



Black Rock Mining Limited (BKT.AX) | Analyst: Jonathon Sharp

Update Report – Graphite demand from LIBs hits turning point and shortages loom

Price: A\$0.12; **Valuation:** A\$0.52 (previous A\$0.52) ; **Market Cap:** A\$113m

NEED TO KNOW

- 7–10X more graphite than lithium in an LIB by weight –but prices don't yet reflect likely future shortages
- Graphite demand is now >50% EV-related – a major inflection point
- **Stable graphite prices do not yet reflect likely future shortages:** Although battery demand has caused lithium prices to soar (+800%), graphite prices remain relatively stable. This is unexpected given that lithium-ion batteries (LIBs) contain 7-10X times more graphite, with the role of this mineral in LIBs often overlooked. The causes of this disparity are changing.
- **EV-related demand as a percentage of total graphite demand has crossed the 50% mark:** This is a significant inflection point for graphite prices, with the majority of demand coming from a high-growth, critical sector.
- **BKT's competitive advantages:** BKT is among the few publicly graphite listed companies globally that have been officially qualified by an anode producer, and notably, an anode producer outside of China: POSCO.

INVESTMENT THESIS

- **High-quality, shovel-ready flagship asset:** The Mahenge project, majority-owned by Black Rock (BKT), has a large graphite mineral resource of 213Mt at 7.8% TGC and the second-largest Ore Reserves worldwide. It can produce up to 350kt/year of high-quality graphite concentrate with minimal processing due to low impurities and large flake size.
- **Demand: batteries make up an increasing percentage of total graphite market, have hit a critical milestone:** Lithium prices soared in 2020/2021 as battery demand reached ~60% of the total market. In 2023, battery demand is projected to reach a critical turning point, comprising ~60% of the market and growing to 85% by 2030. As the proportion of battery demand relative to the total market demand increases, we anticipate increased upward pressure on natural flake prices.
- **Supply: optimistic forecasts don't paint full picture; product qualification is key:** By 2025, the year we expect BKT to be producing, we forecast the market will face a shortage of almost 500kt of graphite concentrate. While a scenario incorporating the expected ~20% CAGR in graphite demand for LIBs, the need for qualified product, and the preference for ex-China sources could lead to ~580kt natural graphite deficits by 2025.

VALUATION A\$0.52 (PREV:A\$0.52)

Our valuation has not changed and is based risked NPV of the Mahenge Project. We applied a conservative 65% risk weighting to account for outstanding project risks (financing, construction, commissioning) and dilution for a A\$141m equity raise at A\$0.20/share to fund BKT's equity contribution to the project (we assume 50:50 debt and equity).

RISKS

Key risks include inability to access funding, project delays, escalation in capital costs, a fall in the graphite price, inability to sell large flake into the high-value markets, and continuity of key persons.

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