

# From the Mineral Inventory Files

## Greenfield Placer Gold: an Orphan Looking for a Home

Gold occurrences that do not readily fit into any particular mineral deposit type (termed 'orphans') have always been of special interest to me. One such orphan occupies the back woods of southeastern Kings County at Greenfield, about 15 km up the Halfway River from Hantsport (Fig. 1). This poor orphan doesn't even have a consistent name: it has also been called the Pencil Brook placer and the Gold Brook placer.

There is very little information on the prospect in DNR's exploration assessment files. The only meaningful report was made by J. R. Hea who, in the 1861 Mines Report, described a visit he made to the site after a friend showed him a sample of gold-bearing sediment supposedly collected there. Hea wrote: "Yesterday I visited the locality, and found that with little labour, and the roughest appliances, gold was really to be had. A dozen or more of persons were at work during parts of the day, washing sand and soil in ordinary tin pans, and there was one regular cradle or rocker on the ground. In order to satisfy myself fully, I collected a panful of the material, and found seven small pieces of gold. I afterwards washed another, and obtained five pieces and during the time I was there, scarcely a panful was washed that did not contain more or less of the precious metal. It is in small particles or scales, similar to that of Lunenburg (the Ovens), but of a lighter colour and probably containing more silver. The largest piece obtained during the three or four hours I was there was found by myself in the second washing, and weighed fourteen grams. The gold is procured by washing the sand or soil overlying the rocky bed, and on breaking apart the rock itself, small particles are found in the crevices, very much as at Lunenburg. The quartz veins in the neighbourhood, and from which the gold doubtless came in the first place, are contained in slates similar to those of Lunenburg, with occasional dykes of igneous rocks, and are of remarkable uniformity in thickness and regularity in direction. It is said that

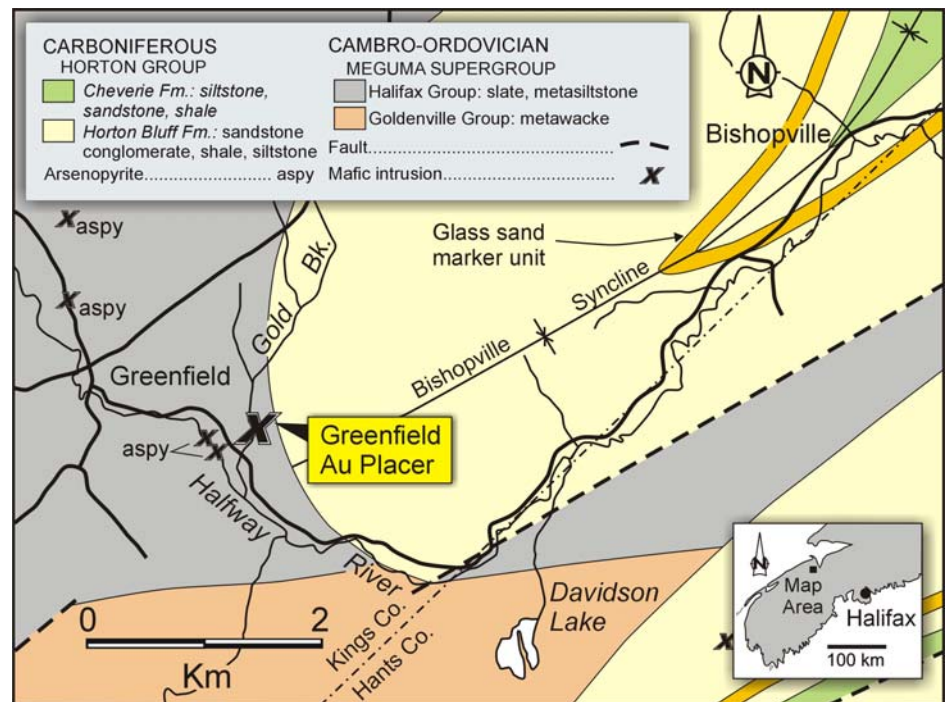


Figure 1. Local geology in the area of the Greenfield gold placer, Kings County.

specimens of gold have been found in the quartz, though I have not seen them. In the immediate vicinity of the washings I found specimens, in loco, of calcareous spar and barite."

Since that time there has been no concerted exploration of the site. In a field check of the occurrence in 1998, colleague Ron Mills and I noted many overgrown trenches and pits along almost 100 m of Gold Brook (Pencil Brook on old maps), starting about 275 m upstream of the bridge. It's obvious that the early work had focused on the glacial drift adjacent to the stream, but also important to note that pyrite-bearing quartz rubble abounds in several of the trenches, along the brook, and along the nearby woods roads. In addition, several bedding-discordant quartz veins intrude the local Halifax Group slate. Although Hea refers to this quartz as auriferous, this has never been confirmed. One thing is certain: there is gold at this site. During the 1998 visit, Mills managed to extract an impressive nugget of gold from a frac-

ture in the slate of the stream bed. Just last month, gold was obtained in a few of the pans during a Nova Scotia Prospectors Association field trip to the prospect (see p. 7).

Two observations particularly caught my eye in 1998. The first was the location of the gold placer activity within a zone of pronounced carbonate alteration associated with one or more small mafic dykes that intrude Halifax Group slate along a northeast-trending crumple or fault. This structure is revealed by a sudden and marked change in bedding orientation from steeply dipping toward the south on one side of the crumple to shallow dipping toward the north on the other. The second is that along strike to the west of the prospect are found two arsenopyrite-bearing mafic intrusions in the Halifax Group along Halfway River (Fig. 1). Only further exploration will determine the nature of this occurrence, and perhaps finally provide this poor orphan with a home.

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