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ASX Release

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## POSITIVE METALLURGY RESULTS ON WEATHERED MATERIAL

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### Highlights

- **Mineralogy on weathered material show good liberation of niobium minerals**
- **Preliminary flotation tests on weathered material indicates good recoveries**

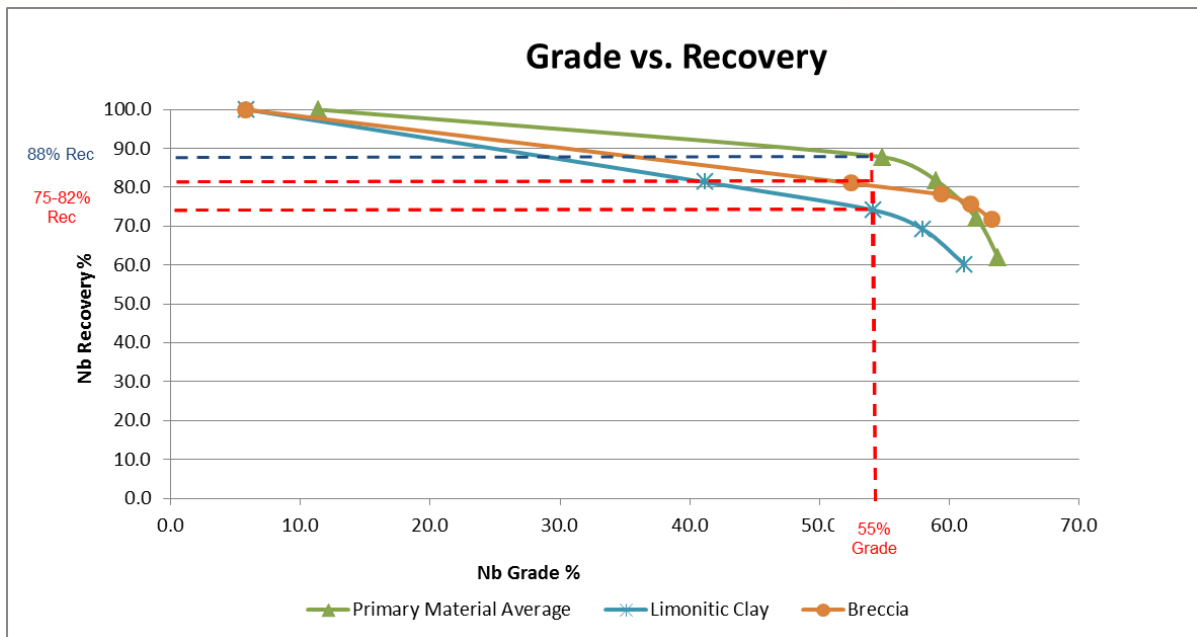
Cradle Resources Limited (ASX: CXX, CXXO) is pleased to announce that results from the mineralogy testwork carried out at SGS Lakefield (Canada) on samples from the weathered cap at Panda Hill have met expectations, and indicate the potential for good niobium recoveries and concentrate grade.

The work undertaken has shown that the secondary weathered material types have well liberated niobium minerals at relatively coarse grinds, in line with the results seen for the fresh material (primary ore). The implication is that these minerals should produce a high grade concentrate with reasonable recoveries. In addition, the process flowsheet for these materials should be similar to that for the primary ores.

The weathered cap consists of a combination of breccias, oxidised carbonatites, and limonitic clay types. Figure 1 (below) shows that the maximum potential niobium recovery in the flotation circuit, at a 55% Nb<sub>2</sub>O<sub>5</sub> grade, is between 75% and 82%, compared to the average for the fresh ore at 88%. We note that desliming and other parts of the circuit are anticipated to cost about 20% in recovery in weathered material. Existing Nb producers are recovering about 50 to 60 percent overall in weathered material so our mineralogy results are in line with this.

Flotation testwork on the weathered samples has started and the first open circuit batch test for the breccia sample has indicated that better than expected recoveries of between 60 and 70 percent overall are achievable in this ore type. The breccia materials make up 30% of the weathered material in the resource. The other weathered materials are not expected to recover as well as the breccia, however, this result is encouraging for the likely average recovery of the combined weathered material. Flotation work on the other weathered materials will be one of the focuses of the project team going forward.

Grant Davey, the Managing Director of Cradle, commented *“These are excellent results, particularly as the high grade weathered materials are generally on surface and could be mined and treated first. The mineralogy work has previously shown good correlation with the flotation testwork and I am confident that we shall see positive metallurgical results for the weathered materials as we continue with the development work. The project economics have the potential to be boosted by the ability to treat high grade materials upfront, confirming Panda Hill as a world class niobium resource.”*



**Figure 1: Potential Nb<sub>2</sub>O<sub>5</sub> Grade – Recovery Curves based on Quantitative Mineralogy for a P80 Grind Size of ~200um**

For further information, please visit [www.cradleresources.com.au](http://www.cradleresources.com.au) or contact:

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### Background

The Panda Hill Project is located in the Mbeya region in south western Tanzania, approximately 650km west of the capital Dar es Salam. The industrial city of Mbeya is situated only 35km from the Project area and will be a significant service and logistics centre for the Project. Mbeya has a population of approximately 280,000 people and is located on the main highway to Dar es Salam. A recently completed international airport is located close by.

The Project is covered by three granted Mining Licenses totaling 22.1km<sup>2</sup>. This, along with the existing roads, rail, airport and power which are all available in close proximity to the Project area, will enable a quick transition from the study and development phases to an operating plant. The three granted Mining Licenses are due for renewal in November 2016 and under Tanzanian mining legislation can be renewed for a further 10 year period on completion of the approved programs of work within the Project.