



Mining Morning News

Mirabaud Securities

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Cradle Resources (CXX AU, A\$0.17, Mkt Cap A\$22m – Speculative Buy, valuation A\$0.50) – resource update supports scoping study and points towards a positive prefeasibility study

Cradle today reports an updated resource estimate following an in-fill drilling program at its Panda Hill niobium project in Tanzania. The Phase 1 in-fill drilling campaign (June – October) has completed a total of 72 holes (for 9,365m) on a 50m x 100m drilling grid (from 100m x 100m previously).

Today's resource update has not only resulted in an upgrade of confidence levels by increasing the indicated category (44% of total resources vs. 8% calculated in October 2013, which was based upon assay results from 13 Cradle-drilled holes and 96 historical drill holes), but has also increased the average grade (to 0.52% Nb₂O₅ from 0.47% Nb₂O₅ previously) and the tonnage of the key primary carbonatite ore (the main target mineralisation), while capturing at the same time material for more detailed metallurgical modelling.

Resource update indicates primary carbonatite material

Current resources total 96.3Mt at 0.52% Nb₂O₅ for 504kt of contained Nb₂O₅ (Niobium occurs as an oxide), an increase of 19% compared with previous (2013) resources of 423kt (81.8Mt at 0.52% Nb₂O₅). This is primarily a result of an increase in tonnage (~18% to 96.3Mt) in the key primary carbonatite material (~24% to 88.4Mt from 71.1Mt previously), partly due to a depth extension of mineralisation, particularly in the Angel Zone, which falls within an early stage conceptual open-pit, based on the company's preliminary pit optimisations. The Angel zone hosts a deep and wide high-grade core to the deposit which is likely to be an attractive starter pit. The identification of such a higher-grade zone, in our view, not only improves the quality and the economics of the deposit which enhances its ability to compete with the established producers.

Beyond the increase in tonnage, of high importance is the upgrade of a big part of current. The drilling programme has succeeded to upgrade a big portion of the previously largely inferred-category resources (~93% of total resources), to the indicated status (thereby allowing better optimisation of the scoping-study production schedule) which now accounts for ~45% (41Mt at 0.54% Nb₂O₅ for 223kt Nb₂O₅) of total resources.

We see as positive the increase in both grade and tonnage of the primary carbonatite material (> 90% of the current total JORC resource vs. 80% previously), since the overlying weathered material generally has poorer recoveries (particularly the oxidised carbonatite and limonitic clays). The company today advises that the weathered material, due to its poorer recoverability, will not play a significant role in the initial mining schedule.

The Phase 2 in-fill drilling program (for 6,000m of RC and 1,800m of DD), which commenced in early November, is targeting the recently discovered higher-grade southern region (Angel Zone) for measured resources, which should result in a further improvement in resource confidence. This has been completed and will form part of the definite feasibility study.

We note that the deposit is still open at depth; while it has been sporadically drilled towards mainly the north and the west (only one third of the carbonatite outcrop has been tested).

Based on Cradle's Scoping Study for Panda Hill (early 2014), the company has demonstrated the potential to build a 2Mtpa open-pit (low-strip – 0.4:1) operation for an initial capex of US\$185m (incl. US\$30m contingency), at average on-site cash costs of US\$17/kg (in today's money), total cash costs (inclusive of royalties, marketing and transport costs) of just over US\$19/kg, and an average annual Niobium production of 4.8ktpa over a 28 year mine life, based on the scoping study optimised pit shell of 58Mt (mill feed) at 0.56% Nb₂O₅. Assuming a niobium price of US\$40/kg, around the market average price over the past 12 months, we estimate that this could generate operational cash flow of >US\$100m pa (100% basis) in the initial years, a margin of over 50%.

We believe that today's results when incorporated in the pre-feasibility study (will be published later in Q1 2015) will further enhance project economics primarily due to the tonnage increase in the higher recoverability primary carbonatite ore.

We reiterate our SPECULATIVE BUY recommendation, which now comes at a ~200% upside to the current share price.

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