

PRECIOUS METALS

Precious Metals

Gold and Silver

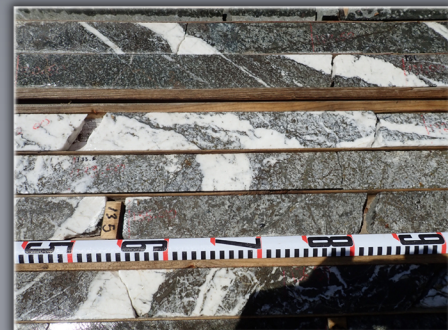
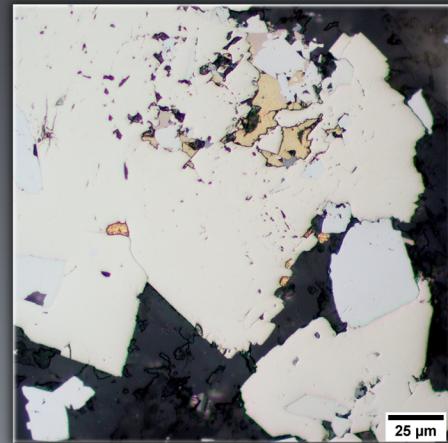
Gold has a mythical quality. It has caused family feuds and led nations to war. It once was the basis of our currency and has filled the dreams of every prospector ever to swing a rock hammer. We are all aware of gold's use in jewellery and as a hedge against inflation and volatility in stock-markets, but gold is also critical for everyday things, like dental fillings and electronics.

Silver is another precious metal with many functions. Of course, silver is commonly found in our homes as jewellery and tableware and its high reflectivity makes it critical in the manufacturing of mirrors. Compounds of silver are used as antiseptics and wood preservatives and in the manufacturing of such diverse products as photographic film and nuclear reactor rods.

Primary Gold

A gold mine is one worked primarily for gold as opposed to gold produced as a byproduct during the mining of other metals. The first full-scale gold mine in New Brunswick was located at Cape Spencer east of Saint John. There, gold occurs as tiny grains together with the mineral pyrite (fool's gold) along the margins of quartz veins. The Cape Spencer mine operated from 1986 to 1989 until declining gold prices made mining uneconomic. Cape Spencer was one of the first Canadian mines to use the percolation leaching method of gold extraction. The technology costs less than traditional extraction methods and allows low grade gold ores to be processed at a profit.

A second gold mine opened in 1989 at Murray Brook in northeast New Brunswick. NovaGold Resources Inc. extracted gold from the Murray Brook deposit, one of 45 large base-metal massive sulphide deposits that formed on the sea floor about 470 million years ago. All these deposits contain gold in low concentrations (< 1 g/tonne), but generally they do not contain enough gold to justify mining it, except as a byproduct. In the case of Murray Brook, millions of years of weathering and oxidation transformed the upper part of the deposit into a gossan from which all the sulphide minerals were leached leaving a large volume of very soft low-density material dominated by iron oxide, silica, and gold. The location of this gossan below the crest of a step slope is unlike that of other deposits in the region and such placement protected it from glacial erosion. By the time mining ended in 1992, the operation had yielded substantial quantities of gold. NovaGold's processing mill was one of the most advanced of its kind in the world. The ore was leached year-round in a fully enclosed facility that allowed airborne and liquid mine effluent to be strictly controlled.



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In 1999 Freewest Resources Canada Inc. acquired a 100% interest in a potentially significant new gold deposit in the Rollingdam area southwest of Fredericton. Discovered in 1998 by prospector Reginald Cox, the Clarence Stream mineralization occurs along the northern margin of the Saint George granite Batholith and belongs to a class of deposit known as intrusion-related gold. The discovery of potentially economic, high-grade gold zones around 'Anomaly A' 3 km northwest of the initial discovery (Main Zone), indicates that the deposit may be of minable size. Freewest conducted extensive trenching and drilled over 150 holes in the property, which has dramatically expanded the along strike potential of the mineralized zones. The property is presently controlled by Galway Metals Inc. and they are undertaking an aggressive program to increase the resource and bring the deposit into production. In 2017, a resource estimate reported > 660,000 oz of contained gold at Clarence Stream.

Recent discoveries of quartz-vein hosted gold mineralization in the Menneval-St. Quentin-Mount Carleton area of northwest New Brunswick underscore the high potential for further gold discoveries in New Brunswick.

By-product Gold and Silver

The famous massive sulphide deposits in northeastern New Brunswick are mined primarily for zinc, lead, and copper, but they also contain minute quantities of gold and substantial amounts of silver. The precious metals can be recovered as by-product gold and silver during smelting. Several base-metal mines in the area have successfully extracted by-product gold and/or silver. These include the Brunswick No. 6 and No. 12, Caribou, Heath Steele, and Captain North Extension mines. Silver production from the Brunswick No. 12 mine alone accounted for 13,965 tonnes of silver.

