



ASX Announcement | September 18, 2023

## Tama Atacama Lithium – Solid Seismic Data Interpretations

### HIGHLIGHTS

- Data review yields positive results
- Review focuses on Pink, Pozon and Dolores Li in Brine Prospects
- Primary focus on Pink Lithium Prospect, with preliminary drill targets defined
- Seismic results confirm deep basin sediments, approximately 400-600m thick
- Historic groundwater investigations confirm shallow saline aquifers
- Saline groundwater zones correspond with highly elevated Li in surface salt crusts
- Target Li Brine area re-defined with elevated Li and chlorine (Cl) over ~1,000km<sup>2</sup>
- Results awaited for additional surface geochemical samples
- Geophysical exploration being planned
- Drill planning underway

**Pan Asia Metals Managing Director said:** *“We are making great progress at the Tama Atacama Lithium Project. The historical seismic data at the Pink Lithium Prospect provides great insight. When overlayed with historic water drilling data, which identified an area of ~2,000km<sup>2</sup> of elevated chlorine levels - a proxy for brine, and which corresponds with PAM’s surface assays, with ~65% at >100ppm Li, of which about half were >250ppm Li and about one quarter were >650ppm Li and up to 2,200ppm Li, we know we are in a good position. The data review confirms that PAM’s northern Li Brine prospects, being Pink to the south and Pozon, Dolores South and Dolores North to the north, cover an area of ~1,000km or 50% of the Li Brine target area. The Tama Atacama Lithium Project in Chile complements PAM’s initiatives in Southeast Asia, the latter being PAM’s pathway to earlier cash flow and the former PAM’s pathway to future growth, which will set PAM up to secure its position in the global lithium supply chain.”*

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**Battery and critical metals explorer and developer Pan Asia Metals Limited (ASX: PAM)** ('PAM' or 'the Company') is pleased to report an exploration update for the Pink, Pozon, Dolores South and Dolores North Lithium Prospects situated in the Tarapaca region of the Atacama Desert in northern Chile, with a primary focus on the Pink Lithium Prospect. The review and this exploration update relates to historic seismic surveying undertaken in the 1960's and shallow groundwater drilling undertaken in the early 1990s'. The target lithium in brine zone at the Pink Lithium Prospect has been re-defined, with overlapping areas of elevated Li and chlorine (Cl), an indicator of salty water/brine, interpreted at >500km<sup>2</sup>, while the total target lithium in brine zone at the Pink, Pozon and Dolores South and North Lithium Prospects is interpreted at ~1,000km<sup>2</sup>.

## **Project Overview**

### Location and Access

The Pink Lithium Prospect (Pink) is located in the Tarapacá Region, in northern Chile. The project area is part of the larger Pampa del Tamarugal Basin (PT Basin) where PAM holds approximately 1,600km<sup>2</sup> of granted concessions or concession applications. The project area has excellent access to infrastructure with the energy grid and a major highway (Ruta 5) running through it. The nearest large city is Iquique, located about 75km by road to the west, on the coast (see Figure 1). The mining service town of Pozo Almonte is located immediately north of the project area.

### Land Ownership and Tenure

The project area hosts a variety of land uses, in the north and east there is private residential land in and around several villages, small acreage land with 'weekend homesteaders', some military land, some Reserve land and some other public lands. The western and southern parts of the project area host an extensive zone of salt flats associated with Salar's Pintados and Bellavista, which are essentially unpopulated.

### Previous Mining and Exploration

Certain areas of the Salars in this region host historic borate, potassium and salt extraction, with many areas immediately west of the project area the host to historic nitrate mining. There is little record of any of these past mining activities.

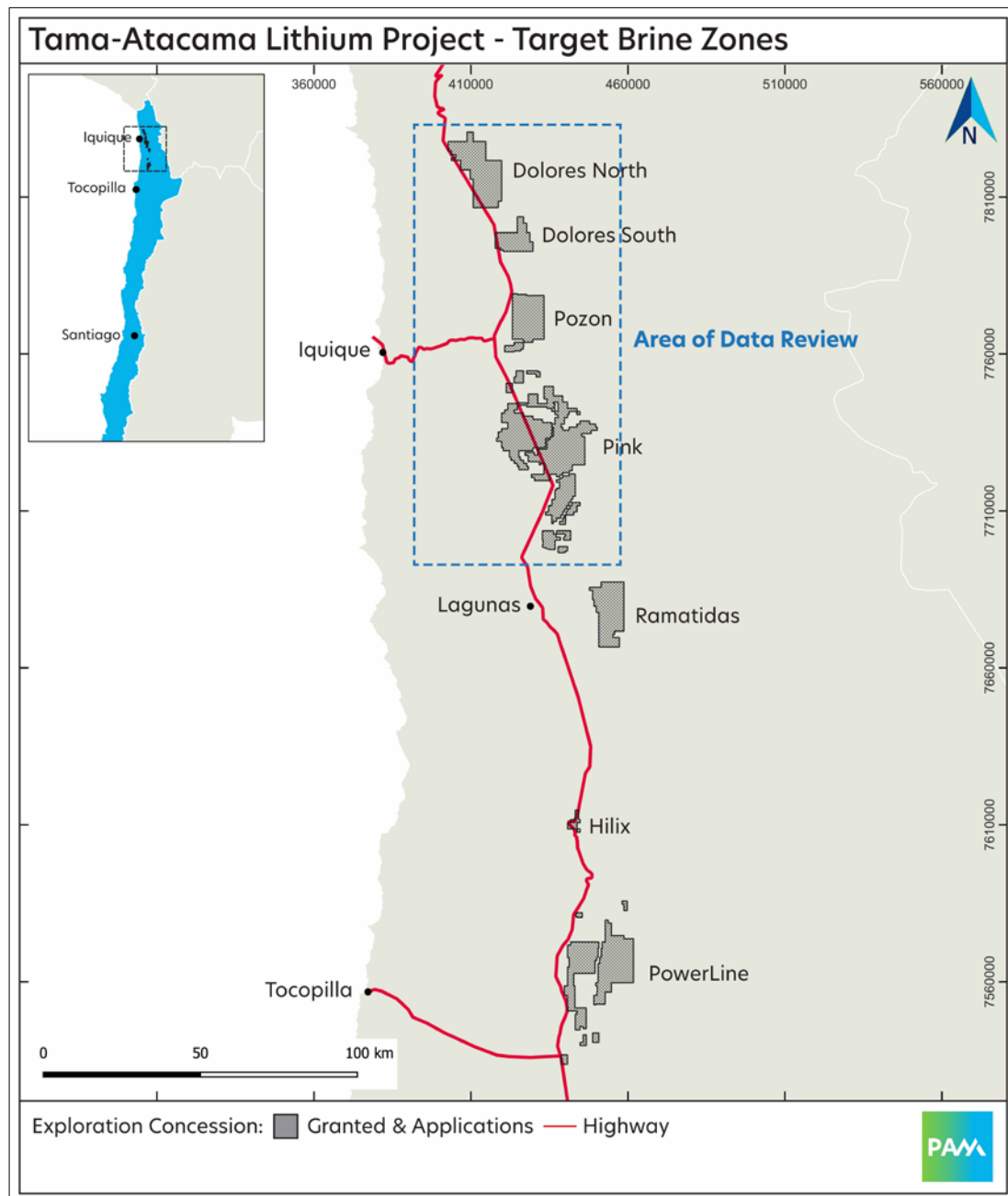


Figure 1. Tama Atacama Lithium Project - Area of Data Review

### Modern Exploration

More recent exploration, since 2016, has been conducted by Rajo in conjunction with ASX-listed Specialty Metals Limited (ASX:SEI). SEI were awarded 20 exploration concessions covering the southwestern parts of Salar de Pintados and northern parts of Salar Bellavista. From 2016-2018 Rajo/SEI collected 128 samples that now occur within or immediately adjacent to PAM's granted concessions and concession



applications. These samples are mostly from the near surface salt/gypsum crust with lesser samples of adjacent clay rich zones. Samples were taken along traverse lines using roads, tracks associated with powerlines, pipelines and the railway line. The samples were nominally collected at 1km spacings however, this does vary. The Rajo/SEI relationship concluded in 2019 and SEI exited Chile, with Rajo continuing to explore.

Rajo have also collected surface samples at numerous other Salar's in this part of Chile. This was done as an orientation/learning exercise. The most instructive of these samples are those collected from the Salar de Atacama where high grade lithium rich brines are being extracted by Sociedad Química y Minera, and Albemarle Corporation. The salt crust sampled from Salar de Atacama have a similar grade distribution as those collected from PAM's Pink Lithium Prospect. Other Salar's sampled contain variable amounts of Li in the surface crusts. Some contain very little however, Salars with known Li rich brines usually have Li in near surface salt crusts.

During PAM's visit in early 2023, a total of 12 samples were collected at or near some of the Rajo/SEI sample locations. PAM's results were in line with the Rajo/SEI results. The combined sampling results for Li are shown in Figure 2 indicating numerous areas of elevated to highly elevated Li, with many values >250ppm Li and ranging up to 2200ppm Li. The area defined by elevated lithium is interpreted to be greater than 500km<sup>2</sup>. Elevated Li values are commonly associated with elevated B, K and Mg.

During PAM's visit in August 2023, a total of 26 samples were collected at the Dolores North Lithium Prospect (see Figure 4) and 4 samples were collected at the southern end of the Pink Lithium Prospect (see Figures 2 and 4). Results are awaited.

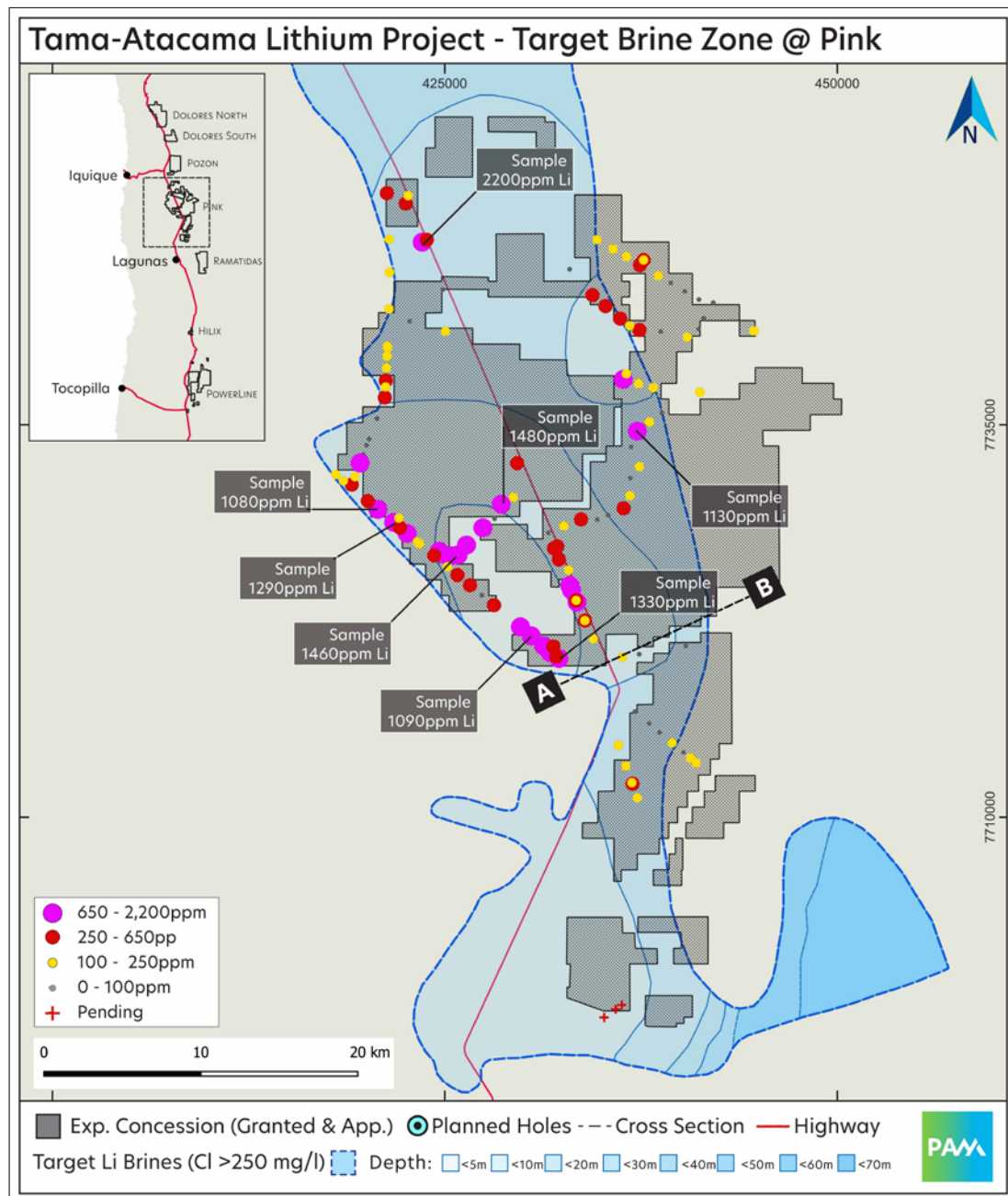


Figure 2. Pink Lithium Prospect - Aquifer with Elevated Chlorine, a proxy for Brine

## Seismic and Groundwater Data Review

In the 1960's-70's Empresa Nacional del Petroleo (ENAP), the National Petroleum Company, conducted oil and gas exploration in the PT Basin<sup>1</sup>. Work included seismic surveying and drilling of exploratory water wells. Significant aquifer host rocks were intersected, and brine was reported in well 'Pintados' 1 from approximately 560m to



575m, which is located several km to the east of the Pink Lithium Prospect and outside of the target brine zones defined by the elevated Li and chlorine (Cl) discussed within.

Seismic lines were conducted at various orientations across the project area. The seismic work enabled depth of the basin sediments to be mapped down to basement. The most instructive seismic line is oriented to indicate a moderate to gentle shallowing of the basin sediments to the west (see A-B in Figure 2). A Seismic cross section modified from ENAP shows that the PT basin sediments are shallowing slightly from east to west and that basin sediments (potential brine host) occur from about 250m-600m below surface (see Figure 3).

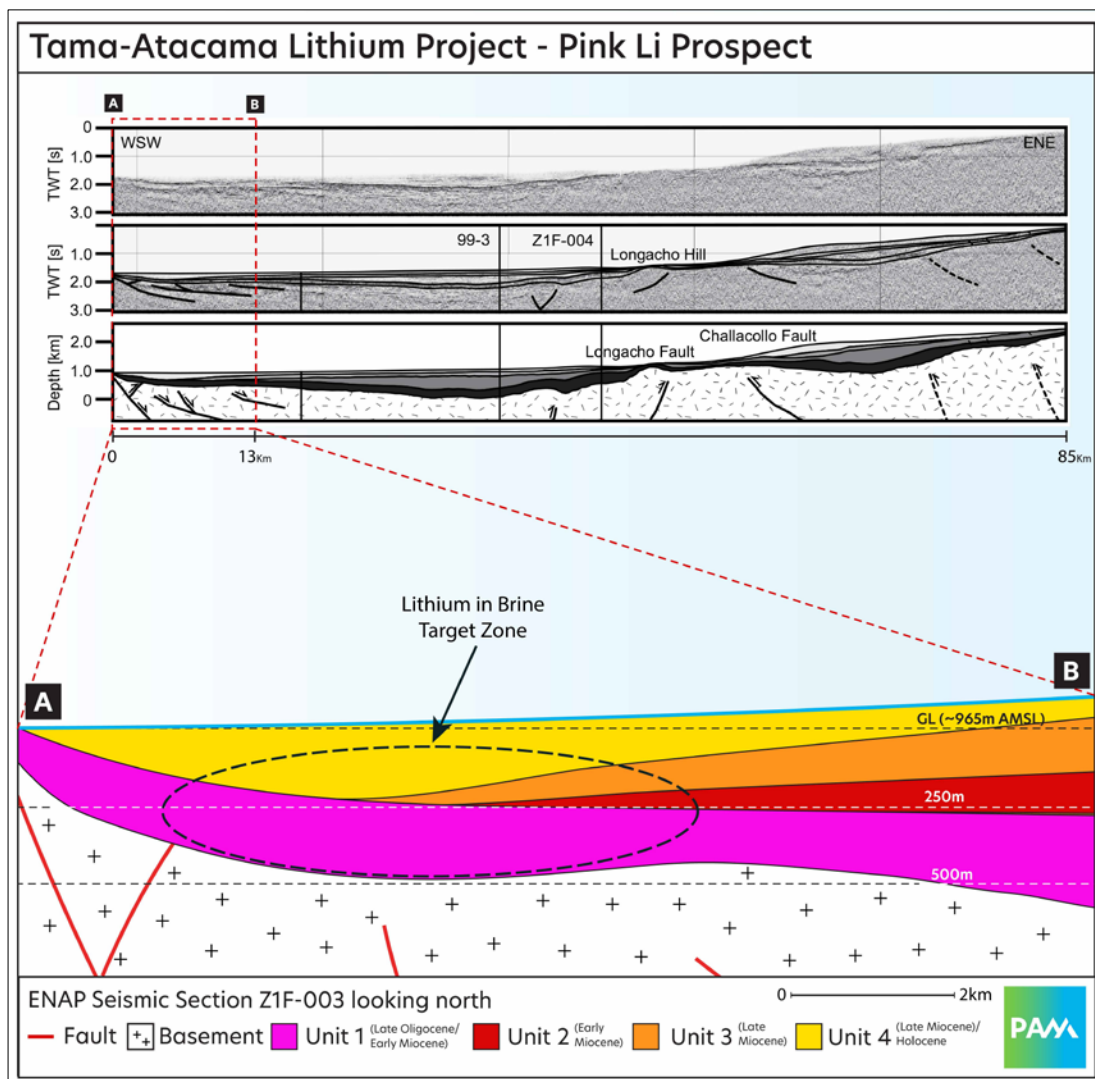


Figure 3. Pink Lithium Prospect – Seismic Data and Interpretations



Groundwater investigations throughout the region are reported by the Japanese International Cooperation Agency (1995)<sup>2</sup>. This work was aimed at identifying potential groundwater sources and characterizing the groundwater intersected. Most of the drilling conducted was to depths less than 100m below surface. Drilling defined an area of about 2,000km<sup>2</sup> of shallow groundwater from 5-70m from surface which intersected elevated chlorine (Cl), a proxy for brine. This zone is located in the central to western margin of Salar's Pintados and Bellavista and extends to the north through PAM's Pozon, Dolores South and Dolores North Lithium Prospects (see Figure 4).

The drilling in the Salar Pintados and Salar Bellavista areas indicate the water table commences at 5-20m below surface. Much of this mapped area corresponds to areas associated with or very proximal to surface salt crust with highly elevated lithium results (see Figure 4).



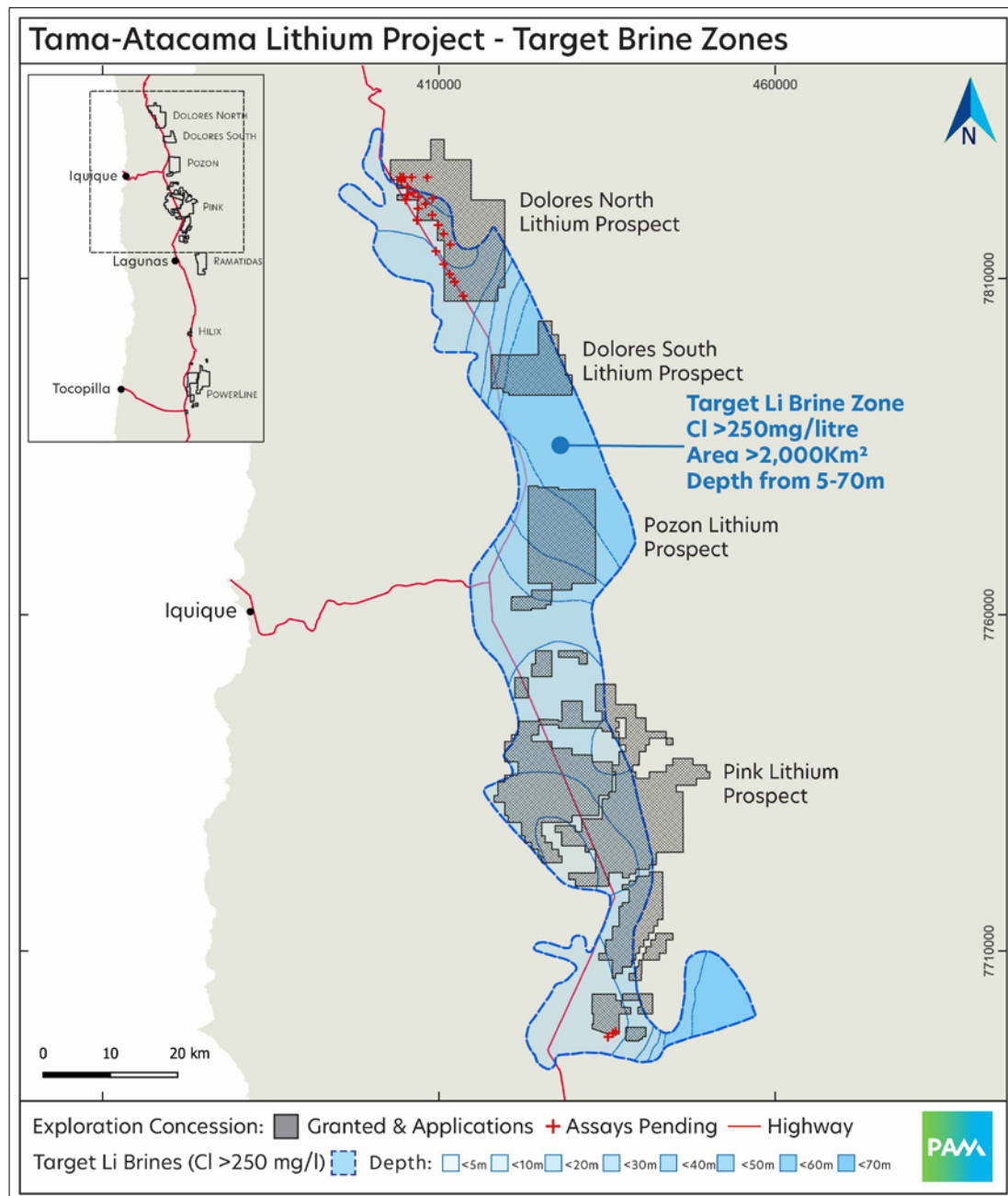


Figure 4. PAM's Northern Lithium Prospects - Aquifer with Elevated Chlorine, a proxy for Brine

### Deposit Model and Exploration Targeting

PAM believes the Pink prospect has potential for deeper Li rich brines from about 250-600m, which are hosted in consolidated to semi-consolidated sedimentary/evaporite horizons. At and near surface PAM also believes there is potential for Li hosted in clay and evaporite layers.





### **Conclusions and Plans for Evaluation**

PAM believes the Pink Lithium Prospect has strong potential to host lithium brines at depth as well as potential lithium clays, near surface. PAM's aim is to commence drilling as soon as possible which will evaluate both brine and clay target zones.

To more broadly evaluate the potential for sub-surface brine to depths down to 600m, electrical geophysics such as resistivity, electromagnetics or CSAMT may be undertaken. Should this prove successful in locating conductive brine, then broad spaced drilling would be undertaken aiming to sample the brine horizons.

The Company looks forward to keeping Shareholders and the market updated on the results obtained and other activities related to the Company's ongoing evaluation of the Tama Atacama Lithium Project, as well as its broader activities in Southeast Asia and elsewhere to secure its position in the global lithium supply chain.

### **Ends**

**Authorised by:**  
**Managing Director**

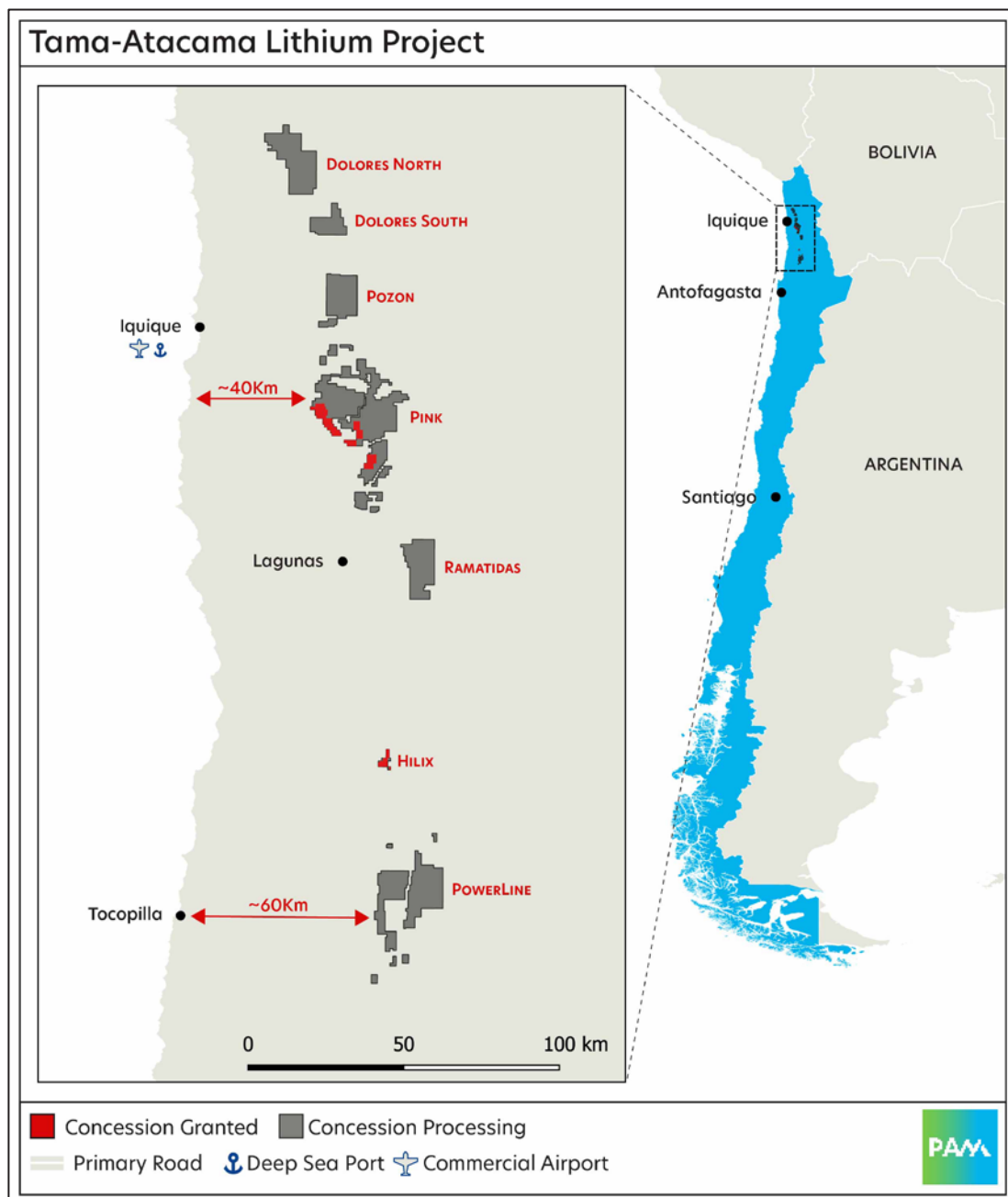
### **Notes**

1. Gallardo A. (1961). Informe geologico sobre el pozo de exploracion de Pintados No 1 - Tarapaca. Empresa Nacional del Petróleo (ENAP). Santiago, Chile
2. JICA-DGA-PCI: The study on the development of water resources in northern Chile, Supporting report B: Geology and groundwater, 216 pp., Japanese International Cooperation Agency, 5 Direccion General de Aguas, and Pacific Consultants International, Santiago, Chile, 1995. ´ 5884, 5885, 5895, 5896, 5920



## About the Tama Atacama Lithium Project

The Tama-Atacama Lithium Project is located in the Pampa del Tamarugal basin in the northern part of the Atacama Desert, in northern Chile. PAM's holdings include brine and clay style projects covering over 1600km<sup>2</sup>. In many areas surface samples >250ppm Li and up to 2,200ppm Li have been generated. The Hilix Lithium Prospect is supported by historical drilling, with many intersections greater than 1,000ppm Li over substantial widths.



*Regional map identifying the location of the Tama Atacama Lithium Project*



### **About Pan Asia Metals Limited (ASX:PAM)**

Pan Asia Metals Limited is the only publicly traded battery materials company with lithium projects in South-East Asia and South America, and with agreements with key battery and chemical producers in the Asian region to produce advanced battery chemicals.

PAM's Asian assets are strategically located in Thailand – the largest vehicle producer in the region. With Asia accounting for more than half of the global annual vehicle production, PAM is uniquely positioned to capitalize on the soaring demand for battery minerals in the region. PAM's South American assets are strategically located in the Atacama region of Chile, with both lithium brine and lithium clay assets located on key infrastructure 40km from the coast and 75km from Iquique with a large port and commercial airport.

PAM's dedication to producing innovative, high-value products with a minimal carbon footprint makes us an ideal partner for meeting our needs in both battery chemicals and sustainable energy. PAM is also a respected local company, with a strategy focused on developing an integrated supply chain to cost-effectively deliver relevant and in-demand products to the Li-ion battery market.

PAM is rapidly advancing its lithium projects through to feasibility and plans to expand its global lithium resource sustainably through its extensive holdings in Asia and South America.

To learn more, please visit: [www.panasiametals.com](http://www.panasiametals.com)

Stay up to date with the latest news by connecting with PAM on [LinkedIn](#) and [Twitter](#).

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### **Competent Persons Statement**

The information in this report that relates to Exploration Targets and Exploration Results, is based on information compiled by Mr. David Hobby, is a Member of the Australasian Institute of Mining and Metallurgy. Mr. Hobby is a full time employee, Director and Shareholder of Pan Asia Metals Limited. Mr. Hobby has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking 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. Hobby consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### **Forward Looking Statements**

Various statements in this document constitute statements relating to intentions, future acts and events which are generally classified as “forward looking statements”. These forward looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other important factors (many of which are beyond the Company’s control) that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed in this document. For example, future reserves or resources or exploration targets described in this document may be based, in part, on market prices that may vary significantly from current levels. These variations may materially affect the timing or feasibility of particular developments. Words such as “anticipates”, “expects”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “potential” and similar expressions are intended to identify forward-looking statements. Pan Asia Metals cautions security holders and prospective security holders to not place undue reliance on these forward-looking statements, which reflect the view of Pan Asia Metals only as of the date of this document. The forward-looking statements made in this document relate only to events as of the date on which the statements are made. Except as required by applicable regulations or by law, Pan Asia Metals does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events. Past performance cannot be relied on as a guide to future performance.

### **Important**

To the extent permitted by law, PAM and its officers, employees, related bodies corporate and agents (Agents) disclaim all liability, direct, indirect or consequential (and whether or not arising out of the negligence, default or lack of care of PAM and/or any of its Agents) for any loss or damage suffered by a Recipient or other persons arising out of, or in connection with, any use or reliance on this document or information.



## APPENDIX 2 - JORC Code, 2012 Edition - Table 1

### 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>• In many areas samples of salt crust or clays exposed at surface have been collected.</li> <li>• Samples were taken as random rock (rock salt or clay) chips</li> <li>• Samples were sent to ALS Geochemistry laboratory in La Serena Chile.</li> <li>• In the laboratory, standard sample preparation methods were used (crushing and pulverisation)</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 is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable – no drilling undertaken.</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>• Not applicable – no drilling undertaken.</li> </ul>



<b>Logging</b>	<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>Not applicable – no drilling undertaken.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<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> </ul>	<ul style="list-style-type: none"> <li>Not applicable – no drill samples taken, full description of sampling provided above.</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>Pan Asia has MOU's and option agreements with Rajo and Kura. Kura have about 84km<sup>2</sup> of Exploration Concessions and Rajo/PAM have about 1330km<sup>2</sup> of Exploration Concession applications.</li> <li>Each concession measures 1kmx3km, with some 2 x 1 or 1 x 1 and are held for 2 years.</li> <li>No known impediments for future exploration and development</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>Little to no information for any prior exploration is available, aside from PAM/Rajo data which is contained in the public report.</li> <li>In vicinity of many Exploration Concessions Concessions/applications and there was previous nitrate, borate, iodine mining from near surface rich layers.</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>Deposit types include near surface Li in evaporite and/or clays, and Li hosted in deeper brine aquifers which occur in zones within the Pampa del Tamarugal sedimentary basin</li> </ul>



<b>Drill 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>• Not applicable – no drilling undertaken.</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>• Not applicable – no cut offs applied, assay values only limited by limits of detection and in the results reported few values below limit of detection are reported.</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>• Not applicable – no drilling undertaken.</li> </ul>
<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</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate diagrams with Li geochemical information are reported in body of public report.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<i>reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	
<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 to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>The objective is lithium in saline groundwater brine or near surface clays/evaporites</li> <li>The assays for lithium in salt crusts and clays which were sampled because they are exposed at surface, may be related to lithium contents in saline groundwater at depth and/or near surface zones.</li> <li>To date no drilling has been done so that it is not known what the relationship between assays for lithium in salt crusts and lithium contents in saline groundwater at depth may be</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>There is a lack of published information for much of the Concession areas.</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 ultimate aim is drill testing to obtain samples of near surface clays and evaporites as well as deeper drilling to obtain saline groundwater brine for assay for lithium and related elements</li> </ul>