

## **Tales of Tails: Values from Liabilities?**

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### **TALES OF TAILS: VALUES FROM LIABILITIES?**

Processing of tailings has been a recurring theme throughout the modern history of mineral processing. There are various factors driving the reclamation and treatment of the tailings of previous operations. One can be the introduction of a new technology as was the case at the beginning of the 20th century when cyanidation rapidly replaced amalgamation as the predominant method of recovering gold. A second factor can be demand for an element or mineral in the tailings that was not previously targeted by the initial treatment process e.g. extraction of uranium from gold tailings. A sustained rise in a commodity price can also prompt the recovery of a mineral or element in tailings such as has been recently seen with the recovery of cobalt from copper tailings in Central Africa is a third reason driving tailings treatment. A final factor can be recognition of the environmental benefits of reprocessing and repurposing such as elimination of acid mine drainage issues.

This paper discusses aspects and presents case studies of the economic recovery values and environmental benefits that arise from tailings treatment. For beginners in the field it proposes several cautionary but important "tests" to consider as a counter to the implicit hubris of "we're smarter/we'll try harder and therefore do better than the previous operators" which is sometimes encountered. These tests are (a) will the processing of tailings use a different mineral separation/extraction technology than the previous operation; (b) is the treatment of tailings making a different product; (c) is there an assured market for the product, and (d) is there an environmental benefit to treating the tailings?