From the Mineral Inventory Files

Walter Henry Prest: a Nova Scotia Prospecting Pioneer

Nova Scotia has produced geologists and prospectors of international acclaim, including the likes of Sir William Dawson, President of McGill University, his son George Dawson, first Director of the Geological Survey of Canada, Robert Henderson, co-discoverer of the Klondike, and Edmund Horne, discoverer of the Rouyn-Noranda base-metal deposits and founder of Noranda Inc. There is another native son who belongs on the list: Walter Henry Prest. Prest was born in Spry Harbour in 1856 and died in Halifax in 1920. Like many scientists of his day, Prest wore several hats: he was a prospector, surficial geologist and botanist, all stemming from his love of the outdoors. He authored several books and pamphlets, but it is his innovative work on prospecting for gold in glaciated terrains for which he deserves most acclaim, especially a study he carried out at Blockhouse, Lunenburg County, in 1896.

Blockhouse was a small gold producer (1,788 oz. reported) with an interesting history. Very rich Au-bearing drift was discovered near Blockhouse in 1894 (Fig. 1). Over the following 12 years several prospecting attempts failed to determine the Au source. These used the conventional wisdom that the province's Au-bearing veins are interbedded and oriented east-west, so one simply trenches north from a location of Au-bearing drift to find the source veins. This clearly was not working at Blockhouse and, in fact, one N-S trench was dug just over 1 m from what was eventually discovered by Prest to be the source of the Au at Blockhouse, a N-striking quartz fissure vein.

William Prest, because of his good reputation, was contracted in 1896 to take over the search. The first thing he did was study the character of the Au-bearing quartz boulders, concluding that their source was a fissure vein. He then established the direction of glacial transport to be toward the southeast and laid out two lines of three timbered pits to bedrock (shown in the area of the B on Fig. 1). He then panned the till profile in the pits and found five of the six had Au-bearing drift and, importantly, the rich drift occurred in the top third of the profiles. Continuing up-ice (northwest) he dug three more pits across strike of the ice-flow direction, and in these found that two contained Au and the other was barren. This, together with the distribution of Au in the first six pits, established the width of the "Au plume" in the glacial till (Fig. 1). Continuing toward the northwest with more pits, he followed the Au plume and also determined it was descending down through the till profile until it finally reached the till bedrock interface some 200 m NW of where his prospecting program began. In short order the source of the Au-bearing quartz was found, a rich Au-bearing shoot along a N-trending quartz fissure vein. In recognition of Prest, the vein was named the Prest Fissure Vein and became the district's most prolific Au producer.

Prest documented his systematic drift prospecting approach in the Journal of the Nova Scotia Institute of Science in 1896. For this Prest may be deserving of global acclaim as some years ago now retired DNR surficial geologist Ralph Stea carried out a literature search and determined that the Prest paper may be the first published documentation of a drift prospecting program. Prest again summarized this study in his book *Gold Fields of Nova Scotia, a Prospectors Handbook* published by the Industrial Publishing Co. Ltd., Halifax, in 1915. A must-read for any serious prospector, especially those in Nova Scotia, this book is rare but is readily available online free of charge as a PDF via a simple Google search. One can tell by Prest's comments and writing style that he was a colourful individual, quick to denigrate "greenhorns," but clearly a strong advocate of the mining industry in Nova Scotia. We could use a few more like him.

G. A. O'Reilly

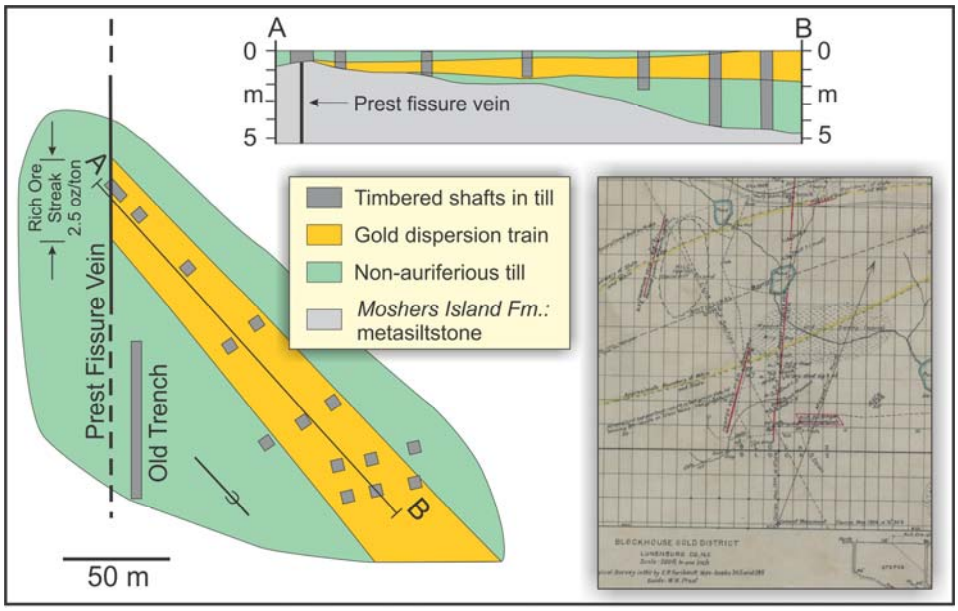

Figure 1. *Diagram of a drift-prospecting program carried out by W. H. Prest in Blockhouse in 1896. Inset map is E. R. Faribault's 1911 map of the Blockhouse Gold District.*