

# Kidd Copper Tailing Site – Reclamation New Meaning

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## Summary

The Kidd Copper site is located directly southwest of Sudbury, and the mine actually sits on a mineral intrusion. The significance of the Kidd Copper mine tailings (slag) site is that three steps of sediment deposits are recorded in its history from 1960--1970.

## Introduction

The *ā•Ūœ* is the initial slag deposits of hot liquid from the slag pots in the 1960's. During this time a daily accumulation of slag was deposited on the ground surface layer, in the upper and lower zones of transition. The *•^& } āĀœ* is during the early 1970's, when the retaining dam at the southeast corner breaks, creating an upsurge of deposits water, which overflows the tailings. Sand, liquid water and the mine tailings (slag) mix in random order due to the velocity of the water overflow. The *œĀĀœ* is approximately one week after the break in the dam. The water-mixed sediments settled onto the ground surface. The redeposited sediments are the sediments that were observed *āĀœ* on the Kidd Copper property and are the focus of this presentation.

## Theory and/or Method

"In 1966 Kidd Copper commenced the construction of a 1000 tpd mill and commenced mining and milling in 1967 producing approximately 250,000 tons of ore prior to mining being concluded in 1968" (Article [2], 2008, J Ē ā.). The Kidd Copper property continued its operation until ~1970's when the dam broke and the waste site was stopped. "Abandoned mine sites can be extremely dangerous places" (Umpherson, Bennett, & Webb, 1991, p. 34). On August 30, 2004 students from Geo3Fe3 McMaster University's school of Geography and Geology Field Camp take a photograph while they observe the surface of the Kidd Copper Property. With written permission slips data collected from their Forestry Supplier's Field Books was given to Loreen (Rudd) Sherman and stored for John MacLachlan to mark. The data assembled included: material, records, sketch maps, statements or log entries that were recorded within each student's entries. This information was collected blindly and without any prejudice. Loreen picked up the books in the GSB lab at 2:30 pm on Friday, October 15, 2004. Loreen photocopied the entries within sight of Susan Vajoczki (Burke Science Building 313); and Susan photocopied Loreen's entries so that no tampering with data could be accused. Secondary research was conducted from ~150 sources spanning a six-year period.

Note: The use of personal or brand names in this presentation is for identification purposes only and does not constitute endorsement by the named subjects or McMaster University on the subject matter presented.

## Examples

(1) The site is a well-known study area; (2) The site area has remained inactive; (3) The collected data was found in a natural state in a primary depositional structure over 85-90% of the impoundment area of mine tailings.

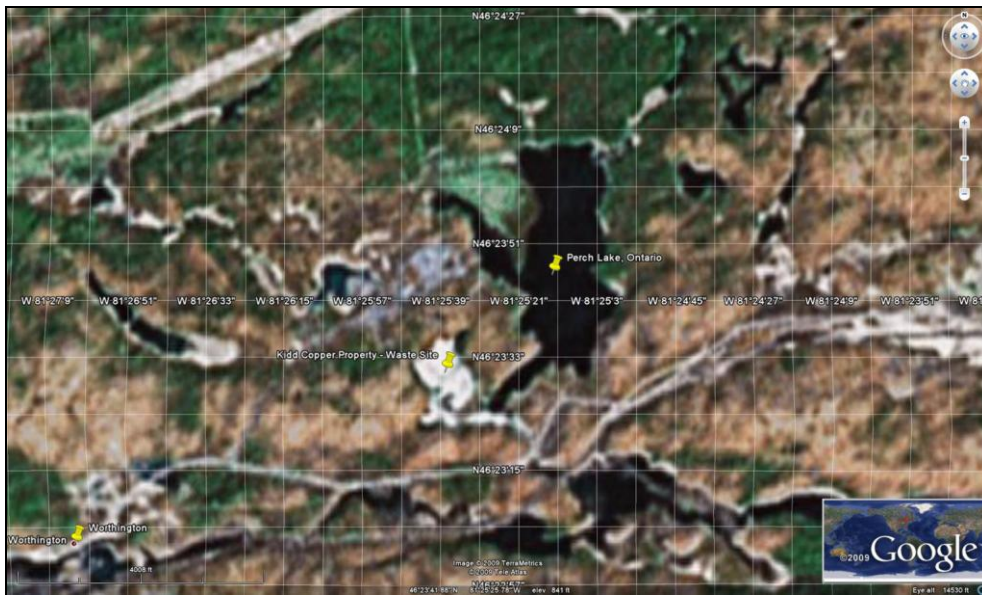


Figure 1 - Section 1.2: Geographic Coordinates for Kidd Copper Property, cite Google Earth, 2009

## Conclusions

Spherical grains, water-laid strata and turbulent flows discussed in this presentation capture new ideas to the meaning of 'reclamation'. Within a historically recorded sequence distinct depositional phases in a short period enlighten geologists with new ways to correlate rock stratigraphy and classify alternate banding.

## Acknowledgements

Much thanks and appreciation is extended to Andy Weller for his contribution to the collection of the photographs taken on August 30, 2004 (without his knowledge to the direction or conclusion of the study). He blindly allowed the author the use of the photographs and the author is very appreciative of his gift. Derrick Li is another photographer who captured the shot of the first shovel without realizing the implication of this report. Thanks Derrick. The shovel exposes stratified layers contrary to the expected outcome of the Law of superposition. Topographic maps were provided for this study by Calgary's Map Town with complete cooperation by Paul Hopkins on March 4, 2009, who is a credit to cartographers. A special acknowledgement is extended to my husband, Paul Whittington Sherman, for the graphics, encouragement and hours of formatting and proofreading which helped immensely. If, despite the best efforts of those that have offered help, errors, omissions, or other problems remain, they are the author's sole responsibility.

## References

- Article [2]. (2008). Crowflight Minerals Inc.. Sudbury Basin: AER Kidd Property – Friday [Online]. Retrieved March 27, 2008, from <http://www.crowflight.com/s/SudburyBasin.asp>.
- Umpherson, D., Bennett, D., and Webb, J.R., (1991). *Bush Safety in Mineral Exploration; Ontario Ministry of Northern Development and Mines*, Education Series No. 2,73p. Ontario: Queen's Printer for Ontario.