

# Mineral Resources INFORMATION

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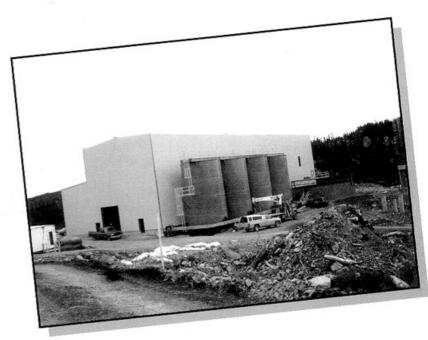


**GOVERNMENT OF** NEWFOUNDLAND AND LABRADOR

Department of Mines and Energy

Mines Branch





#### Production Scheduled at Nugget Pond

The Nugget Pond Deposit is located in the southeast sector of the Baie Verte Peninsula near Snooks Arm and covers an area of 800 acres.

Bitech Corporation began exploration in the area in 1987 and discovered the Nugget Pond gold deposit. In April of 1995, Noveder acquired all of Bitech's rights, interests and royalties in the Nugget Pond property from Bitech for \$1.3 million plus the issuance of 4 million common shares of Noveder.

On May 23, 1995 Noveder Inc. signed a joint venture agreement with **Richmont Mines Inc.** with respect to the Nugget Pond property. Richmont acquired a 60% undivided interest and Noveder retained a 40% undivided interest. Then in January, 1996 Richmont purchased the remaining 40% interest. Richmont now owns 100% of the Nugget Pond property.

Reserves are estimated at 390,000 tonnes grading 12.69 grams of gold per tonne or 160,000 ounces.

Construction of the mill and site facilities, including an office building, a new ore stockpile pad, a fivekilometre power line, and short roads to provide access to the tailings pond began in June, 1996. Construction and mine development is ahead of schedule. Production is scheduled for March, 1997.

The mine has an estimated life of four years while employing 80 people. Approximately 90 people are currently employed in construction.

Voisey's Bay Nickel Company Ltd. continues exploration at Voisey's Bay at a brisk pace. Since the discovery of the nickel, copper, cobalt deposit located 35 km southwest of Nain, Labrador was announced on November 3, 1994, three major mining companies have had interest in the project. Teck Corporation purchased a 10.4% interest in Diamond Fields Resources (Diamond Fields then owned 100% of Voisey's Bay Nickel Company Ltd.). Inco purchased 25% of Voisey's Bay Nickel Company Ltd. and approximately 7% of Diamond Fields Resources on June 28, 1995 and on April 9, 1996 an offer by Inco to purchase the remaining shares it did not presently own was accepted by Diamond Fields' Board of Directors. Inco Limited completed the Acquisition of Diamond Fields Resources Inc. on August 21, 1996.

As of October 21, 1996 total reserves at Voisey's Bay are projected to be in the 150 million tonne range.

Drilling in the Eastern Deeps is still ongoing and Voisey's Bay Nickel has indicated resources of 50 million tonnes containing 1.36% nickel, 0.67% copper and 0.09% cobalt. This resource is in addition to the 32 million tonnes of 2.83% nickel, 1.68% copper and 0.12% cobalt in the Main Ovoid.

Exploration also continues on the western extension and Voisey's Bay west mineralization zones.

On September 26, 1996, a project description for the development of the mine and mill was submitted to the federal Department of Fisheries and Oceans to initiate the federal environmental assessment process. It is hoped that the project will clear this process by May, 1998 allowing for production in the second half of 1999.

The company envisions a mine and mill at Voisey's Bay, Labrador and a smelter/refinery complex elsewhere in the province. The selection of the site for a smelter/refinery complex is scheduled to be completed by December 1, 1996 and the processing of refined nickel to start by the year 2000.

The overall feasibility study for the Voisey's Bay project, including the mine, mill and smelter/refinery complex, is scheduled to be completed by December 31, 1996.

Major General Resources Ltd. increased reserve estimates at their Rendell-Jackman property by adding the newly explored Rumbullion Zone to the Hammerdown Zone. Reserves to date are 550,000 tonnes grading 18 grams of gold per tonne (approximately 250,000 ounces of gold). In early 1996, Major General discovered a new zone, the "Orion Gold Zone". This zone could potentially contain a large reserve and therefore further development of the property has been delayed until drilling results from the Orion Zone are completed.

Roycefield Resources Ltd. plans to bring its Beaver Brook antimony deposit into production in the first half of 1997. The company will produce concentrate and valued-added trioxides for North American and European suppliers of flame retardants to the plastic and vinyl industries. The mine will be an

underground operation with initial production of approximately 400 tonnes per day. Roycefield is developing a new environmentally friendly hydrometallurgical process to convert antimony sulphide into antimony trioxide. Preparation for construction of the mill has started and the company is preparing to obtain financing for the project. Drillindicated reserves at the East and Central Zones stand at approximately 1,380,000 tonnes averaging 4.49% antimony. This is sufficient for Roycefield to produce about 5% of the world's antimony for the next 13 years.

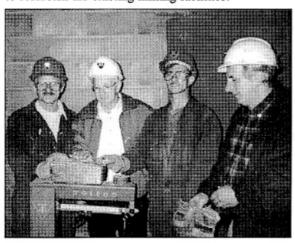
Burin Minerals Ltd. has completed feasibility studies on reopening the fluorspar mines and mill at St. Lawrence. Studies indicate that the project is viable and the company has proceeded with efforts to finance the project. The parent company, Burin Fluorspar Ltd. has finalized a private placement memorandum which was circulated to business associates this past summer. A public offering of shares will follow.

An independent assessment of mineral resources in Blue Beach North and Tarefare deposits was completed in May, 1996 by Roscoe, Postle Associates. Its calculations confirmed previous assessments of size and grade of these deposits at a total of 5,453,000 metric tonnes averaging 50% CaF<sub>2</sub>.

Burin Minerals has now acquired the milling assets of St. Lawrence as well as the requisite mining leases.

# Ming Minerals Pours First Gold Bar

Ming Minerals Inc. reopened the Ming West mine on the old Rambler property in October 1995, due to an increase in copper prices and the low capital cost to refurbish the existing milling facilities.



Ming Minerals' first gold bar

From October, 1995 to July, 1996 the company mined the Ming West deposit and produced a copper concentrate also containing gold and silver. In July, 1996 Ming installed a gold circuit in the mill and in August began mining a small ore deposit in the Main Zone near the mill. The company poured its first gold bar on September 28, 1996. Ore from the Main Zone was the source for the initial gold production and in mid October, Ming began mining the Stog'er Tight gold deposit 5 km to the north.

Reserves at Stog'er Tight are estimated at 48,000 ounces of gold, sufficient for a two-year life. Ming is also pursuing other gold opportunities in the area.

Armstrong World Industry Canada Ltd. announced in the spring of 1996 an extended layoff of all employees at the Newfoundland Minerals Division in Manuels, for a period of 12 months. The company stated the reason for the shutdown was weak market conditions. An announcement will be made in the spring of 1997 on whether or not the mine will reopen again in 1997.

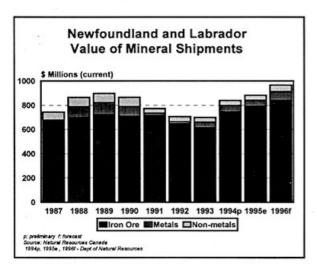
Newfoundland Minerals has been operating a pyrophyllite quarry at Long Pond, Manuels since 1956. Pyrophyllite is shipped in bulk to the United States where it is made into high-quality ceramic tile. The company usually operates on a year-round basis, producing pyrophyllite between June and September and removing waste during the remaining months.

Atlantic Gypsum Resources, Inc., which was awarded rights to the Fischells Brook gypsum deposit earlier this year after a Call for Proposals was issued, started mining in early July. The company has constructed a road to the deposit from the Trans-Canada Highway. The crushed gypsum is trucked to Atlantic Group Limited, a wallboard manufacturer in Corner Brook. Annual production will be approximately 25,000 tonnes.

Power Slate Enterprises Ltd. has developed its Keels, Bonavista Bay deposit of purple and green slate, and has constructed a small processing building. Workers have been trained in slate quarrying and the program that trains workers in slate processing is near completion. Initial shipments are expected this fall, followed by a full year of production in 1997. Power Slate was designated as an EDGE corporation in June, 1996.

## Value of Mineral Shipments Will Increase

The total value of Newfoundland and Labrador's mineral shipments is forecast to be \$966 million in 1996. This is an increase of 9.5% over the value of mineral shipments in 1995. The Department of Mines and Energy had projected earlier in 1996 that the value of mineral shipments would surpass the \$1 billion mark. However, the strike at the Iron Ore Company of Canada plus the cancellation of a large order by a customer of Wabush Mines lowered the forecasted value of iron ore shipments.



The value of industrial mineral shipments, which includes dolomite, gypsum and peat increased 3% in 1996 and the value of structural materials such as brick, cement, limestone, magnetite, sand and gravel and stone increased 31%

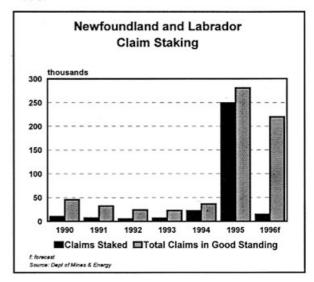
Average employment in the mineral resource industry increased 2% to 3,455 in 1996. The increase in employment resulting from the opening of Ming Minerals and Raymo Processing was offset by the sixweek strike at IOC.

Exploration expenditures in Newfoundland and Labrador are estimated to be \$100 million in 1996. This is an increase of 41% over the 1995 total. A number of diamond drilling programs were carried out in Labrador over the summer. This will result in a 16% increase in diamond drilling to a total of 150,000 metres in 1996.

The number of claims staked in Newfoundland and Labrador returned to normal levels in 1996. There have been approximately 9,000 claims staked in the province up to November 1, 1996, nowhere near the

1995 total when the claim staking rush in Labrador resulted in 248,707 claims staked in the province. This claim staking rush was the second largest in Canadian history.

The number of claims in good standing on December 31, 1995 was 280,750. The department is estimating this number will drop to approximately 185,000 in 1996.



## Silicon Smelter a Possibility for Labrador

The Labrador City/Wabush area has large deposits of high-purity silica. Some of these deposits have the potential to meet the required specifications for fuel for silicon smelting.

Some preliminary work was conducted by the Department of Mines and Energy under the Canada-Newfoundland Mineral Development Agreements during the 1980's. Shabogamo Mining Exploration Ltd., a company based in Labrador City, is currently doing further assessment on these deposits to determine the location of the highest quality deposits and determine whether they would meet the chemical specifications for a silicon smelter.

Silicon metal markets are strong and industry experts predict good growth. Silicon metal is primarily used as an alloy in aluminum with lesser use in the electronics, fibre optics and aerospace industries.

A silica smelter requires between 50-60 megawatts of electricity to operate. The province of Newfoundland and Labrador has the ability to recall 127 megawatts of electricity presently being sold to Hydro Quebec, subject to a three-year recall notice.

In 1994, Resource Strategies Inc. of Exton, Pennsylvania and Acres Engineering Ltd., of Toronto did an assessment of a 30,000 ton-a-year silicon production facility and the construction of a hydro line from Churchill Falls to Labrador West. The project would require investments of approximately \$52-\$57 million for the transmission and terminal facilities and \$70-\$90 million for the plant. Long-term employment for the smelter would be approximately 125-150 people. Such benefits and associated operating costs would result in significant economic benefits to Labrador.

Several companies have expressed interest in the project and technical data regarding the silica has been forwarded to them. The interest level is very encouraging.

# Mineral Regulations Changed to Designate "Genuine Prospectors"

Changes were made to the Mineral Regulations under the Mineral Act on July 26, 1996. The change was published in the Newfoundland Gazette dated September 13, 1996. A "genuine prospector" may now make an application in person or by mail for map staked licences without submitting the security deposit fee. A deposit of \$50 per claim was previously charged.

A "genuine prospector" is defined as a person who is ordinarily a resident in the province who applies to the Minister for that designation. Evidence must be provided with the application that he or she is either qualified as a mineral prospector, having successfully completed a recognized mineral prospecting training program or has undertaken mineral prospecting activities in the past year.

The new regulation stipulates that up to five licences, for a total of thirty claims may be granted to the genuine prospector each calendar year without a security deposit. The security deposit will become payable in full where a transfer is registered with respect to one or more of the licences.

If the genuine prospector claims more than thirty claims in a calendar year, then the security deposit is payable on the new claims.

# Labrador Mining Conference a Huge Success

Organizers and participants of the "Voisey's Bay and Beyond" mining conference and trade exhibition have called the event a huge success. At the closing luncheon, Labrador North Chamber of Commerce president Peter Woodward said that people walking away from the conference should be realizing that Labrador is open for business. "People should look at Labrador as a potential investment."

The chairman of the event's organizing committee, Larry Pittman, thanked the many volunteers for all the hard work they did. "It would have never been made possible without them," he said. "We have shown the rest of the world that when Happy Valley-Goose Bay puts its mind to something, we can put off a professional, top class event," Mr. Pittman said.

He concluded by noting everyone is welcome back next year "to learn more about Happy Valley-Goose Bay, the remainder of Labrador, and Voisey's Bay and beyond."

Source: Jacinda Beals The Labradorian

# Mines and Energy has Moved

The Department of Mines and Energy, including the Minister's Office, Mineral Lands, Mineral Development, Geological Survey and Energy, has moved to its new location at The Natural Resources Building on 50 Elizabeth Avenue, next to Canadian Tire. Previously, the department operated out of three different locations in the city at Confederation Building, Bonaventure Avenue and Atlantic Place. This is the first time the department has been under one roof since 1987.

The Natural Resources Building is also home to the Department of Forestry and Agrifoods, located on the fifth floor of the building.

#### GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Mines & Energy Mines Branch

#### CHRYSOTILE ASBESTOS PROPERTY AVAILABLE

Baie Verte Asbestos Property Baie Verte Peninsula, Newfoundland Canada

Proposals are invited for the development of a former chrysotile asbestos mining property situated within 800 hectares of Exempt Mineral Land. The property hosts two chrysotile sources: drill-indicated underground reserves of 9.5 million tonnes grading 4.47% fibre located beneath an existing open pit and 40 million tonnes grading 2.20% fibre of stock-piled mill tailings. Mine-site infrastructure includes two processing plants, a warehouse, dock, and ancillary buildings.

Closing date for receipt of proposals is December 20, 1996. An information package with property description and terms of reference for proposals is available from:

Hon. Rex V. Gibbons, Ph.D., P.Geo.
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P.O. Box 8700
St. John's, Newfoundland, Canada
A1A 1W5

Telephone: (709) 729-6439 Fax: (709) 729-6782 E-mail: plegrow@dnr.gov.nf.ca

# **Avalon Zone Mineral Exploration Potential**

The Avalon Zone occupies the southeastern margin of the Newfoundland Appalachians and is represented by volcanic, plutonic and sedimentary rocks that portray elements of a late Precambrian orogenic system. The geological history of the southeastern Appalachian margin has been punctuated by several important mineralizing events. The Avalon Zone hosts a large number of mineral occurrences that offer promising exploration targets for a variety of commodities.

The oldest rocks in the Avalon Zone (760 Ma) are located in the Burin area and consist of submarine mafic volcanics and oceanic gabbros. These successions have potential for ophiolitic and arc-related copper and gold mineralization. Rocks of the same age in the Pan African belt contain significant cobalt-nickel and copper-gold deposits (Bou Azzer / El Graara).

Arc-related volcanic-rich successions (685–670 Ma) host several important zinc-copper massive sulphide occurrences on the Connaigre Peninsula. Similar mineralization occurs in correlative rocks in Cape Breton Island (abandoned Mindamar mine).

Extensive advanced argillic alteration and associated epithermal style gold mineralization accompanied volcano-plutonic arcs in at least two episodes (635–620 Ma and 590–560 Ma). Examples of acid-sulphate (e.g., Hope Brook and Hickey's Pond) and local adularia–sericite (Foxtrap area) systems are preserved.

The geological setting, type and size of the hydrothermal systems present in the Avalon Zone coupled with the existence of similar styles of mineralization in four gold deposits in rocks of similar age in South Carolina (Brewer, Ridgeway, Haile and Barite Hill) underscores the potential for the Newfoundland Avalon Zone for gold and copper—gold epithermal and porphyry deposits. Late Precambrian sedimentary successions on the Avalon and Bonavista peninsulas include sulphide-bearing shale-rich units and corresponding lake-sediment anomalies that represent a favourable exploration target for Sullivantype mineralization.

Early Ordovician rocks host the historic hematite deposits of Bell Island. Enormous reserves still exist under the waters of Conception Bay. Nearby Cambrian rocks contain significant reserves of manganese. Cambrian shales are quarried for slate (Nut Cove) and potential for further commercial quantities of variegated slate is high on the Avalon and Bonavista peninsulas.

Devonian granites host granophile mineralization and represent important targets for molybdenum, tin, tungsten and fluorine, in addition to gold. The most extensive documented mineralization occurs in granite at St. Lawrence where more than 40 fluorite veins are

known; major reserves remain undeveloped. The Ackley Granite contains significant molybdenite deposits along its southern boundary as well as a number of occurrences of tin, fluorine and tungsten. Similar Devonian granite on the Connaigre Peninsula contains molybdenum and fluorine occurrences. A number of lead, zinc and silver veins in the western Avalon Peninsula are thought to be related to Devonian plutons. Extensive hydrothermal veining containing tungsten deposits at Grey River is considered to be associated with granite of probable Devonian age.

## **Upcoming Events**

#### Mines Branch 20th Annual Review of Activities

November 7, 1996

St. John's, Newfoundland.

Annual Review of the Mines Branch activities and Open House will be held in conjunction with the CIM Conference. For more information, please contact Janet Gillespie at:

Tel:

(709) 729-6193

Fax:

(709) 729-3493

#### CIM Annual Meeting and Conference

November 7-9, 1996

St. John's, Newfoundland.

The Newfoundland Branch of the Canadian Institute of Mining, Metallurgy and Petroleum and the Newfoundland Department of Mines and Energy hosts the 43rd annual conference. The theme of this year's conference is "Mineral Development in Newfoundland and Labrador - World Leaders into the Next Millenium". For more information, please contact Janet Gillespie at:

Tel:

(709) 729-6193

Fax:

(709) 729-3493

#### World Iron Ore '96

November 13-15, 1996

Orlando, Florida

This conference sponsored by Skillings Mining Review, will focus on the international iron ore and steel industries with emphasis on rapidly increasing new technology. For additional information, please call:

Tel:

(218) 722-2310 or

(218) 525-7777

Fax:

(218) 722-0134

# International Conference on Mining Companies' Participation in Aboriginal Communities

November 19-20, 1996 Thunder Bay, Ontario Canada Forum and the Canadian Aboriginal Minerals Association present the fourth annual conference and Canada's first international conference on mining companies' participation in aboriginal communities. "Tapping Traditional Resources" is an international perspective on the mineral industry and aboriginal community development. For more information, please contact:

Ann Ogler

Tel: (416) 925-0866 Toll Free: 1-800-443-6452

Fax: (4

(416) 925-1709

#### Northwest Mining Association Annual Convention

December 2-6, 1996

Spokane, Washington

The Western United States premier international mining exposition will hold its 102nd annual meeting. For more information, please fax:

Fax:

(509) 623-1241

#### 1997 Current Activities Forum

January 20-22, 1997

Ottawa, Ontario

The Geological Survey of Canada (GSC) will hold Forum '97 which will highlight current activities from all its program areas, with emphasis on work carried out in the North. For further information please contact Debora Turner at:

Tel:

(613) 996-6574

Fax: (613) 996-6575

e-mail: turner@gsc.NRCan.gc.ca

#### Cordilleran Roundup 1997

January 28-31, 1997

Vancouver, British Columbia

The British Columbia and Yukon Chamber of Mines hosts the annual convention and exhibition at Hotel Vancouver. The conference is attended by most of the Vancouver-based junior mining and exploration companies. For more information, please call:

Tel:

(604) 681-5363

Fax:

(604) 681-2363

Prospectors and Developers Association of Canada 1997 Annual International Convention and Trade Show.

March 9-13, 1997

Toronto, Ontario

The annual meeting of the PDAC is unique in the world in its ability to bring together the full range of players in global exploration and development. For more information please call:

Tel:

(416) 362-1969

Fax:

(416) 362-0101

# NEWFOUNDLAND AND LABRADOR



GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Canada

# DEPARTMENT OF MINES AND ENERGY MINES BRANCH

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Director Mineral Lands(709) 729-6425	Mineral Deposits(709) 729-5946
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Core Storage, Pasadena(709) 686-2054	Newfoundland Mapping(709) 729-3574
Engineering Analysis (709) 729-6449	Labrador Mapping(709) 729-2107
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