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ASX RELEASE: 3 January 2023

Large Potential Lithium-Bearing Brine Zone Identified at Xantippe's Carachi Lithium Project in Catamarca, Argentina

Xantippe Resources Limited (ASX: XTC) (Xantippe, XTC, or the Company) is pleased to provide exploration results on its Carachi Lithium Project (the Project), located in Catamarca province, Argentina in the Lithium Triangle of South America.

The Company recently completed a Vertical Electrical Sounding (VES) geophysical survey that has identified a highly conductive horizon that is interpreted to represent a brine target with potential to host a large lithium deposit.

The project area shares geologic features in common with other lithium-rich salars in the region. This brine aquifer has been reported as having elevated concentrations of lithium at Lake Resources' Kachi lithium project located adjacent to the Project. The geophysical survey covered an area of approximately 300 square kilometres. The conductive horizon was detected clearly in the majority of the VES stations, which cover an area of approximately 130 square kilometres.

The zone is characterized by very low resistivity values interpreted to represent a buried salar deposit of a highly conductive saline brine zone (<2 ohm/m). The zone occurs at depths of 34 to 220 metres below surface. It is interpreted to be at least 150 metres thick, and is open at depth and in all directions laterally. Figure 1 overleaf shows a generalized cross section showing local geophysical contractor Conhidro's interpretation of the VES data.

VES geophysical surveys are being used frequently in Argentina to successfully delineate potential brine zones below surface. Based on the VES resistivity data, Conhidro interprets there to be five zones, which range from unsaturated material (highly resistive) in the surface, to highly conductive brine at depth.

Figure 1 shows three of these zones, and Conhidro interprets these as follows:

- Unit 1: A near surface horizon with resistivity values ranging between 30 to 2,324 ohm/m. Conhidro interpreted this zone as a horizon of unsaturated Quaternary sediments probably consisting of gravel and minor silts/clays.
- Unit 2: A semi-resistive layer with moderate resistivity values between 83 to 123 ohm/m, which Conhidro interpreted to be a gravel and sand horizon containing fresh to brackish water. The thickness of this zone ranges from 9 to 178 metres.



ASX ANNOUNCEMENT

- Unit 3: This layer is a highly conductive zone with resistivity values that range from 0.2 to 1.0 ohm/m interpreted by Conhidro to represent a zone of saturated brines. The zone begins at a depth of 34 metres in the southwest portion of the claim group and it dips to a depth of 200 metres to the central part of the claim group increasing depth to the north. Maximum thickness of the unit is unknown.

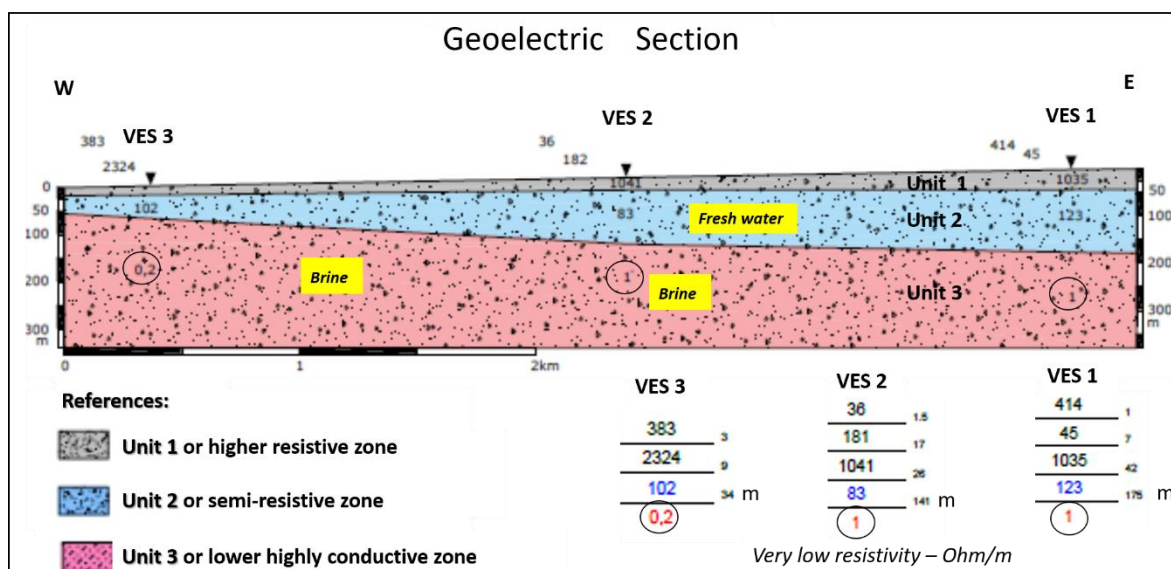


Figure 1. Interpreted west-east section through the Project area

Executive Chairman, Mr John Featherby commented:

"The Company is very pleased with these positive results and moves forward with great confidence to the next phase of exploration, our first drilling program. The aim is to use this drilling program to provide an initial JORC compliant Mineral Resource Estimate."

The next phase of exploration at Carachi will involve exploration drilling. The Company has submitted the environmental impact assessment (EIA) necessary to obtain the permits.

The mining authority is in the process of evaluating the EIA for a program consisting of 3,550 metres of exploration core holes to sample and characterise the target aquifer (four holes of 400 metres in south part, one of 500 metres in central portion of the Project and one of up to 950 metres in the north) and one 500-metre pumpable well in the southwest portion of the claim area. The drilling program will commence as soon as the permits are granted.

This announcement has been approved for release by the Board.



ASX ANNOUNCEMENT

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Competent Person's Statement – Carachi Lithium Brine Project

The information contained in this ASX release relating to Exploration Results has been compiled by Mr Michael Rosko, PG. Mr Rosko is a hydrogeologist and a Registered Member of the Society for Mining, Metallurgy, and Exploration (SME). Mr Rosko has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Rosko is an employee of Montgomery & Associates Ltd, and is an independent consultant to Xantippe Resources Limited. Mr Rosko consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from the VES exploration at the Carachi Project.

About the Carachi Lithium Project – Catamarca, Argentina

The Carachi Lithium Project is located in Catamarca Province, Argentina (the "Project") which is inside the world-renowned Lithium triangle in South America that covers areas of Argentina, Chile and Bolivia.

The Project, which comprises 21,900 hectares, is situated 40 kilometres south of the town of Antofagasta de la Sierra, Catamarca, at approximately 3,000 metres elevation. This region of Argentina includes the Hombre Muerto Salar where a US\$840 million lithium mine is under development by the Korean multinational corporation POSCO. Livent Corporation has been producing lithium in the southwest part of Hombre Muerto for over 25 years. Also, Allkem Resources has a large development stage lithium Project in the south part of Hombre Muerto salar.

At the district level, the Carachi Project is adjacent to Lake Resources' Kachi lithium project that is well advanced in its development stage.



ASX ANNOUNCEMENT

JORC Code, 2012 Edition – Table 1 Report

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	No drilling has occurred at this early stage of exploration. Samples have yet to be taken by Xantippe.
Drilling techniques	No drilling has occurred at this early stage of exploration.
Drill sample recovery	No drilling has occurred at this early stage of exploration.
Logging	No logging has occurred at this early stage of exploration.
Sub-sampling techniques and sample preparation	Samples have yet to be taken by Xantippe.
Quality of assay data and laboratory tests	Samples have yet to be taken by Xantippe.
Verification of sampling and assaying	Samples have yet to be taken by Xantippe.
Location of datapoints	The grid system used for the VES geophysical survey was Gauss Krüger.
Data spacing and distribution	VES survey points were within 2 km of each other.
Orientation of data in relation to geological structure	The survey points were based on a grid, unrelated to any geologic structure.
Sample security	Samples have yet to be taken by Xantippe.
Audits or reviews	No audits or reviews have been done to date.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	A title opinion has not been prepared for the concessions under control by Xantippe.
Exploration done by other parties	Limited exploration has been done previously on the property by the previous owner but cannot be verified. No resource was estimated.
Geology	The Xantippe concessions are located in a high altitude, hydraulically-closed alluvial basin. The mineralisation consists of a brine aquifer believed to be enriched in lithium and possibly other economic elements.
Drill hole information	No drilling has occurred at this early stage of exploration.
Data aggregation methods	Not applicable.
Relationship between mineralisation widths and	Not applicable.



ASX ANNOUNCEMENT

<i>intercept lengths</i>	
Diagrams	No drilling has occurred at this early stage of exploration; maps of boreholes do not exist.
Balanced reporting	Not applicable.
Other substantive exploration data	<p>In November 2022, a vertical electrical sounding (VES) geophysical survey was completed by the Salta-based geophysical contractor Conhidro. This geoelectric prospecting study was executed in the mining properties: Rita, La Sofía, Rita I, Luz María, La Fortuna, La Fortuna I and Justina, located in the so-called "Campo de Carachi", near the Carachipampa or Carachi Pampa volcano, Department of Antofagasta de la Sierra, Province of Catamarca. The objective of the study was to identify potential brine that was believed to occur at depth.</p> <p>Thirty-three vertical electrical soundings were carried out in order to determine the freshwater/brine interface, the thickness of permeable sediments, and depth to hydrogeological basement. The distances between the current electrodes were variable, up to maximum distances of about 2,000 metres. Interpretation of the results suggested that the following five major units existed:</p> <ul style="list-style-type: none"> - Unit 1 or Upper Resistive Zone: dry Quaternary sediments. - Unit 2 or Semi-resistive Zone: Quaternary sediments saturated with fresh or brackish water. - Unit 3 or Lower Resistive Zone: volcanic and/or metamorphic rocks. - Unit 4 or Lower Very Conductive Zone: brine-saturated sandy facies (?) and/or brine-saturated Tertiary or Permian sediments (?) Lower Conductive Zone: Quaternary sediments saturated with salt to brackish water or more clayey facies. - Unit 5 or Lower Conductive Zone: sandy facies saturated with brine (?) and/or Tertiary or Permian saturated sediments (?).
Further work	Exploration drilling is being planned as a next phase of exploration, and drilling permit requests have been submitted.



ASX ANNOUNCEMENT

Disclaimer

All dollar amounts are in reference to Australian dollars unless otherwise indicated.

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This document contains forward-looking statements including certain forecast financial information. The words "anticipate", "believe", "expect", "project", "forecast", "estimate", "outlook", "upside", "likely", "intend", "should", "could", "may", "target", "plan", and other similar expressions are intended to identify forward-looking statements.

The forward-looking statements are made only as at the date of this announcement and involve known and unknown risks, uncertainties, assumptions and other factors, many of which are beyond the control of the Company and its directors. Such statements are not guarantees of future performance and actual results may differ materially from anticipated result, performance or achievements expressed or implied by the forward-looking statements.

Other than as required by law, although they believe there is a reasonable basis for the forward-looking statements, neither the Company nor any other person (including any director, officer, or employee of the Company or any related body corporate) gives any representation, assurance or guarantee (express or implied) as to the accuracy or completeness of each forward-looking statement or that the occurrence of any event, result or performance.