From the Mineral Inventory Files

Duelling Banjos on the Stewiacke

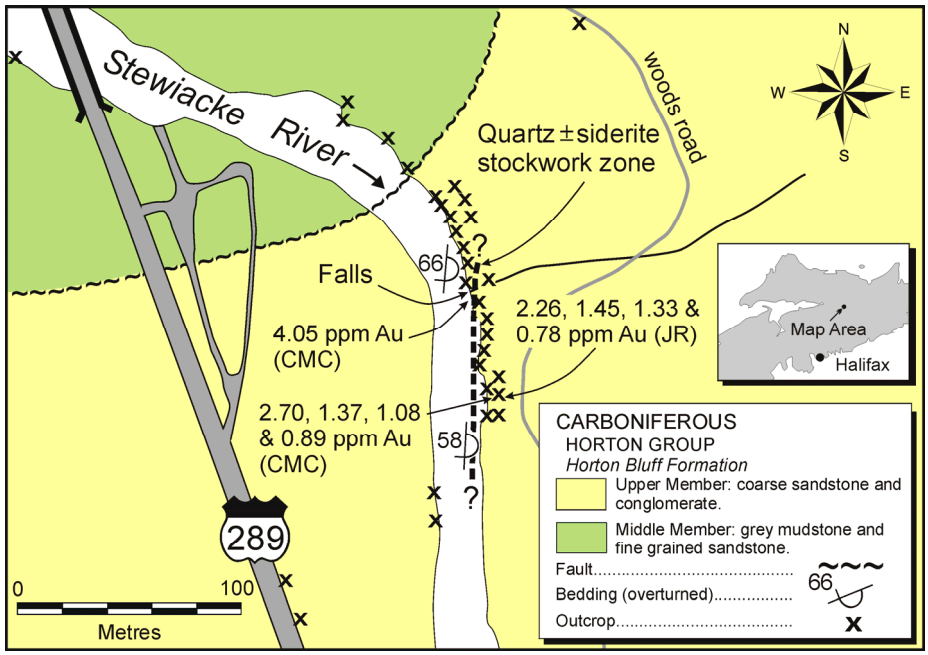

***Figure 1**. Map of the Stewiacke River gold prospect showing locations of gold-bearing samples obtained by Caledonia Mining Corporation (CMC) and Joe Richman (JR).*

An interesting gold prospect is exposed in Carboniferous sedimentary rocks of the Horton Group on the Stewiacke River near its headwaters in southeast Colchester County (Fig. 1). Located 4 km north of Eastville on Highway #289, the occurrence was discovered in 1994 by Caledonia Mining Corporation (CMC) of Scotland during regional exploration for paleoplacer gold deposits. CMC focused its exploration on the Horton Group in the St. Marys Graben, an east-west, fault-bounded basin that dominates central Nova Scotia.

Horton Group sediments host several paleoplacer gold deposits (see *Nova Scotia Minerals Update, vol. 9*) and three actually produced gold, most notably 2,268 oz. from the Coldstream, or Gays River deposit, just northeast of Shubenacadie. Sediments of the Horton Group have the two prime ingredients thought necessary for paleoplacer gold: (1) a suitable sedimentary host rock (Horton Group) and (2) a source of gold, the abundant gold-bearing lode deposits of the Meguma Group, from which the sediment was derived.

In 1994 CMC discovered a sample on the Stewiacke River with an anomalous gold concentration. Follow-up exploration revealed five more anomalous samples, with the highest returning 4.05 ppm gold (DNR Assessment Report ME-1996-060; Fig. 1). Since CMC was interested in paleoplacer deposits, the company concentrated on sampling coarse-grained units such as pebble-bearing arenites and quartz-pebble conglomerates (Fig. 2). Even though its exploration results were promising, CMC surprisingly elected to abandon its Nova Scotia exploration play. The property was again examined in 2000 by local prospector Joe Richman, who found similar gold concentrations in the same units sampled by CMC (Fig. 1).

Anyone visiting the Stewiacke River property will probably note that, even though there are promising paleoplacer host rocks such as quartz-pebble conglomerates (Fig. 2B), there has also been considerable deformation and hydrothermal alteration of the rocks and injection of quartz-siderite stockwork zones (Fig. 2A). This alteration was noted by CMC geologists, who wondered if the gold there might actually be epithermal in origin and related to alteration rather than being mechanically deposited as a paleoplacer. In addition, it was found that the samples with elevated gold were not always obtained from the most attractive paleoplacer units, such as the quartz pebble conglomerates. Instead, the higher concentrations were found in coarse sandy units. In any event, it remains to be demonstrated just how, and within which units, the gold occurs. Whatever the origin, the site demonstrates a potential for similar deposits throughout the Horton Group.

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***Figure 2**. (A) Quartz-siderite alteration zone and (B) quartz pebble conglomerate at the Stewiacke River gold prospect.*