Plateau Reports Additional Preliminary Metallurgy Results

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TORONTO, Oct. 04, 2018 - Plateau Energy Metals Inc. (“Plateau” “PLU” or the "Company") (TSX VENTURE:PLU)(FRANKFURT:QG1)(OTCQB:PLUUF) is pleased to provide an update on results from on-going metallurgical test work, and initiation of the next phase of test work.

The additional test work forms part of the Company's continuing efforts to determine the economic value of the Falchani high-grade lithium discovery and aims to build on the ‘proof of concept’ precipitation work to date for a lithium carbonate product. Three additional process options for the up-front extraction of lithium will been examined by ANSTO’s Minerals Business Unit in Sydney, Australia, in parallel with the baseline ‘simple’ sulfuric acid leach option. The results of these efforts will form the basis for future trade-off studies. Each of the options is based on conventional, up-front lithium extraction unit processes followed by conventional downstream lithium processing steps.

Alternate Lithium Processing Test Work Programs

High Temperature Sulfation Roast

- Preliminary test work on calcination of lithium-rich tuff in the presence of sulfate followed by simple water leaching has been undertaken as an alternative route to the baseline sulfuric acid leach (previously released results) due to the potential up-front rejection of impurities
- Extraction of lithium up to 71% has been achieved from roasting at between 900–1000 °C for 2 h (P_{80} 150 µm, 300 kg/t K_2SO_4 and 300 kg/t $CaSO_4$) followed by a water leach at 50 °C (18 h, 25 wt%)
- While the extraction of lithium has been lower than achieved by the baseline sulfuric acid leach, there is a significant advantage from the up-front rejection of almost all of the aluminium, fluoride, iron and silicon
- This allows a simpler downstream processing of the liquor to produce either battery grade lithium carbonate or lithium hydroxide

Low Temperature Sulfation Bake

- Preliminary test work on sulfation baking using sulfuric acid followed by simple water leaching has been undertaken in an effort to minimise free acidity reporting to the downstream neutralisation circuits – a key disadvantage of ‘simple’ sulfuric acid leaching
- To date, a free acidity of ~10 g/L sulfuric acid has been achieved versus 250 – 300 g/L in the baseline sulfuric acid leach
- Extraction of lithium up to 74% has been achieved by baking at only 150 ^oC (P_{80} 58 µm, 300 kg/t H_2SO_4 , 4 h) followed by simple water leaching (30 °C, 24 h, 10 wt%)
- The elemental composition of the PLS from sulfuric baking is comparable to that of the baseline sulfuric acid leach, but considerably more complex than that from sulfation roasting. A key objective in this program will be to reduce the amount of major impurities such as aluminium and fluoride which report to the downstream purification circuits
- Plateau views the lower temperature of the sulfuric baking option as particularly attractive, however, future trade-off studies will aim to more accurately assess the impact of energy consumption, reagent consumption and capital requirements versus the baseline and sulfation roast options

Hydrochloric Acid Leaching

- Preliminary test work on atmospheric leaching using hydrochloric acid has been undertaken by TECCMINE in Peru and shown that comparable extraction of lithium to the baseline sulfuric acid leach is achievable at 92 °C for 12 h (88 versus 90%)

- Although the elemental composition of the PLS from hydrochloric acid leaching is comparable to that of the baseline sulfuric acid leach, the use of hydrochloric acid opens up the possibility of recovering free acidity from the PLS by distillation, and thus avoiding excess free acidity reporting to downstream neutralisation circuits
- In addition, further acid recovery from solubilised aluminium may be possible through hydro-pyrolysis

“Our ongoing work with ANSTO’s established lithium background, and our plans to run trade-off studies in conjunction with their work, will lead us to identifying our ideal processing routes as we advance Falchani to a PEA for mid-2019,” commented Laurence Stefan, President & COO.

“Having multiple commercially conventional process options available to us at this time is significant as we take the next steps to determine the economic viability of our project,” stated Alex Holmes, CEO.

ANSTO is leading this phase of work and will work alongside Plateau’s lead engineering firm, to be appointed, for advancing the project towards a Preliminary Economic Assessment. TECCMINE in Peru has been utilized to conduct a series of preliminary test work programs to support ANSTO’s development of the three process route work programs.

Qualified Persons
Doug Collier (FAusIMM) of ANSTO Minerals, and a qualified person as defined by National Instrument 43-101 *Standards of Disclosure for Mineral Projects*, has reviewed and approved the scientific and technical information contained in this news release.

About ANSTO’s Minerals Business Unit
ANSTO’s Minerals Business Unit is an international mining consultancy group located in Sydney, Australia, with an experienced team of 60+ engineers, metallurgists, chemists, and scientists who have been providing consulting services and process development services to the mining and minerals processing industries for well over 35 years. ANSTO has world-leading expertise in lithium (brines and hardrock), rare earth, zirconium/niobium/hafnium, base metals and uranium ore processing, and radioactivity control and management.

About Plateau Energy Metals
Plateau Energy Metals Inc. is a Canadian lithium and uranium exploration and development company focused on its properties on the Macusani Plateau in southeastern Peru. The Company controls all reported uranium resources known in Peru, significant and growing lithium resources and mineral concessions covering over 93,100 hectares (930 km^2) situated near significant infrastructure. Plateau Energy Metals is listed on the TSX Venture Exchange under the symbol 'PLU', quoted on the OTCQB under the symbol “PLUUF” and the Frankfurt Exchange under the symbol 'QG1'. The Company has 71,098,494 shares issued and outstanding.

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Forward Looking Information
This news release includes certain forward-looking statements concerning possible expected results of exploration and future exploration and development activities. Forward-looking statements are frequently identified by such words as "may", "will", "plan", "expect", "anticipate", "estimate", "intend" and similar words referring to future events and results. Forward-looking statements are based on the current opinions and expectations of management. All forward-looking information is inherently uncertain and subject to a variety of assumptions, risks and uncertainties, including risks and uncertainties relating to the interpretation of drill

results, the geology, grade and continuity of mineral deposits; the possibility that any future exploration, development or mining results will not be consistent with our expectations; mining and development risks, including risks related to accidents, equipment breakdowns, labour disputes (including work stoppages and strikes) or other unanticipated difficulties with or interruptions in exploration and development; the potential for delays in exploration or development activities; risks related to commodity price and foreign exchange rate fluctuations; risks related to foreign operations; the cyclical nature of the industry in which we operate; risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals; risks related to environmental regulation and liability; political and regulatory risks associated with mining and exploration; risks related to the certainty of title to our properties; risks related to the uncertain global economic environment; and other risks and uncertainties related to our prospects, properties and business strategy, as described in more detail in Plateau Energy Metals’ recent securities filings available at www.sedar.com. Actual events or results may differ materially from those projected in the forward-looking statements and Plateau cautions against placing undue reliance thereon. Neither Plateau nor its management assume any obligation to revise or update these forward-looking statements.