2</sub> O <sub>5</sub> (ppm)	Li₂O (%)
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
	Total	663.5	431	76	0.28
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
	Total	544.0	389	75	0.30
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
	Total	1,207.5	412	76	0.29

At Bitterwasser a JORC Mineral Resource of 15.1 million tons @ 828ppm Li and 1.79% K (at a cut-off grade of 680ppm Li) representing only 6% of the exposed clay pans was defined over one of 14 clay pans. The Mineral Resource was announced on the 3rd of November 2021 and is contained over three exploration licenses, which licenses were the subject of an acquisition that was approved by shareholders on the 5 April 2022. See the table below for more details of the Bitterwasser mineral resource.

## BITTERWASSER LITHIUM-IN-CLAU MINERAL RESOURCE (JORC 2012).

Classification	Tonnage (kt)	Li Grade ppm	Contained Li (tonnes)	Lithium Carbonate Equivalent (tonnes)
Total Indicated	0	0	0	0
Total Inferred	15,100	828	12,503	66,929
Total Resources	15,100	828	12,503	66,929



#### **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). The Company's strategy is to bring the advanced Swanson Tantalum project into production and then to use the cashflows (which may be generated) to drive exploration and development at the potentially company transforming exploration assets. As such the first two pillars of Arcadia's development strategy (a potential cash generator and company transforming exploration assets) are established through a third pillar, which consists of utilising the Company's human capital of industry specific experience, tied with a history of project generation and bringing projects to results, and thereby, to create value for the Company and its shareholders.

Most of the Company's projects are located in the neighbourhood of established mining operations and significant discoveries. The mineral projects include-

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

As an exploration company, all the projects of the company are currently receiving focus. However, currently the Swanson project and the Bitterwasser Lithium project may be considered as Arcadia's primary projects due to their potential to enhance the Company's value.

For more details, please visit www.arcadiaminerals.global

#### **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.

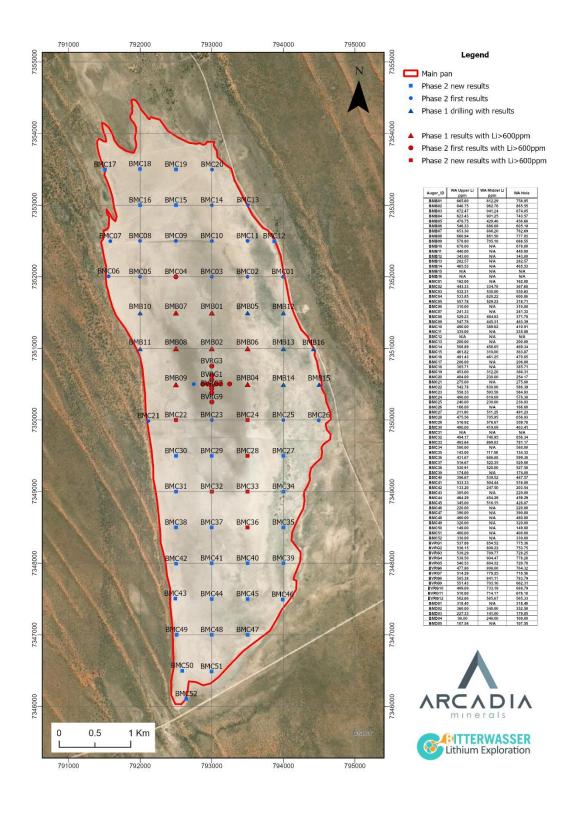
The Company does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the 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.



#### **ANNEXURE 1 – MAP 1**

#### BITTERWASSER EDEN PAN DRILLHOLE LOCALITY MAP





# ANNEXURE 2 – TABLE 1 DRILLHOLE INTERCEPTS

								Total_Clay				Middle_Cla	y_Unit	
HOLE_ID	UTM33S_X	UTM33S_Y	Elevation	Azimuth	Inclination	EOH	From	То	Thick_m	Li_ppm	From	То	Thick_m	Li_ppm
BMC12	793872	7352497	1233	N/A	-90	0.60	0.00	0.60	0.60	Not Analysed				
BMC15	792500	7353000	1232	N/A	-90	7.60	0.00	7.60	7.60	364	3.60	7.60	4.00	310
BMC16	792000	7353000	1227	N/A	-90	7.40	0.00	7.40	7.40	470	4.00	7.40	3.40	461
BMC17	791510	7353497	1231	N/A	-90	1.60	0.00	1.60	1.60	206				
BMC18	791998	7353505	1233	N/A	-90	1.60	0.00	1.60	1.60	386				
BMC19	792500	7353500	1236	N/A	-90	4.00	0.00	4.00	4.00	386	2.20	4.00	1.80	312
BMC27	794000	7349500	1234	N/A	-90	8.60	0.00	8.60	8.60	491	3.00	8.60	5.60	511
BMC28	793500	7349500	1231	N/A	-90	9.60	0.00	9.60	9.60	657	2.20	9.60	7.40	706
BMC29	793000	7349500	1226	N/A	-90	9.40	0.00	9.40	9.40	560	2.80	9.40	6.60	577
BMC30	792500	7349500	1230	N/A	-90	4.80	0.00	4.80	4.80	463	3.00	4.80	1.80	419
BMC31	792500	7349000	1233	N/A	-90	4.60	0.00	1.60	1.60	Not Analysed				
BMC32	793000	7349000	1235	N/A	-90	8.20	0.00	8.20	8.20	656	3.60	8.20	4.60	741
BMC33	793500	7349000	1233	N/A	-90	9.60	0.00	9.60	9.60	781	2.40	9.60	7.20	748
BMC34	794000	7349000	1230	N/A	-90	1.60	0.00	1.60	1.60	580				
BMC35	794000	7348500	1230	N/A	-90	1.80	0.00	1.80	1.80	134	1.40	1.80	0.40	117
BMC36	793500	7348500	1229	N/A	-90	7.20	0.00	7.20	7.20	599	2.60	7.20	4.60	687
BMC37	793000	7348500	1230	N/A	-90	6.20	0.00	6.20	6.20	520	2.80	6.20	3.40	522
BMC38	792500	7348500	1234	N/A	-90	4.00	0.00	4.00	4.00	528	3.00	4.00	1.00	520
BMC39	794000	7348000	1230	N/A	-90	4.20	0.00	4.20	4.20	174				
BMC40	793500	7348000	1229	N/A	-90	6.80	0.00	6.80	6.80	488	2.60	6.80	4.20	540
BMC41	793000	7348000	1232	N/A	-90	6.00	0.00	6.00	6.00	516	2.40	6.00	3.60	504
BMC42	792503	7347994	1232	N/A	-90	3.20	0.00	3.20	3.20	204	1.60	3.20	1.60	248
BMC43	792492	7347506	1229	N/A	-90	1.60	0.00	1.60	1.60	220				
BMC44	793000	7347500	1235	N/A	-90	3.20	0.00	3.20	3.20	459	1.80	3.20	1.40	454
BMC45	793500	7347500	1221	N/A	-90	4.20	0.00	4.20	4.20	426	2.40	4.20	1.80	516
BMC46	793991	7347492	1231	N/A	-90	0.80	0.00	0.80	0.80	220				
BMC47	793500	7347000	1231	N/A	-90	1.60	0.00	1.60	1.60	390				
BMC48	793000	7347000	1234	N/A	-90	2.40	0.00	2.40	2.40	460				
BMC49	792510	7347001	1232	N/A	-90	1.00	0.00	1.00	1.00	320				
BMC50	792588	7346498	1231	N/A	-90	0.80	0.00	0.80	0.80	149				
BMC51	792998	7346488	1230	N/A	-90	1.00	0.00	1.00	1.00	400				
BMC52	792644	7346106	1233	N/A	-90	1.00	0.00	1.00	1.00	330				



# **ANNEXURE 3 - JORC 2012 TABLES**<sup>8</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 Bitterwasser Lithium-in-Clays Project.

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Sampling was undertaken using industry standard practices and consist of hand-auger drilling by Bitterwasser Lithium Exploration (Pty) Ltd. during December 2021 and January 2022.</li> <li>All drill holes are vertical</li> <li>A total of 370 samples were taken from the core of the drilling campaign, of and 45 for QAQC samples was added.</li> <li>Samples ranged from 317 g to 1090 g.</li> <li>An additional 38 density samples were collected.</li> <li>To minimize sample contamination, the collected sediment samples were placed on a canvas cloth, while the clay-bit was cleaned with a wet cloth and water after every sample.</li> <li>All drill hole and sample locations are mapped in WGS84 UTM zone 33S</li> </ul>
Drilling techniques	• Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>64 vertical hand-auger drillholes were drilled perpendicular to the long axis of the main Bitterwasser pan.</li> <li>The holes were drilled on a 500 m x 500 m grid and have a total core length of 412.60 m.</li> </ul>

<sup>&</sup>lt;sup>8</sup> Independent Geological Report on the Lithium Resource at the Bitterwasser Pan, Hardap Region, Namibia, Dr. Johan Hattingh, Nov. 2021



Criteria	JORC Code explanation	Commentary
		<ul> <li>A 250 mm long auger clay-bit with a 90 mm outer diameter was used.</li> <li>The depth of the holes ranged from 0.6 m to 13.00 m.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>Core recovery in the mineralised clay zone was almost 100% due to the cohesive nature of the clay.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples is not recorded in available documents.</li> <li>No apparent bias was noted between sample recovery and grade.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All drill holes were fully logged and are qualitative.</li> <li>The core has been logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>The total length of the mineralized clay logged is 412.60 m</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Each of the 370 samples was split into two. One split was for chemical analysis and the other split for is kept for mineralogical and metallurgical test work.</li> <li>The Middle clay was composite sampled at an interval of 0.20 m to 2.80 m average of 1.43m and the Upper Clay Unit was sampled at an average interval of 0.20 m to 5.00 m average 0.92m.</li> </ul>
Quality of assay data and	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The samples were analysed at ALS in Namibia, where sample preparation took place, and the samples was then sent to ALS in Ireland.



Criteria	JORC Code explanation	Commentary
laboratory tests	<ul> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>	<ul> <li>Sodium peroxide fusion ICP-MS finish for analysis of Li (ppm), K (%), Al (%), Cr (%), Si (%), Ti (%), As (ppm), Cd (ppm), Fe (%), Mg (%), Mn (%), P (%), Co (%) and Y (%) was done.</li> <li>The QAQC samples consisted of African Minerals Standards (Pty) Ltd's (AMIS) certified reference materials AMIS0683 (standard), and AMIS0577 (blank) and were inserted on average every 6 – 7 m within the sampling stream.</li> <li>It is assumed that industry best practices were used by the laboratories to ensure sample retrospectivity and acceptable assay data accuracy, however the specific QAQC procedures used are not recorded in available documents</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>All samples and data were verified by the project geologist.</li> <li>All sample material was bagged and tagged on site as per the specific clay unit it was located on. The sample intersections were logged in the field and were weighed at the sampling site.</li> <li>All hard copy data-capturing was completed at the sampling locality.</li> <li>All sample material was stored at a secure storage site.</li> <li>The original assay data has not been adjusted.</li> <li>Recording of field observations and that of samples collected was done in field notes and transferred to and electronic data base following the Standard Operational Procedures.</li> <li>No twin holes were drilled.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>The locations of all the samples were recorded.</li> <li>The sample locations were GPS captured using WGS84 UTM zone 33S.</li> <li>The quality and accuracy of the GPS and its measurements is not known, because it is not stated in available documents.</li> </ul>



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The drill holes are spaced on a 500 m x 500 m grid.</li> <li>The data spacing and distribution of the drill holes and samples is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied</li> <li>The Middle clay was composite sampled at an interval of 0.20 m to 2.80 m average of 1.43m and the Upper Clay Unit was sampled at an average interval of 0.20 m to 5.00 m average 0.92m.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>The holes were all drilled vertical and perpendicular to the sediment horizons and all the sediment horizons were sampled equally and representative.</li> <li>The lithium is not visible; therefore, no bias could take place when selecting the sample position.</li> <li>The orientation of the sampling is unbiased.</li> <li>The relationship between the sampling orientation and the orientation of key mineralized structures is not considered to have introduced a sampling bias.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>Bitterwasser Lithium Exploration (Pty) Ltd. 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 Bitterwasser Lithium Exploration (Pty) Ltd control until they are delivered and released to the laboratory.</li> <li>An export permit was obtained from the Namibian Mining Department to transport the samples across the border.</li> </ul>



D	Criteria	JORC Code explanation	Commentary
	Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Audits and reviews were limited to the Standard Operational Procedures in as far as data capturing was concerned during the sampling.</li> </ul>



# **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Bitterwasser Project area is east of Kalkrand in south central Namibia, some 190 km south of Windhoek in the Hardap Region.</li> <li>The Bitterwasser Lithium Project comprise of three exclusive exploration licences, EPLs 5353, 5354 and 5358, all held by Bitterwasser Lithium Exploration (Pty) Ltd.</li> <li>The project covers a total area of 59 323.09 hectares.</li> <li>A land-use agreement, including access to the property for exploration has been obtained through the Ministry of Agriculture, Water and Forestry of Namibia and the two landowners of which the drilling took place.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	A regional reconnaissance investigation in the form of a systematic field survey covering the entire southern Namibia and some parts of the Northern Cape Province of South Africa was done during 2009 and 2010. The reconnaissance investigation was aimed at establishing the prospectiveness of the area that could potentially sustain economic exploitation of soda ash and lithium.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The Main Bitterwasser Pan forms part of the Cenozoic aged Kalahari Group and comprises a lithium, potassium and boron enriched sulphate-, chlorite-and carbonate- saltpan.</li> <li>Post-Cretaceous Brukkaros alkaline volcanics and sub-volcanics in the area and are potential source rocks for the lithium.</li> <li>The presence of an active deep-seated connate/hydrothermal water circulation network is suggested, which acts as a transport mechanism for lithium bearing brines into the overlying Gordonia Formation pan sediments.</li> <li>High evaporation rates (&gt;3200 mm/year) occurring in the area are favourable for brine formation and salt-concentration.</li> </ul>



Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Drill results have been described in annexure 3 of this report and all relevant data is included in the report.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Two clay units was identified the Upper and Middle unit and each was in samples independently.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>	<ul> <li>The drill holes were all drilled vertical, with the clay units being horizontal.</li> <li>The mineralized clay thickness intercepted range from 1 m to 12.80 m.</li> </ul>



Criteria	JORC Code explanation	Commentary
Diagrams	<ul> <li>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.</li> </ul>	The appropriate diagrams and tabulations are supplied in Annexure 3.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.	<ul> <li>This report has been prepared to present the prospectivity of the project and results of historical and recent exploration activities.</li> <li>All the available reconnaissance work results have been reported.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>The Namibian Government conducted a regional magnetic survey in the area.</li> <li>The Namibian Government conducted a radiometric survey of potassium in the area.</li> <li>An electromagnetic (EM) survey was done by the groundwater consultancy Geoss during October 2019.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>The next exploration phase should focus on the further in-fill drilling to increase the resource classification on the Eden pan, while also conducting exploration on some of the other pans in the region.</li> <li>Mineralogical and metallurgical test work would also be done to prove that the Li could be extracted from the clay.</li> </ul>