

MINERAL EXPLORATION & DEVELOPMENT HIGHLIGHTS 2012

Department of Natural Resources, Mines Branch



NEWFOUNDLAND AND LABRADOR

EXPLORATION AND DEVELOPMENT HIGHLIGHTS 2012

OVERVIEW

The minerals industry in Newfoundland and Labrador saw strong levels of activity in 2012, with one new producer, expansion at several existing operations, and a projected increase in exploration expenditures. As in 2011, new developments in the iron-ore sector dominated the industry and strong gold prices contributed to increased gold exploration on the Island.

Exploration spending in the Province is forecast to rise to about \$194 million in 2012, an all-time high. However, this number may be optimistically high, as indicated by recent program cuts. Only 9478 claims had been staked by December 6, 2012, the lowest level since 1993. Drilling activity in 2012 is estimated to decrease to about 270,000 m, from about 320,000 m in 2011.

GOVERNMENT SERVICES

The Department of Natural Resources' Mineral Incentive Program continued to support the exploration sector with a budget of \$2.5 million for 2012/13 for cost-shared funding of approved projects. The program also supports prospectors through grants, mentoring and training courses.

The Department maintained delivery of its expanded geoscience program (\$1.2 million long-term funding increase awarded in 2011/12). Key initiatives designed to encourage exploration included bedrock mapping, geochemistry and an indicator-mineral survey in central and western Labrador, surficial mapping and geochemical surveys in Newfoundland, and gold and rare-earth metallogenic studies in both regions. The Geological Survey of Canada published the results of their aeromagnetic survey in the Strange Lake to Border Lake area of northwest Labrador and a detailed airborne-gravity survey in the Strange Lake area.

The Department also assists the mineral industry through its extensive web-based research tools and utilities, including GIS-based databases and mineral claim staking. The web-

based Geoscience Atlas is updated regularly with new geochemical and geophysical data, with a continuing focus on building the provincial bedrock-geology database.

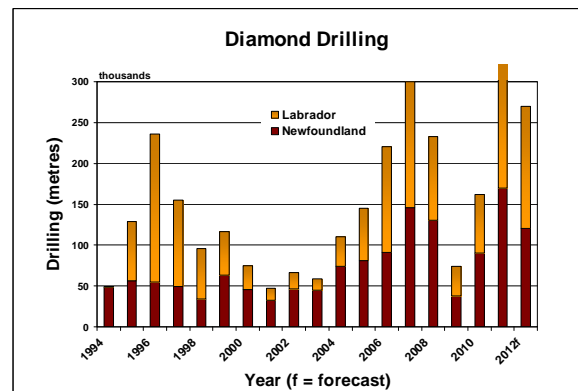
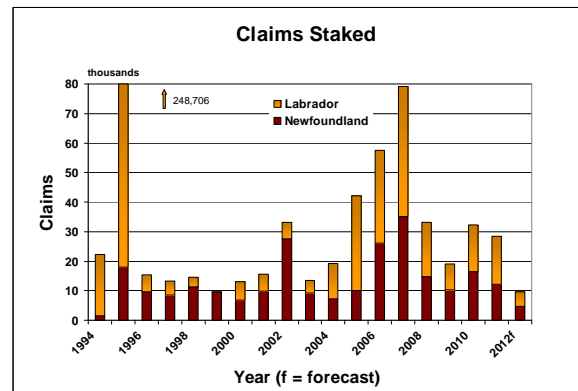
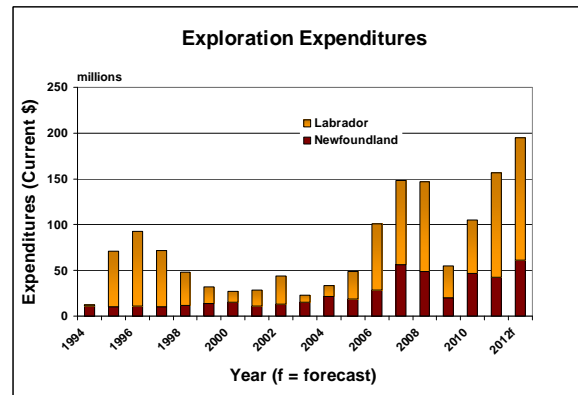


Figure 1. Exploration statistics, 1994 – 2012

The Department plays a lead role in informing potential investors, both in Canada and abroad, about the Province's mineral resources, mineral potential and the overall operating environment of the mineral sector. This effort is conducted through a variety of initiatives and activities including participation in annual technical conferences such as the PDAC, Roundup and our own Mineral Resources Review; developing and maintaining technical/promotional materials relating to the mineral sector; publishing general or sector-specific technical articles in trade journals; responding to queries on mineral investment opportunities; and developing and maintaining a substantial minerals investment section on the Department website.

In recent years, the Department's marketing efforts have increasingly turned to the fast-growing Asian sector, both as a source of investment capital for advanced projects, and as a market for our existing and potential mineral resources. This effort includes participating in the annual China Mining conference, and related mineral investment forums in China and Canada; helping organize, in cooperation with other jurisdictions and the federal government, inbound trade missions from China;

and developing and maintaining a Mandarin section on the investment part of the website.

OUTLOOK

The 2013 outlook for all stages of the minerals sector in the Province is conservatively positive. Prices for most of the commodities produced or explored for are relatively strong, and forecast demand for most remains healthy.

The iron-ore sector saw sustained high levels of production despite slumping iron prices during the summer. Prices for gold and base metals remain strong, whereas the prices for many specialty products such as antimony and fluorspar have seen variable but modest drops. Rare-earth element prices have been on a downward trend since mid-2011, reflecting slumping demand. Uranium exploration is expected to rise and could increase dramatically if uranium prices rebound.

For further information on the minerals sector in Newfoundland and Labrador, please visit the Department of Natural Resources website at http://www.nr.gov.nl.ca/nr/mines/exploration/exploration_activity/exp_overview.html or contact [Andrea Mills](#), project geologist for exploration monitoring.

NOTE TO READER

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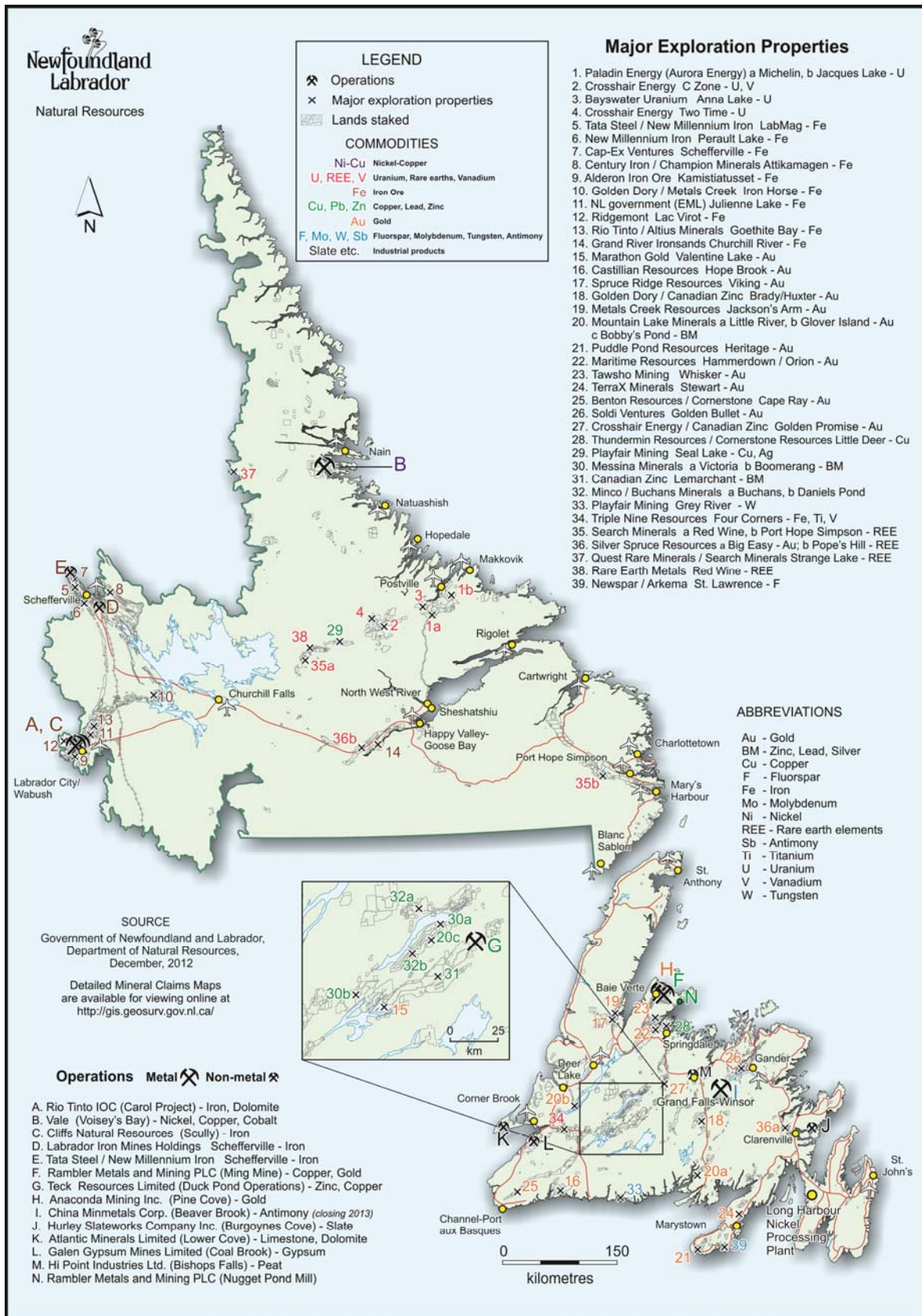


Figure 2. Mining operations and major exploration properties, 2012

NEW MINING AND PROCESSING DEVELOPMENTS

Sustained demand for iron has ensured that the Labrador Trough iron-mining district remains a hive of activity. Despite lower prices for iron ore during the summer of 2012, the Trough saw new production, expansion of existing operations, and accelerated exploration.

Labrador Iron Mines Holdings Ltd. (LIM) sold 1.2 million wet tonnes of iron ore by August 31, 2012, or three times their iron-ore sales for 2011. The product is high-grade Direct Shipping Ore (DSO) and comes from LIM's James Mine. LIM also received environmental approval and project release from the Government of Newfoundland and Labrador for its Houston iron-ore mining project. Due to a decline in the spot price for iron ore over the summer of 2012, LIM reduced its exploration budget and deferred capital expenditures on their processing plant and development of their Houston deposits.



Dome construction – DSO Project, Tata Steel Minerals Canada Ltd.

Tata Steel Minerals Canada Ltd. (TSMC; a partnership between **Tata Steel** and **New Millennium Iron Corp.**) commenced production from their DSO project in September. Additional developments include a rail-service agreement to construct and operate 21 km of new rail line to facilitate transport of ore to markets. TSMC also released a revised NI 43-101 compliant resource estimate that includes 40 new holes resulting in 28% and 43% increases in the indicated and inferred categories, respectively: 85.1 million tonnes at 59.2% iron (measured and indicated) and 10.3 million tonnes at 58.3% iron (inferred).



Open-pit operations, Anaconda's Pine Cove mine

Anaconda Mining Inc. continues to produce and sell gold (~3000-4000 ounces per quarter) and pay down its debt. It has also acquired new prospective ground near its Pine Cove operation with the intent of delineating additional gold resources.

Rambler Metals and Mining plc released a Preliminary Economic Assessment (PEA) to include the Lower Footwall Zone in its mine plan and continues to optimize copper and gold production through increases in head grade, copper recovery and month-to-month throughput. The company signed an off-take agreement with Transamine Trading for the sale of 85,000 tonnes of copper concentrate over the initial 6-year mine life at international spot rates. It also purchased the Ming Mine's 2% net smelter royalty held by Philippine Metals Inc. for C\$600,000 and an additional 1% net smelter royalty held by Ming Minerals Inc. for \$500,000.

Canada Fluorspar (NL) Inc. is working to reactivate the Blue Beach North and Tarefare underground fluorspar mines, by expanding the existing mill, constructing a new tailings management facility and building a new deep-water marine terminal in the outer St. Lawrence Harbour for the export of fluorspar concentrate. The company received a \$17 million repayable contribution from the Government of Newfoundland and Labrador to assist in the cost of construction of a deep-water port facility.

Teck Resources Ltd is continuing with a feasibility study on the Boundary open-pit project, with a goal to initiate production in 2013. A mine development plan has been submitted.

EXPLORATION HIGHLIGHTS

Iron Ore

Exploration for iron in the Labrador Trough remained strong during 2012 despite the drop in spot prices during the summer. Two principal ore types are targeted: magnetite—hematite—bearing taconite and metamorphosed equivalents (e.g., Alderon, Altius/Rio Tinto, Cap-Ex) and weathered, hematite-rich, high-grade, direct shipping ores (DSO) (e.g., Champion/Century, New Millennium/Tata Steel).



*The James Mine,
Labrador Iron Mines Holdings Ltd*

Labrador Iron Mines Holdings Ltd. provided an updated mineral resource estimate for the Houston deposits and a new mineral resource estimate for the Knob Lake deposit. For Houston, the updated estimate contains 23 million tonnes at 57.2% iron (measured and indicated) and 3.7 million tonnes at 56.5% iron (inferred). The Houston deposits remain open and 2012 drilling will seek to extend the deposits as well as upgrade the inferred resource. The new estimate for Knob Lake includes 5.7 million tonnes at 54.2% iron (measured and indicated).

New Millennium Iron Corp. completed drill programs in the Perault and Sheps lakes area (3890.8 m in 48 holes and 1918.1 m in 22 holes, respectively) and has outlined taconite averaging 60 m in thickness. The taconite is unaltered and gives excellent Davis Tube concentrate recoveries having very low silica values (<2%) and high iron values (>70%).



Winter 2012 drilling at Alderon's Kami Project

Alderon Iron Ore Corp. announced results of the final mineral resource estimate on its Kamistiatusset ("Kami") Iron Ore Project, which incorporated results from the 32-hole, 12,300-m winter 2012 drill program. The estimate includes a measured and indicated mineral resource of 1.1 billion tonnes at 29.8% iron and an inferred mineral resource of 277.4 million tonnes at 29.5% iron. The company also filed its Environmental Impact Statement with the Federal and Provincial governments and is now fully engaged in the environmental assessment process.

Altius Minerals Corp. reported results of the 2,633 m drill program carried out at Goethite Bay in western Labrador by **Rio Tinto Exploration Canada Inc.** Results include an intercept of 29.8% iron over 279.73 m. **Rio Tinto** intends to pursue the second phase of the option agreement to earn an additional 19% interest, for a total of 70% interest in the property. Altius retains a 3% gross overriding royalty.

Altius Minerals Corp. announced results from a 22,000 line-km airborne EM survey and initial ground follow-up work on the four projects that they have optioned to **Century Iron Ore Inc.** Multiple targets have been identified. Century can earn 100% interest in the properties by spending \$7 million per project and issuing 5 million Century shares over a 5-year period. Altius will retain a 1-4% sliding scale Gross Sales Royalty.



Trench and cut-lines at Julienne Lake, western Labrador

The **Government of Newfoundland and Labrador** holds mineral rights to the Julienne Lake iron deposit, located in the heart of the Labrador Trough, and is seeking proposals for its development. NI 43-101 compliant resources include 867 million tonnes at 33.7% iron (measured and indicated) and 299 million tonnes at 34.1% iron (inferred).

Cap-Ex Ventures Ltd. drilled 22,300 m in 72 holes on the Greenbush Zone located on the Block 103 property. The drillholes were positioned along northeast-trending lines perpendicular to the Greenbush Zone. Highlights include 29.2% iron over 290.8 m and 29.7% iron over 250.7 m. The company hopes to complete an initial resource estimate by end of 2012 and a PEA by Q1 2013.

Century Iron Mines Corp. Inc. is advancing its Joyce Lake DSO Prospect at Attikamagen. Results from the 2012 drill program include up to 66 m containing an average of 62.75% total iron at relatively shallow depths. The company expects to complete an NI 43-101 resource estimate by end of 2012 and plans to initiate a PEA study in early 2013. The company currently holds a 56% interest in the Attikamagen Project and has requested the transfer of an additional 4% interest under the current option agreement with **Champion Iron Mines Ltd.**



Folded taconite from Golden Dory / Metals Creek's Iron Horse Project

Golden Dory Resources Corp and partner **Metals Creek Resources Corp.** completed Phase 1 and 2 drill programs (1188 m and 1200 m, respectively) and released positive Davis Tube results from the Iron Horse Project (formerly Gabbro Lake). Davis Tube results indicate that some of the iron formation is amenable to upgrading by magnetic separation. The 5-hole Phase 1 program yielded intercepts including 120.9 m at 30.08% iron, and 125.2 m at 28.28% iron, with mineralization starting at surface. Highlights of Phase 2 drilling include 309.0 m grading 28.6% iron and 354.18 m grading 27.75% iron. **Golden Dory** announced its intention to increase its interest in the project from 50% to 70%, as per the agreement with **Metals Creek.**

Ridgemont Iron Ore Corp. announced first drill results from its wholly owned Lac Virot iron project in the southern Labrador Trough. As of early December 2012, results have been reported for 9 drillholes totaling 2700 m. Highlights include 32.8% total iron over 33.2 m and 25.6% iron over 106.6 m.

Gold

Strong gold prices have contributed to increased expenditures on gold exploration on the Island through 2011 and 2012. Advanced projects are targeting orogenic gold (Marathon), epithermal-style (Castillian), intrusion-hosted gold (Golden Dory, TerraX) and VMS-hosted (Rambler).

Rambler Metals and Mining PLC continued to drill gold-rich volcanogenic massive sulphides in the 1806 zone at the Ming Mine, yielding an intersection of 278 g/t gold over 2.60 m.



Strongly flattened and extended tonalite cobble-bearing Rogerson Lake conglomerate (Silurian) in the hanging wall of the Leprechaun deposit

Marathon Gold Corp. released an updated NI 43-101 resource estimate for the Leprechaun deposit: 9.54 million tonnes at 2.22 g/t gold (682,000 oz gold, measured and indicated) and 7.96 million tonnes at 2.30 g/t gold (145,000 oz, inferred). An aggressive 40,000-m drill program is underway and the new resource estimate incorporates results from 19,800 m (69 drillholes) of the 2012 drill program. Highlights include 7.23 g/t gold over 20.9 m and 13.81 g/t gold over 18.05 m. The company discovered new gold-bearing quartz veins in an extension of the J. Frank Zone. Drill highlights there include 3.29 g/t gold over 8.1 m including 18.66 g/t gold over 0.9 m and 7.24 g/t gold over 8.0 m including 55.55 g/t gold over 1.0 m.

Castillian Resources Corp. released an updated NI 43-101 resource estimate of 590,000 oz gold (indicated) at 1.48 g/t and 548,000 oz gold (inferred) at 2.07 g/t for the former Hope Brook gold mine. Highlights from the 15-hole (4549 m) drill program include an intersection of

5.47 g/t gold over 38.0 m from a pillar in the former mine.

Mountain Lake Minerals Inc. (formerly Mountain Lake Resources Inc.) completed a 7,227-m, 29-hole drill campaign on its Glover Island gold property during winter 2011-12. Highlights include 1.74 g/t gold over 53.5 m and 1.65 g/t gold over 44.7 m, both targeting mineralization at the Lunch Pond South East Prospect. The drill results were incorporated into a maiden NI 43-101 resource estimate for the Lunch Pond Prospect that outlines 1,281,000 tonnes grading 1.61 g/t gold for 66,400 oz gold (indicated) and 4,434,000 tonnes at 1.38 g/t gold for 196,900 oz gold (inferred).

Maritime Resources Corp. acquired 100% of the Green Bay Gold property from **Commander Resources Ltd.** and completed a 16-hole, 2600-m drill program on the Hammerdown gold deposit. Drill highlights include 12.46 g/t gold over 2.41 m. Trenching has extended the Hammerdown veins 300 m to the east, encountering several narrow high-grade zones, including one that assayed 96.0 g/t gold over 0.30 m.

Golden Dory Resources Corp. completed a 1553-m drill program at its Huxter Lane gold project in central Newfoundland. Results confirm continuity of the Mosquito Hill Zone (which remains open) and revealed a new porphyry body 800 m northwest of Mosquito Hill. Gold-bearing mineralized porphyry was intersected in all drillholes, extending the deposit an additional 50 m west. Highlights include 0.20 g/t gold over 113.28 m and 0.35 g/t gold over 47.8 m

Cornerstone Capital Resources Inc. announced an initial NI 43-101 resource estimate for its Cape Ray gold—silver project in southwestern Newfoundland. The 51 Zone contains 103,943 oz gold at 6.10 g/t gold and 270,253 oz silver at 15.86 g/t silver (inferred). Windowglass Hill contains an additional inferred resource of 103,001 oz gold at 1.77 g/t gold and 656,415 oz silver at 11.28 g/t silver. In September, Cornerstone announced terms of an option agreement with **Benton Resources Corp.** whereby Benton can earn an initial 70% interest in the Cape Ray project. Benton re-sampled two historical drillholes in November, yielding intercepts including 82.91 m at 0.86 g/t gold and 20.73 m at 1.53 g/t gold, thereby confirming a new gold zone.



Sericite-altered and mullioned felsic schist at the Stewart prospect

TerraX Minerals Inc. is exploring the Stewart gold—silver property on the Burin Peninsula. Highlights include 48.8 g/t gold and 1990 g/t silver in quartz boulders along the Forty Creek showing and the extension of the multi-element soil anomaly over the Stewart porphyry system by 200 m. The company earned 100% interest in the property and has plans for a winter drill campaign.

Silver Spruce Resources Inc. drilled 5 holes (1080 m) on the Big Easy gold property in eastern Newfoundland. Best results feature an intersection of 1.3 g/t gold and 36.7 g/t silver over 8.7 m, including 7.9 g/t gold and 130 g/t silver over 1.2 m. The company reported the presence of adularia, sinter and boiling textures in drillcore, indicating that mineralization lies near the paleosurface of an epithermal system. Native silver or electrum was tentatively identified in drillcore. The company also flew a high-resolution magnetic and VLF-EM survey to improve structural interpretations.

Tawsho Mining Inc. reported results from a trenching program on its Whisker Valley property on the Baie Verte Peninsula. Channel samples of 1 m width returned a weighted average grade of 8.68 g/t gold over 12 m exposed length. The company also acquired from local prospectors the 25 km² Cabot property, located 12 km north of Baie Verte.

Puddle Pond Resources Inc. acquired a new gold—silver property (the Heritage Project) in the Lamaline area on the Burin Peninsula. Epithermal-style gold—silver mineralization

discovered in the area yielded up to 117 g/t gold and 2769 g/t silver. Results from follow-up work include up to 17.6 g/t gold, up to 786.0 g/t silver accompanied by up to 0.26% copper, 0.21 % zinc and 0.22% lead. Plans include up to 18 trenches over 3 km.



Bedrock exposed by trenching at Jackson's Arm

Metals Creek Resources Corp. completed a trenching program on the Boot n Hammer and Stocker zones, both located on the Jackson's Arm property near White Bay. Grab samples from veined and altered granodiorite returned assays up to 20.2 g/t gold and 1232.0 g/t silver. Mineralization occurs within a 200-m-wide zone that can be traced for at least 1.2 km. Trenching, line-cutting, ground magnetics and IP surveys are to be completed prior to drilling.

Soldi Ventures Inc. completed a 23-hole, 2688-m drill program on its Golden Bullet project in central Newfoundland. All holes intersected anomalous gold and significant results include 1.32 g/t gold over 32.2 m and a high-grade intercept of 62.99 g/t gold over 0.70 m within a 5.4 m intercept grading 9.80 g/t gold. Gold mineralization was delineated over a 200 m length and remains open to the north, east and at depth.

Zonte Metals Inc. conducted a trenching program at its Wings Point gold project in northeast Newfoundland. Spotty sericite alteration and quartz veining were noted and assays commonly yielded anomalous gold and arsenic. Further line-cutting, IP and magnetic surveys are scheduled for completion during fall 2012.

Base Metals (Zinc, Lead, Copper)



Site of the former Buchans mine

Base-metal exploration on the Island of Newfoundland has traditionally focused on volcanogenic massive sulphide (VMS) deposit types. Two subclasses are generally recognized: *polymetallic* (zinc—lead—copper +/- gold, silver), and *copper dominated* (+/- gold). The former occur predominantly in arc-related host rocks whereas the latter are commonly hosted by ophiolitic and associated rocks.

Thundermin Resources Inc. and joint venture partner **Cornerstone Resources Inc.** completed a 6198-m, 14-hole drill program on the past-producing Whalesback copper deposit near Springdale. Highlights include an intercept of 2.8% copper over 18.2 m. The company released an initial NI 43-101 resource estimate for the deposit: 797,000 tonnes grading 1.67% copper (for 29.3 million lbs. copper, indicated) and 443,000 tonnes grading 1.57% copper (for 15.3 million lbs. copper, inferred). Combined with the Little Deer resource (1,911,000 tonnes grading 2.37% copper for 99.8 million lbs of copper indicated and 3,748,000 tonnes grading 2.13% copper for 175.9 million lbs of copper inferred), the companies have significant copper resources that they plan to expand through additional resource delineation and infill drilling prior to pre-feasibility studies.

Paragon Minerals Corp. (acquired by **Canadian Zinc Corp.**; see *Corporate Developments* at the back of this volume) reported an initial NI 43-101 resource estimate on the Lemarchant VMS deposit located at South Tally Pond, central Newfoundland. The estimate outlined an indicated resource of 1.24 million tonnes grading 5.38% zinc, 0.58% copper, 1.19% lead, 1.01 g/t gold and 59.17 g/t silver and an inferred resource of 1.34 million tonnes grading 3.70% zinc, 0.41% copper,

0.86% lead, 1.00 g/t gold, and 50.41 g/t silver. The deposit is defined to a vertical depth of 210 m and remains open along strike and at depth.



Sulphidized and brecciated mafic volcanics from the Buchans camp

Buchans Minerals Corp. and **Minco PLC** released results of the first 46 holes of a 58-hole, 8184-m drill program. Highlights from the Engine House deposit include an intercept of 0.94% copper, 1.03% lead and 2.50% zinc over 17.0 m and 1.10% copper, 0.44% lead and 1.93% zinc over 18.0 m. Intercepts from the Lundberg deposit include 102.8 m of 0.68% copper, 0.91% lead, 1.82% zinc and 4.8 g/t silver and a high-grade intercept of 2.06% copper, 5.94% lead, 11.62% zinc, 119.0 g/t silver and 0.719 g/t gold over 4.0 m.

Messina Minerals Inc. reported results from winter 2011-12 drilling on the Brook Zone of its Victoria property. Highlights include 5.5% copper over 4 m beginning at a depth of 20.58 m. The company also announced a maiden NI 43-101 resource estimate for the Long Lake Main Zone, a part of the company's Glitter Project area. The estimate includes indicated resources of 70 million pounds of zinc, 14 million pounds of lead, 8.7 million pounds of copper, 640,000 ounces silver and 7,500 ounces gold. The Main Zone prospect is located 22 km northeast of the Company's Boomerang deposit and 48 km southwest of Teck Resources' operating Duck Pond zinc—copper mine.

At **Teck Resources Ltd.** Duck Pond Operations, about 25,000 m of underground drilling was completed on the Lower Duck deposit in 2012. In addition, about 10,000 m of surface drilling was completed to test the Duck Pond and Boundary alteration zones to depths of 800 m.

Rare Earth Elements (REEs)

Exploration for rare-earth metals peaked in 2011 with \$10.8 million in expenditures. The level of activity decreased in 2012, with about \$4.1 million anticipated in expenditures. Rare-earth element occurrences are mainly concentrated in the Grenville Province of southern Labrador, occurring predominantly in Proterozoic alkaline igneous rocks. One significant exception is the Strange Lake deposit, located within the Churchill Geological Province near the border between Labrador and Quebec.

Search Minerals Inc. produced an initial NI 43-101 compliant resource estimate on its wholly owned Foxtrot project based on 8,078 m of drilling in 43 holes covering mineralization to a depth of 200 m. An updated resource estimate, released in November, contains a 270% increase in indicated resources, with 9,229,000 tonnes containing 0.88% total rare-earth elements (TREEs) including 0.17% heavy rare-earth elements (HREEs), and an inferred resource of 5,165,000 tonnes grading 0.16% heavy rare-earth elements plus yttrium. The company released metallurgical test results for Foxtrot samples, with recovery of 55.48% TREE + Y₂O₃ product, and an overall average recovery of 78.8%. The company also announced positive results of a PEA based on the resource estimate to a depth of 200 m. Highlights of the PEA include production of 14.3 million tonnes grading 0.58% TREE at a rate of 4,000 tonnes per day by open-pit operation with a mine life of ten years. The pre-tax net present value (at 10% discount rate) is \$408 million, initial capital cost is \$469 million, average operating cost is \$96 per tonne and the project would have an internal rate of return of 29%, or pre-tax payback period of 2.8 years.

Search also completed a 1200-m drill program this fall on the Pesky Hill HREE prospect near Port Hope Simpson and results are pending. Mapping, prospecting and channel sampling were completed on the prospect earlier in 2012 and highlights include Dy values up to 2751 ppm, HREE/TREE content up to 53.5%, Nb values up to 21,693 ppm and Y values up to 12,522 ppm.

Search Minerals Inc. and **Great Western Minerals Group Ltd.** announced in January the discovery of high-grade REE mineralization in the Merlot Prospect on their Red Wine Property located ~120 km northwest of Churchill Falls. Six channel samples were collected over a total of 44.08 m. Results ranged up to 1.20% TREE, 5207 Y, 2340 ppm Nd and 800 ppm Dy.

Silver Spruce Resources Inc. is exploring for REEs on several properties in central and eastern Labrador. Trenching of REE-mineralized areas on the Popes Hill Property revealed wide zones (up to 30 m) with anomalous REEs, narrower (>3 m) zones of medium-grade (>0.75 TREE) and narrow zones (<1 m) of high-grade values (>3% TREE). The company also released preliminary mineralogical results indicating that the REE mineralization is found in mineral phases (allanite, titanite, monazite, britholite) that can be successfully exploited to produce a saleable REE concentrate.



Coarse-grained allanite (black) and pyroxene (green) in granitic pegmatite from Silver Spruce's Pope's Hill Property

Antimony, Tungsten, Vanadium, Uranium, Fluorspar

The moratorium on the mining, development and production of uranium on Labrador Inuit Lands ended in March 2012, upon proclamation of the previously passed Nunatsiavut Environmental Protection Act. Uranium exploration rose modestly in Labrador in 2012 and may increase significantly in 2013 if uranium prices rebound.



Aerial photograph of Aurora's Michelin camp

Aurora Energy Resources Inc., a member of the **Paladin Energy Ltd.** group of companies, is active in the Central Mineral Belt of Labrador, where it has identified a significant uranium mineral resource in six deposits. The largest of these, the Michelin deposit, was the primary focus of the company's 2012 summer/fall drilling program. Work took place within a 3-km radius of Michelin and included ground geological and geophysical surveys aimed at identifying drill targets. The Michelin mineralized trend will continue to be the focus of a winter 2013 drill program.

Canada Fluorspar Inc. conducted a trenching campaign focused on extending known mineralization associated with the Director Vein. The mineralization has been extended approximately 750 m along strike and highlights include the discovery of a high-grade zone of 90.7% CaF_2 over 9.4 m.



Underground photo of massive stibnite ore at Beaver Brook Antimony Mine

Beaver Brook Antimony Mine Inc. operated at full production while constructing a new tailings pond and continued exploration with 5000 m of drilling in 2012. In late November, the company announced closure of the mine starting in mid-January due to lower-than-expected grades. The mine will be held under care and maintenance.

Playfair Mining Inc. provided an updated PEA for the Grey River tungsten deposit on the south coast of Newfoundland. The updated inventory consists of an inferred resource of 1.2 million tonnes grading 0.73% WO_3 for a total of 18.8 million lbs of WO_3 . Using base-case parameters, the pre-tax cash-flow is estimated at US\$15.5 million over a 9-year mine life and increases to US\$75.3 million at a tungsten price of US\$21/lb.

Crosshair Energy Corp. drilled 2923 m in 16 holes by late August. Additional drilling is underway at the Two Time prospect and at the C Zone Corridor in central Labrador. Highlights from early results at Two Time include 0.031% U_3O_8 over 28.5 m, including 0.074% U_3O_8 over 3.0 m. At the C Zone Corridor, significant intercepts include 0.150% V_2O_5 over 10.0 m. This mineralization occurs about half way between the Area 1 Prospect and the Trout Pond Prospect and supports the interpretation that mineralization is continuous between the two zones.

Nickel—Copper



*Ni—Cu—Co ore from the Voisey's Bay project,
Vale Newfoundland and Labrador Limited*

Vale Newfoundland and Labrador Ltd's 2012 exploration drilling program focused on four main areas, including Deep Reid Brook, Ryan's Pond, Reid Brook and Red Dog area west of the main Eastern Deeps mineralization. Drilling in these areas followed up on known occurrences and explored for extensions to mineralization proximal to the Reid Brook and Eastern Deeps deposits. In addition to the exploration program, infill drilling was conducted in the Reid Brook zone. This is part of a multi-year program to upgrade the Reid Brook inferred resource to indicated category to incorporate into the Post Ovoid FEL3 (feasibility) study starting in 2013. The total meterage drilled in 2012 was 19,235.1 m.

Corporate Developments

Alderon Iron Ore Corp. announced the signing of an agreement with **Hebei Iron & Steel Group Co.**, China's largest steel producer, whereby Hebei will invest an aggregate of \$194 million in exchange for 19.9% of the outstanding common shares in Alderon and a 25% interest in a newly formed partnership that will own the Kami Project.

Altius Minerals Corp. entered an agreement to advance Snelgrove Lake with **Capital Investment Partners (CIP)** of Australia. Altius will retain 100% interest in the property until CIP establishes a new company to manage the project and incurs \$6.5 million in exploration expenditures to advance the project. The new company will then acquire 100% interest in the property and Altius will retain a 3% gross sales

royalty and an initial 20% interest in the new company.

Altius Minerals Corp. announced a Memorandum of Understanding with **Virginia Mines Inc.** whereby the two companies will cooperate to explore for base and precious metals in southern Labrador.

Century Iron Mines Corp. and **WISCO International Resources Development & Investment Ltd** completed the formation of their joint venture for Century's Attikamagen iron property. WISCO completed its initial \$20 million investment through WISCO Attikamagen and the remaining \$20 million balance is to be advanced by September 26, 2013. The Attikamagen Project is held by Century's subsidiary, Labec Century Iron Ore Inc., which holds a 56% interest in the project pursuant to its agreement with Champion Iron Mines Inc. WISCO can invest an aggregate of \$40 million to earn 40% interest in Labec Century.

Labrador Iron Mines Holdings Ltd. formed an agreement with the Iron Ore Company of Canada for the sale of all of its 2012 iron-ore production on the spot market. This agreement allows the company to benefit from lower shipping rates.

Tata Steel Minerals Canada (New Millennium Iron Corp. and partner **Tata Steel**) signed a life of mine agreement with Quebec North Shore and Labrador Railway (QNS&L) for the transportation of iron ore from its DSO project from Emeril Junction to Arnaud Junction at Sept-Îles.

The Sept-Îles Port Authority has signed agreements with a number of iron-ore companies to contribute toward the cost of the new multi-user dock facility that the Port is constructing. Companies that have made financial commitments include: **Alderon Iron Ore Corp.**, **Champion Iron Mines Ltd.**, **Labrador Iron Mines Holdings Ltd.**, and **New Millennium Iron Corp.**

The Canadian National Railway Company has formed agreements with several iron-ore producers / explorers to share the cost of a feasibility study of CN's proposed rail line to serve the greater Labrador Trough area. Companies that have announced commitments include: **Cap-Ex Ventures Ltd.**, **Labrador Iron**

Mines Holdings Ltd., Alderon Iron Ore Corp., New Millennium Iron Corp., and Champion Iron Mines Ltd.

Petmin has increased its stake in the **North Atlantic Iron Corp. (NAIC)**, a holding company owned by Grand River (83%) and Petmin (17%) from 17% to 22.5% by spending an additional \$4.5 million on the joint venture. **Muskat Minerals Inc.** owns 40.22% interest in Grand River. The Atlantic Canada Opportunities Agency contributed \$500,000 to NAIC to carry out a pilot project to collect and separate iron-ore grains from the sands near Happy Valley-Goose Bay. If proven economically feasible, the iron concentrate could be used to produce high-purity pig iron.

Marathon Gold Corp. acquired all outstanding shares of **Mountain Lake Resources Inc.** in July 2012, resulting in Marathon becoming 100% owner of the Valentine Lake Property in south-central Newfoundland. **Mountain Lake Resources Inc.** changed its name to **Mountain Lake Minerals Inc.** and is now a wholly owned subsidiary of Marathon.

Northern Abitibi Mining Corp. sold its 100% interest in the Viking project to **Spruce Ridge Resources Ltd.** The Viking property is surrounded on three sides by Spruce Ridge's Kramer property and at least two of the known gold occurrences at Kramer are believed to be extensions of the mineralizing systems at Viking.

Buchans Minerals Corp. and **Minco** have signed an agreement whereby the latter can earn a 51% interest in the former's base-metal properties in central Newfoundland by spending \$8 million over 4 years to advance the Lundberg deposit to final feasibility. Under the agreement, Minco is required to spend \$3.5 million over the first two years to advance Lundberg to the prefeasibility stage. Minco will then have the option to complete a final feasibility study by spending an additional \$4.5 million.

Paragon Minerals Corp. optioned their JBP Linear Gold Project to **Northern Skye Resources Ltd.**, a private company.

Canadian Zinc Corp. acquired **Paragon Minerals Corp** and its assets in September. Canadian Zinc intends to advance South Tally through further exploration and feasibility studies.

Rambler Metals and Mining PLC acquired 4,500,000 shares of **Maritime Resources Corp.**, representing 17% of the company. Rambler owns and operates the Nugget Pond Mill.

Vulcan Minerals Inc. has completed arrangements to spin out a new subsidiary company focused on potash exploration and development. The new company is called **Red Moon Potash Inc.** and was listed on the TSXV under the symbol RMK on August 17, 2012.

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