From the Mineral Inventory Files

The Elusive North Ogden Gold Prospect

Information in the department's mineral exploration assessment files on a gold occurrence at North Ogden, Guysborough County (Fig. 1), may well provoke a response such as "Gee, I really want to see this place". The property provides a mix of tantalizing features. Gold is reported there in concentrations of up to 31.5 g Au/t within highly carbonitized, chloritized and silicified country rocks occurring along a major splay of the east-west Cobequid-Chedabucto Fault Zone (CCFZ). In addition, two separate stream sediment geochemical surveys turned up anomalous levels of gold downstream of the showing. There is even a bit of Lost Dutchman in the story, as a result of confusion regarding the exact location of the gold-bearing rock.

A Mr. Hiram Smith first brought attention to the site in the early 1940s when he noted sulphide mineralization along the banks of the Salmon River while driving logs downstream. In 1943 Aubrey Dickson, a friend of Mr. Smith, sampled the site and reported grab samples with 4.3 and 3.3 g Au/t. He then obtained two channel samples and reported that they contained 4.5 g Au/t over 5.5 m, 4.8 g Au/t over 7.3 m and 4.1 g Au/t over 10.4 m. J. P. Messervey of the Nova Scotia Department of Mines visited the site that same year and collected chip samples from the altered zones, which returned 0.5 g Au/t over 6.1 m, 0.5 g Au/t over 11.6 m, 0.7 g Au/t over 5.8 m and 1.5 g Au/t over 5.5 m. During 1944 the property was examined by a couple of exploration companies. Both companies obtained only slightly anomalous gold concentrations, except for one sample that reportedly ran 31.5 g/t. Revered Dalhousie University geologist G. V. Douglas also visited the site in 1944 and collected 14 chip samples from the southern 35 m of a 43 m long trench exposing the mineralized zones along the east bank of the river. The results of gold analyses (shown on Fig. 1) ranged from trace up to 1.40 g Au/t. Messervey and Douglas are both considered competent geologists of honest character, so their positive results strongly suggest that gold actually occurs in low concentrations within these highly altered and faulted rocks. The site remained essentially ignored until 1984 when Prospex Incorporated and Noranda Exploration Ltd. carried out reviews. Both examinations included stream silt geochemical sampling and both collected samples with anomalous gold concentrations (up to 6,646 ppb) downstream of the prospect (Fig. 1).

When visiting the prospect, the first observation is generally the significant amount of pyrite, magnetite and specularite in very highly altered and contorted argillite and gabbro at the north end of an outcrop section along the east bank of the river (Fig. 1). Unfortunately, it is not these rocks that contain the gold, and analyses from samples collected there invariably return gold concentrations near the detection limit. It is now fairly certain that the trench that exposed the gold-bearing rock was actually along the river bank immediately downstream of these outcrops. Most evidence of the old trenches has long since been washed away. No outcrop remains in that area.

When the previous exploration activities were conducted, the levels of gold obtained were considered to be low grade and sub-economic. However, by modern mining standards, grades of 0.5 to 4.0 g Au/t are frequently associated with economically viable operations. The gold levels observed at North Ogden are consistent with those found within iron oxide-copper-gold (IOCG) deposits. Furthermore, the presence of widespread carbonate, chlorite and silica alteration, abundant magnetite and specularite, strong structural control to the mineralization, and favourable country rocks (gabbro) are all features that support the North Ogden prospect's affinity to IOCG deposits. At minimum, the prospect reveals this eastern region of the CCFZ as a possible IOCG terrain.

G. A. O'Reilly

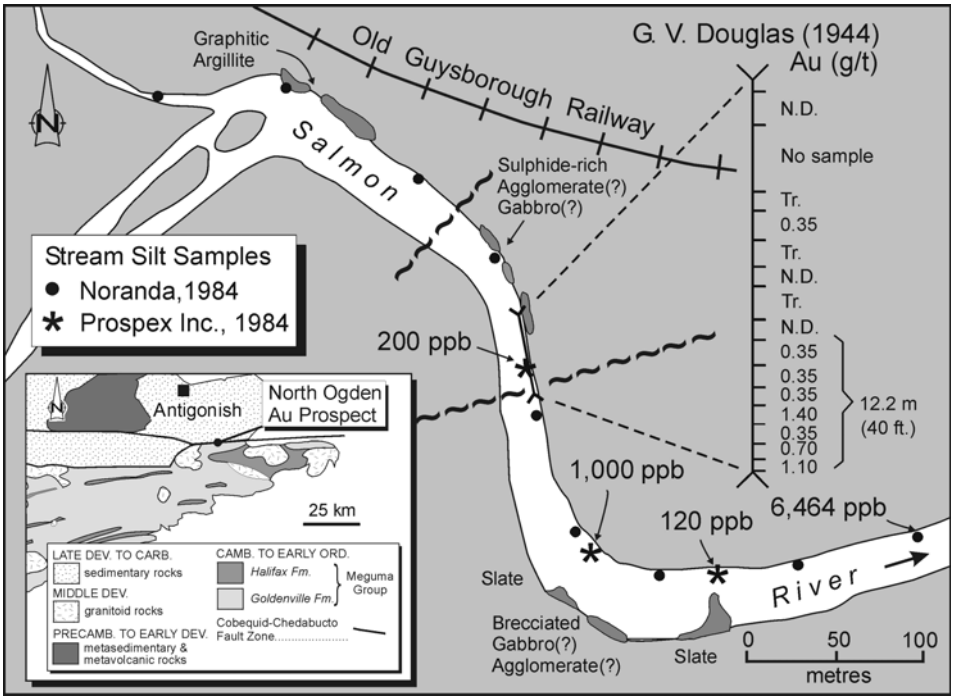

Figure 1. The North Ogden gold prospect, Guysborough County.