

## DRILLING COMMENCED AT BITTERWASSER LITHIUM IN BRINES PROJECT

**Arcadia Minerals Limited (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 that drilling has commenced at the Company's Bitterwasser Lithium Brines Project.

### HIGHLIGHTS

- Drilling has commenced at the Bitterwasser Lithium-in-Brines Project
- Further geophysical interpretation by Brisbane based hydrogeologists Klohn Crippen Berger (KCB), indicates two distinct aquifers at varying depths within the Bitterwasser Basin
- Drilling of 700m is planned over 9 boreholes sited at 6 locations, guided by geophysical features, stratigraphic drilling and further by KCB's geophysical interpretation
- The **main target area consists of 6 holes at 3 sites under a 42km x 9km geophysical anomaly** identified by an airborne geophysical survey, where **Lithium mineralisation in brines was intercepted 28m below surface**<sup>1</sup>
- The **objective of the drilling is to make a discovery** of mineralised brine aqueous bodies containing elevated levels of Lithium and associated mineralisation
- Results expected by end January 2024

### Drilling

The Company appointed Hammerstein Drilling Company (Pty) Ltd to drill 9 vertical drill holes sited at 6 locations in the Bitterwasser Basin. The drill sites have been identified in consultation with Brisbane based hydrogeologists Klohn Crippen Berger (KCB), by referencing the results of a geophysical survey<sup>2</sup> conducted by the Company over the project area, a further geophysical interpretation by KCB, and the results of a stratigraphic drilling campaign concluded in April 2023 (refer to footnote 1 below).

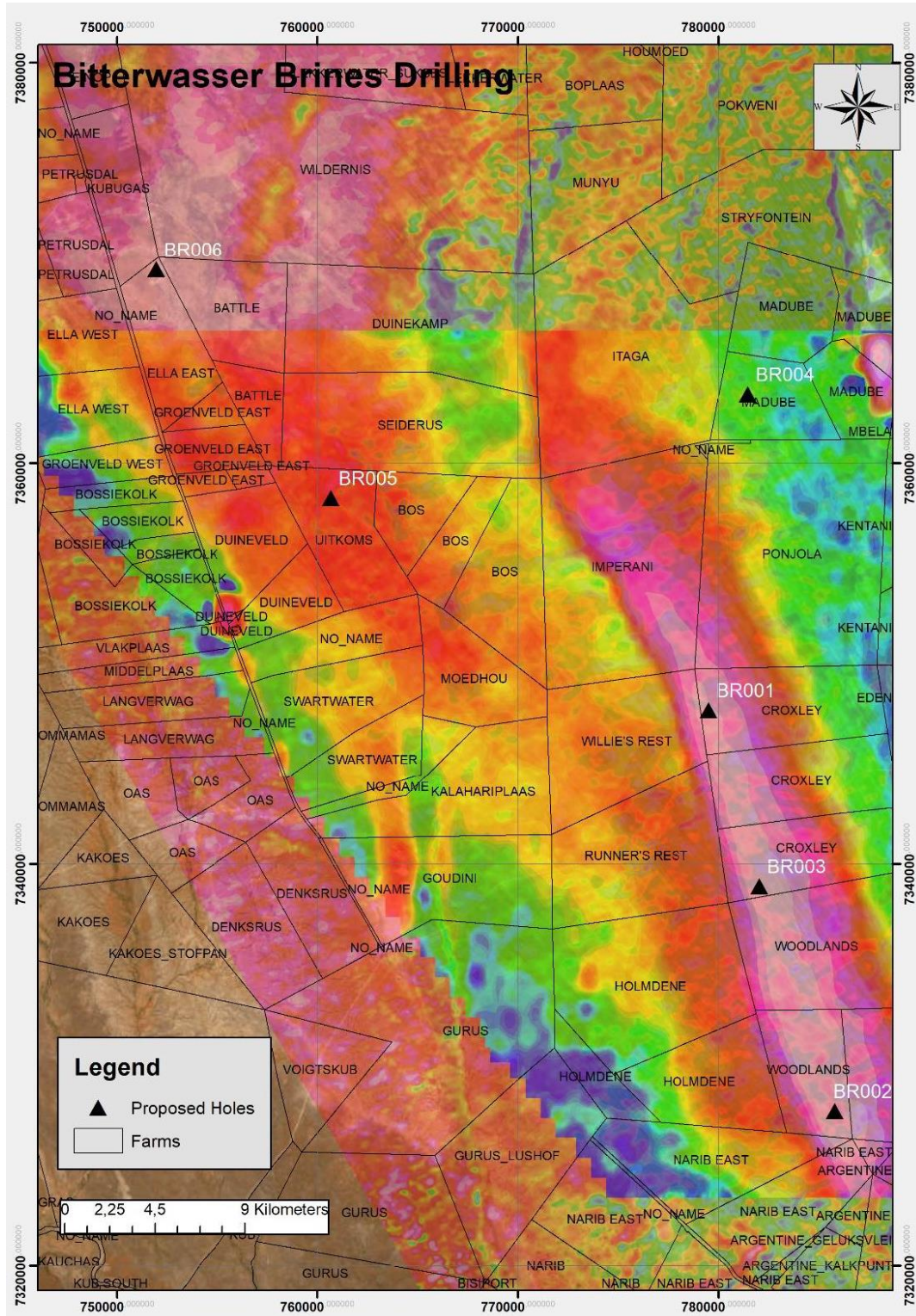
<sup>1</sup> Refer to Asx Announcement 17 May 2023 "*Mineralised Lithium Brines and Shallow Clays Discovered at Bitterwasser*"

<sup>2</sup> Refer to Asx Announcement 6 February 2023 "*Geophysical Interpretation Defines Drill Targets for Lithium Brines*"

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The KCB geophysical interpretation identified two distinct aquifers in the Bitterwasser Basin with varying electroconductive signatures. By drilling two holes per site in the main anomaly, the company is targeting both aquifers.

Figure 1: Location Map of Drilling



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KCB is to provide services that are aimed at:

- Perform down-hole logging of exploration boreholes to determine zones of elevated Electrical Conductivity, PH and brine grades,
- Performing pumping test supervision and sampling of brine water during hydraulic testing, and
- Conducting baseline chemical analysis at ALS Laboratories in Brisbane, Australia, which will be focussed primarily on Li, K, Mg and B grades.

**Table 1: Drilling Locations**

Name	X UTM	Y UTM	Twin holes	Target
BR001	779532	7347703	Pair holes (Shallow and Deep)	EM Anomaly
BR002	785816	7327708	Pair holes (Shallow and Deep)	EM Anomaly
BR003	782063	7338894	Pair holes (Shallow and Deep)	EM Anomaly
BR004	781481	7363432	Shallow	Scout Target
BR005	760693	7358266	Shallow	Scout Target
BR006	751967	7369676	Shallow	Mag. Anomaly

The borehole locations of BR001 to BR005 were selected to:

- Characterise groundwater quality within the Bitterwasser Half-Graben;
- Characterise the hydraulic properties of the two aquifers associated with unconsolidated and consolidated formations; and
- Determine groundwater levels in the consolidated and unconsolidated graben material and vertical gradients between these units.

The objective of drilling the boreholes in the Bitterwasser Half-Graben will be to:

- Conduct in-situ down hole water quality and mineralisation measurements to possibly determine mineralisation grades;
- Conduct step and constant rate discharge tests (pump rates) to obtain aquifer volume parameters to assist in Mineral Resource estimation;
- Determine groundwater levels in the different lithological units and vertical gradients between units;
- Facilitate data collection to allow updates to the hydrogeological conceptual model;
- Identify data gaps and inform the scope of future drilling programs; and
- Serve as long term monitoring boreholes to allow time-variant characterisation of groundwater levels and quality;

Hole BR006 is an exploration hole aimed at identifying the geological characteristics of the large circular geophysical anomaly believed to be either an extinct Volcano

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(functioning as a likely source of Lithium mineralisation) or a magnetic intrusion exhibiting carbonatite features.

Holes will be drilled vertically utilising mud rotary drilling in view of the unconsolidated characteristics of the host material and to enable hydrogeological characterisation. Bore casing with an inner diameter of 165 mm will be used for the entire length of the borehole in order to ease testing and sampling at varying depths. HydraSleeve sampling collectors will be used to attain water sampling at specific depths within boreholes. The sampling collectors allows for discrete interval sampling in the screened portion of the well with no change in water level and minimal disturbance of the water column. The water sampler is sealed except during sample collection, then re-seals itself, assuring that a representative and repeatable sample is recovered.

**Figure 2: Photo of HydraSleeve**



All holes will be terminated once in contact with the basalt bedrock.

Casing is required to ensure boreholes remain open during drilling, sampling, and testing. Factory thread-jointed non-corrosive casing and screens are being used for borehole retention and construction. In addition, special perforated screens with

apertures compatible with the host gravel is used and suitable stabiliser will be applied where required to ensure a hole stays intact.

The following stratigraphic conditions are expected during drilling:

- Aeolian (windblown) sands to a depth of between 2m to 4m;
- Groundwater level at about 15m to 20m below surface;
- Unconsolidated conglomerate interbedded with loose sand to a depth of between 35m and 70m (the upper Aquifer);
- Semi-consolidated sandstone and mudstone, with layers of unconsolidated mud and sand for depths between 70m and 150m (the lower Aquifer), and;
- Basalt basement underlying the consolidated graben sediments.

**Figure 3: Photo of drilling operations underway**



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**Figure 4: Photo of special casing being delivered**



**For further information, please contact:**

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## COMPETENT PERSONS STATEMENT & PREVIOUSLY REPORTED INFORMATION

The information in this announcement that relates to exploration objectives is based on, and fairly represents, information and supporting documentation prepared by the Competent Person(s) whose name(s) appears below, each of whom is either an independent consultant to the Company and a member of a Recognised Professional Organisation or a director of the Company. The Competent Person(s) named below have 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

The Company confirms that the form and context in which a Competent Person's previous findings are presented in the footnotes above and noted in the table below have not been materially modified from the original market announcements and that all material assumptions and technical parameters underpinning the announcements continue to apply. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Release Date	ASX Announcements
17 May 2023	<i>Mineralised Lithium Brines and Shallow Clays Discovered at Bitterwasser</i>
6 February 2023	<i>Geophysical Interpretation Defines Drill Targets</i>

### BACKGROUND ON ARCADIA

Arcadia is a Namibia-focused diversified metals exploration company, which is domiciled in Guernsey. The Company explores for a suite of new-era metals (Lithium, Tantalum, Platinum-Group-Elements, Nickel 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 exploration projects include-

1. Bitterwasser Lithium in Clay Project – which project contains a potentially expanding JORC Mineral Resource from lithium-in-clays
2. Bitterwasser Lithium in Brines Project – which is prospective for lithium-in-brines within the Bitterwasser Basin area.
3. Kum-Kum Project – prospective for nickel, copper, and platinum group elements.
4. TVC Pegmatite Project – prospective for Lithium, Tantalum and other associated minerals.
5. Karibib Project – prospective for copper and gold.
6. The Swanson Mining Project – advanced tantalum mining project undergoing development to become a mining operation, and which contains a potentially expanding JORC Mineral Resource within the Swanson Project area.

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As an exploration company, all the projects of the company are currently receiving focus. However, currently the Swanson project and the Bitterwasser Lithium projects 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](http://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.

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**APPENDIX 1 –JORC 2012 Tables**

The following Tables are provided to ensure compliance with the JORC Code (2012 Edition)

**Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>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.</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 (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.</li> </ul>	<ul style="list-style-type: none"> <li>Helicopter airborne electromagnetic (EM) and magnetic survey was completed over a portion of the Bitterwasser Lithium project, located in central Namibia</li> <li>The survey includes a total of 52 lines on a 1km grid, totaling 2 122-line km</li> <li>The survey system used, consist of Xcite (electromagnetic system) and NRG RPACII (magnetic system), Refer to Annexure 1 for details information on the survey equipment.</li> <li>The sampling techniques used are deemed appropriate and industry standard for this style of exploration</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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 is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Presented results related to the geophysical survey and no new drilling results are presented in this announcement.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement.</li> </ul>

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	<ul style="list-style-type: none"> <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>	
Logging	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• No geological logging was undertaken.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement.</li> </ul>

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<p><i>Verification of sampling and assaying</i></p>	<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, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement.</li> </ul>
<p><i>Location of data points</i></p>	<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>• GPS captured data using WGS84 UTM zone 33S co-ordinate system.</li> </ul>
<p><i>Data spacing and distribution</i></p>	<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>• EM data was recorded between 0.04 and 11ms along the 52 lines on a 1km grid.</li> </ul>
<p><i>Orientation of data in relation to geological structure</i></p>	<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 survey lines were flown in an east – west direction</li> </ul>
<p><i>Sample security</i></p>	<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>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement.</li> </ul>
<p><i>Audits or reviews</i></p>	<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>• No audits or reviews has been conducted and the data in this announcement the data would be audited and reviewed during the data interpretation stage that is currently being done.</li> </ul>

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## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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 eight exclusive exploration licences, EPLs 5353, 5354 and 5358, held by Bitterwasser Lithium Exploration (Pty) Ltd. and EPL's 7614, 8101, 8102, 8103 and 8104 held by Brines Mining and Exploration (Pty) Ltd.</li> <li>Environmental Clearance Certificates was obtained for the Bitterwasser Lithium Exploration licences.</li> <li>Land-use agreement were signed with landowner on all properties that the company has work on the ground to date.</li> <li>For the airborne geophysical survey flight permission was obtained from the Namibian Civil Aviation Authority</li> </ul>
Exploration done by other parties	<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>
Geology	<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 Eden 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</li> </ul>

		<p>lithium bearing brines into the overlying Gordonia Formation pan sediments.</p> <ul style="list-style-type: none"> <li>• High evaporation rates (&gt;3200 mm/year) occurring in the area are favourable for brine formation and salt-concentration.</li> </ul>
Drill hole Information	<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>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement</li> </ul>
Data aggregation methods	<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>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement</li> </ul>
Relationship between mineralisation widths and intercept lengths	<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>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement</li> </ul>

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Diagrams	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The appropriate diagrams and tabulations are supplied in the main report.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• No new drill data is presented. Only previously ASX announced drilling results are quoted in the announcement</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The Namibian Government conducted a regional magnetic survey in the area from with structural information was interpreted for the Bitterwasser half graben structure.</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 over one of the pans at the Bitterwasser project</li> <li>• A helicopter airborne EM and Magnetic Geophysical survey was conducted in October 2022 than include 53lines on a 1km grid, totalling 2 112 line-km</li> </ul>
Further work	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drilling of 9 holes situated at 6 locations.</li> <li>• The drill sites have been identified in consultation with Brisbane based hydrogeologists Klohn Crippen Berger (KCB) by referencing the results of a geophysical survey conducted by the Company over the project area, a further geophysical interpretation by KCB, and the results of a stratigraphic drilling campaign concluded in April 2023 (refer to footnote 1 below).</li> </ul>

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