

Significant process and product results positively impact Vittangi PFS options

- Pilot metallurgical testing of Vittangi graphite ore produces high concentrate recoveries, purities and anode material yields using ‘off the shelf’ processing equipment
- Opens up lower cost development options including early stage toll processing
- Incorporation of new and economically improved process pathways into Vittangi PFS push completion date to end of April 2019
- Latest tests in Japan support commercialisation of Talnode-C as a fully engineered coated anode material to maximise product value
- Metallurgical testing confirms Talga’s two other graphite projects produce high performance Li-ion anode material, offering future growth potential

Australian advanced materials technology company, Talga Resources Ltd (“Talga” or “the Company”) (ASX:TLG), is pleased to announce highly positive metallurgical processing and Li-ion anode test results, along with an update on the Company’s pre-feasibility study (“PFS”).

Recently completed work included a large range of pilot and laboratory metallurgical testing of ore from Vittangi, the Company’s flagship graphite project, as part of the PFS, along with testing of the Company’s other graphite resources at Jalkunen and Raitajärvi, to assess future development options (see ASX:TLG 31 Jan 2019).

The metallurgical programs reveal Vittangi ore produces high recoveries, purities and anode material yields using industry standard crush-grind-flotation equipment (see Technical Summary below). This new processing pathway potentially offers enhanced project economics, including lower capital and operational costs, and the option of toll processing at nearby concentrator facilities in early stages.

Processing of ore samples from Talga’s Jalkunen and Raitajärvi graphite resources, using the same industry standard method, resulted in similar high recovery and purity graphite concentrates that were successfully refined into high capacity Li-ion battery anodes. This discovery opens up additional development and growth options to Talga in future, in addition to the Vittangi project.

Further, testing conducted by technical partners in Asia has confirmed the potential to produce a coated version of Talnode-C that is suitable for sale as a fully engineered final anode material to maximise end-product value.

Figure 1 Vittangi project graphite undergoing pilot scale metallurgical testing



After assessing the above new information, the Company has decided that these highly positive developments will be incorporated into the Vittangi project PFS, resulting in a delay to its completion to the end of this month (April 2019).

Technical Summary

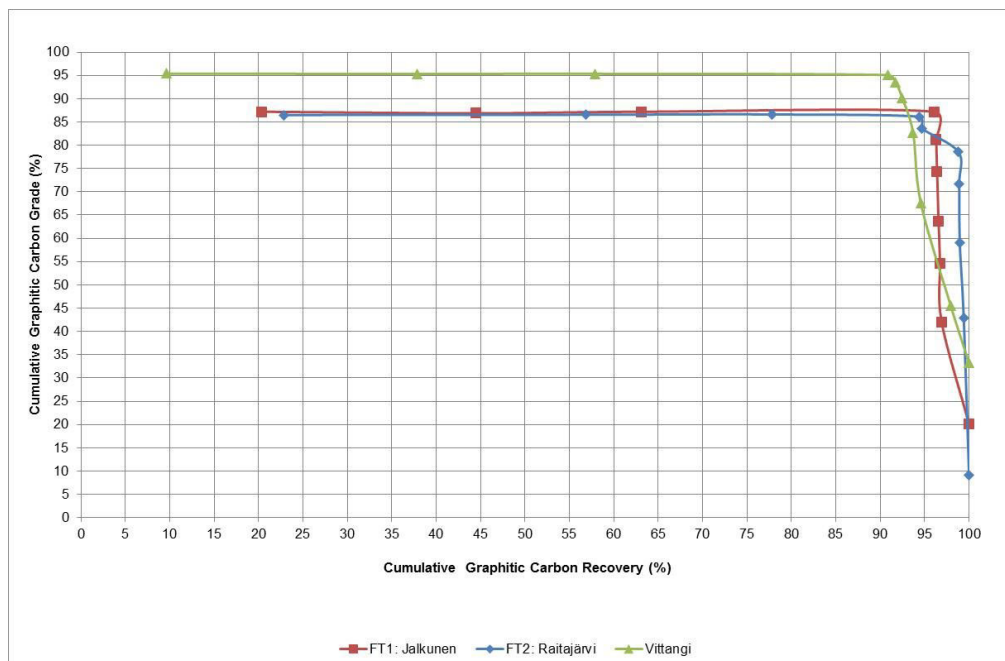
Talga has been advancing metallurgical testing across its 100% owned projects in northern Sweden, with a primary focus on the Vittangi project, but including the other JORC resources of Jalkunen and Raitajärvi.

In a series of metallurgical tests with Talga's consultants in Australia and Europe, representative samples of the three graphite resources were compiled from drill core and subjected to crush-grind-flotation processing with industry standard equipment to form a concentrate. Talga considers that this new processing pathway is a more economic process to making Talnode-C, in contrast to the electrochemical exfoliation route currently being used by the Company in its other Talnode and graphene products.

The concentrate was refined into Li-ion anode material, purified via a Talga-proprietary chemical process, and tested at leading independent battery research centres in Europe and Japan. Key results of the tests include:

- Vittangi graphite produced a high concentrate grade of 95.1%Cg at a high recovery rate of 91%, at premium sub-10 micron graphite flake size.
- Graphite concentrates made from Jalkunen and Raitajärvi ore returned 87.2%Cg grade at a carbon recovery of 96% and 86.1%Cg grade at a carbon recovery of 94% respectively, before optimisation of grind size and flotation conditions specific for these samples.
- All concentrates were successfully refined to >99.5%C purity with low carbon losses, producing Li-ion anodes that exceeded commercial levels of performance in battery tests (capacity of up to 370mAh/g).
- Vittangi graphite has extraordinary physical properties that enable high yields of purified graphite for use in anode material production with graphite recovery of 88% to final anode product (Talnode-C).

Figure 2 Graphite grade vs recovery curves for the Vittangi, Jalkunen and Raitajärvi concentrate samples.



The product goal is to achieve premium performance battery anode material using graphite flake sizes of <10 micron, a premium priced anode product (Benchmark Minerals Graphite Price Assessment Mar 2019) commonly requiring energy intensive size-reduction and shaping process steps resulting in higher costs. Significantly it is common for flake graphite concentrates to lose approximately 50% mass during these size-reduction steps.

Talga's Vittangi graphite flakes are naturally close to the premium <10 micron flake size for high performance anodes, and does not require the same size-reduction process steps. The metallurgical test results confirm the final graphite recovery to be 88% to anode material, suggesting Vittangi can be globally competitive in anode production costs.

As part of the testing, Vittangi Talnode-C product also underwent extensive anode material development, including surface treatment and coating with Talga's technology partners in Japan. Production of a final coated version is in progress to support Talnode-C as a fully engineered anode material suitable for sale directly to battery manufacturers.

Conclusion and Next Steps

Talga's metallurgical consultants have provided an alternative processing flowsheet, based on the metallurgical results, identifying a number of additional benefits including potential reduction in capital requirements, operating costs and plant footprint.

The PFS will therefore be based on a staged development strategy that includes options for lower cost primary toll processing during the early stages of project development, the inclusion of an onsite concentrator at Vittangi as a primary stage and the construction of a Li-ion battery anode refinery at a nearby port facility.

To incorporate these development options, the proposed Vittangi project PFS is now scheduled for completion by end of April 2019.

The Jalkunen and Raitajärvi graphite resources will not be considered for inclusion in the Vittangi PFS. However, the test results support their future development potential for Li-ion battery anode production and, over time, these resources can be re-assessed as global energy storage markets continue to expand rapidly.

Parallel to the current PFS work, Talga continues to develop the Company's vertically integrated graphene and graphite supply chain to deliver advanced materials critical to developing sustainable and clean energy markets

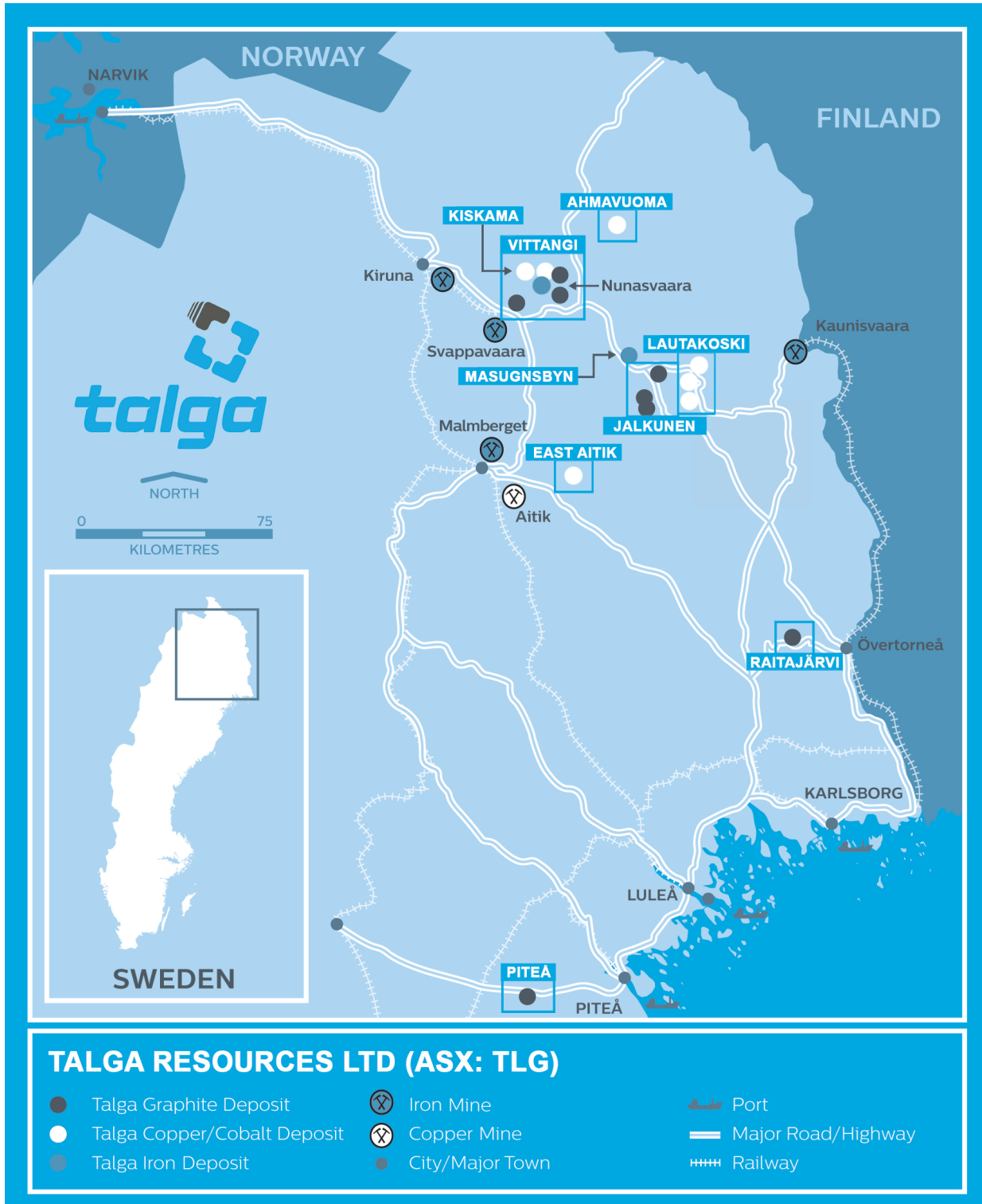
For further information please contact:

Mark Thompson
Managing Director
[Talga Resources Ltd](#)
T: +61 (0) 8 9481 6667

Nikki Löf
Marketing and Investor Relations Coordinator
[Talga Resources Ltd](#)
T: +61 (0) 8 9481 6667



Figure 3 Location map showing Talga graphite projects in northern Sweden.



Forward-Looking Statements

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About Talga

Talga Resources Ltd is an advanced materials technology company enabling stronger, lighter and more functional graphene and graphite enhanced products for the multi-billion dollar global battery, coatings, construction and composites markets. Talga has significant commercial advantages owing to its vertically integrated high grade Swedish graphite deposits and in-house process to product technology. Company website: www.talgaresources.com

