



Natural Resources

Volume 17, No. 1

Summer 2011

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MINISTER'S MESSAGE



Honourable Shawn Skinner Minister of Natural Resources Provide the set of the

In 2011, we anticipate renewed interest in the province with produced mineral shipments of \$4.7 billion. Projected exploration expenditures, driven by increases in overall commodity prices, have increased to \$127 million.

Development activity is making a very strong recovery. Principal among these developments is Vale's commercial hydromet facility in Long Harbour and the \$828 million expansion of the Iron Ore Company of Canada's operations in Labrador. These two projects alone have the potential to ensure long-term economic growth and viability.

Newfoundland and Labrador's mining industry continues to grow, and this signals a promising future for the province. Two new mines are progressing through the advanced stages of development, and are expected to open this year. Two direct-shipping iron ore projects in Western Labrador will provide further benefits for the region while meeting the global demand for high-quality iron ore. The reactivation of former producing mines on both the Burin and Baie Verte peninsulas will encourage further growth and employment in these areas of the province.

Ongoing growth of the provincial mining industry is contingent on exploration with major interest in iron ore, gold, copper, and rare metals. Several projects are currently in the advanced exploratory stages both on the Island and in Labrador.

In keeping with the Provincial Government's commitment to the responsible and sustainable development of Newfoundland and Labrador's mineral resources, public consultations on the development of a Minerals Strategy have been completed. I want to thank all those individuals who participated. Your input will prove to be valuable as we move ahead with the development of the strategy.

In Budget 2011 Standing Strong: For Prosperity. For Our Future. For Newfoundland and Labrador, the Provincial Government has maintained its focus on exploration and investment attraction. A healthy level of exploration is essential in discovering economic deposits that lead to new operations, which provide a major source of employment and revenue in the province, particularly our rural communities.

Budget 2011 continues our investment in the Mineral Incentive Program with \$2.9 million for prospector grants and assistance to junior exploration companies. Geoscience mapping is an important component in providing a competitive environment for mineral exploration, and we have maintained our support of increased mapping with a permanent addition of \$1.2 million.

Building on our commitment to safety and the environment, we have provided \$510,000 to address issues at four orphaned or abandoned mine sites across the province. Funding will also allow us to continue with the inspection and maintenance of all sites. This reflects our intent to be responsible stewards of our valuable mineral resources and ensure they are developed in a responsible manner for the people of Newfoundland and Labrador.

The Provincial Government will encourage exploration and investment in Newfoundland and Labrador to ensure longterm industry sustainability, as well as the development of successful mining projects and meaningful employment opportunities. I want to thank the members of the Mines Branch for their continued hard work and dedication. With many exciting projects underway and on the horizon, I am confident that Newfoundland and Labrador will continue to grow and succeed.

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Note: Currency in Canadian Dollars unless otherwise noted.

MINING SECTOR UPDATE

The mining industry in Newfoundland and Labrador produces more than a dozen mineral commodities that contribute to both our economy and quality of life. The commodities mined vary from aggregates used in road construction to iron used in structural steel, nickel used to produce stainless steel, and copper used in electrical generation and distribution.

The forecasted Gross Value of Mineral Shipments (GVMS) of \$4.7 billion for 2011 is substantially higher than the \$3.7 billion in 2010. This is mostly due to the projected increase in shipments and prices of iron ore from western Labrador. Increased shipments are a result of expansion and upgrades at existing iron ore operations, and the anticipated opening of the Labrador Iron Mines operation near Schefferville. The end of the strike at Voisey's Bay, the planned reactivation of the Ming Mine by Rambler Metals and Mining, and a general increase in commodity prices are also contributing factors. A shipment value of \$4.7 billion would be the highest GVMS on record in nominal Canadian dollars and the first time above \$4 billion.

In 2004, the value of mineral shipments from this province stood at just \$684 million. From 2004 to 2011 there is a clear positive trend in the value of mineral shipments. Over this period, the commodity-demand boom resulted in an increase in prices attained for most commodities worldwide. This, coupled with the corresponding string of mine openings and expansions, resulted in a diversification of commodities produced and an increase in the mineral wealth. Several projects are currently in the development stage, and this bodes well for the future of mining in the province.





Direct employment in the mineral industry is projected to be 5980 person years in 2011, an increase of 1139 over 2010. This is the result of hiring for construction of the hydromet nickel processing facility at Long Harbour, increased employment by most mining operations in the province, and the projected opening of two new mines.

MINERAL EXPLORATION 2010

Interval exploration and development activity in the province enjoyed a strong recovery in 2010, following a substantial decline during the global downturn of 2009. Spending on exploration and deposit appraisal rose to an estimated \$72 million, compared to a five-year low of about \$55 million recorded in 2009 (Figure 1). Iron ore and gold played a prominent role in this activity, reflecting strong demand and prices for these commodities. A global resurgence of interest in rare-earth elements and rare metals was also felt in the province, as several companies are evaluating new and historic showings. Another indication of exploration activity is diamond drilling, this increased to about 180 000 m in 2010, from about 140 000 m in 2009 (Figure 2).



Iron deposits in the Labrador Trough were a major focus of exploration in 2010. Alderon Resource Corp. completed a major drilling program and published an initial resource estimate on its Kamistiatusset iron project south of Wabush. The department conducted drilling and metallurgical studies to evaluate the resource and potential market value of the Julienne Lake deposit north of Labrador City. Altius Minerals and Champion Minerals also operated iron ore projects in the district, but these are at an early stage.

A new development in 2010 was the launch of exploration programs for rare-earth elements (REE) and rare metals (RM). These commodities are increasingly important as key ingredients in a wide variety of green and high-technology applications.

Rare Earth Metals and Search Minerals conducted major programs, including drilling, in central and eastern Labrador respectively. Silver Spruce Resources and Midland Exploration also have substantial land positions and active programs in the region. Many other companies are involved with smaller projects or joint ventures.



Figure 1. Exploration Expenditures, 1990 – 2010.



Figure 2. Diamond Drilling, 1990 – 2010.

Vale continued to explore near-mine targets at the Voisey's Bay nickel–copper–cobalt project, and Benton Resources completed drilling on its Kingurutik nickel–copper–cobalt property.

In another new development, Crosshair Exploration & Mining announced a resource estimate for vanadium on its Central Mineral Belt project.

NEWFOUNDLAND

On the Island of Newfoundland, strong gold prices through most of 2010 prompted renewed efforts in many gold projects. Companies with major drill programs leading to new or updated resource estimates include Marathon Gold / Mountain Lake Resources at the Valentine Lake Project, Northern Abitibi Mining at Viking, and Golden Dory Resources / Paragon Minerals at Huxter Lane. Castillian Resources explored the former Hope Brook gold mine and Crosshair extracted a 2000-tonne bulk sample from the Jaclyn deposit on their Golden Promise gold property, a joint venture with Paragon Minerals. Other companies, including Silver Spruce Resources, Mountain Lake, Spruce Ridge Resources, Metals Creek Resources, Kat Exploration and Tawsho Mining conducted early-stage drilling. New gold occurrences were reported by TerraX Minerals on the Burin Peninsula, and by Buchans Minerals / Benton Resources on their Long Range joint venture.

Base-metal exploration continued on a number of well-established projects in central Newfoundland, as well as on several new ones.

Thundermin Resources and joint-venture partner Cornerstone Capital Resources completed another major drilling program on the Little Deer copper project near Springdale, and produced an updated resource estimate. Teck Resources conducted a major exploration drilling campaign near their Duck Pond copper–zinc mine, in central Newfoundland. South of Duck Pond, Paragon Minerals resumed drilling on the high-grade Lemarchant base-metals prospect.

Buchans Minerals reported the completion of a detailed open-pit mine plan to evaluate the Lundberg and Engine House deposits in the former Buchans base-metal mining camp. The company also reported high grade assays from drilling on the nearby Buchans North prospect. Buchans Minerals were also exploring for nickel-copper at the Long Range Nickel property southwest of Buchans, a joint venture with Benton Resources Corp.

Elsewhere in central Newfoundland, Puddle Pond Resources completed reconnaissance drilling on the Horn-Mesher and MolyPeak projects, located in the Lloyd's Valley area.

Rare-earth elements and rare metals also received attention on the Island of Newfound-land.

RockBridge Resources completed prospecting, sampling and diamond drilling on historic REE occurrences in the Cross Hills property. Kirrin Resources Inc. explored in the Bottom Brook property in western Newfoundland. New areas of REE mineralization were identified in both areas.

Finally, Triple Nine Resources Ltd. is exploring a newly reported vanadium–titanium–iron discovery near the Burgeo Highway in western Newfoundland. The company completed mapping, sampling, geophysical surveys and diamond drilling on the property.

The mineral industry in Newfoundland and Labrador has seen strong growth in 2010, with major capital investments in new and expanding projects, and highly encouraging results from major exploration programs throughout the Province. These programs represent a pipeline of potential new mining developments to help sustain the province's mineral industry.

For further information on mining and mineral exploration in Newfoundland and Labrador, please visit our website at www.nr.gov.nl.ca/mines&en/statistics/ exp_overview.stm, or contact Phil Saunders, project geologist for exploration monitoring.

FUNDAMENTAL SHIFT IN IRON ORE PRICING

The decades old practice of annual price negotiations between ironore producers and their steel-mill customers is giving way to new price mechanisms that closely reflect spot-market activity, especially in the market for seaborne ore.

Suppliers have become frustrated with the old pricing methods, whereby annual contract prices were locked in and this eliminated the potential to benefit from rising iron-ore prices. Traditionally, rising prices were not as evident because there was virtually no spot-market trade of iron ore. However, with the development of an iron-ore spot market, contracts were fixed while prices escalated on the spot market. Exacerbating the situation, some steel mills would renege on contracts when spot markets were in decline, creating further headaches for producers.

Since 2009, some suppliers have moved toward a system where contracts are signed for a quarterly period with the price being set at the average of spot-market prices for the first three of the previous four months. For example, contract prices for the quarter April 1 to June 30 would be set at the average of spot-market prices for the previous three months (December through February).

To accommodate this new arrangement, metals information services such as Platts, Metals Bulletin, and The Steel Index have devised systems where reliable reporting of spot-market trades are compiled, and in some cases normalized, to a standard reference for ore of a certain iron content and meeting certain tolerances with regard to the presence of unwanted elements, such as phosphorus or manganese. The index that results from this data compilation can be used as a reference, where reliable price information for iron-ore products is required.

Entities advocating this shift away from annual contracts touted transparent price discovery as an expected advantage of moving toward more frequent contract settlements that more closely reflect spotmarket activity. This has been achieved to some extent. The chart attached, for instance, shows a fairly consistent price



difference between the 58% iron and 62% iron indexes maintained by The Steel Index. The chart data indicates that for each 1% extra iron content a supplier might expect to receive a price premium of about \$7.00 per metric tonne. This is useful information when buyer and seller are trying to agree to contract pricing.

The iron-ore industry is subject to many nuances that arise from unique requirements of steel-mill customers, and the abilities of suppliers to fill these needs. There will never be an off-the-shelf supply of iron ore that suits all purchasers, and so there will always be deals struck between suppliers and end-users that are conducted outside of evolving market mechanisms.

GEOLOGICAL SURVEY FIELD PROJECTS

Budget 2011 provided a long-term increase in funding for Geological Survey. This allows the Survey to carry out significant field projects and office-based research. There will be six major field projects and four short-term projects. Twenty-two Earth Sciences and Geography summer students are employed in the field- and office-based projects.

GEOCHEMISTRY GEOPHYSICS AND TERRAIN SCIENCES

Steve Amor will be carrying out a helicopter-supported lake-water and lake-sediment geochemical survey in southeastern Labrador for about one month. He will be based in Mary's Harbour.

Dave Taylor will be carrying out a till-geochemistry survey in the northeast Avalon area and will be based in St. John's.

Denise Brushett will be carrying a project consisting of surficial geological mapping and till geochemical sampling in the area northeast of Gander. The project will be based in the Centreville area. This is the third and final year for this project.

Melanie Irvine will be starting a new three-year project to monitor the effects of climate change in Newfoundland and Labrador. Initial emphasis will be on areas of coastal erosion in numerous susceptible areas on the island of Newfoundland.

Jennifer Smith will carry out a two-week, helicopter-supported glacial stratigraphy project in the Red Indian Lake area of central Newfoundland.

REGIONAL GEOLOGY

Leon Normore will continue with detailed mapping of the Ediacaran–Cambrian strata and various intrusive rocks in the Clarenville–Random Island area. This is the third year for this project which started in the Bonavista area. Leon will be based in Hickman's Harbour on Random Island.

Charles Gower is planning a short field season taking advantage of the recently completed southern part of the Trans Labrador highway, to access newly created outcrops. He will also fly into some of the isolated areas west of Mary's Harbour. This work will further refine some details of the geology of the Grenville Province in southeast Labrador.

Charles Gower and *Norm Mercer* will lead a five-day field trip, in early September, in southeast Labrador. The event is sponsored by the Southeastern Aurora Development Corporation and Labrador Straits Development Corporation Regional Economic Development boards and is designed for mineral explorationists.



REPORT ON GOLD



Over the last decade, despite some periods of price retraction, the price of gold has trended higher, and on May 2, 2011 reached a new nominal high of US\$1577.57. This is a 6 fold gain since the precious metal's low in August 1999.

Since 1999, the tech bubble, the attack on the World Trade Center, the war in Afghanistan and the global financial crisis have all had a negative impact on the world's economies. Led by the USA, countries are increasing their money supply in an effort to stimulate their faltering economies. This has had the effect of devaluing their 'fiat' currencies against gold and most other commodities. In fact, over the past ten years, gold has gained between 250 and 450% in value against the USA and Canadian dollars, the British pound, the Euro, and the Yen (see chart). Investor anxiety has been rising with money



SUMMER 2011

Ian Knight and *Doug Boyce* will spend about two weeks in western Newfoundland examining some of the new exposures produced by the recent construction of forest access roads. This work will help refine the biostratigraphy and bedrock mapping in areas around Hawkes Bay.

MINERAL DEPOSITS

Greg Sparkes will start a new project on the Burin Peninsula looking at the metallogeny of the various gold prospects in the Marystown to Swift Current area. Greg will be based in St. Bernard's.

Iron Ore: It is hoped that a new project will start in the summer of 2011 to study aspects of the iron-ore deposits of western Labrador. This project will be based initially in the Labrador City–Wabush area and is dependent on recruiting a project geologist.

Andy Kerr will continue his research on the various rare-earth element prospects in central, southern and northwest Labrador. Archived samples, including drill core, will be sampled for analysis. Andy will be based in Happy Valley–Goose Bay.

Hamish Sandeman will carry out some field visits to gold properties in central Newfoundland and this will complete the fieldwork for this project.

John Hinchey will carry out some brief reconnaissance work in the southern Long Range Mountains and will concentrate on the nickel prospects in the area.

PUBLICATIONS AND INFORMATION

Amanda McCallum and *Norm Mercer* will attend the Expo Labrador conference and trade show held in Happy Valley–Goose Bay from 26–29 June. At the Mines Branch display, they will highlight the Province's mining industry, with emphasis on Labrador, and provide interactive mineral- and mining-related activities for conference participants.

Amanda McCallum will also participate in the Empowering Women 2011 Conference in Grand Falls–Windsor in early June, a conference to discuss ways of getting more women working in the mining industry. She will also be liaising with the Bonavista GeoPark steering committee during the summer.

creation and the realization that more money created means further devaluing of currencies and inevitably to inflation. Investors of all types, wanting to protect their wealth, have been flocking to gold as a safe haven and a hedge against inflation. There are early indications that some national economies, such as China are seriously considering a cycle of monetary tightening to battle inflation. Should such a reaction become prevalent, the price of monetary substitutes like gold could lose some appeal.



The World Gold Council regularly monitors official gold reserve statistics, is reporting substantial purchases by central banks, especially among emerging economies. The Council comments that these acquisitions are likely motivated by a need to diversify expanding foreign reserves and to hedge against inflation. In addition, a desire by China and Russia to bring their 'gold reserves to outstanding currency ratio' closer to that of western banks will require them to combine, to add an additional 4000 tons of gold to their reserves.

Given the poor economic climate with little near-term optimism of most developed countries, an increase in demand by investors for gold, should find solid, but cautious support.

THE RARE-EARTH RENAISSANCE IN LABRADOR

The cyclic nature of the minerals industry is well-known, and there are changes, related to societal and technological developments, that cause radical shifts in the outlook for commodities. The rare-earth-elements (REE) provide such an example, and these developments have had an important impact upon exploration in Labrador. These obscure metals with difficult sounding names - like 'dysprosium' and 'praseodymium' - are increasingly important in modern technology. In terms of value, their most important uses are in high-strength, lightweight magnets and in the manufacture of specialized phosphors, closely followed by specialized alloys and ceramic applications. The ubiquitous flat-screen displays of today's world - be they iPhones or giant TV s - depend on the REE, as do the generators in wind-turbines or the

complex motors of hybrid cars. Over the years, China has become the dominant supplier of the REE, and its imposition of export tariffs and quotas to ensure domestic supplies have affected markets for REE, driven up their prices, and promoted wider exploration.

Canada is well-known for its REE potential, notably in its Precambrian shield areas, and one of the best-known undeveloped deposits occurs on the remote interprovincial border between northern Labrador and Québec. The Strange Lake deposit, located mostly in Labrador, was discovered at the end of the 1970s, by the Iron Ore Company of Canada. At the time, the REE were not the main focus of exploration, but they are certainly known to be abundant in the deposit. The main deposit in Labrador is presently closed to exploration pending finalization of a land-use plan with the Nunatsiavut Government. However, renewed exploration in Québec, by Quest Rare Minerals, has discovered a similar deposit, and they are now proceeding with assessing the commercial feasibility of its development. Quest's success has raised the profile of Labrador and



The rare-earth element bearing mineral eudialyte, from the Red Wine Mountains area of Labrador.

Québec as REE targets, and several other survey/exploration programs operated during 2010. One of these, by Rare Earth Metals, targeted deposits originally discovered in the 1950s near Letitia Lake that had previously been explored for beryllium (Be). The results from drilling in late 2010 suggest that these are also enriched in REE, most notably in the element neodymium (Nd), used extensively in magnet manufacture. A preliminary estimate of resources in this area is anticipated during the summer of 2011, and there will be additional drilling. Some other projects in Labrador are truly 'grass-roots' efforts in areas that have little history of exploration. Search Minerals has been working since 2009 in the Port Hope Simpson area, where they have found several types of REE mineralization, and reported interesting grades. Drilling continued through the winter of 2010-11, and new results are awaited with much interest. Silver Spruce Resources has focused on the Popes Hill area, conveniently located by the Trans-Labrador highway west of Goose Bay, where they successfully intersected REE mineralization in drilling completed over the winter. Last, but not least, a Québec-based junior company, Midland Exploration, ventured into largely uncharted territory along the border, south of Strange Lake, and uncovered REE mineralization in Labrador. They hope to test these areas by drilling during the coming summer.

In summary, the impetus for REE exploration in Labrador remains strong and 2011 promises to be another active and interesting summer. The Geological Survey will continue its geoscientific work in these growing exploration projects, and also complete additional studies using archived material from the Strange Lake deposit that is retained within our core library.

PROVINCE CONTINUES TO SUPPORT MINERAL EXPLORATION

The Department of Natural Resources continues to provide financial assistance to support and encourage mineral exploration in Newfoundland and Labrador. The \$2.9 million budget funds three programs; the Junior Exploration Assistance Program, Prospector Grants & Training and Natural Stone Assessment. In 2009/10 the program funded 22 Junior Exploration Assistance projects, 3 Natural Stone projects and 75 Prospectors Grants along with the support of the Prospectors Training Course.

PROSPECTOR'S CORNER: KEVIN RYAN

ne of this province's most recent additions to our prospecting fraternity is Kevin Ryan of St. John's. Kevin was born in St. John's in November 1945, the sixth of eight children and was the first for his parents, post World War II. His father, Michael, returned from service with the Royal Navy's Rescue Tug Service out of Portsmouth, England. Kevin was quite active in his boyhood / teenage years playing soccer, hockey, and guitar, along with stints in the Boy Scouts, the Kinsmen's Boys Club and with the 2515 St. John's Army Cadet Corps. He graduated from Grade 11 at Brother Rice High School here in St. John's.

Post-secondary education saw him attend both Memorial University and Mount St. Vincent's where he undertook Arts studies. Kevin obtained his CRA designation from the Appraisal



Institute of Canada, through studies at MUN and at the Trades College. Career paths for Kevin have included training to be a Bank Manager, and Executive Marketing Officer licensed under the Ontario Securities Commission for Canadian Property Investors Trust Ltd. He retired just a couple of years ago after a very fulfilling 31 year career with the Federal Government, being involved in a number of positions including; as a Real Estate Appraiser, Project Co-ordinator, Programs Investigator and as an Administrative Officer.

Kevin says that what got him interested in prospecting was that while gardening, he found the rocks more interesting than the planting of shrubs and flowers. So he started searching the internet and came across rock hounding, precious stone collections and information on gold panning. The geology and mining history of the province intrigued him and he got hooked. Kevin originally thought that it might be an interesting hobby to explore some of the rivers and streams in the region and try his hand at gold panning. Through his ongoing computer research, plus enquiries and discussions with staff at the Mines Branch along with the Matty Mitchell Prospectors Resources Room Geologist, Pat O'Neill, as well as studying the literature made available to him, he realized that the pursuit of prospecting could become much more than a hobby. Prospecting could be a serious vocation with even more substantial rewards.

Kevin retired in June of 2006 and started prospecting shortly thereafter over the summer. That fall he completed the twoday Introductory Prospecting Course offered by the Mines Branch of the Department of Natural Resources in St. John's. He completed the two-week Prospector Course at CONA in Stephenville in June of 2010. Over the past few years, Kevin has been searching for a range of mineral commodities including gold, copper, uranium and fluorspar. He currently has claims staked for gold on the Avalon Peninsula, copper on the Burin Peninsula near Bay L'Argent and copper–zinc near Seal Bay, Notre Dame Bay. He also has fluorspar and uranium properties on the Burin Peninsula, and he promotes his prospects on his own website at www.hyperionminerals.com.

Up to this point, he has been successful in optioning two properties to exploration companies; a great start indeed! Kevin has attended the PDAC International Conference and Investment Show on two occasions as part of our provincial delegation. The first foray into this very large event in Toronto, he found it to be quite overwhelming and somewhat intimidating, but by doing a lot of advanced prep work and arranging meetings with prospective company clients, the second visit was much more rewarding and a greater success for him personally.

Kevin is an avid outdoorsman having enjoyed these activities ever since his Scouting and camping days and he has a special love for the fall of the year. His goal is to hopefully see one or two of his mineral properties advance to the production stage, which he feels will be of great benefit to the province providing significant employment opportunities. To best sum up Kevin's thoughts on his prospecting endeavours, he simply says "that my dream of finding the Big Deposit is secondary to my enjoyment of prospecting in the outdoors right now, but I also enjoy the promotional side of the exploration process and eventually hope to devote more of my time to this side of the business". Kevin, we all wish you well in your prospecting efforts in the years ahead.

HISTORIC MINE SPOTLIGHT: SLEEPY COVE

Prospecting and exploration during Newfoundland's pre-confederation copper boom days made many enterprising men dream of being what Rev. Moses Harvey called 'Copper lords'. One of the small mines that had a short life during this period was located at Sleepy Cove on Twillingate Island. There, massive to pillowed lavas of Cambrian age are crosscut by a network of chalcopyrite-bearing quartz and calcite veins.

The chronology of events surrounding the discovery and exploitation of the Twillingate Island copper is somewhat cloudy. It seems that James Hodder, his son Edgar, and several other men discovered copper mineralization at Long Point, near Sleepy Cove, in the early 20th century. The Twillingate Sun and Northern Weekly Advertiser of December 12, 1902, reported that "the splendid find of good copper by Messrs James Hodder and Co., at Long Point, the past fall has awakened the probability that Twillingate North Island will yet be a busy mining center." Obadiah Hodder, another of James' sons, returned home from the United States in 1905 and purchased the prospect from the original finders. He incorporated the Great Northern Copper Company Limited, probably in Pennsylvania where he resided, the following year. Apparently, the company assays showed 2% copper, and it promoted the property as having 9 million tons of ore. Erection of the mining infrastructure commenced in 1907 or 1908. The construction was captured on a Newfoundland picture postcard from that time, which showed a ship anchored in front of the covered ore conveyor and the partly completed ore-storage shed (see accompanying illustration). State-of-the-art mining equipment was transported from America to Twillingate Island in late 1908. To process the ore, there was a 1500-ton crushing plant and a 150-ton concentrator. Production was in full swing by the fall of 1909, and the operation would eventually consist of a 35 m shaft and a 49 m long open cut. The September 18th, 1909, edition of the Twillingate Sun and Northern Weekly Advertiser gushed that "the large daily output of copper at the Great Northern Copper Co.'s mine there would convince the most crooked pessimist that an extensive deposit lies beneath the surface in that locality... The mine at Sleepy Cove never looked more promising " On October 30th the newspaper reported that a contract had been awarded for the supply of materials for a 400-foot-long loading pier. By 1910, Hodder was ready to export his first load of ore. The Sleepy Cove mine, however, had more potential in the eyes of its owner than it had in ore reserves. At best, three loads of copper left the site over the next few years.

Obadiah Hodder returned to the United States after it became apparent that the prospect of a successful and long-lived

mining operation was unlikely. He restructured his company in 1917 as the Great Northern Copper Company Incorporated, and registered it in Dakota. South It appears that his attempts to extract and market additional Sleepy Cove copper came to an end in that year or in 1918. Hodder continued to sell shares in his company into the 1920s, perhaps still dreaming of reviving the Sleepy Cove mine and eventually Newbecoming а foundland 'Copper lord'.



Reference Sources: **"Once Upon A Mine"** by Wendy Martin, CIMM Special Volume 26 (1983), augmented by internet-based and other public domain information.

LONG HARBOUR NICKEL PROCESSING PLANT - CONSTRUCTION UPDATE



During 2002, Vale Newfoundland and Labrador Limited (VNL) committed to construct a commercial nickel processing plant in the province as part of an agreement for the development of the Voisey's Bay Project. The big question at that time was whether the facility would employ new hydromet technology or traditional matt processing technology. On November 7, 2008, VNL formally notified the province that it would construct a commercial hydromet nickel processing plant at Long Harbour. Due to its larger size and complexity than originally envisioned, the company was granted a 14 month extension for the construction period, resulting in a revised completion date from December 2011 to February 2013. The project is expected to generate 8.9 million person-hours of employment during construction, occupy an area of 65ha, includes a two-tier plant layout and has a total estimated construction cost of US\$2.821 billion.

The site in Long Harbour will continue to ramp up during this summer as more employees are brought in for construction activities. The Phase I earth works is almost complete and the company is advancing into the concrete and steel phase. Concrete installation for site buildings will continue as will the erection of structural steel; also, siding and roofing installation has started on one of the permanent warehouses. The loading and offloading area of the port facility is available for use and the installation of piles continues. Marine traffic to the site has been minimal for the first half of 2011; however the use of the port will dramatically increase during the second half of 2011.

As of May 2011, employment at the site included approximately 1300 people, and this is expected to increase to about 2000 during the summer months. VNL has completed construction of a 500-person camp facility and plans to erect accommodations for another 250 prior to the end of 2011. This will provide those employees from outside the immediate area with an option to remain on site versus either travelling long distances or attempting to secure accommodations locally. This will help supplement the supply of local accommodations, which has had to respond to the increased demand since construction began at the facility.

From the community of Long Harbour not much of the top tier of the commercial processing plant is visible; however there are still changes that can be seen in the community. There is a new fire hall with training room, office space, kitchen, as well as two large bays and a new fire truck. The Long Harbour Lodge is completed and will serve as temporary accommodations for VNL during the construction phase of the project. There is no doubt that this project will change the face of Long Harbour and the surrounding areas for years to come.



MINERAL STRATEGY CONSULTATIONS

The Provincial Minerals Strategy, whose development was announced in Budget 2010, embarked on public consultations in February and March. A discussion paper, released in early February, formed the basis for these consultations.

A team of departmental staff, and a contracted facilitator held public consultation sessions in fourteen communities across the province. These included St John's, Long Harbour, Clarenville, Marystown, Gander, Baie Verte, Corner Brook, Stephenville, Grand Falls-Windsor, and St. Anthony on the island part of the province; and Labrador City, Happy Valley-Goose Bay, Port Hope Simpson and Nain in Labrador. These were supplemented with two workshops: the first focusing on 'The Environment & Sustainable Mining', and the second on 'A Competitive Environment for Exploration / Mining'. These workshops were held in St. John's and were well attended by representatives from industry, academia and non-governmental organizations.



Approximately one hundred and twenty people attended the

public consultation sessions, with a mix of presentations being made by participants. Workshop attendance totalled around fifty. In addition, written submissions were welcomed, and twenty-seven were received as of late April 2011.

The input received will form the basis from which the final strategy will be developed. We are grateful to all those who took the time to attend sessions, workshops and provide written submissions.

Meeting records, workshop summaries and written submissions can be found on the Minerals Strategy web site at: http://www.nr.gov.nl.ca/nr/mineralstrategy/

IRON ORE ACTIVITY IN LABRADOR WEST

In 2011, economic activity in Labrador West continues to grow with iron ore expansion, new mining developments, and exploration activity.

IOC's phases 1 and 2 expansion projects will run concurrently in 2011 with peak construction employment occurring during the summer months. Completion of these phases will boost IOC's annual production capacity to 23.3 million tonnes of iron ore concentrate.

A new resident manager at Cliffs Natural Resources Scully mine at Wabush is working to improve processes and operations at the site. Production levels continue to improve from a low of 2.6 million tonnes in 2009 to an expected 4.4 million tonnes in 2011. Cliffs is continuing with significant investments from 2010 to 2012 to extend mine longevity; this includes



a manganese reduction program that will effectively increase crude ore tonnages amenable to processing.

Labrador Iron Mines Holdings Ltd. (LIM) began mining in March and processing ore in May at its project in north western Labrador near Schefferville. This project will contribute about 1.5 million tonnes of iron ore production from Labrador this year. There are 20 separate deposits on LIM's ground that could support 15 to 20 years of mine life.

Tata Steel Minerals Canada Ltd. (TSMC) will begin construction this summer on a project near that of LIM. TSMC expects to have the project ready for production in the second half of 2012. This project could add a further 4 million tonnes to annual iron ore concentrate production in Labrador. continued on page 13

NEW GEOSCIENCE IN EASTERN LABRADOR



Area covered by new geological maps and mineral occurrences report.

E astern Labrador is undergoing major changes! The completion of the Trans-Labrador highway has made mineral exploration viable in many previously inaccessible areas. Hydroelectric power developments and forestry also will have major impacts in the future, as will the settlement aboriginal land claims.

In this context, the release of new geological maps and a review of mineralization in eastern Labrador, in late 2010 are very timely. The new geological maps include a 1:500 000-scale compilation and 25 individual 1:100 000-scale maps that collectively cover about 80 000 km2 (20% of the province), extending from the Benedict Mountains in the north to the Labrador Straits in the south, and reaching almost to Goose Bay in the west. These maps are the final cartographic product of a 25-year mapping project under the direction of Dr. Charles F. Gower of the Geological Survey of Newfoundland and Labrador. They represent a synthesis for the region of current information on bedrock, mineral occurrences, geochronological ages and other types of geological data.

The mineralization review is contained within a 141-page Geological Survey Open File report (and accompanying 1:500 000-scale map), documenting 545 mineral occurrences within eastern Labrador, of which over 60% were discovered during 1:100 000-scale survey mapping. The report classifies types of mineralization, offers interpretation regarding genesis, and identifies new mineral exploration targets.

These geological products, that are available free online, will provide much-needed information for a currently very active mineral exploration sector in Labrador, presently focused on rare-earth-element and base-metal investigations. Both the maps and the review of mineralization will provide a valuable resource, likely having application in a wide range of land uses, that, apart from mineral exploration, could include construction, tourism, forestry, agriculture and offshore oil and gas exploration.

continued from page 12... New Millennium Capital Corp. (NML), part owner of TSMC, has reached an agreement with Tata Steel of India to complete a feasibility study on the large LabMag and KeMag iron ore deposits near Schefferville. If this project proceeds to development a significant increase in iron concentrate production of about 20 million tonnes annually could be expected and the anticipated economic impacts would be substantial. NML is also exploring other iron ore targets in the area.

Alderon Resource Corp's Kamistiatusset project is an advanced-stage iron-ore exploration project in Labrador West. An initial resource of about 490 million tonnes of indicated, and 118 million tonnes of inferred iron ore resources have been identified so far; a drill program conducted this past winter might add additional resources. Alderon recently hired BBA Inc. and Stassinu Stantec to do a scoping study on the deposit.

The Julienne Lake iron ore deposit, also in Labrador West, is currently designated as Exempt Mineral Lands and is the subject of a resource assessment by the provincial government.

Iron ore shipments from Labrador West represent the largest single metal commodity contribution to the province's gross value of mineral shipments. Global demand for quality iron ore products from the province supports well paid mining jobs and other benefits that will help sustain the provincial economy for many years.

RECLAMATION 2011

The Mineral Development Division is continuing its commitment to the rehabilitation of orphaned and abandoned mines in the province. Current plans, for the summer of 2011, include rehabilitation work at a number of sites, including; Collier's Point, Cliff Mine, Goodyear prospect and Pollard's Point. Activity will be limited to preliminary assessment of site conditions, and reclamation of safety hazards such as open shafts and adits.

The division recently issued a call for proposals for a detailed dam safety review at three former mine sites; Gullbridge Mine, Whalesback Mine and Consolidated Rambler Mine. The call for proposals has closed and award of the contract is pending. Design for the tailing dams will be completed by year end and, subject to budgetary approval, the tailings dam repair work will begin in 2012. The tailings detailed dam safety review and rehabilitation work at these sites will be completed in accordance to the Canadian Dam Association Dam Safety Guidelines.

APPOINTMENTS

DAVID LIVERMAN was appointed Assistant Deputy Minister (Acting), Mineral Resource Management–Mines, in January 2011, with the Department of Natural Resources.

David Liverman most recently was Director of Mineral Strategy, Department of Natural Resources. He has also worked as Director, and earlier as Senior Geologist, with the Geological Survey Division of the Mines Branch of the department. He joined the Provincial Government in 1988 as project geologist, Department of Mines.

RICHARD WARDLE was appointed acting Deputy Minister, Department of Natural Resources, in December, 2011, and had been Assistant Deputy Minister, Mineral Resource Management–Mines, with the department since 2006. He began his career in the provincial public service as a geologist 34 years ago, with most of his later experience in management roles. Mr. Wardle has a Bachelor of Science (honours) from the University of Liverpool and Doctor of Philosophy in Geology from the University of New Brunswick. He is a member of both the Association of Professional Engineers and Geoscientists of Newfoundland and Labrador and the provincial branch of the Canadian Institute of Mining and Metallurgy. He was also an executive member of the Geological Association of Canada.

In April of 2011 Mr. Wardle announced that he will be retiring from the public service at the end of June 2011. We wish Mr. Wardle all the best in his retirement.

GEOLOGICAL SURVEY

LISA CONNORS was appointed to the position of Mineral Laboratory Chemist in the Geological Survey's geochemical laboratory in January, 2011. Lisa has a B.Sc. in Chemistry from Memorial University, and previously worked in mineral laboratories in various parts of Canada. **CAROLINA VALVERDE-CARDENAS** was appointed to the position of Geologist II in the Geoscience Publications and Information Section of the Geological Survey in April 2011. Carolina has B.Sc. and M.Sc. degrees in Earth Sciences from Memorial University having started her geological education at the Universidad de Caldas in Colombia, South America. Carolina is working with Sean O'Brien on the numerous promotions activities of the Mines Branch.

MONICA SQUIRES was appointed the position of Geologist I in the Mineral Deposits Section of the Geological Survey in April 2011 and will work on the Mineral Occurrence Data System (MODS). Monica has a B.Sc. in Earth Sciences from Memorial University. Prior to her appointment, Monica worked with the Newfoundland Branch of CIM as their conference coordinator and statistician, and with the Geological Survey as a summer student.

CORDELL DEERING was appointed to the position of Administrative Officer I for the Geological Survey in May 2011. Prior to his appointment, Cordell was with the Department of Government Services in St. John's.

LARRY NOLAN was re-appointed to the position of Acting Senior Geologist, Regional Geology Section of the Geological Survey, on April 1, 2011. Larry is currently Senior Geologist for the Geoscience Data Management Section of the Geological Survey and he will also continue in this position.

MELANIE IRVINE was appointed to the position of Geologist II in the Geochemistry, Geophysics and Terrain Sciences in May 2011. Melanie will be in charge of the new Climate Change project developing a monitoring program for vulnerable coastal areas in Newfoundland and Labrador. Melanie has a B.Sc. in Geography from the University of Victoria (BC) and a M.Sc. in Geography from Memorial University. Her thesis topic concerned climate change adaptation in Nunavut.

APPOINTMENTS (Continued)

DENISE BRUSHETT rejoined the Geological Survey in May 2010 as a Geologist III, and will continue with her project in the Gander area where she will carry out a program of till sampling and surficial mapping.

MINERAL DEVELOPMENT

ABIGAIL STEEL has been appointed to the position of Mineral Development Engineer (Environment) with the Engineering Analysis Section of the Mineral Development Division. Abigail brings extensive and varied experience from government, consultancy and research projects related to environmental issues. Abigail's knowledge of acid rock drainage prediction and prevention, as well as environmental site assessment and remediation will be a huge benefit to the department.

ALEX SMITH has been appointed to the position of Director of the Mineral Development Division.

LEN MANDVILLE has been appointed to the position of Manager of the Engineering Analysis Section of the Mineral Development Division. Len's knowledge of the geology of the province, the players in the industry and the history of current and former operations will enable him to effectively manage the administration of the Mining Act and overseeing of the rehabilitation of these former sites. **JOHN CLARKE** has been appointed to the position of Geologist III (Manager of the Mineral Incentive Program) with the Mineral Development Division. John's experience in and knowledge of the exploration industry in the Province will be a great asset as he administers the Mineral Incentive Program.

BRAD WAY has been appointed to the position of Geologist III with the Engineering Analysis Section of the Mineral Development Division. In recent years, Brad has been providing valuable service to the Department as a Mineral Industry Analyst II, but is glad to be back working in his field of training – geology.

MUHAMMAD QURESHI has been appointed to the position of Mineral Development Engineer (Underground) with the Engineering Analysis Section of the Mineral Development Division. Muhammad received his degree from the University of Engineering and Technology in Lahore, Pakistan in 1987 and most recently worked as a planner at IOCC.

BERNIE BRAZIL has been appointed to the position of Clerk Typist III with the Mineral Development Division. Bernie's youth and desire to learn will prove to be a long term benefit to the department.

RETIREMENT

DEB DOWNEY retired from the Geological Survey on February 28, 2011. Deb had over 38 years service with Government, with nearly 35 years of it with the Geological Survey. She was the longest serving staff member in the Survey. We wish her well in her retirement.

PHOTO CREDITS

Cover; Vale Newfoundland and Labrador Limited, Atlantic Minerals Limited, Department of Natural Resources.

Inside; Vale Newfoundland and Labrador Limited, Fluor Canada Limited, Department of Natural Resources.



DID YOU KNOW?

Newfoundland and Labrador accounted for 54.2% of Canadian iron ore mine shipments in 2009.

UPCOMING EVENTS

RESOURCE INVESTORS FORUM 2011

September 13 - 14, 2011 St. John's. NL Contact: Pauline Plowman Newfoundland and Labrador Chamber of Mineral Resources Tel: (709) 722-9542 Email: director@nlcmr.ca Web: www.investorsform.ca/

PROVINCIAL MINING WEEK October 30 - November 5, 2011 Contact: Amanda McCallum Tel: (709) 729-6398 Email: amandamccallum@gov.nl.ca

MINERAL RESOURCES REVIEW November 3 - 5, 2011 St. John's, NL Contact: Len Mandville Tel: (709) 729-6439 Email: lenmandville@gov.nl.ca Norm Mercer Tel: (709) 729-6193 Email: normmercer@gov.nl.ca

QUEBEC EXPLORATION November 21 - 24, 2011 Quebec Contact: Québec Exploration 2011 Tel: 1-866-249-0649 (toll free) Fax: (418) 643-2816 Email: info@QuebecExploration.qc.ca Web: www.quebecexploration.qc.ca

MINERAL EXPLORATION ROUNDUP 2012 January 23 - 26, 2012 Vancouver, BC Contact: Association for Mineral Exploration British Columbia Tel: (604) 689-4800 Fax: (604) 682-5722 Email: roundup@amebc.ca Web: www.amebc.ca/rounduppoverview.htm

PDAC 2012 March 4 - 7, 2012 Toronto Ontario Contact: Prospectors & Developers Association of Canada Tel: (416) 362-1969 Fax: (416) 362-0101 Email: info@pdac.ca Web: www.pdac.ca/pdac/conv/

MINES BRANCH

Key Contacts

Minister	(709) 729-2920
Deputy Minister	(709) 729-2766
Assistant Deputy Minister	(709) 729-2768
Director, Minerals Lands	(709)729-6425
Director, Mineral Development	(709)729-6379
Wabush Office	(709)282-3949
Director, Geological Survey	(709)729-2453
Goose Bay Office	(709)896-5162
Geoscience Publications and	

Information and statistics quoted are from data provided by government and/or industry publications: for details, the reader should direct their enquiries to the Mineral Development Division of the Department of Natural Resources.

Home Page http:www.nr.gov.nl.ca./mines&en