

26 September 2017

ASX Announcement

## Kibaran Produces Battery-Grade Graphite Using New Environmentally-Friendly Process

**Kibaran Resources Limited** (“Kibaran” or the “Company”) (ASX: KNL), is pleased to announce that it has made a major breakthrough in the production of battery-grade graphite at its Epanko Graphite Project (‘Epanko’), establishing the technical and economic success of a new process which eliminates the use of highly toxic chemicals.

### HIGHLIGHTS

- Ground-breaking graphite purification method uses non-toxic chemicals, eliminating the use of hydrofluoric acid
- The eco-friendly process is a result of significant testwork and the favourable mineralogy of the Epanko deposit
- New purification process flowsheet now being optimised to finalise operating costs
- Low capital and operating costs expected from the unique purification
- Patenting the purification process is being investigated
- Kibaran now in discussions with leading major anode manufacturers in China, Japan and Korea, with positive feedback received on the Epanko product properties

The new purification process uses simple acids that are readily available in Tanzania and does not use hydrofluoric (‘HF’) acid, which is currently used by all of producers of battery spherical graphite globally.

HF is a highly toxic and corrosive chemical due to the fluoride ion readily penetrating the skin, causing destruction of deep tissue layers and bone.

The eco-friendly production process supports the high environmental standards Kibaran has set for the Epanko, which meets International Finance Corporation (‘IFC’) principles and World Bank Group standards.

Kibaran believes an eco-friendly production process for battery-grade graphite will be a key future requirement from anode material and battery producers.

**Kibaran Managing Director Andrew Spinks said:** “The new process would assist the Company to secure a large portion of the battery graphite market.”

He also noted that the breakthrough came amid a strengthening outlook for natural flake graphite and battery spherical graphite prices on the back of:

- increasing anode manufacturing capacity being installed to meet the expected demand
- increasing prices due to environmental pressure being placed on graphite producers in China by their government for both natural flake graphite and synthetic graphite
- market shortage of high-quality battery-grade graphite

Based on direct feedback from the world’s leading major anode manufacturers, Kibaran is updating its demand model.

"It is very clear that growth for battery spherical graphite is increasing at a greater rate than expected," *Mr Spinks said*. "The Company's feasibility study for production of battery-grade graphite will be revised given the increased demand."

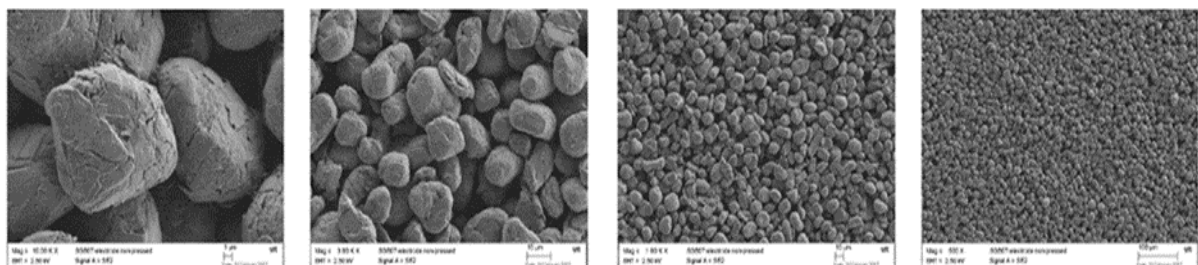
The Feasibility Study for production of battery spherical graphite is a separate study to the recently reported Epanko 60 ktpa bankable feasibility study, which has been the catalyst for the commencement of the debt financing process for the development of the mine to produce natural flake graphite products for the traditional graphite markets.

The spherical graphite feasibility study is now expected to be completed during Q4 2017 after optimisation work for the purification process and expanded production is finalised.

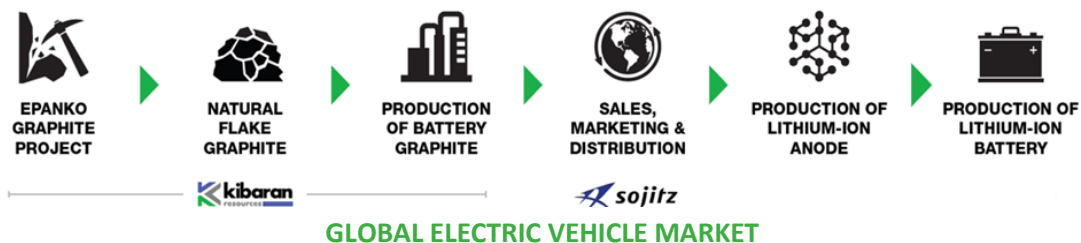
Completion of the feasibility study is expected to add significant value given no value is currently attributed for the sale of battery spherical graphite within the Epanko 60 ktpa bankable feasibility study financial model.

**Kibaran Managing Director Andrew Spinks said:** "Recent visits to the major anode manufacturers has allowed us to see first hand that the growth in battery spherical grade graphite and the demand for spherical graphite is much greater than expected. This, combined with all the recent announcements by major car manufacturers concerning the shift to electric vehicles, will be the lead to an even larger demand for graphite."

**Figure 1: Epanko spherical graphite at different magnification (from left: 10k, 3k, 1k, 500x)**



**Figure 2: Kibaran Strategy and supply chain to Global Electric Vehicle Market**



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