



## ELEVATED LITHIUM RECOVERIES FROM ORGANIC ACID LEACHING COMPOUNDS

### HIGHLIGHTS

- Pre-liminary leaching test work conducted at the University of Stellenbosch<sup>1</sup> indicates that organic acids are suitable to extract lithium from the Bitterwasser clays
- Initial unoptimized test work indicates that one specific organic acid extracts up to 78% of the lithium
- Organic acids are generally regarded as being environmentally friendly and relatively cheap to produce and use, compared to inorganic acids such as Sulfuric and Hydrochloric Acid
- Full-scale test work program underway at the University of Stellenbosch to further optimise and potentially increase the leachability and recoveries

**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 positive lithium organic leach test results from its Bitterwasser lithium clay project.

**Philip le Roux, CEO of Arcadia stated:** *"This result is a significant step for Arcadia towards possibly confirming the viability of extracting significant quantities of lithium from the Bitterwasser clays in an environmentally and economically compliant manner. The test results, combined with the potential of producing a lithium rich leachate from concentrates<sup>2</sup>, holds the promise of confirming processing matrices with competitive capex and opex responses for any future analyses of economic and technical assessment, which Arcadia could undertake towards confirming the project viability."*

<sup>1</sup> Refer to ASX Announcement dated 7 March 2022 "Positive Lithium Mineralogical Test Results Received"

<sup>2</sup> Refer to ASX Announcement dated 7 March 2022 "Positive Lithium Mineralogical Test Results Received", and particularly to the appointment of Multotech to conduct cyclone test work to possibly increase the lithium grade in material to be leached.

## Organic Leach Test Results

Leaching test work conducted at the University of Stellenbosch Geochemistry Laboratories on the Bitterwasser clays, has been undertaken to test the leachability of lithium from the clays using an organic acid. The aim of the test work is to obtain an understanding whether organic acids could be used to extract lithium from the Bitterwasser clays. To date, three tests were conducted. The parameters that were used during the tests include:

- Acid doses - 300 g/L
- Temperature - 80 °C
- Leach time - 7 hours

Three samples of the Middle Green Clay Unit obtained from recent drilling<sup>3</sup> were tested, using the test parameters described above (Refer to Annexure 1, Table 1 for detailed results):

- Sample 1: Total sample (not sieved), resulting in a lithium leachability of 55%
- Sample 2: Containing the < 50-micron fraction, resulting in a lithium leachability of 66%
- Sample 3: Containing the < 40-micron fraction, resulting in a lithium leachability of 78%

Arcadia, in conjunction with the Chemical Engineering Department of the University of Stellenbosch, is currently working on designing a full-scale test work program that would include tests at various acid doses, temperatures and leach resident times using various organic acids. This test work could result in the optimisation and potential increase in the leachability.

Four main advantages for using organic acids, as compared to inorganic acids such as sulphuric acid include:

- Organic acids are much more environmentally friendly than inorganic acids such as sulphuric acid, which could result in producing a lithium product that has much less impact on the environment.
- Sulphuric acid production is required to be undertaken in close proximity to a lithium production plant, resulting in elevated capex costs. On the other hand, organic acids could be sourced from suppliers and may not require construction of an acid plant, thereby reducing the capex portion of a project.
- Organic acids tend to be susceptible to reclamation and recycling, resulting in potential operational savings, which is not possible to achieve with sulphuric acid.

Arcadia's work program will be aimed at possibly confirming the advantages of organic acids in so far as these acids are applicable to the Bitterwasser Clays. If proven to be correct, it is possible that economies of scale sensitivities could favour reduced mineral resource tonnages

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<sup>3</sup> Refer ASX announcement dated 10 March 2022 "Encouraging Lithium drilling assay results at Bitterwasser"

through reduced capex requirements, and that upscaling of throughput through modularisation can be achieved if implemented in phases.

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

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#### **COMPETENT PERSONS STATEMENT & PREVIOUSLY REPORTED INFORMATION**

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

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

The Company confirms that the form and context in which a Competent Person's previous findings, as noted in footnotes 1 to 3, 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.

#### **MINERAL RESOURCES**

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 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".

#### **DISCLAIMER**

Some of the statements appearing in this announcement may be forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Arcadia operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking

statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside Arcadia's control.

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

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

## **BACKGROUND ON ARCADIA**

Arcadia is a Namibia-focused diversified metals exploration company, which is domiciled in Guernsey. The Company explores for a suite of Gold and battery metals (Nickel, Lithium and Copper). 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.

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 Ta<sub>2</sub>O<sub>5</sub>, 76g/t Nb<sub>2</sub>O<sub>5</sub> and 0.29% Li<sub>2</sub>O 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.

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 are the subject of an acquisition that is conditional upon Arcadia shareholders' approval. See the table below for more details of the Bitterwasser 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)	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>

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

Mineral Reserve Category				Mineral Resource Category				
Classification	Tonnage (kt)	Li Grade ppm	Contained Li (ton)	Classification	Tonnage (kt)	Li Grade ppm	Contained Li (ton)	Lithium Carbonate Equivalent
Total Probable	0			Total Indicated	0	0	0	0
				Total Inferred	15 100	828	12 503	66 929
Total Reserves	0			Total Resources	<b>15 100</b>	<b>828</b>	<b>12 503</b>	<b>66 929</b>

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



ANNEXURE 1 – TABLE 1 LEACH TEST RESULTS FOR THREE BITTERWASSER CLAY SAMPLES

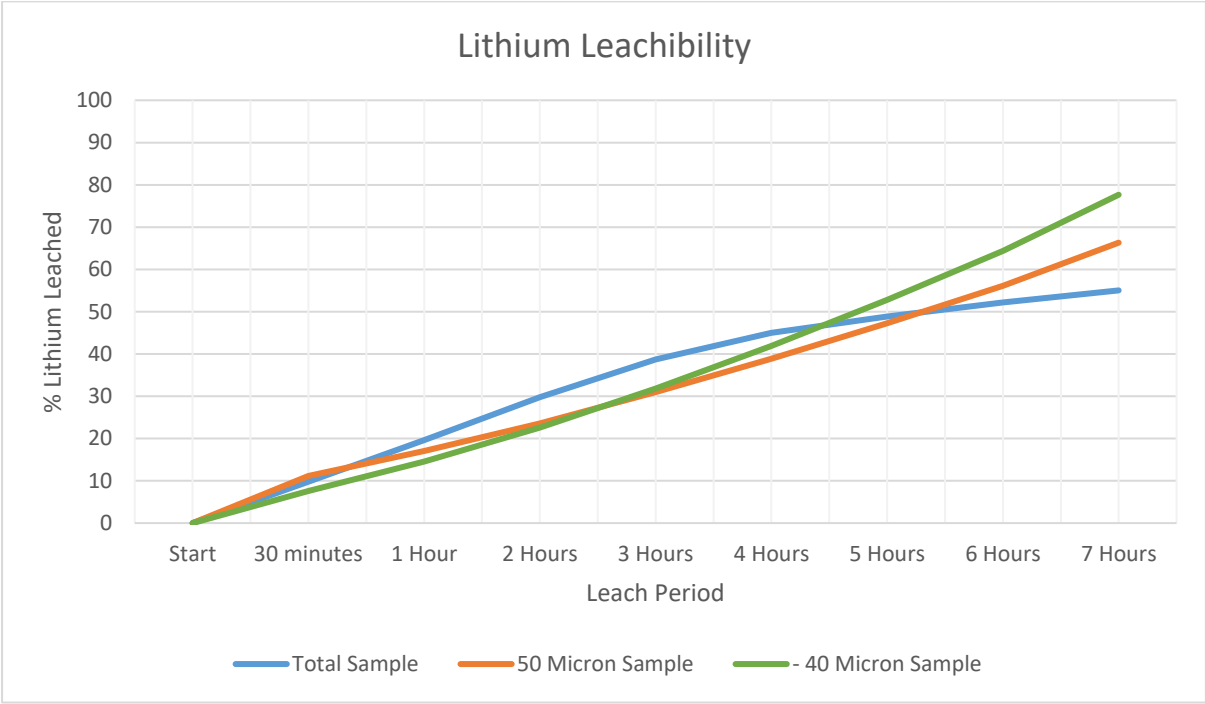


TABLE 1: LEACH TEST WORK COMPOSITE SAMPLE

HOLE_ID	UTM33S_X	UTM33S_Y	Elevation	Azimuth	Inclination	EOH	Sample Used for Leach Test Work			
							From	To	Thick_m	Li_ppm
BVRG3	793000	7350752	1233	0	-90	11.60	9.40	11.40	2.00	950
BVRG8	793000	7350377	1233	0	-90	11.80	9.20	10.60	1.40	1010

## ANNEXURE 3

### JORC 2012 TABLES

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

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg. 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></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where 'industry standard' work has been done this would be relatively simple (eg. '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 (eg. submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core</i></li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>is oriented and if so, by what method, etc).</i>	<p>of 412.60 m.</p> <ul style="list-style-type: none"> <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 1.00 m to 13.00 m.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Logging</b>	<ul style="list-style-type: none"> <li><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></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><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></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <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> <li>For the leach test a composite sample from core was made up from to Middle Clay Units from two boreholes, refer to Table 1 this announcement.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><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></li> <li><i>Nature of quality control procedures adopted (eg. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>The samples were analysed at ALS in Namibia, where sample preparation took place, and the samples was then sent to ALS in Ireland.</li> <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 representivity and acceptable assay data accuracy, however the specific QAQC procedures used are not recorded in available documents</li> <li>All leaching experiments were conducted in a batch of 250 ml conical bottles placed in a magnetic stirrer, at a speed of 400 rpm. The experiments were arranged at different parameters, such as different temperature range, particle sizes, solid to liquid ratio and glycine concentration. The experiments were terminated after 7 hours. The chemical reagents were all analytical, and once the preset reaction time was reached, metal contents of the sample solutions were immediately centrifuged out from the clay and analysed using ICP-AES. The metal leaching rate was calculated as follows:  <math display="block">L = (m \div M_i) * 100\%</math> Where L is the metal leaching rate, %: m is the metal weight extracted into the solution, g: and M<sub>i</sub> is the metal weight within the specimen.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification,</i></li> </ul>	<ul style="list-style-type: none"> <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> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>data storage (physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <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 an electronic data base following the Standard Operational Procedures.</li> <li>No twin holes were drilled.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><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></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <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</li> </ul>

Criteria	JORC Code explanation	Commentary
		bias.
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <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
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting, and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <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
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Drill results have been described in annexure 3 of this report and all relevant data is included in the report.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Two clay units was identified the Upper and Middle unit, and each was in samples independently.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 (eg. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <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
<b>Diagrams</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>The appropriate diagrams and tabulations are supplied in Annexure 3.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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 Geos during October 2019.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg. 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 style="list-style-type: none"> <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>