

BATTERY RECYCLING PILOT UPDATE – KEY NICKEL MILESTONE ACHIEVED

HIGHLIGHTS

- Lithium-ion battery recycling pilot generates exceptional purity (+99.9%) nickel sulphate product at high recovery rate (+98%)
- Results materially surpass scoping study assumptions
- Pilot test-work program remains on track for substantial completion this calendar year

Neometals Ltd (ASX: NMT) (“**Neometals**” or “**the Company**”) is pleased to provide a further update on its lithium-ion battery (“**LIB**”) pilot test-work (“**Pilot**”) and announce the successful recovery of very high purity (+99.9%) nickel sulphate solution from the Hydrometallurgical Processing stage of its patent pending recycling technology. Importantly, nickel recovery from shredded battery feed into nickel product exceeded 98%.

Pilot test-work being undertaken by SGS Canada Inc. (“**SGS**”) represents part of the pre-development activities for a proposed commercial LIB recycling venture targeting greater than 90% recovery of LIB materials from electric vehicle and consumer electronics production scrap and end-of-life cells. Neometals successfully shredded and processed 2.3 tonnes of spent commercial LIBs during the initial Feed Preparation Stage of the Pilot. A total of 980 kg of mixed cathode and anode materials (“**Black Powder**”) fed the subsequent Hydrometallurgical Processing stage from which chemical products are currently being recovered and refined into high-purity cathode intermediate materials.

The Hydrometallurgical Processing stage leaches the Black Powder and sequentially recovers cathode materials which are refined to generate high-purity chemical products for potential sale directly into the battery supply chain. The Pilot test-work program draws towards completion with copper, manganese, cobalt and now nickel sulphates having been successfully recovered.

Both the purity and the recovery rates of the nickel product materially exceeds Neometals expectations and represents another significant milestone in the confirmation of technical feasibility for the Company’s proprietary process. The recovery of cobalt and nickel are key drivers of the project economics and the Pilot purity/recovery data strongly supports the validity of previous economic evaluations.

The Company remains on schedule for substantive Pilot completion in December 2019. The recovery of lithium is due to commence prior to year-end and is expected to be concluded in January 2020 along with outcomes from final purification and crystallisation to produce ultra-high purity, cathode materials.

Successful completion of the Pilot and confirmation of the mass-energy balances are the key technical considerations for SMS Group’s due diligence for a 50:50 joint venture decision (*see Neometals ASX announcement dated 17th October 2019*). Other pre-development activities include final product benchmarking and feedstock/offtake negotiations which will be run in parallel with demonstration scale test-work and engineering studies. A final investment decision on a commercial-scale LIB recycling plant is expected to be considered in the December quarter 2020.

Neometals Managing Director Chris Reed commented:

“The Pilot test-work continues to deliver very encouraging results that support the Neometals desire to sell high-purity cathode materials back into the battery supply chain. With provenance, ethical supply and material scarcity concerns, a sustainable, secure supply chain will be key for leaders in energy storage. Eco-friendly recycling will play that vital role and our development timing aligns well with global forecast cell capacity against the projected supply deficit in traditional mine-sourced battery minerals.”

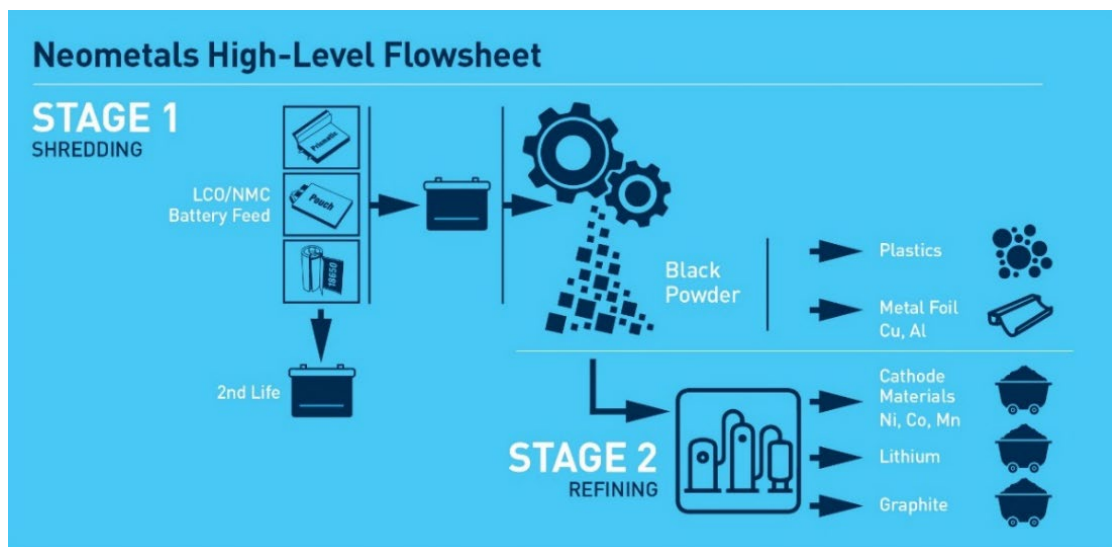


Figure 1 – Neometals LIB high level recycling flowsheet

Test-work Summary

Pilot hydrometallurgical test-work at SGS in Lakefield Canada has seen treatment of Black Powder to recover high purity chemical products. Campaigns have been run to sequentially recover each of the target metals. In this latest campaign nickel was also recovered as a high purity sulphate solution. Each of the sulphate solutions are presently undergoing final impurity removal (“polishing”) test-work prior to crystallisation to generate the ultra-pure (+99.99%) powder products required by the LIB manufacturers.



Figure 2 – Nickel Recovery Circuit of the Neometals Pilot at SGS

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About Neometals Ltd

Neometals innovatively develops opportunities in minerals and advanced materials essential for a sustainable future. The strategy focuses on de-risking and developing long life projects with strong partners and integrating down the value chain to increase margins and return value to shareholders.

Neometals has three core projects:

- Lithium-ion Battery Recycling – a proprietary process for recovering cobalt and other valuable materials from spent and scrap lithium batteries. Pilot plant testing currently underway with plans established to conduct demonstration scale trials with potential JV partner SMS Group;
- Lithium Refinery Project – Progressing plans for a lithium refinery development to supply lithium hydroxide to the battery cathode industry with potential JV partner Manikaran Power, underpinned by a binding life-of-mine annual offtake option for 57,000 tonnes per annum of Mt Marion 6% spodumene concentrate; and
- Barrambie Titanium and Vanadium Project - one of the world's highest-grade hard-rock titanium-vanadium deposits, working towards a development decision in mid-2021 with potential JV partner IMUMR.