





27 April 2022

## **Xantippe Continues with Key Development Milestones**

### **Exercise of option to Acquire La Sofia Lithium Brine Tenement in Argentina**

#### **Highlights:**

-  **Option to acquire La Sofia Tenement, a 3<sup>rd</sup> highly prospective lithium tenement in Argentina – in the heart of the “Lithium Triangle” exercised.**
-  **“La Sofia” has a total area of 3,000 Ha in close proximity to Lake Resources Kachi project.**
-  **Potential for development of a district scale Lithium Brine project with further ground acquisitions being considered.**
-  **Due Diligence commenced on 4<sup>th</sup> tenement, Luz Maria.**

**Xantippe Resources Limited (ASX: XTC) (Xantippe, XTC, or the Company)** is pleased to advise it has, pursuant to its rights to purchase the shares in Carolina Lithium Pty Ltd following the recent announcement to acquire the Rita and Rita I tenements (refer ASX release dated 22 April 2022) exercised its option to acquire a 3<sup>rd</sup> tenement – La Sofia. All three tenements are prospective for lithium brine deposits in Catamarca, Argentina and are known as the Carachi Pampa Lithium Project.

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

*“In exercising the option to acquire both Rita and Rita I, and now La Sofia, Xantippe is one step closer to realising our strategy 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. We will commence exploration activities as soon as possible. We look forward to keeping shareholders updated on our progress.*

*The acquisition of La Sofia adds to our strategy of extending our footprint in Catamarca and developing a Lithium product sourced from brines in South America that will offer a clean product using direct lithium extraction (DLE) which requires a smaller environmental footprint and uses less water.”*

### Carachi Pampa Lithium Project

The target is a paleo salt flat with proven lithium brine at depths of 180-200m and 140-230 mgLi/l, covering 12,500 hectare and is suitable for Direct Lithium Exchange processing (DLE).

### Tenement Details

La Sofia has title on one mining property owned by Arrayanes SA (**Owner**) as follows:

| Mine     | Administrative File |
|----------|---------------------|
| La Sofia | 242-A-2011          |

### Proposed Exploration

To be determined after completion of Phase 1 due diligence.

### Acquisition Terms of La Sofia Tenement

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 La Sofia tenement under a letter of offer with the owner (**Offer Agreement**).

Under the Offer Agreement, the following consideration will be payable by the Company to acquire the La Sofia tenement:

1. Payment of a non-refundable option fee of US\$40,000 plus legal expenses of US\$15,000 to the La Sofia Owner to enable the Company (via Carolina Lithium and Arlupo) to conduct due diligence on La Sofia.
2. US\$460,000 payable to the La Sofia Owner upon exercise of the Option and signing a definitive acquisition agreement within 3 months of the option being exercised.
3. US\$1,500,000 payable to the La Sofia Owner in two separate payments detailed below:
  - a. US\$600,000 6 months after signing the definitive agreement; and
  - b. US\$900,000 12 months after signing the definitive agreement.

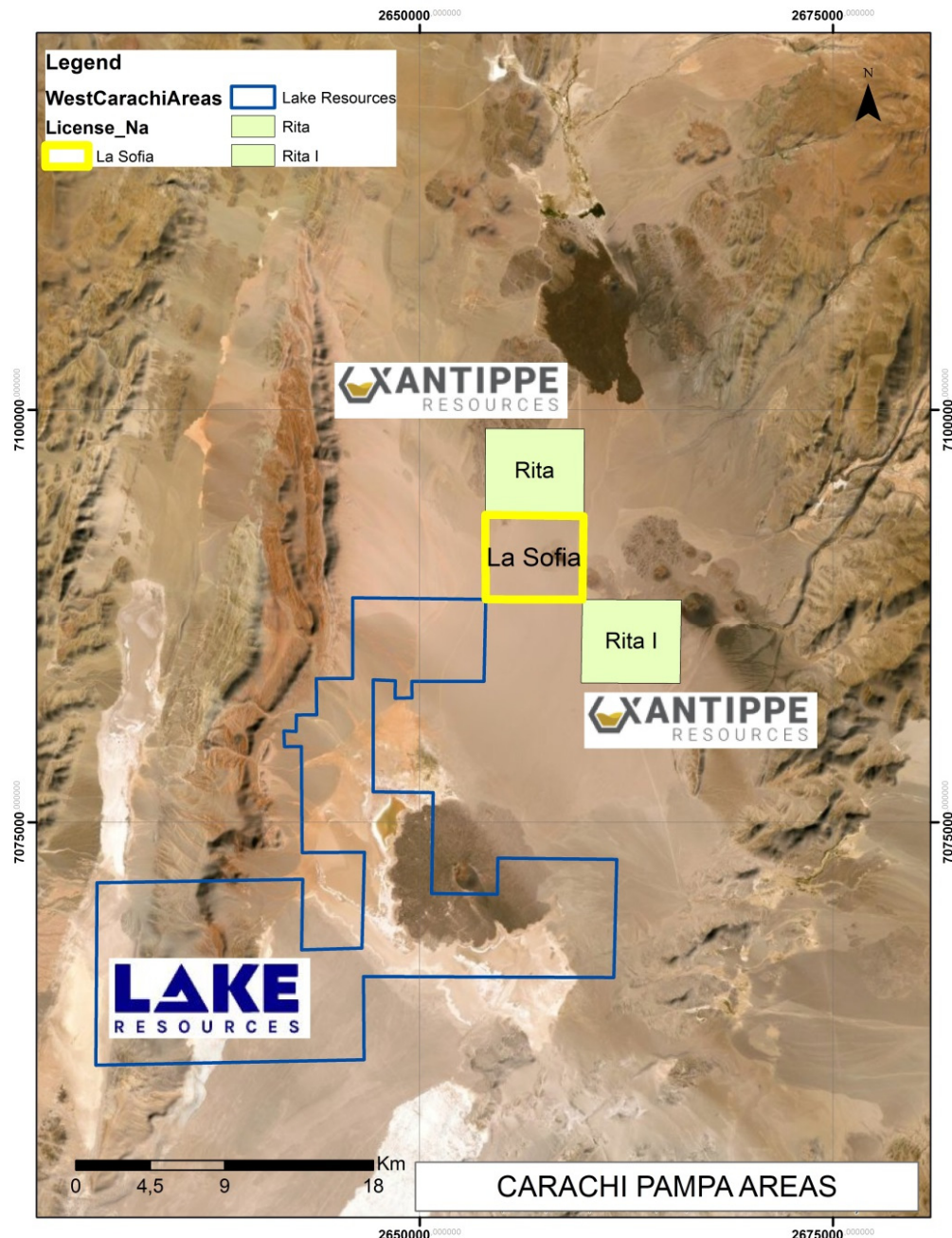
### La Sofia

Xantippe Resources recently announced the acquisition of two properties (Rita and Rita I) covering over 6,000ha in Carachi Pampa salt flat north of Lake Resources project (LKE) in Catamarca Province, Argentina. Both lie within the Carachi basin and the main outcropping units are alluvial fan and recent thin lava flows. The presence of a paleo salar in depth is backed up by the available information in the area.

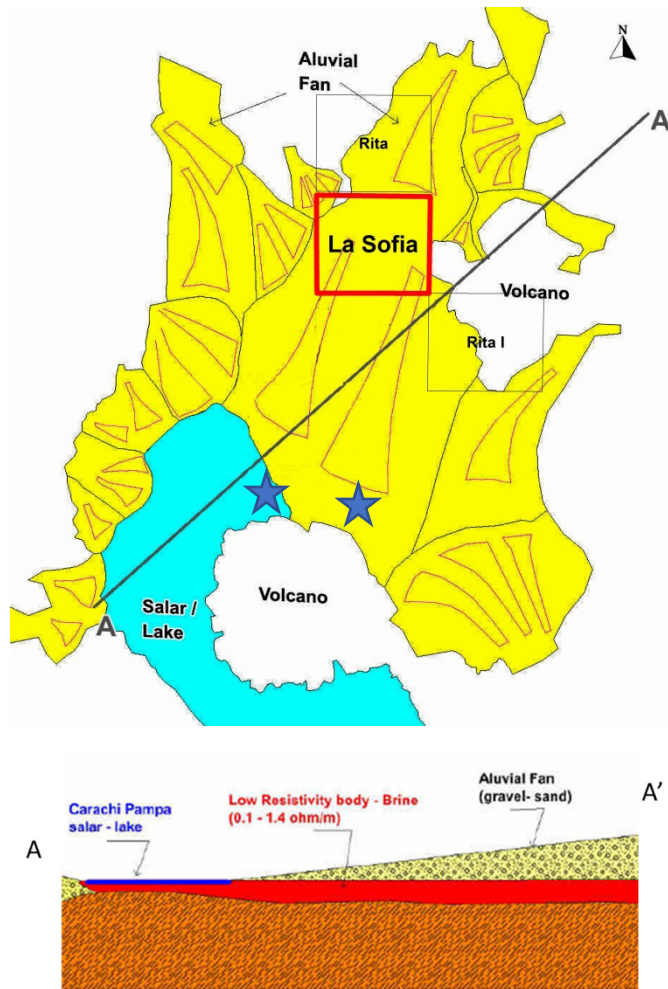
The **La Sofia** property lies some 200 metres south of the Rita tenements and will add another 3,000ha to the Xantippe land package. La Sofia's geological structure is expected to be the continuation of Rita.

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 lithium brine target in Carachi Pampa is a paleo salar found at depth and related to current salt flat layout. This paleo salar continues under a more recent alluvial fan cover to the northeast and west of LKE areas, the advantage of being located on the alluvial fan is that the area is not prone to flooding and access is easier.

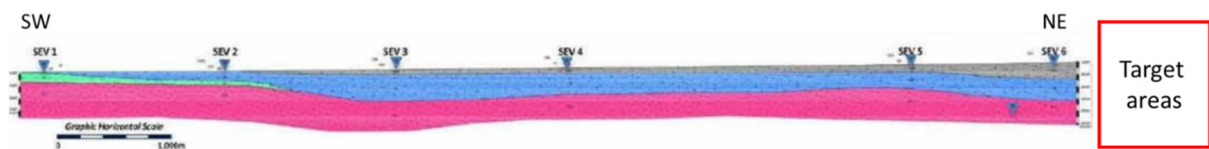


**Figure 1: La Sofia in relation to Rita and Rita 1 showing proximity to LKE tenements.**



**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 reports lithium rich brine at depths of 60 up to 300m and 187 to 252Li mg/l (LKE) and 183-198m and 229 avg Li mg/l some 12Km away from the areas under consideration. VES profiles on adjacent properties suggest the brine saturated levels continue to the northeast and northwest into our target zone starting at 70m depth in the south going deeper to the north.



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

## 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.

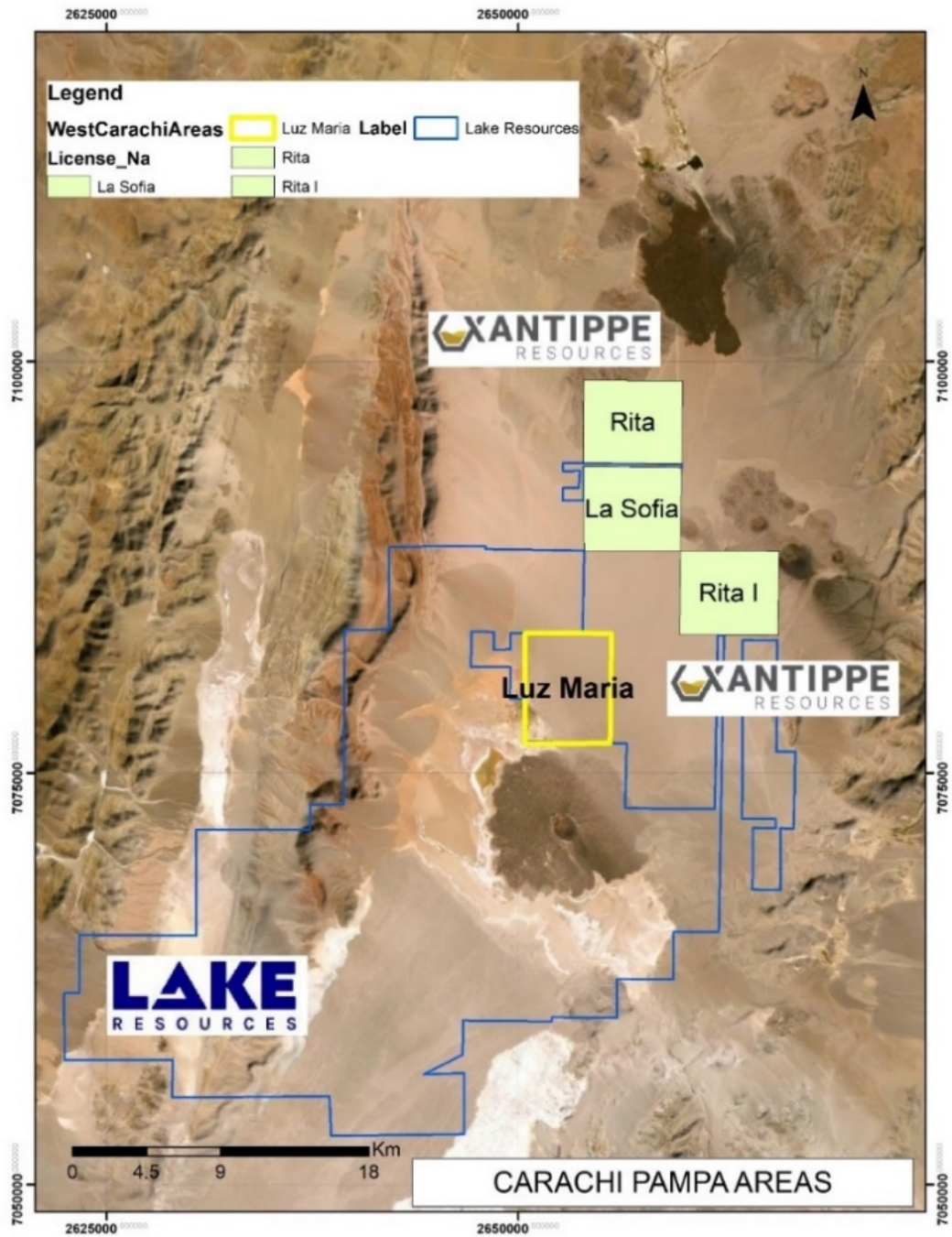
The target area is a proven paleo salt flat with lithium brine potential. XTC currently holds 3 tenements, Rita, Rita1 and La Sofia, totalling 9,000 Ha and has an option agreements on Luz Maria covering a further 3,400 Ha suitable for Direct Lithium Exchange processing (DLE) (**Tenements**) and is part 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*

## About Xantippe Resources Limited

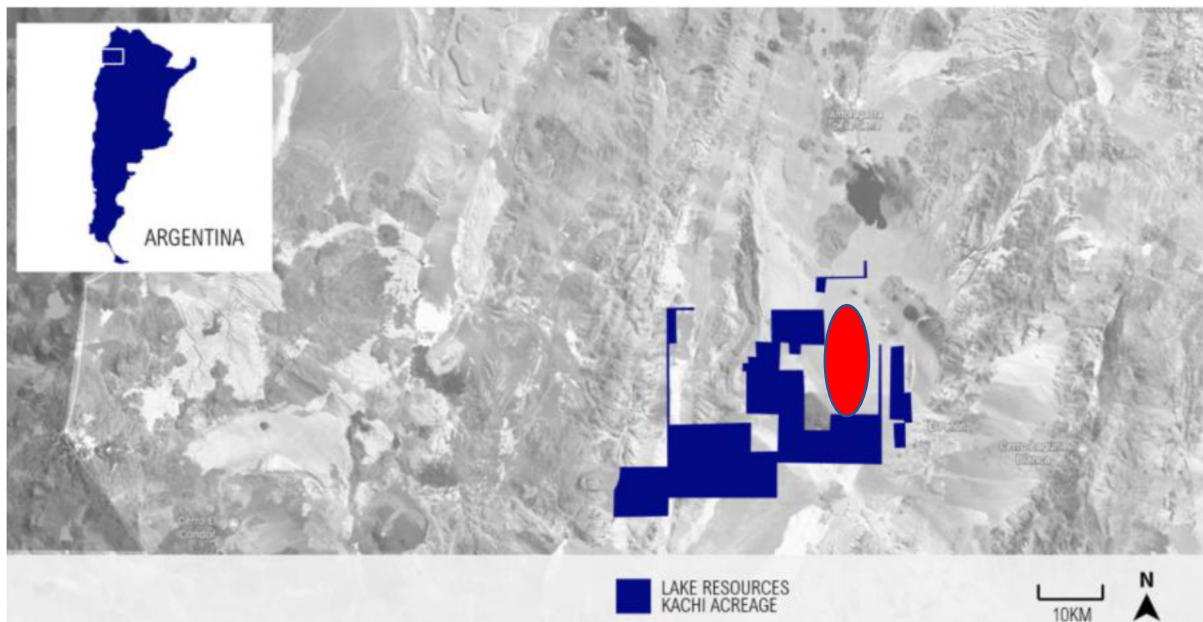
### Background

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 owns or 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.

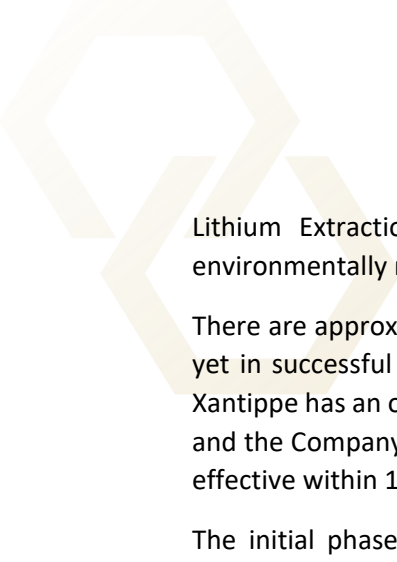


**Figure 5: Carachi Pampa is a basin with lithium in brine located in the northwest of the province of Catamarca (Latitude: -67.49°, -26.42).**

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.

[www.xantippe.com.au](http://www.xantippe.com.au)

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

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