



**Newfoundland
and Labrador**



MINFO

Mineral Resources
INFORMATION

*Volume 1, No.2
(Fall 1995)*

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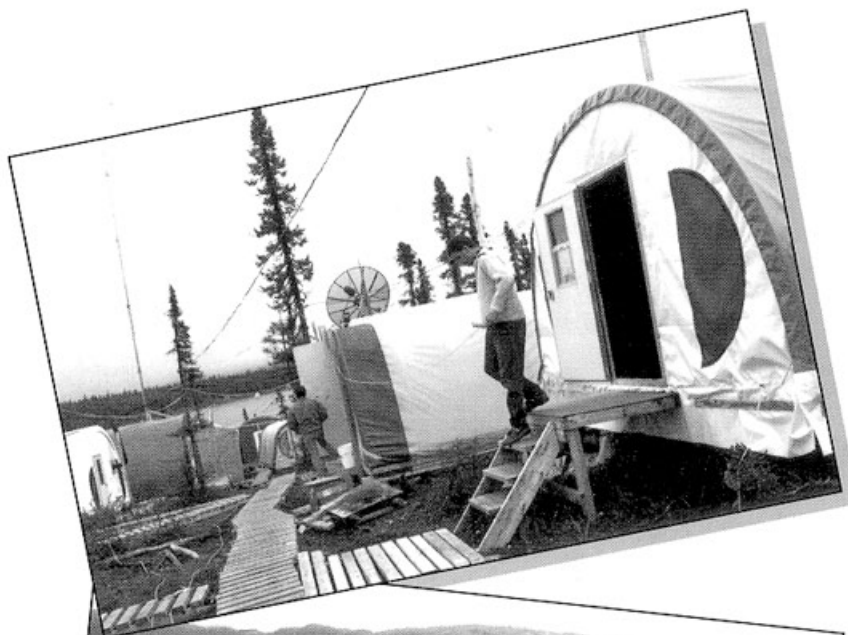
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NEWFOUNDLAND
AND LABRADOR

Department of
Natural Resources

Mines Branch

EXPLORATION CAMP, VOISEY'S BAY

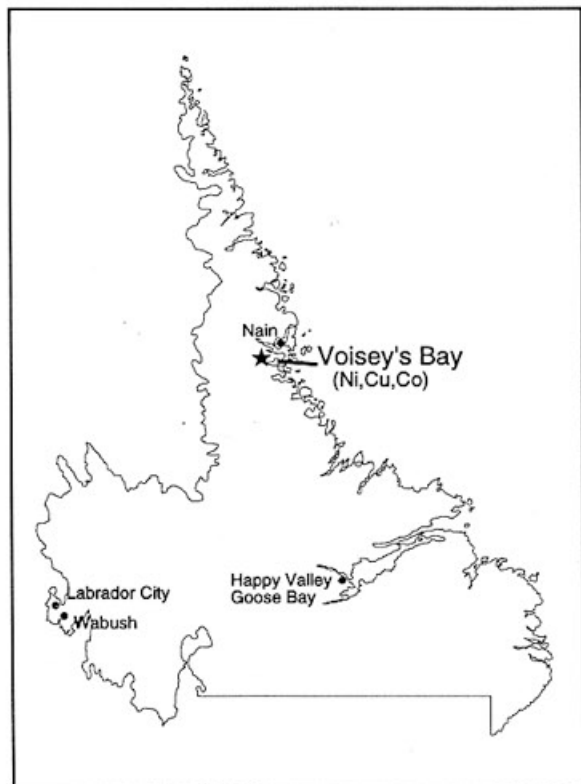
Update on Mineral Exploration/Development

Diamond Fields Resources continued 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, two major mining companies have purchased shares in the project. Teck Corporation purchased 10.4% interest on April 17, 1995, and Inco purchased 25% on June 28, 1995.

As of June 29, 1995, Teck Corporation estimates total reserves of 31.7 million tonnes grading 2.83% Ni, 1.68% Cu and 0.12% Co.

Teck Corporation has been engaged as the contractor for the mine/mill feasibility study to be completed by June 30, 1996. The study will cover mining and concentrate production, with attendant infrastructure. Conceptual design parameters relating to flowsheet, concentrator, product shipping and tailings disposal will be set by Diamond Fields in consultation with Teck and Inco.

Diamond Fields and Inco will continue studies related to the further processing of the concentrate using either pyrometallurgical or hydrometallurgical technology.

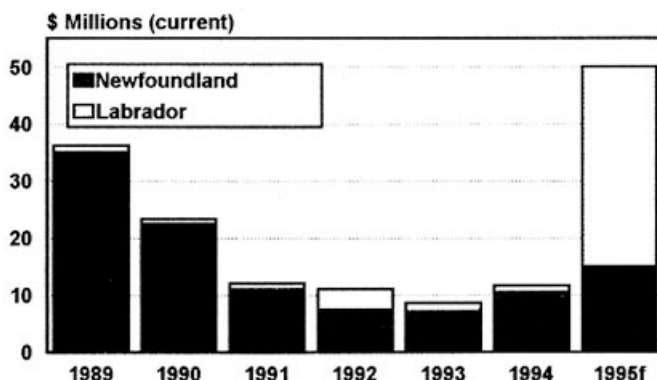


Once environmental approvals are received, construction of the permanent exploration camp, airstrip and 10 km access road will begin. This project is expected to be completed next year.

Since the discovery of the Voisey's Bay deposit approximately 255 000 claims have been staked in Labrador. This brings the number of claims in good standing for the entire province to approximately 279 000.

Total exploration expenditures in the province in 1995 will reach \$50 million. This could increase to \$65-75 million in 1996 as exploration activity increases in Labrador.

Newfoundland and Labrador Annual Exploration Expenditures (Including Administration and Overhead)



On the island portion of the province **Ming Minerals Inc.** have begun the reactivation of the Rambler mine on the Baie Verte Peninsula. Ming Minerals has determined that it is feasible to reactivate the property due to the increase in copper prices and the low capital cost to refurbish the existing facilities.

Reactivation is almost complete and production of 680 tonnes per day from approximately 417 000 tonnes of high-grade ore containing 4% copper is expected by November, 1995.

Raymo Processing Limited has started construction of a vat-leaching process to extract gold from the tailings of the former Rambler Mine. The company expects to complete construction this fall and be ready for start-up in the spring. Proven mineral inventory of the tailings is 1 165 000 tonnes grading 1.695 grams of gold per tonne for a total of 63 487 contained ounces.



Major General Resources Ltd. increased reserve estimates at their Rendell-Jackman property by adding the newly explored Rumbullion Zone to the Hammer Down Zone. Reserves to date are 464 104 tonnes grading 17.48 grams of gold per tonne (approximately 245 000 ounces of gold). The 2000 tonne bulk sample to confirm tonnage and grade prior to committing to bring the mine into production will commence once financial arrangements are complete, likely in 1996.

Richmont Mines Inc. completed a 2000 tonne bulk sampling program on the Nugget Pond project in October and mine design and feasibility work will be completed over the winter. If a production decision is made, the mill construction could start by March, 1996 with full production later in the year. Reserves at the property are 416 000 tonnes averaging 14.3 grams of gold per tonne.

Roycefield Resources Limited continues drilling on their Beaver Brook antimony deposit southwest of Gander. Drilling to date has outlined reserves of 920 000 tonnes grading 4.57% antimony. An underground bulk sampling program has begun to confirm the drill indicated reserves.

Newfoundland Slate Inc. plans to open their second slate operation in 1996. They will develop a quarry near Long Harbour, Placentia Bay and build a

production facility in the Long Harbour area. Also, Power Slate Inc. is developing a slate quarry at Keels, Bonavista Bay. A production facility is near completion and the training of a workforce will begin this fall and finish in the summer of 1996.

St. Lawrence Reactivation

Burin Minerals Ltd. is in the process of completing a feasibility study on reopening the fluorspar mines and mill at St. Lawrence. The study will entail the overall operating costs for mining, milling, materials handling, shipping and making sure there is sufficient margin to justify capital expenditures. The feasibility report should be finished at the end of 1995. The company will then commence procedures to raise the capital needed to fund the operation.

Alex Harris, vice-president of Burin Minerals has stated that if the study should determine it is feasible to operate the facility, then the target time frame would be to commence pumping out one of the mines and start construction of the tailings facilities in the spring of 1996. Mr. Harris hopes the company will be in full production by late 1996. Burin Minerals is planning a seven day a week mining program with a five day milling operation year round.

Mr. Harris is confident major markets can be found for the product. Additional information can be obtained on the proposed operation by contacting Alex Harris at (709) 873-3331.

Mining Update

The total value of Newfoundland and Labrador's mineral shipments in 1994 (preliminary) was \$834 million, an increase of 19% over 1993.

The main reason for this increase is the resurgence of the iron ore industry in western Labrador. The **Iron Ore Company of Canada (IOCC)** increased its total shipments 18% to 15.8 million tonnes, while **Wabush Mines** increased its shipments 5% to 5.1 million tonnes.

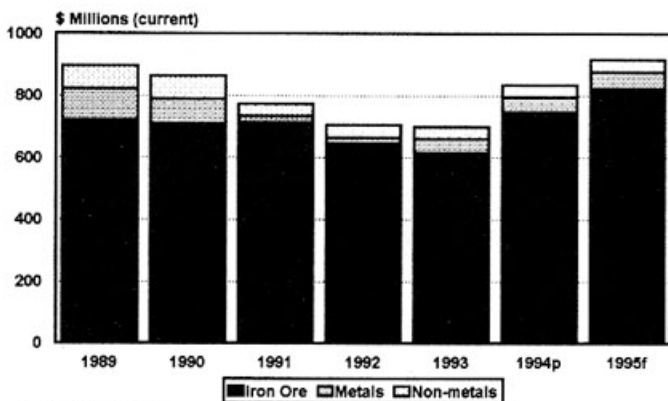
In 1994, **Royal Oak Mines Inc.** increased shipment value of gold from the Hope Brook Mine 5% to \$47.2 million. The copper recovery plant, constructed in 1993, produced over 1.3 million pounds of copper.

Industrial mineral shipments, which include asbestos, dolomite, gypsum, peat and pyrophyllite, decreased 27% in 1994. However, shipments of structural materials such as brick, cement, limestone, sand and gravel, slate and dimension stone increased 7%.

The general outlook for 1995 is an 10% growth in the total value of mineral shipments to \$916 million. This is mainly due to increased iron ore production at both IOCC and Wabush Mines and higher iron ore prices. Royal Oak Mines Inc. will increase gold and copper production at Hope Brook, and Ming Minerals Inc. will start production of copper, gold and silver in November.

Average employment in Newfoundland's mining industry increased 5% to approximately 3000 in 1994, mainly due to the recall of approximately 140 workers at IOCC. Employment is expected to increase again in 1995 by 10% to approximately 3300 because of the increase in exploration work in Labrador.

Newfoundland and Labrador Value of Mineral Shipments



p: preliminary f: forecast
Source: Natural Resources Canada
1994p, 1995f - Dept of Natural Resources

Geological Survey Field Program 1995-1996

The number of 1995 field projects of the Geological Survey were substantially reduced from previous years. This is due to the conclusion of the Mineral Development Agreements with the federal government, which have been in place in one form or another since 1971. Under these agreements, joint- and parallel-delivery programs of geoscientific studies

have been systematically carried out in the province. However, the Geological Survey did carry out two large multidisciplinary projects — one in the Buchans - Robert's Arm area in Newfoundland and the other in the Kanairiktok area in eastern Labrador. Both these projects utilized a variety of geoscientific studies, including systematic bedrock and glacial-overburden mapping, metallogenic studies, prospecting and geochemical surveys, to produce comprehensive and detailed geological maps and databases.

The Survey also carried out a number of smaller field projects during the summer field season. Systematic 1:50 000-scale bedrock mapping and mineral-deposit-potential studies were also carried out in the Mealy Mountains of southern Labrador, the Deer Lake - Corner Brook areas of western Newfoundland, and in selected areas of Notre Dame Bay. Also, bedrock-aggregate assessments were conducted on the eastern Avalon, and granular-aggregate assessments on the Great Northern Peninsula. Assessment of carbonate and refractory mineral deposits in western Newfoundland was also carried out.

The preliminary results of these field studies will be highlighted at the upcoming Mines Branch Review of Activities, Oct. 26. They will also be published in Current Research, Report 96-1.

Workshop on the Geology and Mineral Deposits of Labrador

(To be held in conjunction with the 1995 Mines Branch Review of Activities)

The workshop is being provided as a service to the mineral-exploration community, in light of the recent surge in activity in Labrador. It is directed at those new to the region and will cover the following topics:

- ★ *An overview of the geology and metallogeny of Labrador; the history of mineral exploration and the potential for new discoveries*
- ★ *The principal mineral districts of Labrador, their metallogeny and future mineral-development potential*
- ★ *Mineral rights and environmental regulations as applied to Labrador*
- ★ *Ni—Cu—Co exploration targets in Labrador, including anorthosite suites and other mafic units*

★ *The Labrador geoscience database as an integrated, digital atlas*

Presentations will be made by a combination of Mines Branch staff and invited experts. Ample time will be allotted for question-and-answer and discussion sessions.

The workshop will be held as a one-day session on Wednesday, October 25, 1995. This will be followed on Thursday by the Review of Activities, and on Friday—Saturday by the Newfoundland Branch CIM annual meeting, held jointly this year with APEGN. All sessions will be held at the Hotel Newfoundland, St. John's.

If you are interested in attending the workshop, please contact:

LABRADOR WORKSHOP
c/o R.J. Wardle
Geological Survey
Dept. Natural Resources
P.O. 8700, St. John's, NF
A1B 4J6
Fax. 709-729-3493
Tel. 709-729-2107
e-mail: rjw @zeppo.geosurv.gov.nf.ca.

Respondents will receive a more detailed program at a later date. Accommodation should be booked directly with the hotel of your choice.

A Successful Summer at The Geological Survey's Regional Office in Goose Bay

These days, the people of Goose Bay seem well-versed in the jargon of mineral exploration and the stock market. A local fast-food outlet sells the "Northern Miner", and has a continuously changing display of the ups and downs of exploration companies on the Vancouver Stock Exchange. No wonder, given what's been happening in Labrador over the past few months.

It all started with the announcement of the discovery of a major deposit of nickel and copper near Voisey's Bay in late 1994. This news opened the flood-gates to a winter and spring staking rush that has set records for claim staking in the province. Labrador came to the forefront of mineral exploration in Canada, especially in the eyes of junior mining and exploration companies. The influx of geologists and prospectors to Labrador meant a frenzied summer of activity. To deal with the anticipated need for local

geological information by this new flock of explorationists, and to fulfil the general public's desire to learn more about the reasons for all this new interest in Labrador, the Geological Survey of the Department of Natural Resources opened a temporary regional geology office in Goose Bay from June to September. The office is located adjacent to the Survey's field headquarters at Otter Creek. This field headquarters, managed by Mr. Wayne Tuttle, was established in 1976, as a support base for the Branch's Labrador-based programs and activities.

The Goose Bay geology office was staffed by Bruce Ryan as the "geologist in-residence". Mr. Ryan has spent over twenty years surveying the geology of Labrador. His most recent surveys have been in the Nain area, the part of the Labrador that has become the main focus of mineral exploration this summer; thus, he is able to bring his knowledge of the area to bear in answering questions relevant to the mineral exploration.

Mr. Ryan reported that the office was a beehive of activity for most of its period of operation, and has been kept busy from early morning until late evening, seven days a week, especially during the peak period of exploration activity in the months of July and August. The Goose Bay office has been visited by numerous personnel from the exploration companies during this period, most of whom left bearing armfuls of literature and maps. In addition, requests for information packages on Labrador geology were answered by phone, fax and mail, some coming from as far away as Australia and South Africa.

Residents of Goose Bay were frequent visitors to the office, seeking information on the local geology and inquiring about the latest press releases from the exploration companies. Many residents brought mineralized rock samples for identification; some of the specimens showed sufficient mineralization that Mr. Ryan encouraged the bearer to assay the samples and to stake claim to the mineralization. Other interactions with the general public included contributing geological information for a hiking-guide brochure being prepared for a local ski trail, providing reports of exploration activity to the local newspaper, and making contacts in the local business community in an attempt to marry the assets of the businesses with needs of the exploration fraternity.

In July and August, Mr. Ryan visited many of the exploration groups who are searching for mineralization in the Nain area. Some of these visits were initiated by the companies, and demonstrate the high degree of technical cooperation between industry

and the Geological Survey. Mr. Ryan appreciated the companies' willingness to share and debate geological information and to discuss their mineral discoveries.

The degree of interest in the Nain area (and in Labrador as a whole) also resulted in a number of requests for technical and scientific presentations. Mr. Ryan was invited to address a group of two hundred exploration geologists and investment counsellors at a special meeting of the Toronto Geological Discussion Group in late June, to promote the Nain area and other geologically similar parts of Labrador as exploration targets. Also, he was asked to present an overview of the Voisey's Bay discovery at an international geological conference in Montreal in late August, and in early September he was invited to discuss the geology of the Nain area and the Voisey's Bay discovery to over a hundred delegates attending a Canadian Institute of Mining, Metallurgy and Petroleum Meeting in Bathurst, New Brunswick. It seems clear from the summer activity at the Goose Bay office, and from the number of requests for information handled at the Survey's headquarters in St. John's since the announcement of the Voisey's Bay discovery, that Labrador is going to be in the exploration limelight for some time to come.

Baie Verte Conference Exceeds Registration Expectations

Registration to the eighth annual Mining Conference, sponsored by the Baie Verte and Area Chamber of Commerce on June 23-25, 1995 nearly doubled this year compared to last year. The interest in the Mining Conference has increased not only on a local level but on a national and international level, with some of the nearly 200 registrants coming from Vancouver, Ontario, New York, New Brunswick and Nova Scotia.

The conference allows those in the mining industry to meet formally and socially. It opened with the Hon. Rex Gibbons, Minister of Natural Resources as guest speaker at the Friday night dinner. Saturday's technical presentations included the Nugget Pond gold project by Richmond Mines; the Voisey's Bay discovery by Archean Resources and Inco; the Rambler tailings project by Raymo Processing; and the Rambler underground project by Ming Minerals. The conference's "Rock Room" was the centre of interest with displays of properties of local prospectors and mining companies. The Grand Finale on Sunday was a tour of the underground mining facility at Nugget Pond.

Dimension Stone Incentive Program

The Dimension Stone Incentive Program (DSIP) emanates from Strategic Action Item #118 of the Strategic Economic Plan for Newfoundland and Labrador. The program endeavors to encourage and promote the provincial dimension stone industry by contributing non-refundable financial assistance to businesses performing dimension stone infrastructure and feasibility projects.

The program has been allocated \$100 000 and will contribute up to a maximum of \$20 000 or 50% of the cost of an eligible project, whichever is less, with a limit of two projects per applicant.

Four projects have been funded to date; these involve infrastructure and trial quarry work on granite, marble and slate.

Aggregates Important to Construction

Sand, gravel, and crushed-stone are extensively mined in Newfoundland and Labrador. They're used in all types of construction, with road work being one of the major uses. They're also used for street, water, sewer, driveway, and foundation construction in municipalities throughout the province. The importance of sand and crushed stone to the construction industry of the province is obvious in building the Hibernia oil-production platforms. Almost 150 000 cubic metres of sand is needed for the platform structure. Another one million cubic metres of crushed stone, gravel, silt, and clay will also be needed for the structure and related activities such as road building.

Mining and the Environment

Newfoundland and Labrador covers approximately 40 million hectares. Of this huge area, only 6000 hectares have been used for mining. This represents less than one tenth of one percent of the province's total land area. Today's mine developments must include plans to minimize impact on the environment. These plans include careful start-up procedures and specific mine-closure plans. Once current operations are finished, mining companies have to ensure any disturbed areas are returned as close as possible to their original state.

The Island Converts to Map Staking

On September 1, 1995 a Ministerial Notice was published in the Newfoundland Gazette, effectively ending the acquisition of mineral rights by ground staking on the island portion of the province. The Mineral Regulations require a moratorium on map staking for 31 clear days for areas included in and following a notice under the Mineral Act. Therefore, acceptance of applications for map staked licences for the Island began on October 3, 1995. Map staking had already been in effect for Labrador prior to this change.

Upcoming Events

Workshop on the Geology and Mineral Deposits of Labrador, Oct. 25, 1995, Hotel Newfoundland, St. John's, NF

The Geological Survey of the Mines Branch is conducting a workshop as a service to the mineral-exploration community on the geology and mineral deposits of Labrador. For more information see article in newsletter.

Contact: Richard Wardle
Ph: 709-729-2107
Fax: 709-729-3493

APEGN/CIM Joint Meeting and Technical Conference, Oct. 25-28, 1995, Hotel Newfoundland, St. John's, NF

The theme of this year's conference is "Our Natural Resources - Creating Opportunities in Service, Infrastructure and High-Tech Applications".

Contact: Darlene Whelan
Ph: 709-737-8816
Fax: 709-737-2537

Peter Dimmell
Ph: 709-739-5608
Fax: 709-739-0761

Mines Branch 19th Annual Review of Activities, Oct. 26, 1995, Hotel Newfoundland, St. John's, NF

Annual review of the Mines Branch activities and open house held in conjunction with APEGN/CIM Joint Meeting and Technical Conference.

Contact: Norm Mercer
Ph: 709-729-6193
Fax: 709-729-3493

26th Underwater Mining Institute, Oct. 29-31, 1995, Memorial University of Newfoundland, Centre for Cold Ocean Resources Engineering (C-Core), St. John's, NF

Contact: Jerry English (C-Core)
Ph: 709-737-2594
Fax: 709-737-4706

APEGN/NRC, Oct. 30, 1995, St. John's, NF

A seminar on 'Voisey's Bay and Technology' presented by the Association of Professional Engineers and Geoscientists of Newfoundland and the National Research Council of Canada.

Contact: Hal Barrett
Ph: 709-726-5388
Fax: 709-726-5398

Geological Field Trip, Nov. 9-11, 1995

Gold Deposit of the Carolina Slate Belt.

Contact: Doug Crowe
Ph: 706-542-2382
Fax: 706-542-2425

Canadian-Aboriginal Mining Association, Nov. 14-15, 1995, Sudbury, ON

Exploring Common Ground.
Contact: Ann Osler
Ph: 416-925-0866
Toll Free: 1-800-443-6452
Fax: 416-925-1709

Northwest Mining Association Annual Convention, Dec. 4-8, 1995, Spokane, Washington

The western United States premier international mining exposition.

Contact: Tim S. Olson (Executive Director)
Ph: 509-624-1158
Fax: 509-623-1241

Cordilleran Roundup, Jan. 30 - Feb. 2, 1996, Vancouver, B.C.

Annual convention and exhibition of the B.C. and Yukon Chamber of Mines. Attended by most of the Vancouver based junior mining and exploration companies.

Contact: Sheila Holmes
Ph: 604-681-5328
Fax: 604-681-2363

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Engineering Analysis.....(709) 729-6449
Financial and Project Analysis....(709) 729-3197
Mineral Industry Assistance.....(709) 729-2358
Mineral Rights.....(709) 729-6418
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Hon. Rex Gibbons, Ph.D., P. Geo.