

**Till stratigraphy at the Dead Creek Pb-Zn-quartz float occurrence,  
southwestern New Brunswick: indications for a local source**

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The Dead Creek float occurrence comprises several dozen angular, mineralized quartz boulders concentrated in a surface area of only a few hundred square metres. One, collected by prospector Don Ward in 1994, contained 47% Pb, 7.24% Zn, and 0.028 oz./ton Au. Since the float occurs in association with boulders of Oak Mountain Formation volcanics and Benton Granodiorite (outcropping ~7.5 and 11 km to the north of the occurrence, respectively), the source was considered as most probably local.

To better understand the depositional processes in the area, a pit was hand dug to bedrock adjacent to one of the mineralized boulders. The pit exposed ~1 m of dense, silty basal till containing 4% quartz pebbles, overlying 0.6 m of

moderately dense, gravelly deformation till containing 29% quartz or quartz-metasediment pebbles. Three mineralized quartz cobbles and three pyritiferous metasediment cobbles were also recovered from the deformation till. The deformation till is anomalous in Au, As, Cu, Pb, Zn, Co, Sb, Sc, and Eu, and threshold in Ni, Mn, W, Lu, and Sm. The underlying bedrock, vertically-dipping weathered siltstone, is anomalous in Pb, Zn, Sc, and threshold in Co, Cr, and Ni. The presence of mineralized clasts in the deformation till and anomalous Pb and Zn in the bedrock strongly suggest that the mineralized float is of local origin. The probable source area is beneath the large bog immediately to the north-northeast.