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ASX ANNOUNCEMENT

17 September 2019

Excellent Metallurgical testwork results

Mali Lithium Limited (ASX: **MLL, Mali Lithium**, or **the Company**) is pleased to announce excellent progress in the metallurgical testwork currently underway and designed to optimise the results obtained from the Pre-Feasibility Study (PFS) published 4 July 2018. The final results of this program will confirm the process design selected as part of the Definitive Feasibility Study (DFS).

Results have exceeded expectations with 80% overall recovery achieved from a combination of High Pressure Grinding Rolls (HPGR) and flotation. Definitive flotation work and variability testwork is now underway. Actual plant performance is likely to be less than achieved in the lab but this is an excellent indication that the 70% recovery assumed in the PFS will be materially improved.

High Pressure Grinding Rolls (HPGR)

A representative bulk sample of Goulamina ore at a grade of 1.7% Li_2O was reduced to -4mm top size using High Pressure Grinding Rolls (HPGR) at the Nagrom laboratory in Perth, Western Australia. HPGRs are increasingly being used for crushing hard, abrasive rock such as pegmatite ores. HPGR comminution is a proven alternative to conventional crushing equipment, offering superior availability and reduced maintenance.

Liberation of spodumene particles is crucial to achieving high flotation recoveries. The HPGR crushing principle typically enhances liberation, as opposed to conventional cone crushing, by applying force to compress the ore into a small space. This selectively breaks particles at the mineral/reject interface thus allowing improved liberation and recovery. Results of HPGR tests at different pressing forces were better than expected resulting in evenly sized reduction to the required size of 4mm at low grinding pressures.

Flotation

The HPGR crushed bulk sample at -4mm was then used for flotation testwork at Nagrom Laboratories after being ground to a P_{80} of 106 microns. The first stage of the program is designed to establish baseline parameters which will be used for optimisation, variability and de-risking further flotation testwork. Four different reagent schemes were tested and were informed by the rapidly evolving practice at Western Australian Spodumene operations. Table 1 below shows the

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improved results for flotation. Prior to flotation, the samples were treated by magnetic separation, mica removal and de-sliming.

	FLOTATION CONCENTRATE			
Reagent Scheme	**Overall Mass Yield (%)**	**Grade (%Li_2O)**	**Flotation Recovery (%)**	**Overall Recovery (%)**
Scheme A	23.5%	6.02	89.5%	79.5%
Scheme B	21.6%	6.06	88.6%	78.1%
Scheme C	22.7%	6.12	89.6%	79.4%
Scheme D	24.0%	6.08	90.5%	80.5%

Table 1. Flotation and overall recoveries from latest testwork

The flotation test results exceeded expectations, producing concentrate grades exceeding 6% Li_2O at 90% flotation recoveries in the rougher flotation stage, resulting in approximately 80% recovery overall. Overall recovery is calculated by subtracting the lithium lost in the preparation and beneficiation processes (flotation tailings, mica removal, slimes and magnetic separation) from the total lithium in the initial feed. These results allowed Reagent Scheme D to be established as the benchmark for the final stages of test work.

Testwork has proven that flotation efficiency is significantly improved when mica, magnetic material and slimes are removed efficiently prior to the flotation process. This is an improvement from previous testwork.

Final optimisation testwork in coming weeks will focus on further improvements to overall recovery by reducing lithium losses associated with mica removal, magnetic separation and desliming, thus ensuring results are repeatable and can be scaled up to the process plant with confidence.

This testwork program has delivered a significant improvement on the 70% recovery achieved during the PFS and suggests that ore from the world class Goulamina deposit can be beneficiated to produce a high-grade (6% Li_2O) product while achieving best in class recovery of contained lithium. High recoveries, low mica content and low Iron content will further improve the DFS valuation of the project. This suggested excellent metallurgical performance will lower the operating costs per tonne of concentrate produced and enhance returns from Goulamina, further setting it apart as a world-leading project.

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Competent Persons Statement

Information in this announcement relating to the Goulamina Lithium Project is based on technical data compiled or supervised by Mr Walter Madel, a full-time employee of Mali Lithium. Mr Madel is a member of the Australian Institute of Mining and Metallurgy (AUSIMM) and a mineral processing professional with over 27 years of experience in metallurgical process and project development, process design, project implementation and operations. Of his experience, at least 5 years have been specifically focused on hard rock pegmatite Lithium processing development. Mr Madel consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

APPENDIX

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary

Sampling techniques	• *Nature and quality of sampling (e.g. 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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.*
		• Sample used for this testwork: Whole core sample extracted via HQ drilling from two ore bodies on site in Mali – Main and West. No sample from the Sangar ore body was sourced for this testwork.
		• Samples were air-freighted to Perth, Western Australia from Bamako in Mali. Whole HQ core was broken and bagged, each bag containing 1m interval. Intervals were kept separate throughout.
		• Sample consists of total of six HQ drill holes to represent first proposed years of mining and included only fresh ore equivalent (no weathered ore).
		• Three samples from Main:
		  • GMRC238D (18m-52m)
		  • GMRC239D (12m-79m)
		  • GMRC240D (44m-78m)
		• Three samples from West:
		  • GMRC244D (12m-48m)
		  • GMRC246D (8m-43m)
		  • GMRC249D (17m-44m)
		• The samples are sourced from continuous intervals of full HQ core including coarse and fine spodumene containing core corresponding to logging records of twin RC holes.
		• Total mass of bulk sample approximately 1500kg.
		• All whole core was crushed at ALS laboratories to -32mm to comply with the specifications of the HPGR vendor conducting the HPGR testwork at ALS technologies.
		• After completing HPGR crushing at ALS, the bulk sample was shipped to Nagrom laboratories for final HPGR crushing and subsequent metallurgical testwork.

Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core*	• Drill holes were completed by diamond drilling techniques. • Diamond drill hole are HQ-sized (64mm diameter core).

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	is oriented and if so, by what method, etc).	
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.*	• Recovery of HQ drill core is generally 100% due to the competent nature of the ore. • Drill sample quality is considered to be excellent. • The core recovered is considered to be representative of the ore body at the drill location and fit for sampling. • ML does not consider any bias as there was no loss or gain of fine or coarse material.
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.*	• All cored material has been geologically logged by Company geologists. • Where appropriate, geological logging recorded the abundance of specific minerals, rock types and weathering using a standardised logging system. • Diamond drilled holes for metallurgical testing were drilled as twins to previously drilled RC holes to ensure the mineralised intervals are representative. • All core was photographed in trays in wet and dry state, and photographs stored in the ML database.
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.*	• Full HQ core was utilised to make up the bulk sample for metallurgical testing. • For metallurgical testwork, all samples were crushed by HPGR and screened to -3.35mm after completion of HPGR testwork. • At Nagrom laboratories, all metallurgical samples were weighed, dried and crushed to -2mm in a jaw crusher. A 1.0kg split of the crushed sample was subsequently pulverised in a ring mill (with tungsten-carbide bowl and rings) to achieve a nominal particle size of 85% passing 75µm. • Sample sizes and laboratory preparation techniques are considered to be appropriate.
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*	• Analysis for lithium and a suite of other elements is undertaken at ALS and Nagrom Perth by ICP-AES after Sodium Peroxide Fusion. Detection limits for lithium are 0.01-10%. • For remaining elements reported (excluding

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	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 (i.e. lack of bias) and precision have been established.*	Li_2O), standard XRF methodology was utilised • Sodium Peroxide fusion is considered a “total” assay technique for lithium • No geophysical tools or other non-assay instrument types were used in the analyses reported. • Review of routine standard reference material and sample blanks suggest there is a small positive analytical bias for assays <0.3% Li_2O in the reported analyses.
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.*	• Twin RC holes exist for every HQ hole but were not utilized to verify data of HQ holes. • Existing assays from twin RC holes were only used to estimate an indicative final grade and consistency of bulk sample. • There were no adjustments to assay data.
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.*	• Drill hole collars were set out in UTM grid Zone 29N and WGS84 datum. • Drill hole collars were initially set out using hand held GPS. • All drill holes are routinely surveyed for down hole deviation at approximately 50m spaced intervals down the hole. • Worldview 2 elevation data was used to establish topographic control where appropriate. • Locational accuracy at collar and down the drill hole is considered appropriate for core drilling.
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.*	• Holes drilled for metallurgical testing were distributed within the zones of indicated mineralisation in the Main and West zones and were focussed on the material likely to be produced in the first year’s production.
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*	• The drill hole orientation was designed to intersect the mineralised pegmatites as close to perpendicular as possible for the drilling method. • Drilling orientation has generally not biased the sampling. • The Competent Person considers that the

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	introduced a sampling bias, this should be assessed and reported if material.	drilling directions utilised were appropriate for proper intersection of the pegmatite ore bodies to yield core suitable for the nature of metallurgical testwork.
Sample security	• *The measures taken to ensure sample security.*	• Samples are stored on site prior to shipping to Australia where they are stored in drums at the analytical laboratories.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• A review of the sampling techniques for metallurgical testing has not been undertaken by a third party.

About Mali Lithium

Mali Lithium Limited (ASX:MLL) is developing the world class Goulamina Lithium Project in Mali, West Africa. Goulamina is fully permitted and is the world's largest uncommitted hard rock Lithium Reserve. The company is currently completing its Definitive Feasibility Study and has released the results of its Pre-Feasibility Study (PFS) on the project to the ASX on 4 July 2018.

The Company also has a diversified commodity portfolio containing prospective gold tenements in southern Mali from which it intends to generate near term value for shareholders.