

# From the Mineral Inventory Files

## The Southwest Nova Scotia Tin Domain is a New Kid on the Block

In 1976, noted Maritime prospector Merton Stewart discovered boulders rich in tin (Sn) and base metals in the Wedgeport area near Yarmouth. Follow-up exploration by Shell Canada Resources Ltd. in 1977 led to the discovery of numerous granite- and metasediment-hosted Sn and base metal occurrences, most notably the Dominique Sn-Zn-Cu-In prospect (see *Minerals Update*, v. 22, no. 2). In addition, regional prospecting and till geochemical programs carried out by Shell Canada throughout southwest Nova Scotia revealed several other areas with anomalous Sn, most notably in the westernmost portions of the South Mountain Batholith (Fig. 1).

By the end of 1978 the verdict was in: there was something special going on in southwest Nova Scotia. Exploration had led to the discovery of one substantial greisen-hosted mineral deposit (East Kemptville Sn-Cu-Zn-Ag deposit; *Minerals Update*, v. 29, no. 4) and dozens of smaller, granite-hosted greisen deposits and metasediment-hosted shear- and replacement-style Sn-Cu-Zn-Pb-In deposits (Fig. 1). These mineralization styles were previously unknown in North America; better analogies are found in the Sn-W producing regions of Eastern Europe (Erzgebirge) and Cornwall (UK).

From 1979-1983, exploration in the southwest region, as well as throughout the province's central and eastern mainland granites, turned up even more interesting Sn-W prospects. Several of these received significant exploration, for example the Duck Pond and Pearl Lake Sn-Cu-Zn-In prospects, the Caledonia Sn-W prospect (*The Geological Record*, v. 2, no. 2), the Long Lake Mo-W-Cu prospect (*Minerals Update*, v. 28, no. 2) and Cowan Mill Pond W-Mo-Cu prospect (*Minerals Update*, v. 30, no. 1). To top it off, the East Kemptville deposit was purchased by Rio Algom and mined from 1985-1992. In 1983, A. K. Chatterjee of the former Nova Scotia Department of Mines and Energy assigned the tin

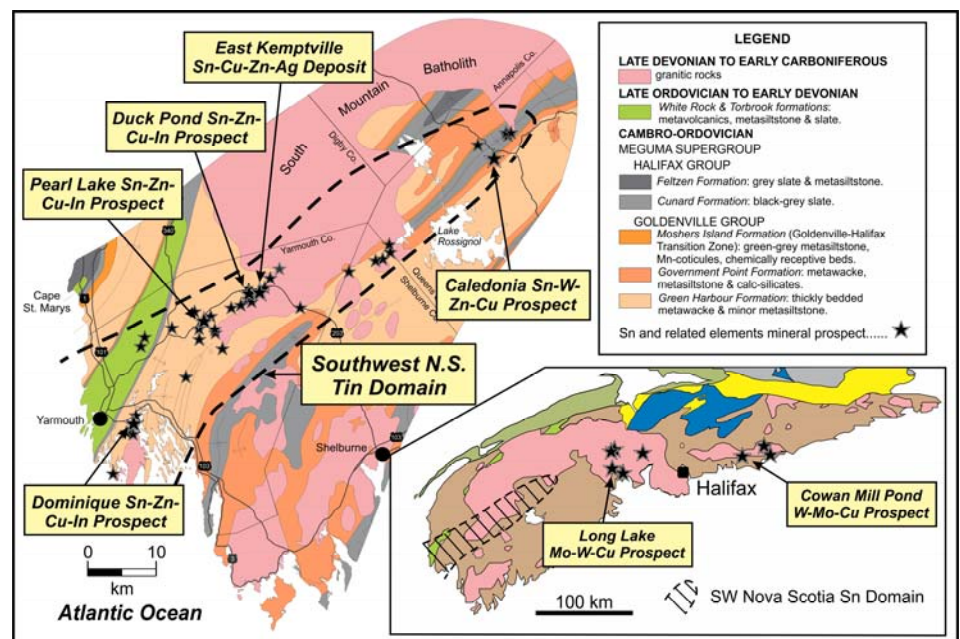
deposits of the Yarmouth area to the Southwest Nova Scotia Tin Domain on his Metallogenic Map of Nova Scotia (NSDME Map 83-5). In fact, there is justification to expand the tin domain to include the Sn-W deposits in the Caledonia area and perhaps even those farther to the east around Long Lake and within the Musquodoboit Batholith, east of Halifax (Fig. 1).

It seemed that the Sn-W potential of the province was going to reach lofty heights, exploration would continue to boom, and the infant tin domain would take its place among the world's major Sn regions. A complication arose, however, in the form of the mid-1980s dissolution of the Association of Tin Producing Countries, the global Sn cartel. The price of tin plummeted. Within a couple of months of the 1985 opening of the East Kemptville Mine, the price of Sn had dropped from \$9 to under \$3/pound, where it hovered for the entire life of the mine, resulting in its closure in 1992. By 1984 Sn-W exploration ceased. From the initial discovery in 1977 to curtailment of all

meaningful exploration in 1984, the record shows that the Southwest Nova Scotia Tin Domain had undergone a mere 6-7 years of exploration. Contrast this with the rest of world's tin domains, which have undergone many centuries to millennia of concerted exploration and mining. The Erzgebirge ('Ore Mountains') of the Germany-Czech Republic border region has evidence of Sn mining dating back to 2500 BC; mining in the Bolivian Tin Belt dates to 1000 AD; underground Sn mining in Cornwall dates to the Middle Ages, with placer mining of cassiterite known there since Roman times.

One can only wonder what would be found in the Southwest Nova Scotia Tin Domain had it received the same level of exploration. Perhaps we will find out. The recent rebound of Sn and W prices, and their bright economic outlook, means that once again these deposits are attracting exploration attention. The new kid on the block is back.

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**Figure 1.** Geology and occurrences of tin and related elements that constitute the Southwest Nova Scotia Tin Domain.