From the Mineral Inventory Files

If Dominique Boudreau Had Only Known What He Actually Found

Sometime around 1900, Dominique Boudreau of Plymouth, Yarmouth County, found galena-bearing quartz boulders in the woods near his home. Mr. Boudreau, like many novices, believed that mineralized quartz veins meant gold, so he prospected the site as a lead-gold property, even though nobody, then or since, has ever been able to confirm the presence of gold in the veins. Within short order, trenching and a 10 m deep shaft had unearthed six quartz veins intruding blue-black slate and greenish quartzite. The property became known as the Dominique Pb-Au Prospect although, in reality, Au should not have been included.

Too bad Mr. Boudreau didn't know what he had actually located. In 1976 the keen eye of successful Maritme prospector Merton Stewert (Millmore Syndicate) entered the picture. They discovered metasediment boulders richly mineralized with Sn, Zn, Cu, Pb and Ag in the numerous gravel pits between Plymouth and Wedgeport (Fig. 1). Further prospecting revealed abundant mineralized boulders of metasediment and granite over a large area. Millmore Syndicate recognized that it had discovered a style of tin mineralization not previously known in Nova Scotia, or North America for that matter. As a result, it staked the entire Wedgeport-Yarmouth region. Millmore optioned the ground to Shell Canada Resources Limited in 1977 and by 1978 three separate sites of tin mineralization were found within and adjacent to the Carboniferous Wedgeport Pluton (Fig. 1).

The northernmost of these sites included the old Dominique Prospect, and it was further discovered that veins there were just a small part of a larger mineralized area extending east to the salt marshes of the Tusket River estuary. Shell geologists retained the Dominique name, but corrected the elemental assemblage to what is actually present in abundance: Sn-Zn-Cu. Shell exploration at Dominique continued into 1979 but, by then, discovery of the tin deposit at East Kemptville 50 km to the northeast resulted essentially in total abandonment of the Dominique project. Dominique lay dormant until 1991 when the Department of Natural Resources carried out a four-hole diamond-drill program on the site. It was at this time that anomalous levels of Indium (In) (up to 90 ppm) were found within the mineralized zones, and a strong correlation between In and Zn was noted. This feature was again examined and verified in 1997 when Votix Corporation Limited acquired the property and drilled three additional diamond-drill holes.

In total, approximately 48 diamond-drill holes have been drilled at Dominique. The drilling has intersected three east-trending zones of metasediment-hosted Sn mineralization consisting of many-metre-thick zones containing hundreds of ppm Sn, and metre-scale zones containing on the order of 1-2 % Sn. The mineralized zones have associated pyrrhotite-chlorite-carbonate-garnet alteration, and occur in three main styles: (1) along easterly-trending shear zones; (2) as replacement of calcareous wacke adjacent to the shear zones; and (3) in stratabound and discordant quartz-carbonate veins. Along with cassiterite, the mineralized zones carry considerable pyrrhotite, sphalerite (up to 6.7% Zn), chalcopyrite (up to 0.3% Cu) and minor amounts of arsenopyrite and galena (up to 4.9% Pb). The strong structural control of the mineralization and its association with large amounts of sulphide, make standard geophysical techniques successful in defining mineralized zones. Given that the Dominique project, and other sites of tin mineralization in the Wedgeport area, were abandoned after only a couple of years of exploration, the full mineral potential of the area has yet to be examined. One can only wonder what would have happened if Dominique Boudreau had known what was really on his land way back when.

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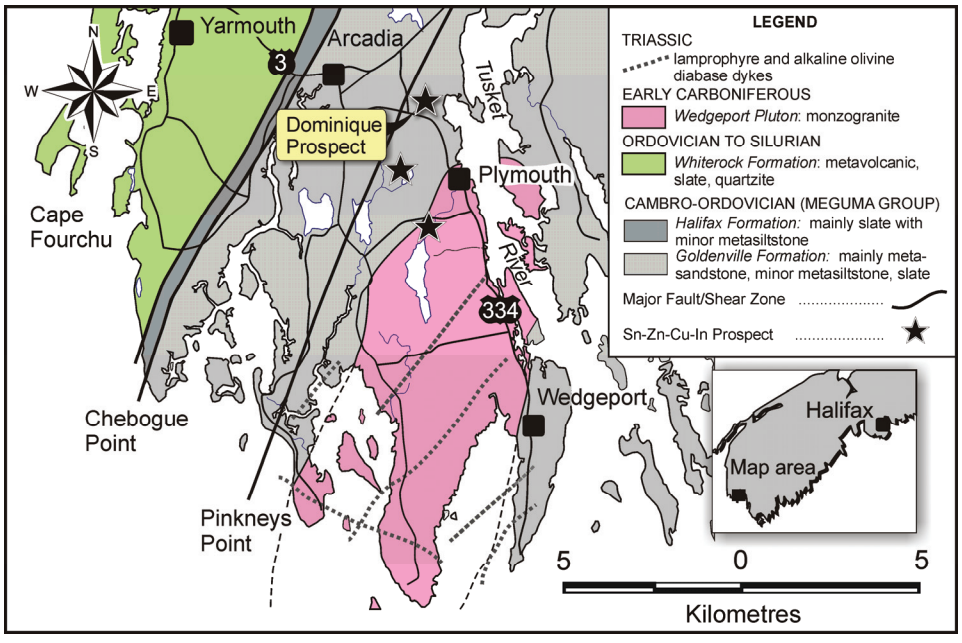

***Figure 1**. Geological map of the southwestern tip of Nova Scotia, showing locations of Sn-Zn-Cu-In prospects in the Yarmouth-Wedgeport area.*