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ASX via Electronic Lodgement

Up to 94% Lithium Recovery Achieved at San Jose Lithium Project

Highlights

- **Initial metallurgical testwork report completed**
- **84% to 94% lithium recoveries achieved from acid leach**
- **Plymouth to continue metallurgical testwork for complete flowsheet**

Plymouth Minerals Limited (ASX**: PLH**) ("**Plymouth**" or the "Company") is pleased to provide an update on the progress of metallurgical testing at the San Jose Lithium Project.

Plymouth commissioned AGQ Mining and Bioenergy (AGQ) based in Seville, Spain to conduct a programme of preliminary testwork utilising mineralised rocks from the San Jose Lithium project. This testwork was designed to confirm part of the flowsheet that was completed by Tolsa SA (Tolsa) as outlined in the *ASX Announcement dated 21st July 2016*.

AGQ undertook a program of testwork to confirm the leachability of lithium from the mineralised rocks. Other parts of the flowsheet including comminution and precipitation are part of continued work programmes. The preferred process test route from historical feasibility studies utilised upgrading through Dense Media Separation, sulphuric acid digest and precipitation to lithium carbonate. The Tolsa flow sheet can be considered as a three-part process which involves 1) Dense Media Separation (DMS), 2) Leaching and 3) Precipitation of end product Lithium Carbonate (LCE).

AGQ conducted a programme of testwork to extract lithium from mineralised samples from San Jose using:

- Sulphuric acid leaching.
- Sulphuric acid leaching of calcined samples (gypsum lime roast).

Tests were completed on varying crush sizes and acid strengths. This work is related to the second, leaching, portion of the historical feasibility study flow sheet.

Lithium recoveries into the leach solution ranged between 84% and 94% within 90 minutes of leach testing. Additional DMS testwork will be conducted to produce further material for integrated ROM-to-leach testing.

Procedure

A composite sample containing lithium mineralisation was created from five samples taken from the surface expression of the mineralisation. The samples were collected across the surface of the deposit.

The samples were crushed and homogenised prior to blending to create a representative composite sample. This sample was subjected to basic leach tests at varying crush sizes and acid strengths, with good recoveries achieved. The calcining process included roasting using gypsum lime as flux. Details in Table 1.

Summary

Whilst this represents a first pass test and is preliminary in nature, Plymouth is very encouraged by these results as they confirm that lithium can be extracted, with good recoveries, using a sulphuric acid leach process from the San Jose mineralisation.

Plymouth will continue with additional metallurgical testwork to further define the process flowsheet including comminution and precipitation. Additionally, Plymouth will undertake metallurgical tests to characterise the waste rock from drill samples and trenches. The RC Drill rig is on site, with drilling due to commence shortly.

For more information, visit www.plymouthminerals.com

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Competent Persons Statement

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on the information compiled or reviewed by Mr Adrian Byass, B.Sc Hons (Geol), B.Econ, FSEG, MAIG and an employee of Plymouth Minerals Limited. Mr Byass has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Byass consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

Disclaimer

Forward-looking statements are statements that are not historical facts. Words such as “expect(s)”, “feel(s)”, “believe(s)”, “will”, “may”, “anticipate(s)” and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to the Company’s prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any

obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

About Plymouth Minerals Lithium Project

Plymouth has partnered with the large Spanish company Sacyr and its wholly owned subsidiary Valoriza Mineria in an earn-in JV over a large, lithium-tin project (San Jose) in central Spain. Plymouth can earn up to 75% of San Jose by completing a Feasibility Study within 4 years (approximately A$6 million in spend). Plymouth also retains an 80% interest in the Morille tungsten project in Spain which was extensively explored by Plymouth in 2013-2015.

About Plymouth Minerals Potash Projects

Plymouth owns 100% of the Banio and Mamana Potash Projects, which are drill proven, high-grade, shallow potash deposits that are favourably located on the coast of Gabon, and on major transport river ways (barge) with direct access to export ports.

Sample Locations are contained in Table 1.

Sample Locations at San Jose

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

Metallurgical Testwork on Samples from the San Jose Project, Spain

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	Samples were collected as fresh rock samples from trenches 1-2m below surface using hand tools.
Drilling techniques	• *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).*	No drilling was conducted to acquire the samples.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	No drilling was conducted to acquire the samples.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	No drilling or logging was conducted.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Testwork on the samples included the following stages: – Samples crushed and homogenized – Samples were pulversied and assayed for Li, Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sn, Sr, Ti, V, W, Zn. – A composite sample was made using five individual samples to create a representative composite sample of ore from the San Jose deposit. – The composite sample was crushed to obtain different sizes. – Acid leaching assays conducted with uncalcined sample.

Criteria	JORC Code explanation	Commentary
		– Acid leaching assays conducted with calcined sample.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	The samples were assayed initially using a four acid digest which is a near total digestion. The composite samples were stored in polypropylene bags and were sampled again for Li, Al, Ca, K, Mg, Mn, Na, Sn. Several laboratory tests were conducted using different partial size and acid concentration to study the effect on lithium extraction. This included conducting the leaching with calcined and uncalcined samples. The calcined sample was roasted in a high capacity furnace prior to leaching. All tests were conducted in an industry standard manner in a professional laboratory.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	The metallurgical work has been conducted by a professional organisation AGQ Mining & Bioenergy.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	GPS co-ordinates of the sample points were taken using a Garmin hand-held GPS with an accuracy of +/- 5m.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	Data is for metallurgical purposes, not for Mineral Resources calculation.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	Samples were collected for metallurgical purposes.
Sample security	• *The measures taken to ensure sample security.*	Samples were taken directly from the San Jose project to the AGQ laboratory where they were registered in the laboratory integrated management system to ensure traceability.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	The metallurgical work has been reviewed by Plymouth personnel.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Mineral tenement and land tenure status</td><td>• 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.
• 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.</td><td>The San Jose Project is held within Investigation Permit No 10C10343-00 which is owned by Valoriza Mineria. Plymouth Minerals has an earn-in and Joint Venture Agreement with Valoriza Mineria (ASX announcement 14 June 2016). The Investigation Permit is in good standing.</td></tr>
<tr><td>Exploration done by other parties</td><td>• Acknowledgment and appraisal of exploration by other parties.</td><td>San Jose was historically mined for tin and tungsten in the 1960s and later underwent extensive evaluation and feasibility work for lithium and tin mineralisation between 1985 and 1991 which was conducted by Tolsa SA.</td></tr>
<tr><td>Geology</td><td>• Deposit type, geological setting and style of mineralisation.</td><td>The San Jose Deposit was formed by an amalgamation of quartz and quartz-pegmatite veins, which formed a stockwork hosted by metasediments. The mineralisation is disseminated in both the host as lithium micas and the veins hosting tin as cassiterite, lithium as amblygonite-montebrasite and minor tungsten as wolframite. The lithium is found mainly in the micas of muscovite-fengite type in the host rock and in lesser proportion in the amblygonite-montebrasite of the veins.</td></tr>
<tr><td>Drill hole Information</td><td>• 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:
○ easting and northing of the drill hole collar
○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
○ dip and azimuth of the hole
○ down hole length and interception depth
○ hole length.
• 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.</td><td>Sample locations – UTM Z29N
<table><tr><th colspan="2">Sample ID</th><th>Easting</th><th>Northing</th><th>RL</th></tr><tr><td>MSJ-016</td><td>MN-16/12454</td><td>729072</td><td>4370993</td><td>469.82</td></tr><tr><td>MSJ-018</td><td>MN-16/12456</td><td>729056</td><td>4371188</td><td>483.97</td></tr><tr><td>MSJ-020</td><td>MN-16/12458</td><td>729082</td><td>4371075</td><td>485.44</td></tr><tr><td>MSJ-021</td><td>MN-16/12459</td><td>729090</td><td>4371084</td><td>489.65</td></tr><tr><td>MSJ-022</td><td>MN-16/12460</td><td>729111</td><td>4371093</td><td>495.12</td></tr></table></td></tr>
<tr><td>Data aggregation methods</td><td>• 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.
• 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.
• The assumptions used for any reporting of metal equivalent values should be clearly stated.</td><td>The five samples selected to make up the composite sample were:
– MSJ-16 (MN-16/12454)
– MSJ-18 (MN-16/12456)
– MSJ-20 (MN-16/12458)
– MSJ-21 (MN-16/12459)
– MSJ-22 (MN-16/12460)</td></tr>
<tr><td>Relationship between mineralisation widths and intercept lengths</td><td>• These relationships are particularly important in the reporting of Exploration Results.
• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
• 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’).</td><td>Samples were not acquired from drilling.</td></tr>
<tr><td>Diagrams</td><td>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any</td><td>Sample locations are shown in Figure 1.</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• *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.*	All results have been reported.
Other substantive exploration data	• *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.*	No other work has been completed.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	RC drilling is set to commence December 2016 (ASX announcement 08 December 2016).