

## Industrial minerals in Newfoundland and Labrador : past, present and future

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The production and trade of industrial minerals in the province of Newfoundland and Labrador dates back thousands of years. In northern Labrador, the flint-like Ramah chert, used in spearpoints and knives, was quarried and traded as far south as the United States thus establishing north-south trade routes still used today. In addition, soapstone deposits on the island and in Labrador were quarried for use as cooking utensils and ornaments. In the last century and early in this century, small industrial mineral operations were established mainly in response to local needs. Limestone from Cobb's Arm was used to flux copper ores from the booming Notre Dame Bay mines. Granite from The Gaff Topsails, Benton, and Petites, was used for bridge abutments on the Newfoundland railway, and (along with sandstone) to construct some of St. John's most prominent buildings. The pioneer brick and slate operations in Trinity Bay supplied local markets and some slate was exported. Early efforts to mine gypsum, asbestos, and chromite on the west coast encountered many insurmountable problems, including "protection squadrons" of the French navy. The 20th century saw the beginning of a new era in the province's industrial minerals industry. Much larger operations were established which made, and in some cases continue to make, significant contributions to the economy. These operations include the Aguathuna limestone quarry, fluorspar mining operations at St. Lawrence, gypsum quarries at Flat Bay, pyrophyllite quarry at Manuels, asbestos mines at Baie Verte, and limestone and shale quarries at Corner Brook. Most were relatively high volume, low value operations with production exported as raw materials for further processing elsewhere.

Current operations in the province produce a wide variety of industrial minerals. An overall trend toward the production of value-added commodities is reflected in such products as roofing slate from Burgoyne's Cove and specialty peat products from Bishop's Falls. The change of focus by Atlantic Minerals from the export of aggregate to high-calcium limestone and high-magnesium dolostone from Lower Cove is giving this operation a very bright future. Spin-off demands from Hibernia

have resulted in the development of a magnetite quarry near St. George's to supply heavy ballast to the Hibernia G.B.S. A granite monument plant at Buchans now processes stone from central Newfoundland quarries, adding value, for example, to the production of gabbro from Borney Lake, while in Labrador the anorthosite quarry near Nain continues to sell an extremely high-value stone to exclusive world markets.

The future holds many opportunities in the field of industrial minerals in the province of Newfoundland and Labrador. In central Newfoundland, a stibnite mine and antimony-trioxide plant is being developed and there are renewed efforts to reopen the fluorspar mines at St. Lawrence. The Argentia smelter announcement has created a staking rush for silica, while in western Labrador the establishment of a silicon metal smelter is being carefully evaluated. Marketing efforts are continuing with respect to the iron oxide pigment deposits at Schefferville. Promising new showings of nepheline, amazonite, and corundum (sapphire), have been identified in southeastern Labrador thus representing new targets for further research and potential development. Significant deposits yet to be developed include the Strange Lake Zr-Nb-Y-REE deposit (now attracting renewed interest because of the developing nickel mines directly to the east at Voisey's Bay), high purity white marble deposits (Roddickton), barite (Buchans), and talc (Deer Cove). There are huge unexploited reserves of limestone and dolomite on the west coast and Northern Peninsula. The St. George Carboniferous Basin also hosts important salt deposits (and associated potash). The dimension stone industry continues to expand with growth in existing operations, and discovery of new deposits.

Newfoundland and Labrador's strategic location on major North Atlantic shipping routes will continue to be a vital factor in the planning, development and production of our industrial mineral resources. Secondary processing of these market-driven commodities will add value to their production and the contribution which they will make to our provincial economy.