Nova Scotia
Minerals Update
Department of Natural Resources, Mineral Resources Branch

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In This Issue

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NOVA SCOTIA
Natural Resources

Prospectors Association Enjoys a June Field Trip

The Nova Scotia Prospectors Association (NSPA) held one of its two annual field trips on June 12 and 13, and enjoyed a very successful weekend of education and inspiration. The late-spring weather co-operated, leading to a relatively large turnout of about 45 persons. The trip concentrated on mineral deposits of the Eastern Shore region, and was led by DNR geologists Ron Mills, George O'Reilly and Rick Horne.

Participants headed eastward out of Dartmouth on Saturday morning, with a short detour to the Musquodoboit Valley to visit the former Dunbrack Pb-Cu-Zn-Ag mine, an amazing, small polymetallic deposit (see article on page 3) hosted in a quartz-rich fissure vein associated with a leucocratic dyke. This stop is a mineral collector's haven, displaying a myriad of epithermal mineral assemblages in spectacular hydrothermal textures. The group then continued on to Tangier, where historical mine workings (adits) used to access placer deposits have recently been uncovered south of the traditional lode-gold site in this community. Similarities to the original placer mining carried out in the Klondike were discussed, as was a plan for upcoming work to be done at the site by DNR staff. The group

Headframe of the Azure Resources Ltd. Mooseland gold deposit provides a backdrop for NSPA members on their June field trip. Photo by Ron Mills.

continued on to Mooseland and the highlight of the weekend, an underground visit at the Azure Resources Ltd. development there. The prospectors were able to visit an area where surface stripping was underway, providing a great example of surface exploration. Examination of the underground development illustrated how modern, cost-effective, narrow vein stoping can be done in a Nova Scotia gold district. The importance of the history of Mooseland, the fist site of gold discovery in Nova Scotia and one of the first in the nation, was also discussed.

The Saturday night barbeque, always a well attended event at these meetings, was held in Sheet Harbour. The evening provided the usual combination of music and social interaction, interrupted only by an entertaining visit from Doug Bowes in his 'Amazing Dr. Flame O' persona, complete with ultra-violet mineral show.

After the overnight stop in Sheet Harbour, the group headed north to Moose River the next morning. The Moose River Museum was the day's first stop, then the prospectors moved on to the Touquoy Pit, one of the best prospects for an open pit, large-tonnage development in the province. The site of the original 'rescue hole' drilled during the famous Moose River mine disaster provided the backdrop for a description of the dramatic rescue carried out at the site. The group moved on to the site of the Moose River (Stillwater) scheelite mine to see a deposit of scheelite hosted in bedding-parallel veins similar to gold deposits in the Meguma terrain. Driving north from Moose River, the group visited the Elderbank Quartz Mine, a site that has produced high-quality quartz for the pre-cast concrete market, and which is worthy of consideration for new, modern resin matrix products, such as those produced for high-traffic flooring and counter tops.

The final stop consisted of an inspirational dissertation by prospector Doug Bowes on the life and times of Walter Prest, whose life Doug has researched, at Prest's final resting place in quiet Elderbank. Prest was an eminent geoscientist of the early 20th Century and a great Nova Scotian. Well ahead of his time, Prest could probably be credited with more gold discoveries and gold district developments than any other single person in the history of the province.

The NSPA will visit the 'Eastern Shore gold terrain' in its second field excursion, which will be held this autumn.

Ron Mills

World Heritage Status for Joggins: We're on Our Way!

The call came at 3 pm on May 1st, just as I lifted my eyes to see for the first time a towering example of the celebrated fossil trees at Joggins. It was the message on which I and a lot of other people had pinned our hopes these past few years: Joggins made Canada's Tentative List. The name implies that such a list may not be important, but it is, in fact, all important. Failure to make the list would end any attempt to nominate Joggins as a UNESCO World Heritage Site. Each country that is a signatory to the UNESCO Convention prepares a list of sites that it plans to nominate as World Heritage Sites. Canada, under the aegis of Parks Canada, has just undertaken an exhaustive review of prospective sites that meet the criteria to be designated either a natural or cultural site, the first such review in 20 years. Named to the revised Tentative List are 11 sites, including Joggins, and Newfoundland's Mistaken Point, site of Ediacaran organisms from the late Archean.

This project has been nurtured from the ground up, with the vital support of the local community. Currently, a transition team is meeting to establish a plan to take the site to the nomination point. The team comprises senior staff of several Nova Scotia government departments (including Natural Resources, Economic Development, Tourism, Culture and Heritage), Parks Canada, and the Municipality of Cumberland, as well as representatives of Joggins and the surrounding community, all co-ordinated by the Cumberland Regional Development Agency. Time is of the essence, as we may be called to go forward in as little as two years, and the site has to be operational when the World Heritage jurors come to pass judgment.

With the knowledge that nomination will be upon us sooner than later, things will soon begin to happen on the ground at Joggins. The most significant event will be construction of an Interpretive Centre to tell the story of the Pennsylvanian Period or 'Coal Age' that Joggins represents, and of the cliffs themselves and the scientists that gave them their pre-eminent place in history.

Here is what Parks Canada says about Joggins in its summary publication on Canada's Tentative List:

"The Joggins fossil site encompasses a 10 km strip of sea cliffs up to 30 m high along the coast of the upper Bay of Fundy. Preserved in the cliff face is a succession of Pennsylvanian Period (Coal Age) fossil swamp forests, including standing tree trunks up to 6 m high, a vast array of invertebrates, fish, amphibians and remains of the world's first reptiles. The largest fossil creature at Joggins is an arthropod nearly 2 m long. Twice-daily tides, among the world's highest, continually erode the cliff face and expose new fossil beds. Since the mid-1800s, the fossil forests of Joggins have been extensively studied and have been so instrumental in the development of geological and evolutionary principles that the site is often referred to as a 'Coal Age Galapagos'.

Criterion suggested: (viii) Joggins is an outstanding example of the evolution of life on earth in the Pennsylvanian Period."

Sir Charles Lyell said of Joggins in 1871: "...the finest example in the world of a natural exposure in a continuous section ten miles long, occurs in the sea cliffs bordering a branch of the Bay of Fundy in Nova Scotia." It is hard to improve on that.

John Calder

From the Mineral Inventory Files

The Dunbrack Pb-Cu-Zn-Ag Mine: A Must Stop for Mineral and Rock Collectors

An interesting vein deposit of Pb-Cu-Zn-Ag occurs 5 km north of the village of Musquodoboit Harbour on Highway 357. Since discovery of mineralized boulders in the area in 1888, and the sinking of two shafts in 1910, the site has been known as the Dunbrack Mine (Fig. 1). By modern mining standards, however, the workings amount to no more than a development prospect. A Main Shaft (Shaft 2) reaches 41 m depth and is found immediately east of Highway 357, 4.95 km north of where it intersects Highway 7 at Musquodoboit Harbour. A level at 27 m depth has drifts that go north for 33.5 m and south for 33 m. Another shaft (Shaft 1) found a couple of hundred metres to the north of Shaft 2, and on the west side of the highway, reaches 20 m depth. The Main Shaft is still open and should be avoided while Shaft 1 was filled in some time ago when houses were built in that area.

The mineral deposit at Dunbrack occurs within a brecciated, quartz-rich fissure vein formed along the hanging wall of a fine-grained leucogranite dyke. The dyke is from 5 to 10 m thick and intrudes a fault zone in the coarse-grained biotite-muscovite monzogranite that constitutes most of the 370 Ma Musquodoboit Batholith. The dyke and fissure vein trend 110° and dip 62° north. The fissure vein is variable in width but averages approximately 1 m and has been traced by trenching along strike of the fault for several hundred metres. A small intrusion of fine-grained leucomonzogranite is found along the east side of Paces Lake about 1 km to the northwest of the Dunbrack deposit. The fault zone within which the mineralized fissure vein is located strikes toward this intrusion and previous workers have postulated that the leucogranite dyke forming the footwall to the mineralized fissure is an offshoot of this intrusion. It is, therefore, believed that the Dunbrack mineral occurrence is a result of hydrothermal fluids emanating from this intrusion.

Although the mineral occurrence within the fissure vein is massive and impressive, it appears that there is not enough tonnage to be economically mined. This is not to say the site has no interest or value. Perhaps its value may instead be its appeal to mineral and rock collectors, as the vein contains an impressive assemblage of minerals and the waste rock piles are littered with spectacular examples of epithermal textures typical of the high-level hydrothermal fluids from which the veins precipitated. The ore minerals are predominantly galena, chalcopyrite and sphalerite, but a host of secondary and/or supergene minerals are also present. The most common of these are malachite and azurite, but over the years several workers have recognized chalcocite, bornite, pyromorphite ($Pb[PO_4]3Cl$), meneghinite ($Pb_{13}CuSb_7S_{24}$), cerussite, ilmenite, djurleite ($Cu_{1.96}S$) and digenite (Cu_9S_5). Minerals also present, but not commonly considered 'economic minerals', include smoky quartz, calcite, sericite, fluorite, kaolinite, K-feldspar and an uncommon isomorphic variation of the quartz mineral family called tridymite. More than mineral collectors will be happy. Rock collectors will also find that the dumps contain an abundance of boulders displaying spectacular epithermal-style crystallization textures such as breccia, cockade, crustiform and comb textures. These quite possibly represent the best examples known in the province and, when slabbed or polished, produce beautiful conversation pieces.

G. A. O'Reilly

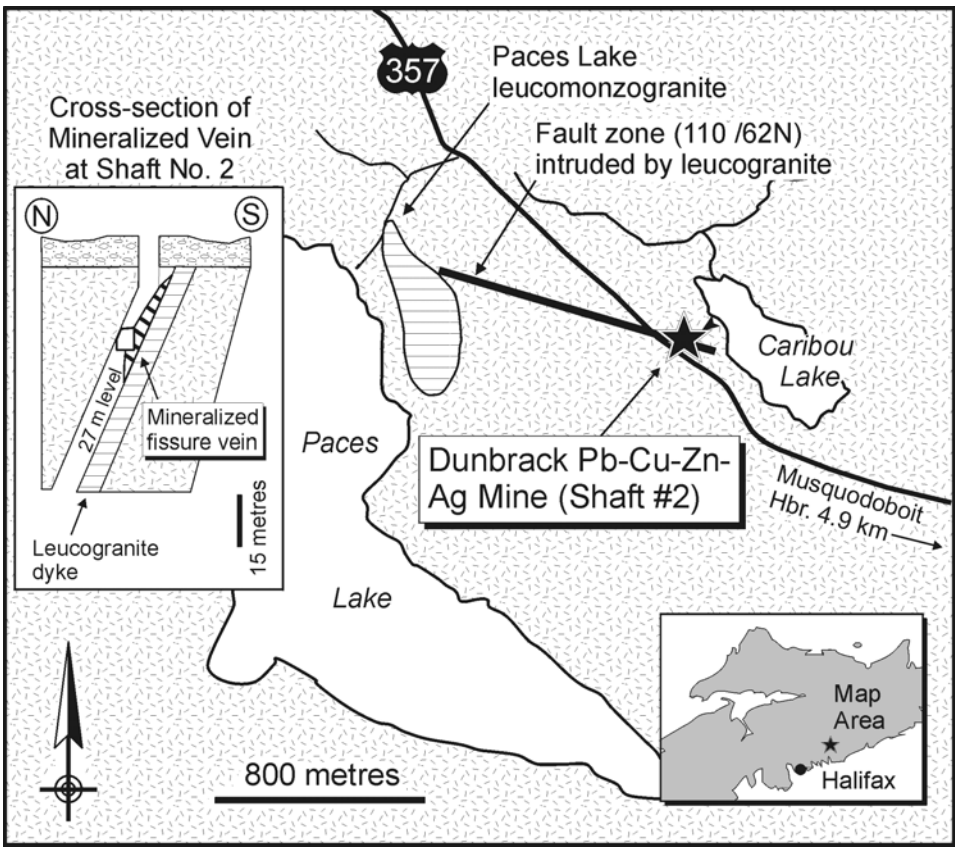


Figure 1. Location map and cross-section of the Dunbrack deposit, Halifax County.

The Dimension Stone Industry in Nova Scotia

Nova Scotia has a proud tradition of using its diverse rock formations to produce dimension stone. Early settlers used stone for a wide range of applications. Granite, quartzite and slate from the Halifax area were used to construct many of the province's heritage buildings, including the Halifax Citadel and surrounding fortifications. The front elevation of Saint Mary's Basilica in Halifax was constructed with white granite from the former Purcells Cove quarry. The Basilica has the tallest granite spire in North America. Even today quartzite cobblestones, quarried locally and used to pave much of downtown Halifax 100 years ago, can be occasionally seen through broken asphalt.

Production records at DNR indicate that a total of 1 million tonnes of dimension stone was produced in Nova Scotia between 1873 and 1973. This production consisted of approximately 900 000 tonnes of sandstone, 50 000 tonnes of granite, 30 000 tonnes of grindstone and 20 000 tonnes of quartzite.

Nova Scotia sandstone has been produced from over 75 quarries in northern Nova Scotia and Cape Breton Island. Olive-green sandstone from the Wallace Quarry was used in the construction of buildings throughout eastern and central Canada, along the Eastern Seaboard of the United States, and as far away as California. Wallace sandstone was used in the construction of the Peace Tower in our Parliament Buildings in Ottawa, and in New York City's famous Central Park.

One of the interesting aspects of the early Nova Scotia dimension stone industry was the manufacture of grindstones using fine-grained grey sandstone. In the early 1880s Amos Seaman, a Cumberland County entrepreneur, operated and leased numerous grindstone quarries near Joggins and established himself as the world-renowned Grindstone King. In 1847 over 33,000 grindstones were shipped from Minudie, Cumberland County, to markets throughout the world.

Stone products ready for shipment from the Scotia Slate Products Limited quarry. Photo courtesy of Scotia Slate Products Limited.

Large deposits of marble have been known in Cape Breton Island since the early settlement of the island. Marble quarries were formerly operated at Marble Mountain, Eskasoni, George River and Whycocomagh. In a 1914 report on building and ornamental stone in eastern Canada, W.A. Parks noted that marbles from near Eskasoni were of "a considerable range of colour and texture, but generally white, with brown, blue, greenish, and canary-yellow streaks, susceptible also to a fine polish....". The report goes on to mention that marble from this region was " secured for exhibition purposes, which received diplomas at the Paris exhibition [World Fair] of 1900."

Natural stone is currently enjoying a resurgence throughout North America, and this has led to growth in Nova Scotia's dimension stone industry. Natural stone is desirable for new construction and landscaping because of the beauty, durability and enjoyment natural stone brings to our surroundings. In addition, natural stone does not share the environmental problems faced by carpet and other construction materials.

Nova Scotia continues to have a small, but vibrant, dimension stone industry with operations located throughout the province. The newest quarry is the MacLeod Resources red marble quarry in River Denys, Cape Breton Island, where marble blocks are prepared for various interior and exterior applications. Scotia Slate Products Limited in Hants County quarries slate for use in landscaping and interior applications. The company ships material to markets throughout eastern and central Canada and along the Eastern Seaboard of the United States. Lange's Rock Farm operates a grey granite quarry near New Germany for the manufacture of cobblestones and construction materials for both domestic and export markets. Until recently, Heritage Memorials Limited of Windsor extracted grey granite from its quarry in Nictaux, Annapolis County, for constructing monuments and memorials. There are two sandstone quarries active in Nova Scotia: Wallace Quarries Limited in Wallace and Pictou County Sandstone Quarry Limited in Scotsburn. Sandstone is produced for restoration of historic buildings and for new construction.

Mike MacDonald

Geochemistry in Nova Scotia: Past, Present and Future

Editor's note: This introductory article will be followed by more detailed information on geochemical surveys and methods in future issues of the *Nova Scotia Minerals Update*.

Geochemistry is a difficult word to define succinctly. In its broadest sense, it is the science that deals with the chemistry of the earth. It involves the study of the distribution and relative amounts of elements (e.g. copper, lead, zinc, gold, etc.) in various earth materials known as 'sample media' (e.g. air, vegetation, humus, soil, glacial sediments, rock, stream water and sediment, lake water and sediment, groundwater, minerals, etc.). Geochemistry has numerous subdivisions, including exploration geochemistry, stable isotope geochemistry, organic geochemistry, hydrogeochemistry, environmental geochemistry and lunar geochemistry. Recent scandals in mineral exploration have prompted the emergence of a new class of geochemistry, termed 'forensic geochemistry'.

The Nova Scotia Department of Natural Resources and its predecessor, the Nova Scotia Department of Mines and Energy, have been conducting detailed and regional geochemical programs for the past five decades. The programs were, in general, undertaken to stimulate mineral exploration within the province and were often cost-shared with the federal government under various mineral development agreements.

Data from various geochemical surveys are available in hard copy through the department's library, located on the third floor of Founders Square, 1701 Hollis Street, Halifax. More recent (post-1970) regional geochemical surveys are also available as digital files, and can be downloaded free from the DNR web site: http://www.gov.ns.ca/natr/meb/pubs/pubs3.htm#databases. These data include analytical results for multi-element analysis for various sample media, including rock, till, lake water and sediment, stream water and sediment, and vegetation.

In order to capture all the relevant information (e.g. laboratory that performed the analysis, size fraction, analytical methodology, etc.) that defines each survey, the department recently began the task of compiling the metadata (the information that describes each survey). To date, most of the metadata have been compiled from geochemical surveys that are currently available as digital data downloads from the department's server.

Recently completed geochemical surveys are significantly smaller in scale than the regional surveys completed during the 1970s and 1980s. Recent programs have included site-specific sampling of: (i) till near Kejimkujik National Park in an attempt to identify a geogenic or anthropogenic source of mercury related to the elevated levels of mercury found in the blood of loons, (ii) till samples collected along the mainline and lateral sections of the natural gas pipelines, and (iii) humus, soil and till samples collected from various past-producing gold districts to determine background levels for numerous elements (e.g. mercury, arsenic, etc.) and the post-mining dispersion of these elements.

The future direction of geochemistry at DNR will include a broader range of sample media (standard will be humus, soil and till), a broader range of elements analyzed (using new analytical methodologies), lower detection limits (again using new analytical methodologies), and multiple size fractions used for the analysis.

This change is a direct response to the department's ever-changing clients and their respective needs. Historically, the department's clients were almost exclusively companies associated with mineral exploration. However, today's clients include not only the mineral exploration industry but environmental companies, other government agencies and departments, and groups with specific, local interests, such as a river protection agency.

Terry Goodwin

One of the main reasons for collecting a sample in the field is to obtain a representative geochemical analysis of the rock, till, soil, vegetation, sediment or water at a site. This site was sampled for humus, soil and till geochemistry. Photo by author.

Diamond-drilling Notification

Section 74 of the *Mineral Resources Regulations* requires mineral explorationists to notify the department's Registrar of Mineral and Petroleum Titles in writing prior to the commencement of any drilling program:

***74 (2)** Every mineral right holder who is not the holder of a mining permit shall **(a)** prior to commencing a drilling program, provide written notification to the Registrar in the form provided by the Department indicating the claim area, magnitude and schedule of any proposed drilling program.*

This notification provides government with important information that allows DNR to track advanced exploration projects in the province, prepare exploration statistics, and answer queries from landowners and the general public. Note that this is a simple notification, not an application for approval. Notification to the Registrar of Mineral and Petroleum Titles is mandatory; there is no discretion with respect to fulfillment of this requirement.

In recent years, there have been occasional instances of exploration drilling without the requirement for prior notice having been fulfilled. This is potentially problematic for the operator because Section 2 of the *Mineral Resources Act* specifies that assessment work, in order to be eligible for work credit, must conform to the regulations:

***2** In this Act:*
(a) "assessment work" means bona fide work that conforms to the regulations and is submitted for credit as work to prove the existence, extent and value of a mineral deposit and includes work carried out pursuant to a special licence;

(ap) "work credit" means credit given for assessment work performed upon a licence.

Carrying out diamond-drilling without prior notification to the Registrar puts the operator in contravention of the *Mineral Resources Regulations* and may render the work ineligible for credit as assessment work. Filing a written drilling notification with the Registrar's office should be a routine part of every drill program carried out in Nova Scotia.

Scott Swinden

April - June Open Assessment Reports

Report Number	NTS	Licensee
AR ME 2002-030	011E/02A	RJZ Mining Corporation
AR ME 2002-032	011E/03C	The Shaw Group Limited
AR ME 2002-033	011E/03C	The Shaw Group Limited
AR ME 2002-034	011F/16D	Golden Ace Mineral Explorations Limited
AR ME 2002-036	021A/02D	Conrad, M
AR ME 2002-037	021A/07C	Hiltz, K R
AR ME 2002-039	011D/16C	H and E Mullen Investments Limited
AR ME 2002-042	011E/04B	Anthony, R C
AR ME 2002-043	011D/15C	Giroux, M
	011E/03A	
	011E/02A, B, C	
	011D/13C, D	
	021A/09B	
	021A/10A	
	021A/07C	
	011K/02B, C	
	021B/01A	
	020O/16D	
	011E/01C	
	021A/14A	
	011E/12B	
	011E/01A, C	
	011F/04A, C, D	
	011D/16C, D	
	011D/14D	
AR ME 2002-044	011F/14B	Glencoe Resources Incorporated
AR ME 2002-051	011K/02C	Keeping, A
AR ME 2002-052	011K/02C	Keeping, A
AR ME 2002-045	011F/14B	Glencoe Resources Incorporated
AR ME 2002-040	021A/07C	O'Brien, J
AR ME 2002-046	011E/02C	Brown, J
AR ME 2002-047	011E/02D	Baillie, T R
AR ME 2002-048	011D/15A	3779751 Canada Incorporated
AR ME 2002-035	011F/14D	MacDonald, R H
AR ME 2002-049	011D/15C	Globex Mining Enterprises Incorporated
AR ME 2002-041	011D/16C	Ochter Holdings Limited
AR ME 2002-103	021A/07A	Crouse, A R
AR ME 1968-002	011E/11B, C	Hanson Mines Limited
	011E/12A, D	

Susan Saunders, Norman Lyttle and Jeff Poole

Exploration for Iron Oxide-Copper-Gold Deposits

Globally, the iron oxide-copper-gold (IOCG) class of mineral deposits is a major source of metals. These deposits can be very large, with up to 1 billion tonnes of ore, and typically are mined for more than one metal, which increases their value. IOCG deposits have been found throughout the world, including important occurrences in North and South America, Africa and Australia. The best known example of IOCG deposits is the Olympic Dam deposit in South Australia, which was discovered in 1975.

Numerous deposits and occurrences of iron oxide are located along the Cobequid - Chedabucto Fault Zone (CCFZ), a crustal-scale transform fault zone that separates Nova Scotia into the Meguma Terrane to the south and the composite Avalon Terrane to the north. The largest deposits discovered to date are in the Londonderry Iron District. Mining was from a 16 km long segment of the CCFZ with numerous veins and pods of ankerite-siderite-hematite up to 40 m wide. Londonderry was the premier iron-mining district in Canada in the mid-1800s. Other iron oxide and iron carbonate deposits along the fault zone are also known to contain anomalous concentrations of gold and copper. These include sites at Mount Thom, Copper Lake, Lansdowne and Drug Brook.

Since 1996, DNR geologists, most notably George O'Reilly, have promoted the IOCG potential of central Nova Scotia at mining trade shows, such as the annual meeting of the Prospectors and Developers Association of Canada. In response to these efforts, several mineral exploration companies and individuals are now actively exploring the province for IOCG deposits.

Monster Copper Corporation and Wallbridge Mining Company Limited issued a press release on June 25, 2004, announcing plans to commence a drilling project in July 2004 at their Copper Lake property. Results from geophysical and geochemical surveys, completed in the Spring of 2004, confirmed the prospectivity of the claims for IOCG deposits. The press release noted that previous government assessment reports at Copper Lake revealed a 5 m drill intercept of 2% Cu and historical workings that reportedly produced 357 tons of 5.5% Cu. Recent work by Monster Copper Corp. has outlined potassic alteration at Copper Lake adjacent to veins and breccias that resemble other worldwide IOCG deposits.

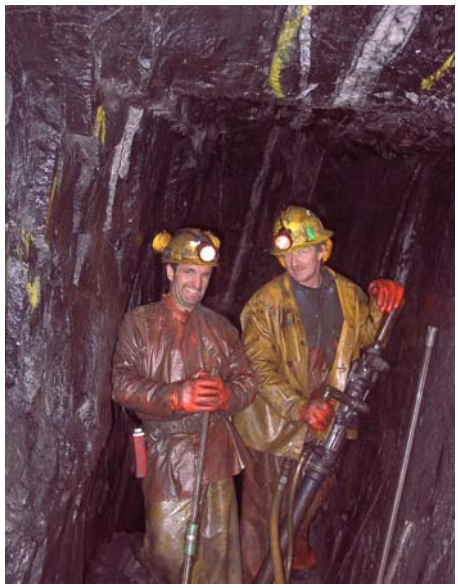
Avalon Ventures Ltd. issued a press release on July 8, 2004, announcing it had commenced a first phase diamond-drilling program on its Mount Thom copper-cobalt-gold prospect near Truro. The company planned a minimum of 500 metres of drilling in seven holes to test four targets that were defined on the basis of geological, geophysical and geochemical studies.

Several of the IOCG prospects in central Nova Scotia have enrichment in cobalt, in particular the Mount Thom prospect. In addition, several areas along the fault system have produced clusters of cobalt anomalies in regional stream sediment surveys. The potential for primary cobalt resources, with by-product copper and gold, may be significant in light of projected strength in the cobalt sector. According to a recent publication by the Cobalt Development Institute, future demand for the metal will increase substantially, particularly with the projected shift to hybrid cars in reaction to anticipated reductions in global petroleum reserves. According to the Institute, the preferred battery for hybrid technology is the lithium-cobalt ion or polymer battery (Li-ion) due to its light weight and performance. Some of the current hybrid cars have batteries containing 7 pounds of cobalt. Clearly, increased production of hybrid cars will have a pronounced impact on the worldwide demand for cobalt resources.

Mike MacDonald

John O'Sullivan carries out field work on the Mount Thom IOGC prospect, Pictou County. Photo courtesy of Avalon Ventures Ltd.

Mining Matters for Nova Scotia 2004



Miners in a drift on the Little North Belt, Mooseland gold deposit (Azure Resources Corp.). Photo by Rick Horne.

What is the impact of the mining industry on the Nova Scotia economy? What mineral commodities are mined in this province? Does Nova Scotia have economic deposits of gold? Is there any coal mining on Cape Breton Island? Does a mining company have to clean up the land when mining is finished? Does the general public have any say in proposed mining projects? The answer to these questions, and many others, may be found at the Mining Matters 2004 conference, to be held at the Westin Nova Scotian Hotel on Monday and Tuesday, November 1 and 2.

In 1998 DNR made significant changes to its annual conference, changing the name from Review of Activities to Mining Matters, and broadening the mandate of the event. It was decided that in addition to providing a venue to highlight geoscience research in Nova Scotia, and promote the mineral potential of the province to interested mineral exploration companies, the conference would be used to increase the awareness and understanding of the mineral industry to a wide audience. Since its inception, the list of partners involved in the organization of Mining Matters has grown to include the departments of Economic Development and Natural Resources, the Mining Society of Nova Scotia, the Chamber of Mineral Resources of Nova Scotia, and the Prospectors Association of Nova Scotia. Delegates at the conference, historically dominated by geologists and mineral explorationists, now include representatives from many provincial government departments and agencies, Natural Resources Canada, local universities, Regional Development Agencies, municipal planners, supply and service industries, and the general public.

Making sure that these groups of delegates gets their collective 'bang for the buck' is not easy, especially since the organizers of the conference want to retain the core geoscience and mining aspects of the conference. This year's conference, however, is shaping up to do just that! Three technical sessions will focus on general developments in the mineral industry, the mineral wealth of southwestern Nova Scotia (in recognition of the 25th anniversary of the discovery of the East Kemptville tin deposit), and the geology and mineral deposits of the Carboniferous rocks of northern Nova Scotia and Cape Breton Island. Two field trips are planned, one to southwest Nova Scotia to visit Black Bull Resources Ltd.'s new quartz mine near Yarmouth, and the geology and reclamation of the former East Kemptville tin mine. The second trip, provisionally termed MetroGeo, will feature the urban geology of the HRM metro area. A special treat for delegates this year will be the participation of local stone mason Heather Lawson from Raspberry Bay Stone. Heather will be on hand carving one of the plinths that will be used in a new interpretation centre at Joggins. Mining Matters 2004 will also feature luncheons with guest speakers on both days of the conference and a Baron of Beef reception hosted by the Hon. Richard Hurlburt, Minister of Natural Resources. Mark November 1-2 on your calendar and plan to attend.

Mike MacDonald

Special Note

Report of Activities 2003
The Mineral Resources Branch Report of Activities 2003 (Report ME 2004-1) is now available in the DNR Library, 3rd Floor, 1701 Hollis Street, Halifax. The report comprises 206 pages (many in full colour) and costs $20.

Dates to Remember

August 20 - 22, 2004
Nova Scotia Mineral and Gem Show, Parrsboro, N. S. For more information call the Fundy Geological Museum at 902-254-3814.

October 28-30, 2004
Atlantic Universities Geological Conference, Acadia University, Wolfville, N. S. For information visit the conference web site: http://ace.acadiau.ca/science/geol/augc2004.

November 1 and 2, 2004
Mining Matters 2004, Westin Nova Scotian Hotel, Halifax, N. S. For more information see article on this page, or contact Mike MacDonald (phone 902-424-2523 or e-mail mamacdon@gov.ns.ca).

November 4-6, 2004
Review of Activities, Geological Survey of Newfoundland and Labrador, Newfoundland Department of Natural Resources, and Fall Meeting of the Newfoundland Branch CIM, Delta St. John's Hotel, St. John's, Newfoundland. For more information contact Norm Mercer (709-729-6193).

November 7 - 9, 2004
2004 Review of Activities, New Brunswick Department of Natural Resources, Delta Hotel, Fredericton, New Brunswick. For more information contact Carol McNeill-Dobbelsteyn (phone 506-453-6624 or e-mail carol.mcneill-dobbelsteyn@gnb.ca).