

Preliminary Assessment of Tills at Kemptville, Yarmouth County, and Moose River and Lake Catcha, Halifax County, as Placer Gold Ore Sources

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Following assessment of till material as a possible source of placer gold in 2004 at Tangier, Nova Scotia, preliminary assessment of tills at several Nova Scotian sites took place during the 2005 field season. These sites were the Lake Catcha and Moose River gold districts, Halifax County, and the Kemptville gold district, Yarmouth County. For these three sites, it was decided to take relatively large samples, consisting of as close to 5 cubic metres as possible, and concentrate them in a sluice on-site. In each case, a sample of 4.8 cubic metres was taken. A Long-Tom sluice consisting of a 0.5 m wide by 3 m long run lined with v-ribbed rubber matting underlying three sizes of expanded metal, 1 m long each, lying end to end, concentrated the samples. The sluice was set up with a rise to run aspect of 7.5 cm/m and a water flow of 50 gal./min. Head and tailings samples were taken as well as sluiced concentrates.

At Lake Catcha, the sample site did not access the local (Beaver River) till and sampled a hybrid till with some aspects of the Beaver River till but consisting mainly of the more foreign Lawrencetown till. The sample was taken over known, well enriched veins, yet there was little quartz material on the oversize spoilage and little colour returned in the sluice. This is still considered to be a good site for further evaluation, if a more localized till can be accessed at the site.

The other sample sites were more successful. At Kemptville, the sample was taken from a source previously sampled and known to return gold. On analysis the site returned a head grade of almost 0.5 gram/ton (490 ppb) in a thick, voluminous till. This site lies close to several known gold-producing quartz veins, which exist within a massive shear zone transecting the Kemptville gold district. On preliminary inspection, this site appears to be ore-grade placer material. Preliminary work is progressing at the site to determine further grades and volumes.

Till at Moose River was sampled close to the Moose River Touquoy pit. This pit was sampled in the 1980s close to zones worked by Touquoy in the 1880s. The overburden tested was originally stripped off the pit site when it was excavated. Touquoy described the till at Moose River as ore grade (approximately 2.5 grams/ton) and ran a successful test of it as well. It is believed the sample for the 2005 test came close to his original site. Visual inspection of gold returned in the sluice at clean-up revealed a very good return consisting of small delicate grains up to 0.5 cm long, many small sand sized and slightly larger nuggets, and flour gold in the rubber matting.

Further evaluation of the sites at Kemptville and Moose River will continue. Valuable placer deposits may exist at these sites. In the case of Moose River, the site is within the boundaries of a newly proposed open pit mine. Should this proposed development go forward, it is conceivable the mine's bottom line may increase with a small wash plant added to the mill circuit in order to exploit this resource, separating gold from overburden as the site is prepared for removal of bedrock.