

Mining, Exploration and Government Geoscience in Newfoundland and Labrador

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In 2007 exploration activity in Newfoundland and Labrador reached levels that have not been seen for over a decade. There are over 185 000 claims in good standing in the province, almost as many claims as following the Voisey's Bay discovery in 1995. Over 60 000 claims are forecast to be staked this year, almost equally distributed between Newfoundland and Labrador. Active exploration on existing claims resulted in an estimated 240 km of diamond drilling and exploration expenditures of more than \$160 M, an all-time record. Exploration activity has been driven by high commodity prices and a resurgence in interest in uranium after a 30-year hiatus. Uranium exploration has concentrated on the Central Mineral Belt of Labrador, extensively explored in the 1960s and 1970s. Recent exploration initially focused on known occurrences and prospects, but extensive work has enlarged the size of known deposits, as well as locating numerous new prospects. Mineralization environments are varied and complex, reflecting the geology. Uranium exploration is also taking place in Newfoundland in a variety of environments, including the Carboniferous basins of western Newfoundland as well as along the Hermitage Flexure of the southern coast. Exploration activity has also been high for base metals, particularly in the Victoria Lake Supergroup of central Newfoundland, and gold continues to be of interest. This year the Duck Pond copper-zinc mine opened in central Newfoundland.

Mining production is dominated by the Voisey's Bay nickel mine that is forecast to ship more than \$2 billion of concentrate this year. Iron ore mines in western Labrador are benefiting from strong demand and will ship over 20 Mt in 2007. Several other smaller scale mining operations produce a variety of commodities including dimension stone, peat, limestone, barite, silica and dolomite.

Staking and exploration have been assisted by the presence of current geological maps for the most prospective areas, as well as a province-wide lake-sediment geochemistry database that shows a strong association with known mineralization. Government geoscience is conducted by the Geological Survey of Newfoundland and Labrador and the Geological Survey of Canada, often in cooperation with each other and with academic institutions. Federal activities are largely funded by the Targeted Geoscience Initiative (TGI III). There were field projects in 2007 in the Buchans area and on the Baie Verte Peninsula. The Geological Survey of Newfoundland and Labrador addresses a range of needs and clients, primarily the mineral industry, but also including oil and gas interests, planning and land use, hazards, water resources, education and tourism. Field work in 2007 included studies of uranium mineralization in Labrador, base metal mineralization in central Newfoundland, aggregate resource evaluation, mapping of platform rocks in western Newfoundland, till geochemistry in central and eastern Newfoundland and lake sediment geochemistry in Labrador.

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