

22 April 2022

## **Xantippe confirms development path in Lithium Triangle through the exercise of option to acquire Rita and Rita I**

### **HIGHLIGHTS**

- **Option to acquire Rita and Rita I tenements at the Carachi Pampa Lithium Project exercised**
- **Rita and Rita I cover over 6,000ha on Carachi Pampa salt flat directly north east of Lake Resources (ASX:LKE)**
- **Drilling by Lake Resources (ASX: LKE) on the area surrounding the Rita and Rita I properties, reports lithium rich brine, just 0.5 kilometres away from the areas under consideration**
- **Limited exploration work has been carried out at the properties; no drilling to date**
- **Exploration activities expected to commence in Q3 2022**

**Xantippe Resources Limited (ASX: XTC) (Xantippe, XTC, or the Company)** is pleased to advise it has exercised its option to acquire the Rita and Rita I tenements, part of the Company's broader Carachi Pampa Lithium Project (**Carachi**) situated in the Lithium Triangle of Argentina.

**Xantippe Resources Managing Director, Richard Henning, commented:**

*"In exercising the option to acquire both Rita and Rita I, Xantippe is one step closer to realising our vision to become a lithium brine producer in the heart of the prolific Lithium Triangle of South America. We are delighted to have acquired such high quality projects, located next to Tier One clean lithium developers. Following the finalisation of the remaining tenement options, we will commence exploration activities. We look forward to keeping shareholders updated on our progress."*

### **Rita and Rita 1 - Carachi Pampa Lithium Project**

The target is a paleo salt flat and lithium brine at depths of 180-200m and 140-230 mgLi/l, covering 9,100 hectare and is suitable for Direct Lithium Exchange processing (DLE).

The Carachi Pampa Lithium Project comprises the **Rita** and **Rita I** properties, which cover over 6,000ha on Carachi Pampa salt flat north of Lake Resources' (ASX:LKE) project in Catamarca Province, Argentina. Both are located within the Carachi basin and the main outcropping units are alluvial fan and recent thin lava flows. The presence of a paleo salar at depth is backed up by the available information in the area.

The lithium brine target in Carachi Pampa is a paleo salar found at depth and which continues under a more recent alluvial fan cover to the northeast of licences currently owned by Lake Resources. Many tenements in this area are in the salt lake and are prone to flooding whereas the XTC target areas are covered by alluvial fans and easy to access.

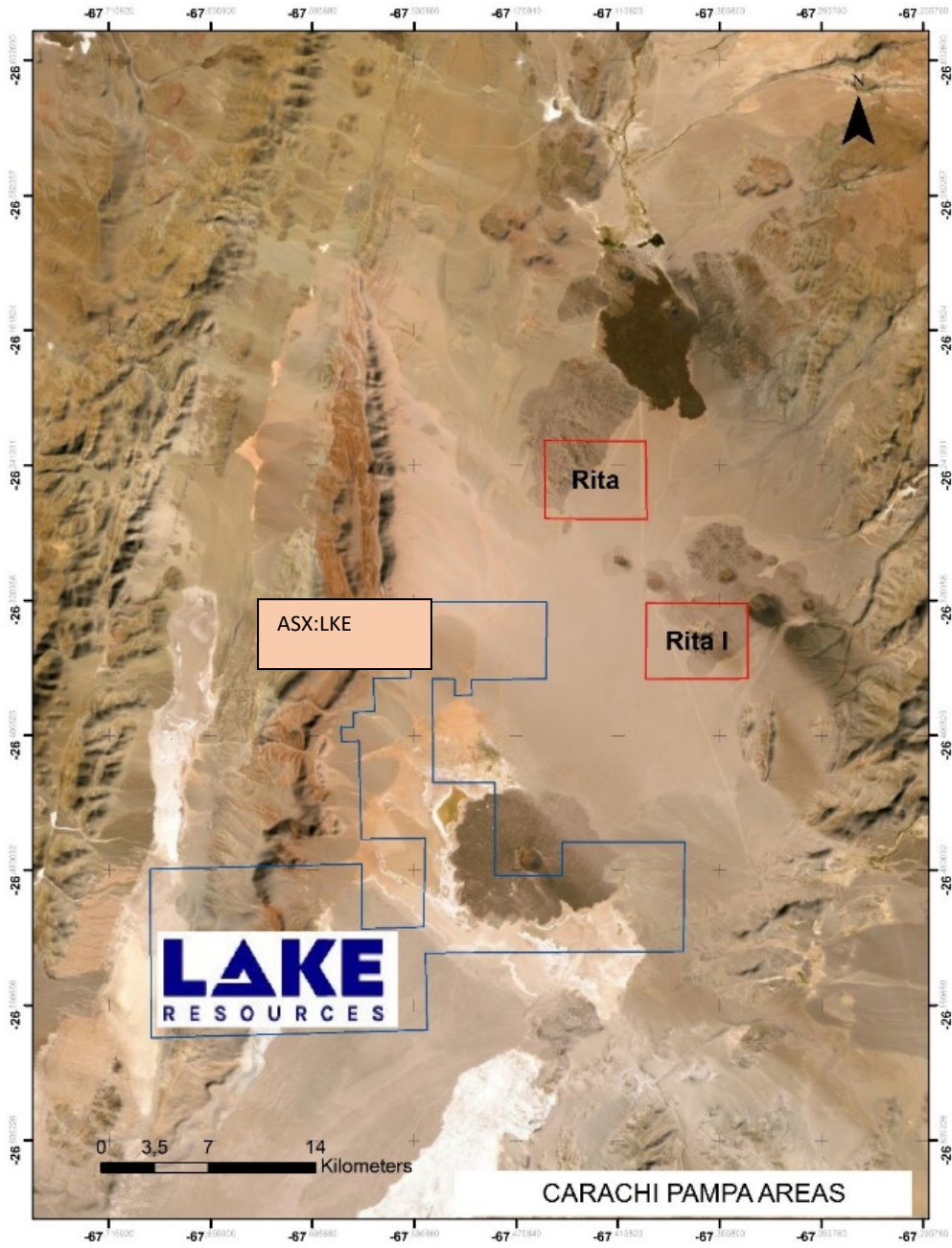


Figure 1: Carachi Pampa Licences

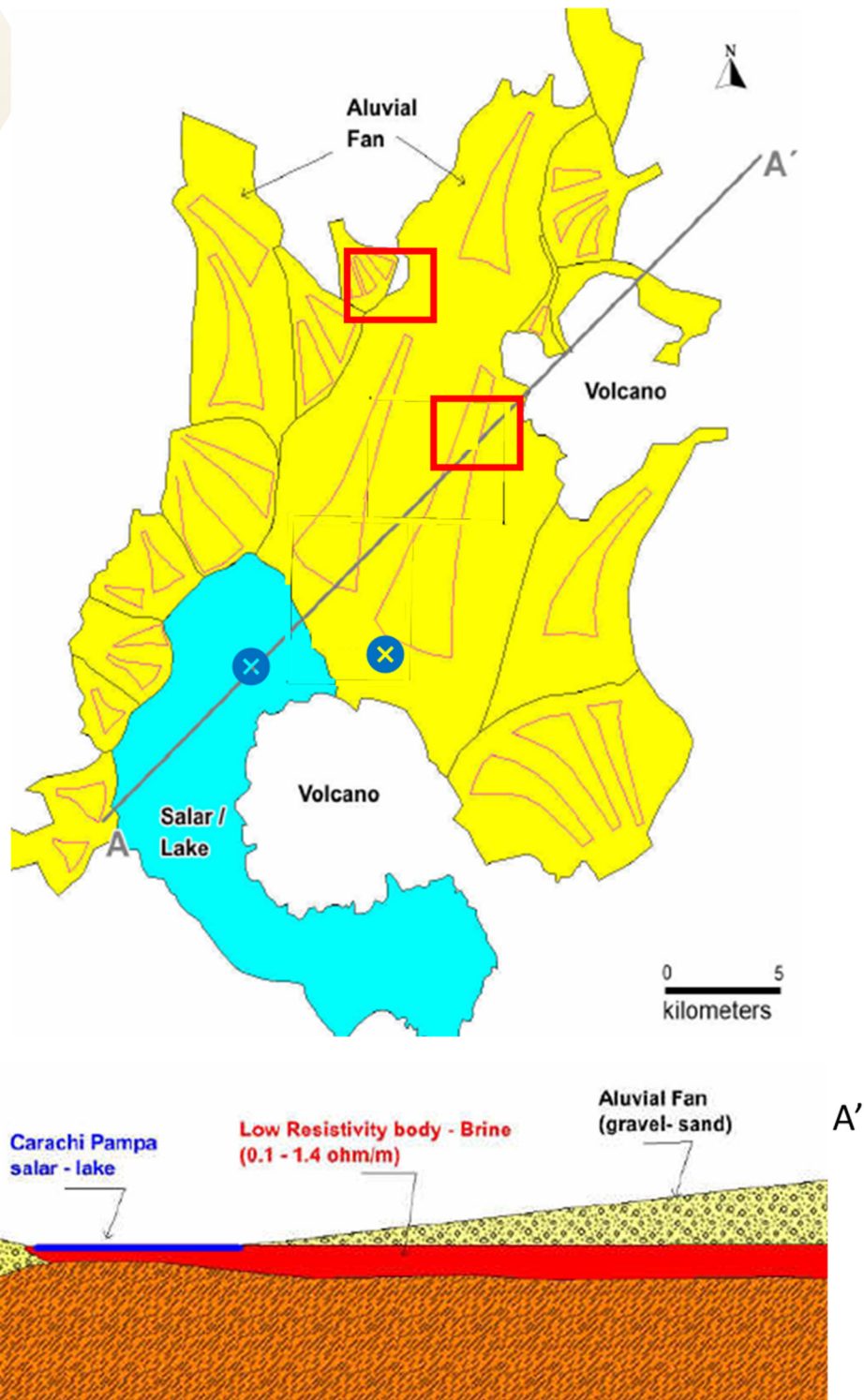
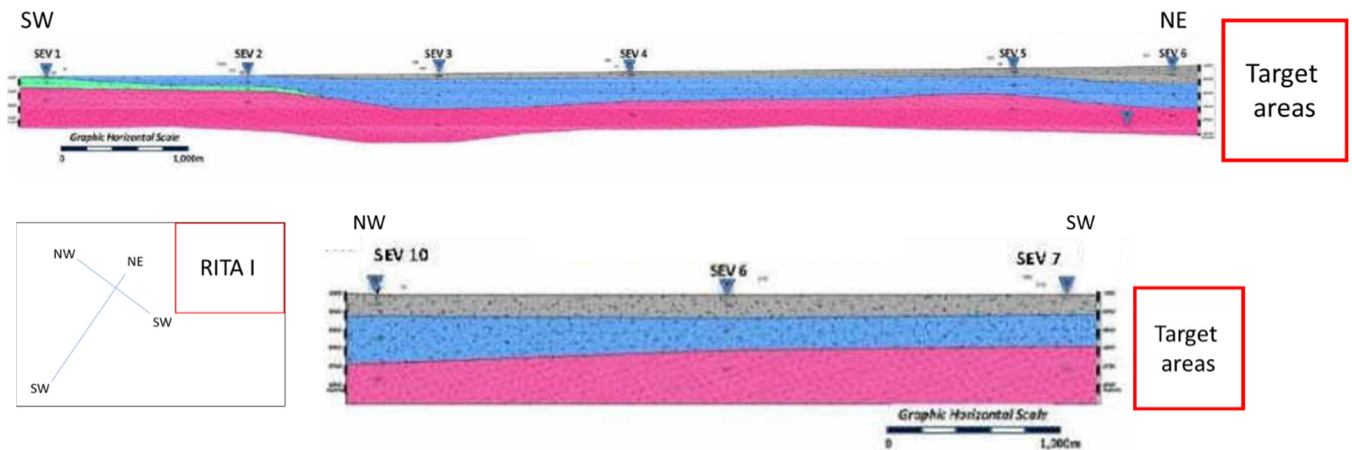


Figure 2: Geomorphological units showing alluvial cover and continuation of brine saturated level (subject areas in red). Wells confirming Li bearing brine in blue.

Drilling on the area surrounding the Rita and Rita I properties, reports lithium rich brine at depths of 60 up to 300m and 187 to 252Li mg/l (ASX:LKE 30 April 2020) and 291-334m and 234 avg Li mg/l (ASX:LKE 27 November 2018) some 12Km and 0.5 Km away from the areas under consideration. Vertical Electrical Sounding (VES) profiles on adjacent properties suggest the brine saturated levels continue to the west into our target zone starting at 70m depth in the south going deeper to the north (refer ASX release 25 February 2022).



**Figure 3: VES profile southwest of Rita I area showing conductive zone (pink) that continues into target areas.**

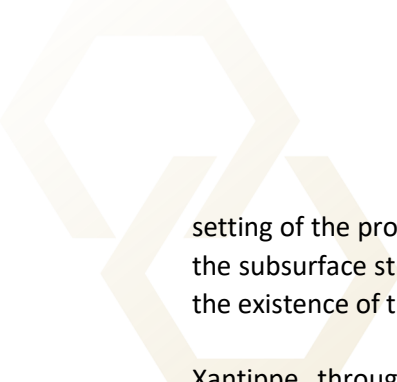
The acquisition consists of two rectangular mining properties known as Rita (3,000 hectares) and Rita I (3,000 hectares), which are registered to Fabiana Rita Ramos. The properties are duly registered at the Juzgado Electoral y de Minas of Catamarca. Both properties are free and clear from any liens, charges, or encumbrances. XTC has signed an agreement which gives XTC the right to enter Exploration and Purchase Agreements – the subject of satisfactory completion of due diligence and making a series of payments set forth in the offer agreement (refer ASX release 29 November 2021).

Historical exploration for lithium was conducted in the Carachi Pampa basin by Marifil Mines Ltd (2009), Eramet (2012), Lithium South (former NGR Metals Inc., 2016-19) and later Lake Resources (2016 onwards). The conceptual model of a paleo-salar has been confirmed at depth by wells drilled up to 400m. Lake Resources has completed a PFS for a DLE project (25,500 tpa LCE) based on over 3,000m of drilling, 15 holes and 1 million tonnes at 290mg/L Lithium (Indicated) and 3.4M tonnes @210mg/L lithium (Inferred) (ASX: LKE 27 November 2018).

The properties under considerations have not been subject of exhaustive exploration activities, only a small portion of Rita I was covered by Eramet survey. No drilling has been performed in the properties. An affidavit for mining prospecting at the Rita & Rita I properties has been submitted. This statement allows surface tasks such as geological mapping, rock chip sampling, auger sampling and surface geophysical work. This statement is valid until 13 April 2022 and an extension has been submitted.

No environmental impact reports (IIA) for drilling have yet been submitted to the Mining Environmental Authority of the Province of Catamarca for either Rita or Rita I. The IIA is required for exploration of lithium brine (drilling) and will be submitted to obtain the “Declaración de Impacto Ambiental” (“DIA”). The DIA constitutes the permit for drilling, pilot plant, etc.

Geophysical surveys and historical information suggest a northeast structure affecting the structural



setting of the properties hence a comprehensive geophysical survey will be carried out to determine the subsurface structure and define drilling targets. This survey will cover the properties to evaluate the existence of the geo electric units already identified in the basin and the general structure.

Xantippe, through its subsidiary Arlupo SA will establish the company in Catamarca, present the company and project to the government authorities and communities, evaluate the purchase of available geophysics, carry out a geophysical survey on the properties and evaluate to start the IIA studies to drill regarding the geophysical survey results.

### **About the Carachi Pampa Lithium Project**

The lithium brine target in Carachi Pampa is a paleo salar found at depth and which continues under recent alluvial fan cover to the northeast and west of tenements currently owned by Lake Resources whose concessions are over the centre and southern extensions of the Carachi pampa salt lake. The two concessions offered by Arlupo are located to the north east of the Lake Resources concessions.

The LKE resources of 4.4 million tons LCE were defined after studying an area of 172 Km<sup>2</sup> with 14 wells and includes a pyroclastic complex (ASX: LKE 27 November 2018). The Lake Resources PFS is on its Kachi project.

The resource estimate at Kachi is reported as 1M tonnes at 290mg/L Lithium (Indicated) and 3.4M tonnes @210mg/L lithium (Inferred) (ASX: LKE 27 November 2018).

Kachi lithium brine is hosted in a 700-800m deep depression filled with brine salt water, salts, capped by salt crust and small lake.

The Carachi pampa salt lake is rhomboidal in shape with a NW-SE axis and covers a known surface area of about 135km<sup>2</sup>. The salt lake area is bounded to the east and west by NNE-SSW trending mountain range. The target area is over 95Km<sup>2</sup> offering potential to host similar resources to surrounding reserves; expanding the footprint in the salt flat will grow to a bigger project. The Xantippe local partners are already starting negotiations to study more areas in the salt flat.

It is anticipated that Carachi Pampa may possibly host a feasible project and by working in collaboration with Arecco Ingenieria, a significant shareholder in Xantippe, the Company is confident to secure further deal flow from the Argentinian portion of the South American Lithium Triangle.

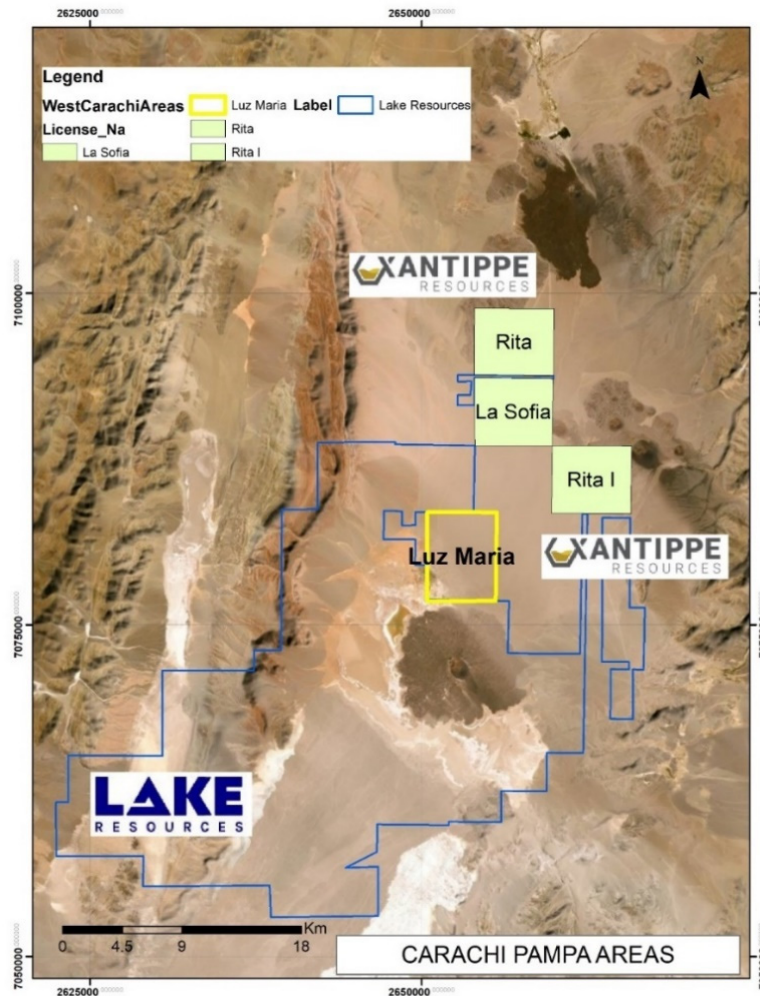
The target area is a proven paleo salt flat with lithium brine potential. XTC currently has option agreements covering 12,400 Ha suitable for Direct Lithium Exchange processing (DLE) (**Tenements**) and is part of an XTC strategy to acquire 17,000 Ha within the Catamarca region.

The **Rita and Rita I** properties cover over 6,000ha on the Carachi Pampa salt flat north east of Lake Resources' project. Both are located within the Carachi basin and the main outcropping units are alluvial fan and recent thin lava flows.

The **La Sofia** property lies some 200 metres south of Rita and will add another 3,000ha to the Xantippe land package. La Sofia geological structure is expected to be the continuation of Rita. This represents a unique opportunity to extend Xantippe's footprint in the Salt Flat and improve the feasibility of a Direct Lithium Exchange (DLE) project.

The **Luz Maria** property covers over 3,383Ha on Carachi Pampa salt flats adjacent to Lake Resources' project (ASX:LKE) also in Catamarca Province. It lies in the centre of the Carachi basin and the main

outcropping units are alluvial fans and a small portion of a salt lake. The presence of superficial brine and a paleo salar in depth is backed up by the available information in the area. It has good infrastructure and mining rights with current environmental permits.



**Figure 4: Carachi Pampa Lithium Project location Map**

#### **Acquisition Terms of Rita & Rita I Tenements**

Pursuant to the Option Agreement previously announced on 29 November 2021, Xantippe exercised its option to acquire all the issued capital in Carolina Lithium on 7 March 2022. Carolina Lithium is entitled to become the beneficial owner of Arlupo SA, a company registered in Argentina that holds the rights to the acquisition of the Tenements under a letter of offer with the respective owners.

On 29 November 2021 the Company acquired an option agreement (through Carolina Lithium) to acquire the Rita and Rita I properties from Mrs Fabiana Ramos for the following consideration:

1. Non-refundable option fee of US\$40,000 to Carolina Lithium on execution of the Option Agreement to enable the Company (through Arlupo SA) to undertake due diligence of the Tenements;

2. Payment of US\$100,000 to Carolina Lithium prior to 30 May 2022 upon the Company exercising the Option signing of definitive agreements (**Exercise Payment**);
3. US\$1,000,000 to the Owner upon signing of a definitive acquisition agreement with Mr Fornaciari which must occur within 12 months of the Exercise Payment; and
4. US\$1,040,000 to the Owner within 18 months of the Exercise Payment.

**Table 1: Tenement Details**

Mine	Administrative File
RITA	Sentencia interlocutoria N*144 del 8 de mayo de 2018 para Rita
RITA I	Sentencia interlocutoria N*116 del 26 de mayo 2018 para Rita I

## About Xantippe Resources Limited

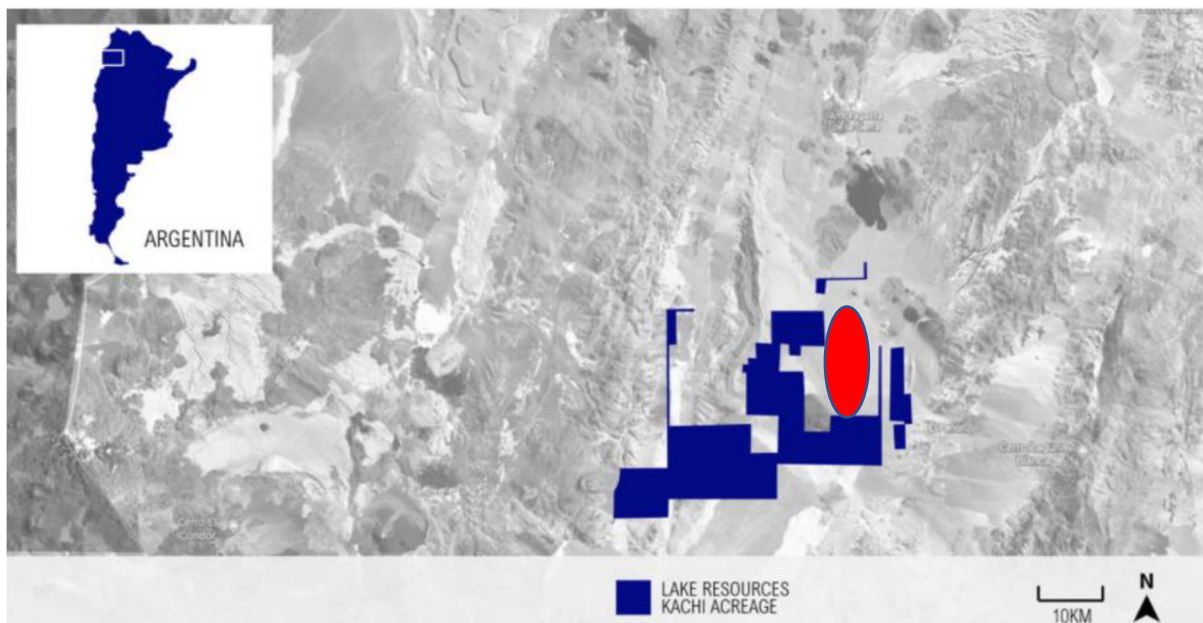
### Background

Xantippe has a history of resource exploration in South Korea where it was active particularly in the battery energy sector (mainly graphite and vanadium commodities) and developed strong links within Korea's 'downstream' companies.

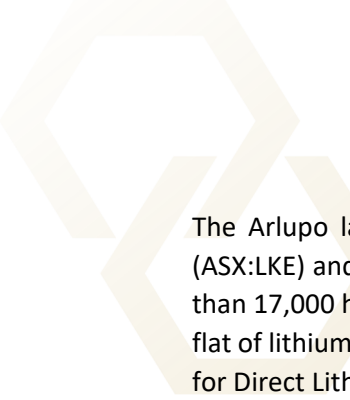
Recently, Xantippe acquired 100% of a West Australian company, Carolina Lithium, which holds a number of options on lithium tenements in Argentina, through its subsidiary Arlupo SA.

### Land Position

At present XTC has options over 4 tenements totalling 12,500Ha (125 km<sup>2</sup>) in the Catamarca region in Northern Argentina in the heart of the 'Lithium Triangle' of Argentina, Chile and Bolivia.



**Figure 5: Carachi Pampa is a basin with lithium in brine located in the northwest of the province of Catamarca (Latitude: -67.49°, -26.42).**



The Arlupo land position, shown in red above (approximate), lies to the East of Lake Resources (ASX:LKE) and offers potential for further acquisition by XTC. The northern sector of the basin -more than 17,000 hectares -has reported geophysical works by seismic refraction. The target is a paleo salt flat of lithium brine at depths of 180-200m and 140-230 mgLi/l, covering 9,100 hectare and is suitable for Direct Lithium Exchange processing (DLE).

### **Technology Collaboration**

The historical method of processing lithium brine is to use evaporation ponds – this requires a large land ‘footprint’ and can take up to 18 months to harvest the lithium. Recently, a process called Direct Lithium Extraction (DLE) has shown that lithium can be processed more quickly and in an environmentally responsible way.

There are approximately 9 DLE methods being trialled throughout South America, none of which are yet in successful commercial production. Through previous managerial experience in South Korea, Xantippe has an opportunity to enter into a collaborative agreement with a technology team in Korea and the Company believes that the technology will present itself to be commercially viable and cost-effective within 12 months.

The initial phase will be a R&D partnership, followed by a MoU – to be determined by drilling programme in Argentina and sample availability, and entering into a formal collaboration agreement by Q3 2022.

### **Local Managers / Partners**

On our existing leases, due diligence is underway. Our partners – Field-Intelligence ([www.field-intelligence.com](http://www.field-intelligence.com)) are led by geologist Federico Gonzales.

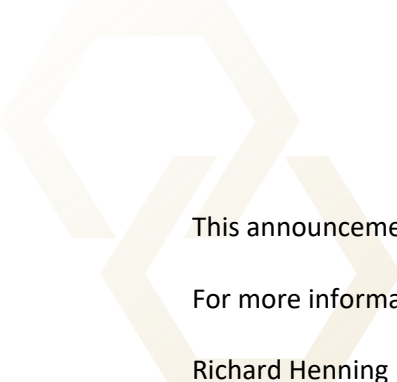
Through the acquisition of Carolina Lithium, Xantippe issued a significant proportion of its share capital to the Arecco Ingenieria Group – an established industrial company based in Buenos Aires and with a strong network throughout Latin America. Arecco is already proving its value to XTC by assisting with the acquisition of land in Catamarca, as well as introducing the Company at the highest levels of Government in Bolivia.

### **Board and Management**

Xantippe has a strong and experienced Board covering legal, geology and technology. The management team has global experience, particularly in gold and lithium and impressive credentials with regard to Investor Relations, Public Relations and Communication at both local and senior government levels.

Recent appointments to the Board include Guzman Fernandez, MD of Field-Intelligence, and Carolina Arecco, Commercial Director of the Arecco Group.





This announcement has been approved for release by the Board of Xantippe Resources.

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