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ASX via Electronic Lodgement

Excellent lithium recoveries continue at San Jose using sulphate calcine process

Highlights

- **Up to 95% recovery of lithium into leach liquor using standard sulphate roast techniques**
- **Recoveries meeting that of acid leach with potentially lower input costs**
- **Reduced reagents, recycle of large proportion of reagents possible and being investigated**
- **Downstream opportunities include potential for simpler purification to Lithium carbonate or Lithium hydroxide**

Plymouth Minerals Limited (ASX: PLH) (Plymouth or the Company) is pleased to provide an update on the rapid advancement of metallurgy programmes being conducted for the San Jose lithium-tin project in Spain (San Jose). Material at San Jose can now be leached using both acid digest and sulphate calcine ‘front-end’ methods. Both are amenable to industry-standard ‘back-end’ precipitation methods to produce lithium carbonate. Both leach processes have historically been tested at San Jose and lithium carbonate has been produced as outlined in the historic Tolsa feasibility study.

Plymouth’s testing so far has confirmed the previous studies sulphuric acid leach process result and achieved a maximum 97% lithium recovery. Utilising a sulphuric acid flowsheet was considered the preferred method, due to readily available sulphuric acid in Western Spain. In parallel with the sulphuric acid process, Plymouth has been evaluating the sulphate calcine pathway to produce a final product of lithium carbonate and is extremely pleased with the results obtained and reported in this release. Material from the San Jose lithium deposit close to Caceres was taken and processed by AGQ Mining and Bioenergy in Spain and IMO Project Services in Australia.

The Managing Director Adrian Byass said, *“It is important to understand that the production of lithium carbonate at San Jose (based on a proven historical study flow-sheet) is fundamentally two parts – leach and precipitation. This result confirms historical work. We have two viable leach methods and precipitation is industry-standard which is essentially the same as employed by all hardrock and mineral producers. The Company will now economically assess the impacts of process options and the potentially generous OPEX benefits enjoyed by sulphate calcining. These benefits include the availability of gas from the adjoining regional natural gas pipeline network and that of greatly reduced reagent usage profile and simpler purification stage”.*

Testwork using conventional sulphate calcining/roasting techniques have achieved 95% lithium extraction from the host rock into the liquor. This was achieved at a 212 micron grind size on non-beneficiated ore. The next stage is ongoing optimisation testwork which is under way to fine tune the parameters of the metallurgical process to minimise both CAPEX and OPEX such as:

- Reducing roasting time;
- Reducing roasting temperature;
- Reducing reagent addition and confirming sulphate reagent recycling potential via crystallisation;
- Reducing leach temperature
- Reducing leach retention time

This ongoing process work will flow into the Mining Lease Application submission which outlines the mining, processing, economic modelling and marketing for a lithium-tin mine at San Jose. Plymouth is preparing this document in partnership with its local partner, Valoriza Minería, subsidiary of major listed Spanish construction company Sacyr.

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For more information, visit www.plymouthminerals.com

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About Plymouth Minerals' Lithium Project

Plymouth has partnered with the large Spanish company Sacyr and its wholly owned subsidiary Valoriza Minería 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 in staged increments of 50% and 75%). Plymouth also retains an 80% interest in the Morille tungsten project in Spain which was extensively explored by Plymouth in 2013-2015.

San Jose is a highly advanced lithium project which is hosted in lithium-mica that hosts of JORC of lithium carbonate equivalent (LCE). A feasibility study completed in 1991 defined an open pit mining operation and a process flow sheet which produced lithium carbonate through acid-leach or sulphate calcine processing. This drilling, mining and processing study work highlights the advanced status and inherent advantages enjoyed by San Jose in relation to many other hardrock deposits. The resource estimate for San Jose is shown below in Table 1;

TABLE 1 SAN JOSE MINERAL RESOURCE, REPORTED ABOVE 0.1% LI CUT-OFF

Classification	Tonnes (Mt)	Li (%)	Li ₂ O (%)	Sn (%)
Indicated	23.9	0.31	0.67	0.02
Inferred	68.3	0.26	0.56	0.02
TOTAL	92.3	0.27	0.60	0.02

Estimated using Ordinary Kriging methodology. Note: Small discrepancies may occur due to rounding

Snowden Mining estimated the total Mineral Resource for the San Jose lithium deposit using Ordinary Kriging interpolation methods and reported above a 0.1% Li cut-off grade. Full details of block modelling and estimation are contained in the ASX announcement dated 25 May 2017.

Lithium (Li) mineralisation is commonly expressed as either lithium oxide (Li₂O) or lithium carbonate (Li₂CO₃) or Lithium Carbonate Equivalent (LCE)

Lithium Conversion: 1.0% Li = 2.153% Li₂O, 1.0%Li = 5.32% Li₂CO₃

Plymouth is not aware of any new information or data that materially affects the information included in this ASX release, and Plymouth confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the resource estimates in this release continue to apply and have not materially changed.

About Plymouth Minerals' Potash Projects

Plymouth owns 100% of the Banio and Mamana Potash Projects, which are drill proven, high-grade, shallow potash deposits. Both and Mamana enjoy good access to infrastructure being located on the coast of Gabon and on major transport river ways (barge) with direct access to export ports. Banio has a multi-billion tonne Exploration Target of carnallite and sylvinite based on historical seismic and drilling data. Plymouth intends to drill test this Exploration Target.

Brazil is a major consumer of potash and South America is the largest consumer of sea-borne potash (MOP) in the world. The West African coast and potash deposits there enjoy a significant shipping advantage over other major potash producing regions.

Competent Persons Statement

The information in this report that relates to Exploration Results, Exploration Targets, 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.

The information in this report that relates to Exploration Targets and Mineral Resources for the San Jose project is based on the information compiled by Mr Jeremy Peters, FAusIMM CP (Mining, Geology). Mr Peters has sufficient relevant professional experience with open pit and underground mining, exploration and development of mineral deposits similar 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 JORC Code. He has visited the project area and observed drilling, logging and sampling techniques used by Plymouth in collection of data used in the preparation of this report. Mr Peters is an employee of Snowden Mining Industry Consultants and consents to be named in this release and the report as it is presented.

Disclaimer:

This announcement contains certain statements that may constitute "forward looking statement". Such statements are only predictions and are subject to inherent risks and uncertainties, which could cause actual values, results, performance achievements to differ materially from those expressed, implied or projected in any forward looking statements.

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.

The Company believes that it has a reasonable basis for making the forward looking Statements in the announcement, based on the information contained in this and previous ASX announcements.