

# Mineral Exploration Activity in Nova Scotia, 2011

*P. D. McCulloch*

## Mineral Exploration Monitoring

Monitoring of mineral exploration activity in Nova Scotia is coordinated through the Registry of Mineral and Petroleum Titles of the Mineral Management Division by the author, who works out of the regional office in Stellarton, Pictou County. Regional Geologists of the Regional Services Branch offices in Coxheath (position vacant), Truro (Donald Weir) and Bridgewater (Sandra Johnston) assist in the field monitoring of mineral exploration activity in their respective regions.

The monitoring process covers exploration activities throughout the province and consists of visits to company offices and exploration sites, liaison with industry personnel, and the review of current assessment reports and other material submitted by industry. Liaison with industry allows the department to maintain an awareness of current exploration activities throughout the province. Assistance or advice is provided as necessary, and any drill core generated by mineral exploration activity in the province is recorded as part of the monitoring process. This core may be recovered for archiving in the Drill Core Library in Stellarton when no longer required by the companies.

The Exploration Monitoring geologist is also responsible for the auditing of confidential assessment reports that are submitted in the support of the renewal of exploration licences. In 2011, 176 assessment reports were received and audited for compliance with the Mineral Resources Regulations. The number of reports represents a moderate increase of just under 20% in comparison to the 147 reports submitted for assessment credit in 2010.

## Mineral Exploration Activity in 2011

Mineral exploration in Nova Scotia during 2011 continued at roughly the same level of activity as the previous year, with field expenditures estimated to be in the range of \$11 million, compared with \$13.2 million in 2010 and \$5.6 million in 2009 (Fig. 1). Prices for both base metals and gold rose steadily throughout 2009, as the demand for metal commodities rebounded following the financial crisis in 2008 and metal inventories were reduced. The price for gold has continued to climb throughout 2010 and 2011 and is currently trading in the \$1700US range. The price for copper also continued to rise throughout 2010 and peaked in the \$4.50US range by the end of the year. Prices for lead and zinc have remained relatively steady since the beginning of 2010, but prices for all three metals have declined moderately throughout 2011. The continued global demand for precious metals as an investment hedge, and a steady increase in the demand for base metals in the major world markets, particularly in China, has continued to drive the strong demand for metal commodities. The increased demand for rare earth elements (REEs), relatively strong base metal prices, and a strong demand for gold have been the driving factors to maintain the current level of mineral exploration activity in the province. Exploration activities for industrial mineral commodities has also demonstrated a modest improvement in comparison to recent years.

Preliminary figures for the total number of general claims staked in 2011 show a small drop of approximately 10% over the previous year from 28,900 to 26,000 claims (Table 1, Fig.2). A preliminary total of 26,100 claims for all commodities were in effect at the end of 2011,

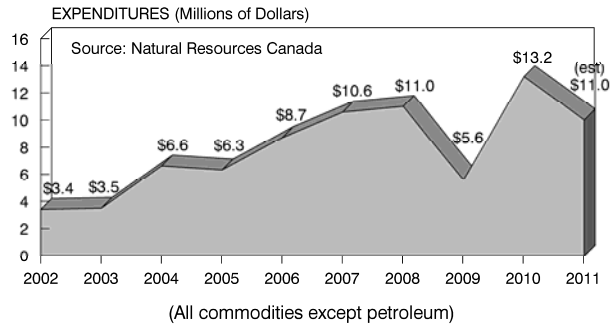
**Table 1. Details of exploration and development activity in Nova Scotia, 2002-2011.**

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total Field Exploration Expenditures (\$)	3 400 000	3 491 710	6 632 520	6 337 550	8 735 000	10 600 000	11 000 000	5 600 000	13 200 000	11 000 000
Total Licences Issued (all categories)	552	744	570	762	938	1401	1389	1082	1222	1150
Claims In Good Standing (new and re-issued)										
General	12 492	18 947	11 242	22 204	25 571	51 215	48 614	26 926	28 900	26 000
Special (Order in Council)										
Salt and Potash	500	500	218	349	349	263	131	131	-	-
Coal	102	102	102	128	1380	1348	1252	1252	-	-
Geothermal	158	158	-	-	-	-	-	-	-	-
Underground Gas Storage	183	183	201	201	201	-	-	-	-	-
Tailings	-	-	-	-	-	-	-	-	-	-
Other (gold, base metals)	10	78	78	78	100	100	100	100	100	100
Uranium*	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)
Total (excluding closures and uranium licences)	13 445	19 968	11 841	22 960	27 601	52 926	50 097	28 409	29 000	26 100
Total Area Held Under Licence										
(ha)	217 647	323 241	191 681	371 676	446 804	856 764	810 969	459 884	469 451	422 506
(acres)	537 800	798 720	473 640	918 400	1 140 040	2 117 040	2 003 880	1 136 360	1 160 000	1 044 000
Work Reported For Licence Renewals (\$)	1 457 012	1 197 208	4 270 042	5 704 121	6 273 377	9 632 665	15 035 159	3 743 728	4 015 920	9 656 401
Number Of Assessment Reports Received	102	96	141	113	162	200	234	118	147	176

p Preliminary figures

\* Parentheses around uranium claims indicate ground alienation due to the uranium moratorium

December 31, 2011



**Figure 1.** Exploration expenditures in Nova Scotia, 2002 to 2011.

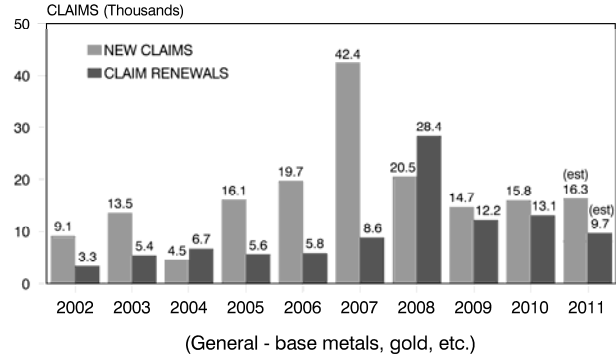
represented by approximately 1046 general and special licences covering an area of 422 506 ha or 4225 km<sup>2</sup>, approximately 7.7% of the total area of the province. The amount of exploration diamond-drilling was down compared to the previous year, with a preliminary estimate of 30 600 m in 2011 compared with 36 200 m in 2010 (Fig. 3). A much greater quantity (estimated 16 900 m) of reverse-circulation drilling was completed in 2011, however, compared with 1380 m in 2010 and 780 m in 2009 (Fig. 3).

Approximately 189 companies and individuals held exploration interests (licences or options) in the province in 2011, including 2 major, 19 junior and 48 private companies (Tables 2, 3 and 4). In addition, several mining lease holders carried out exploration and development work on leases or on unclaimed ground where these commodities did not require licences (e.g. limestone, gypsum). Organizations actively engaged in exploration during 2011 included 1 major, 13 junior and 21 private companies (Tables 2, 3, 4 and 5), as well as a number of individuals.

## Overview of Exploration Activities

### Gold

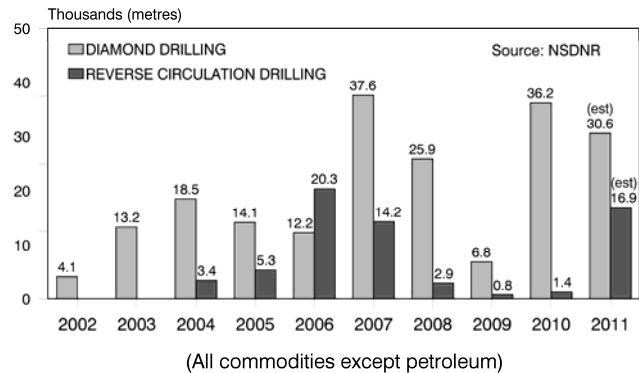
Exploration for gold continued to be a prominent focus for mineral exploration in the province during 2011. The recent strength in the price of gold continued to have a positive impact on gold exploration, with a gradual increase in the level of



**Figure 2.** Claim staking in Nova Scotia, 2002 to 2011.

activity beginning in the second half of 2009 and continuing throughout 2010 and 2011. The lower Paleozoic Meguma Supergroup of southern mainland Nova Scotia continued to be the principal focus for gold exploration, with most of the exploration work concentrated on the historical gold districts in Halifax and Guysborough counties (Fig. 4, Table 5).

Acadian Mining Corporation continued an extensive exploration program on several gold properties throughout Halifax, Hants and Guysborough counties during 2011, including the Beaver Dam, Cameron Dam, Como Lake, Fifteen Mile Stream, Harrigan Cove, Lake Catcha, Moose River, Oldham and Tangier properties in Halifax County, the Centre Rawdon property in Hants County, and the Cochrane Hill, Cranberry Lakes, New Harbour and Upper Seal Harbour (Golden Seal) properties in Guysborough County. Work on the Fifteen Mile Stream property was undertaken through its subsidiary, 6179053 Canada Incorporated, and work on the remaining properties



**Figure 3.** Exploration drilling in Nova Scotia, 2002 to 2011.

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**Table 2.** Major companies with exploration interests (licences or options) in Nova Scotia.

Year	2009	2010	2011
Georgia-Pacific Canada Incorporated	-	-	-
The Shaw Group Limited	-	-	x

x indicates work performed

- company inactive

**Table 3.** Junior companies with exploration interests (licences or options) in Nova Scotia.

Year	2009	2010	2011
Acadian Mining Corporation (formerly Acadian Gold Corporation)	x	x	x
Annapolis Properties Corporation	x	x	x
Atlantic Gold NL (formerly Diamond Ventures NL)	x	x	-
Avalon Rare Metals Incorporated (formerly Avalon Ventures Limited)	x	x	-
Black Bull Resources Incorporated	-	-	-
Canuc Resources Corporation			x
Chrysos Capital Corporation		x	
Cornerstone Resources Incorporated	-	x	-
Exploration Orex Incorporated	x	x	x
Globex Mining Enterprises Incorporated	-	x	x
Gold World Resources Incorporated			-
Landis Mining Corporation	-	-	
Merrex Gold Incorporated	x	x	x
Minotaur Atlantic Exploration Limited	x	x	x
Osisko Mining Corporation		x	x
Ressources Appalaches Incorporated	x	x	-
Scorpio Gold Corporation	-	-	x
ScoZinc Limited	x	x	x
Silvore Fox Minerals Corporation	x	x	x
Strikepoint Gold Incorporated		x	-
Tripple Uranium Resources Inc.	x	x	x
United Reef Limited	-		
Vostok Minerals Incorporated (formerly RJZ Mining Corporation)	x	-	

x indicates work performed

- inactive

blanks indicate that the company did not hold an exploration licence in that particular year

**Table 4.** Private exploration companies in Nova Scotia.

Year	2009	2010	2011
2134889 Ontario Incorporated	-	-	
3228463 Nova Scotia Limited			x
3234885 Nova Scotia Limited			-
6179053 Canada Incorporated	-	-	x
6531954 Canada Incorporated		-	
Ace In The Hole Excavation	-		
AlNova Mining Incorporated			-
Alpha Uranium Resources Incorporated	x	x	
Ayarco Gold Corporation Limited	-	x	x
Alva Construction Limited	-	-	-
Beatrix Ventures Incorporated			-
Blackfly Exploration & Mining	-	-	x
Burnt Point Resources Incorporated	-	-	
Champlain Mineral Ventures Limited (formerly Champlain Resources Incorporated)	-	x	x
Chebucto Resources	-	-	
Chrysos Capital Corporation		x	
Clear Lake Resources Incorporated		x	x
Cobequid Gold Corporation	-	-	-
Cogonov Incorporated			-
Conrad Brothers Limited	x	x	-
Corporation Aurifere (Canada)		-	
Coxheath Resources Limited	-	x	
Craig Nichols Farms Limited			-
D&D Metal Detectors Limited	-		
D.D.V. Gold Limited	x	x	x
Donkin Tenements Incorporated	x	x	-
Dufferin Resources Incorporated	x		
Ecum Secum Enterprises Limited	x	-	-
Elk Exploration Limited	x	x	x
Frontline Gold Corporation		-	x
Gallant Aggregates Limited		-	
Gifhorse Resources Incorporated	-	-	-
Glencoe Resources Incorporated	x	x	x
Gray Jay Holdings	-		-
Greyhawk Ridge Minerals Incorporated	-	-	-

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**Table 4.** Private exploration companies in Nova Scotia (cont.).

Year	2009	2010	2011
Hudgtec Consulting Limited	-	x	x
J. W. Tanner Logging Limited	-		
John Logan Enterprises Limited	-	-	-
Kaoclay Resources Incorporated	-	-	
Kelly Rock Limited		-	
Leadbetter & Associates Management Consultants			-
MacLeod Resources Limited	-	-	-
Magnum Resources Incorporated		x	x
Mercator Geological Services Limited			-
Meguma Resource Enterprises Incorporated	x	x	-
Millbrook Minerals Incorporated	-		
Moose River Resources Limited	-	-	-
Mosher Limestone Company Limited	-		-
Mt. Cameron Minerals Incorporated	-	-	x
Municipal Capitol Incorporated	-		
Muzzy Holdings Incorporated		-	
New Road Resources Limited		-	
Northern Innovations Holdings Limited		-	
NSGold Corporation		x	x
Nycon Resources Incorporated	x	x	
Rainbow Resources Limited	-	-	-
Rare Earth Mineral Sands Incorporated (formerly Maritime Titanium Incorporated)		x	x
Raw Earth Explorations	-		
Rheingold Exploration Corporation			-
S. Farrell & Associates Limited		-	x
Scratch Exploration and Mining Company Limited	x	x	x
Senternet Technologies Incorporated	-		
Stay Gold Incorporated		-	x
Stocks N Rocks Incorporated		-	
Sugarloaf Resources Incorporated			x
The Goldfields Group			-
True Metallic Exploration Incorporated	-	x	-
Unama'ki Resource Exploration and Investment	-	-	
Votix Corporation Limited	-		-
Web Exploration Services			-
Witch's Glen Gold Incorporated		x	x
Yava Technologies Incorporated	x	x	x

x indicates work performed

- inactive

blanks indicate that the company did not hold an exploration licence in that particular year

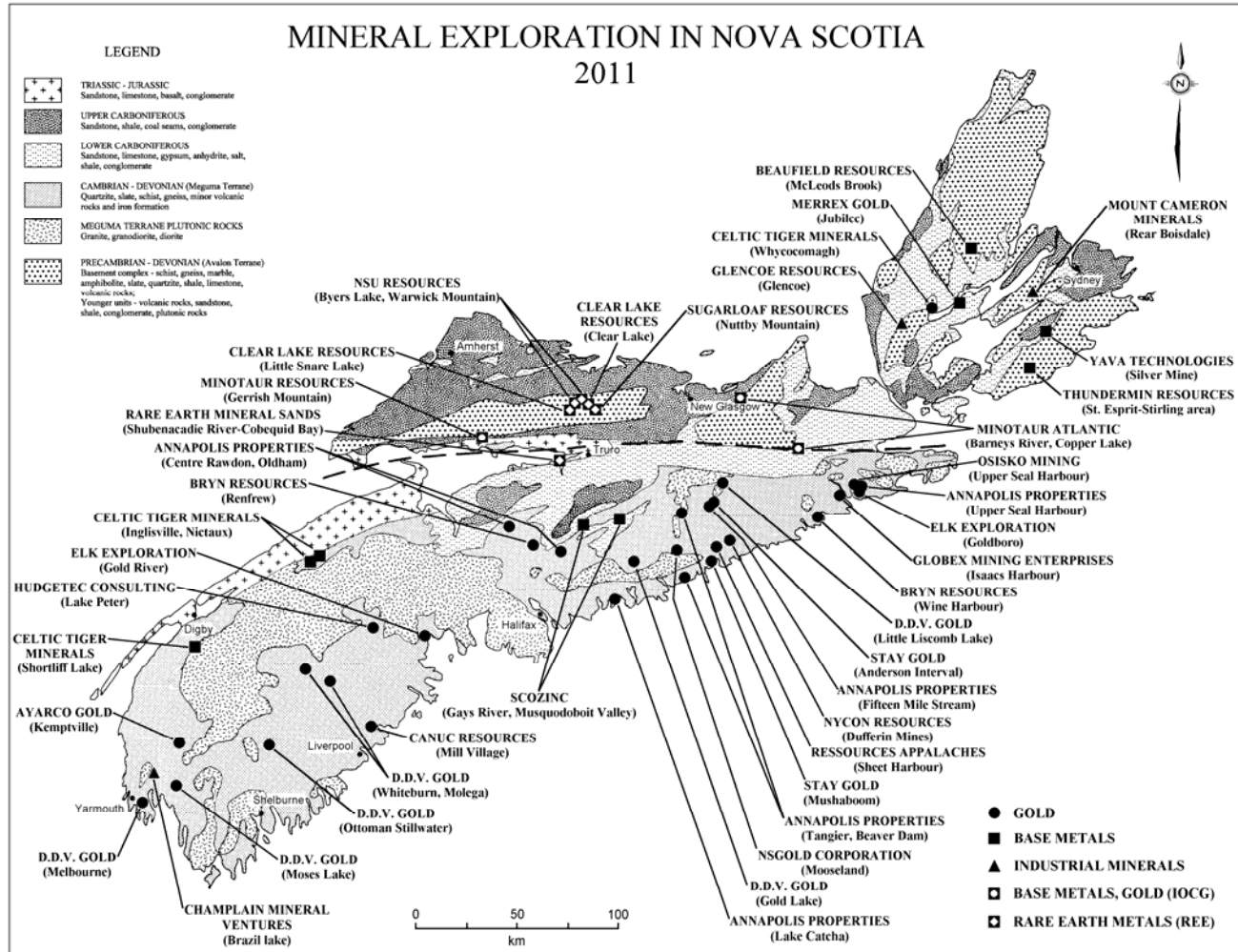


Figure 4. Mineral exploration programs in Nova Scotia, 2011. Simplified geology after Keppie, 1979.

was undertaken through its subsidiary, Annapolis Properties Corporation. The company has focused the bulk of its exploration efforts on the Moose River - Fifteen Mile Stream and Beaver Dam - Ragged Falls anticlinal structures that form part of the NE-SW metagreywackes and metasiltstones of the Goldenville Group. The company is currently focusing its efforts on the potential for the development of open pit operations that are amenable to bulk mining. Work on the properties included prospecting, geological mapping, rock sampling, till sampling, stream sediment sampling, and diamond drilling. The company's primary focus in 2011 has been a resource evaluation of the Fifteen Mile Stream property, which has included the completion of a 3732 m diamond-drilling program to test the strike extension of the Egerton-McLean Zone and the Hudson Zone. Diamond

drilling was also carried out on the Upper Seal Harbour (Golden Seal) property to evaluate the east strike extension of the Goldboro gold deposit. Re-logging and drill core sampling of previous drilling were also completed on the Como Lake, Harrigan Cove and Oldham properties.

Atlantic Gold NL, through its wholly-owned Canadian subsidiary DDV Gold Limited, continued a regional exploration program during 2011 to evaluate the potential for disseminated Touquoy-style gold deposits in other areas of the province. The company acquired extensive mineral rights throughout southern mainland Nova Scotia, including taking options on existing mineral rights held by private interests. The regional program consisted primarily of reconnaissance percussion drilling to evaluate the potential for anomalous

Table 5. Exploration programs in Nova Scotia, 2011.

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
3228463 Nova Scotia Limited	Oceanview, Cape Breton County	Copper, molybdenum	Prospecting, rock sampling, soil sampling
Annapolis Properties Corporation	Beaver Dam, Halifax County	Gold	Till sampling, drill core sampling
	Cameron Dam, Halifax County	Gold	Till sampling
	Centre Rawdon, Hants County	Gold	Stream sediment sampling, rock sampling
	Cochrane Hill, Guysborough County	Gold	Geological mapping, till sampling
	Cranberry Lakes, Guysborough County	Gold	Till sampling
	Fifteen Mile Stream, Halifax County	Gold	Diamond drilling
	Harrigan Cove, Halifax County	Gold	Drill core sampling
	Lake Catcha, Halifax County	Gold	Geological mapping, till sampling, rock sampling
	Moose River, Halifax County	Gold	Till sampling
	New Harbour, Guysborough County	Gold	Geological mapping, till sampling
	Oldham, Halifax County	Gold	Geological mapping, till and rock sampling, drill core sampling
	Tangier, Halifax County	Gold	Till sampling, stream sediment sampling, rock sampling
	Upper Seal Harbour, Guysborough County	Gold	Diamond drilling
	Kemptville, Yarmouth County	Gold	Diamond drilling
Ayarco Gold Corporation Limited	McLeods Brook area, Victoria County	Base metals	Ground geophysics
	Renfrew, Hants County	Gold	Drill core review, magnetic susceptibility studies, 3D modelling
Beaufield Resources Incorporated	Wine Harbour, Guysborough County	Gold	Drill core review, 3D modelling
	Mill Village, Queens County	Gold	Prospecting, geological mapping, rock sampling, soil sampling, ground geophysics
Bryn Resources Incorporated	Inglistville, Annapolis County	Base metals, gold	Diamond drilling
	Nictaux, Annapolis County	Base metals, gold	Diamond drilling
Canuc Resources Corporation	Shortliff Lake, Digby County	Base metals, gold	Diamond drilling
	Whycocomagh, Inverness County	Base metals, gold	Prospecting, rock sampling, stream sediment sampling
Celtic Tiger Minerals Exploration Limited	Brazil Lake, Yarmouth County	Lithium	Prospecting, soil sampling, diamond drilling
	Clear Lake, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis
Champlain Mineral Ventures Limited	Johnston Lake, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis
	Little Snare Lake, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis
Clear Lake Resources Incorporated	Silica Mountain, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis



Table 5. Exploration programs in Nova Scotia, 2011 (cont'd).

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Chris Herman	Hirtle Brook, Lunenburg County	Gold	Prospecting, rock sampling
D. D. V. Gold Limited (subsidiary of Atlantic Gold NL)	Cochrane Hill, Guysborough County	Gold	Prospecting, rock sampling
	Gold Lake, Halifax County	Gold	Prospecting, rock sampling, drill core sampling
	Little Liscomb Lake, Guysborough County	Gold	Reverse-circulation drilling, percussion drilling
	Melbourne, Yarmouth County	Gold	Prospecting, rock sampling, drill core sampling
	Molega, Queens County	Gold	Drill core sampling
	Moses Lake, Yarmouth County	Gold	Percussion drilling, rock sampling
	Ottomon Stillwater, Shelburne County	Gold	Percussion drilling, prospecting, rock sampling
	Upper Long Lake, Guysborough County	Gold	Percussion drilling, rock sampling
	Whiteburn, Queens County	Gold	Percussion drilling, rock sampling, drill core sampling
	Clam Bay, Halifax County	Gold	Prospecting, rock sampling, ground geophysics
Elk Exploration Limited	Gold River, Lunenburg County	Gold	Prospecting, rock sampling
	Goldboro, Guysborough County	Gold	Prospecting, till sampling, rock sampling
Glencoe Resources Incorporated	Whiteburn, Queens County	Gold	Percussion drilling, rock sampling
	Glencoe, Inverness County	Marble	Percussion drilling
Globex Mining Enterprises Incorporated	Isaacs Harbour, Guysborough County	Gold	Diamond drilling
Hudgec Consulting Limited	Lake Peter, Lunenburg County	Gold	Prospecting, rock sampling, stream sediment sampling
	MacMillan Road, Victoria County	Gold	Compilation, review and analysis of previous work
Joe Richman	Stirling, Richmond County	Gold	Compilation, ground geophysics
	Fifteen Mile Brook, Queens County	Gold	Prospecting, rock sampling, till sampling
Ken Hiltz	Hump Hill, Lunenburg County	Gold	Prospecting, rock sampling
	North Brookfield, Queens County		Rock sampling
	Whiteburn, Queens County	Gold	Rock sampling
Lauchie MacLean	Blue Mountain, Cape Breton County	Base metals	Prospecting, rock sampling
	Jubilee, Victoria County	Base metals	Prospecting, geological mapping, rock sampling
Merrex Gold Corporation	Barneys River, Pictou County	Copper, gold	Ground geophysics
	Copper Lake, Antigonish County	Copper, gold	Ground geophysics
Minotaur Atlantic Exploration Limited	Gerrish Valley, Colchester County	Copper, gold	Diamond drilling

Table 5. Exploration programs in Nova Scotia, 2009 (cont'd).

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Minotaur Atlantic Exploration Limited	Barneys River, Pictou County	Copper, gold	Ground geophysics
	Copper Lake, Antigonish County	Copper, gold	Ground geophysics
	Gerrish Valley, Colchester County	Copper, gold	Diamond drilling
Mount Cameron Minerals Incorporated	Rear Boisdaile, Cape Breton County	Graphite	Diamond drilling, LiDAR survey
	Mooseland, Halifax County	Gold	Diamond drilling, LiDAR survey
NSU Resources Incorporated	Byers Lake, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis
	Warwick Mountain, Colchester County	Rare earths, gold	Spectrometer survey, soil and rock sampling, XRF analysis
Nycon Resources Incorporated	Dufferin Mines, Halifax County	Gold	Diamond drilling
Osisko Mining Corporation	Upper Seal Harbour, Guysborough County	Gold	Diamond drilling
Patrick Bellfontaine Perry Bezanson	East River, Colchester County	Base metals, gold	Prospecting, rock sampling, soil sampling
	Mitchell Bay, Halifax County	Gold	Prospecting, rock sampling
Rare Earth Mineral Sands Incorporated (formerly Titanium Minerals Inc.)	Moser River, Halifax County	Gold	Prospecting, rock sampling, soil sampling
	New Chester, Guysborough County	Gold	Prospecting, rock sampling
Ressources Appalaches Incorporated	Shubenacadie River-Cobequid Bay area, Hants and Colchester counties	Rare earths, titanium	Sand sampling
	Sheet Harbour, Halifax County	Gold	Prospecting, geological mapping, rock sampling
Richard Jewers	Ladle Lake, Guysborough County	Gold	Prospecting, rock sampling
	Smith Lake, Guysborough County	Gold	Prospecting, rock sampling
Sugarloaf Resources Incorporated	Nutty Mountain, Colchester County	Rare earths, gold	Prospecting, geological mapping, spectrometer survey, soil and stream sediment sampling, XRF analysis
Scott Grant	Glendale, Inverness County	Marble, base metals	Prospecting, ground geophysics
Scozinc Limited	Gays River, Halifax County	Base metals	Diamond drilling
	Musquodoboit Valley, Halifax County	Base metals	Magnetometer survey
Scratch Exploration & Mining Corporation Limited	Mooseland, Halifax County	Gold	Prospecting, geological mapping, rock sampling
	Twin Lakes, Halifax County	Gold	Prospecting, rock sampling
Stay Gold Incorporated	Anderson Interval, Halifax County	Gold	Geological mapping, soil sampling, ground geophysics
	Cowan Pond, Halifax County	Gold	Prospecting, rock sampling
Thundermin Resources Incorporated	Harrigan Cove, Halifax County	Gold	Review of previous drilling, drill core sampling
	Mushaboom, Halifax County	Gold	Prospecting, rock sampling, soil sampling
Yava Technologies Limited	St. Esprit-Stirling area, Richmond County	Base metals, gold	Prospecting, geological mapping, rock sampling, soil sampling
	Dean Chapter Lake, Lunenburg County	Manganese	Prospecting, rock sampling, XRF analysis
	Silver Mine, Cape Breton County	Lead	Metallurgical testing

gold levels in the underlying till and basement rock formations. Surface exploration was carried out in conjunction with the drilling program and included prospecting and rock sampling.

Osisko Mining Corporation completed additional diamond-drilling on the Upper Seal Harbour gold deposit near Goldboro, Guysborough County, during the first half of the year. Ten drillholes totalling 2375 m were completed as part of ongoing resource evaluation of the deposit. Osisko signed an option agreement with Orex Exploration Incorporated in November 2009, which included taking over management of the project. Following the completion of the 2011 drilling program, Osisko decided to terminate its option with Orex to acquire an interest in the project.

NSGold Corporation, in an option agreement with Globex Mining Enterprises Incorporated, completed additional diamond drilling on the Mooseland gold property in Halifax County during the second half of 2011. The drilling program included eight holes totalling 2404 m on the East Zone and eight holes totalling 2606 m on the West Zone. The company also completed an airborne lidar survey over the Mooseland property during the year. NSGold has entered into option agreements on additional properties through the province, both with Globex as well as with private interests. LiDAR surveys have been completed on several of these properties. A preliminary diamond-drilling program was undertaken late in the year by Globex Mining Enterprises Incorporated on the Isaacs Harbour gold property in Guysborough County.

Scratch Exploration & Mining Corporation Limited continued an exploration program for gold in the Mooseland area, Halifax County, consisting of prospecting, geological mapping and rock sampling. The company also continued an exploration program for gold in the Twin Lakes area, Halifax County, consisting of prospecting and rock sampling. Bryn Resources Incorporated, in an option agreement with private interests, completed a preliminary review of previous drilling on optioned ground at the Renfrew gold property in Hants County and the Wine Harbour property in Guysborough County. Canuc Resources

Corporation, under an option agreement with Elk Exploration Limited, completed a preliminary exploration program on the Mill Village gold property in Queens County. Work on the property included prospecting, geological mapping, rock sampling, soil sampling and ground geophysics.

Nycon Resources Incorporated completed additional diamond drilling on the company's Salmon River gold property in Halifax County. Preliminary drilling was completed on the property by Nycon in 2009 with follow-up drilling in 2010. The property lies along the east strike extension of the former Salmon River Mine. Ressources Appalaches Incorporated completed a preliminary exploration program for gold in the Sheet Harbour area in Halifax County, consisting of prospecting, geological mapping and rock sampling.

Stay Gold Incorporated carried out geological modelling, re-sampling of drill core from previous exploration work and a preliminary diamond-drilling program on the former Harrigan Cove gold deposit in Halifax County. The company also completed prospecting and soil geochemical sampling in the Mushaboom, Anderson Interval and Cowan Mill Pond areas in Halifax County during the year. Elk Exploration Limited carried out an exploration program for gold on several properties during the year including prospecting, till sampling and rock sampling in the Goldboro area in Guysborough County, and prospecting and rock sampling in the Gold River area in Lunenburg County.

Ayarco Gold Corporation Limited, under an option agreement with Greenlight Resources Incorporated, completed additional diamond drilling on the Kemptville gold property in Yarmouth County. The drilling was undertaken to follow up results from an IP survey and soil geochemical survey that was completed on the property in 2010. Hudgtec Consulting Limited carried out prospecting, soil geochemical sampling and ground geophysical surveys on the Lake Peter gold occurrence in Lunenburg County.

Several individuals and private interests also carried out exploration for gold on a number of

properties throughout southern mainland Nova Scotia and Cape Breton Island during the year (Table 5).

## Base Metals

Exploration for base metals during 2011 continued at roughly the same level of activity as the previous year. The current activity has been focused primarily on the Lower Carboniferous Windsor Group sediments in northern mainland Nova Scotia and southeastern Cape Breton Island, and IOCG (iron oxide, copper-gold) deposits and associated polymetallic mineralization (Pb, Zn, Ag, Sn, W, Mo) and Rare Earth Elements (REE) along the Cobequid-Chedabucto Fault Zone throughout central mainland Nova Scotia (Fig. 4).

Minotaur Atlantic Exploration Limited continued an exploration program for IOCG deposits in the northern mainland area of the province during the year. The company completed a single diamond-drill hole in the Gerrish Valley area, Colchester County, to test a large gravity anomaly that had been identified as a result of a regional gravity survey that had been completed by Minotaur in 2007-08. Under option agreements with Elk Exploration Limited and Blackfly Exploration & Mining, the company carried out ground geophysical surveys in the Copper Lake area, Antigonish County. Under an option agreement with Cobequid Gold Corporation Limited, the company also completed ground geophysics in the Barneys River area, Pictou County.

ScoZinc Limited completed additional diamond drilling at the Scotia Mine Pb-Zn deposit at Gays River, Halifax County. The drilling was carried out to test the extent of mineralization along the northwest strike extension of the of the main deposit. The company also completed a soil geochemical survey on its property holdings in the Musquodoboit Valley area during the year. All assets of ScoZinc Limited including the Scotia Mine deposit and exploration licence holdings were purchased by Selwyn Resources Limited in June, 2011. Selwyn plans to re-start the Scotia Mine in the near future.

Clear Lake Resources Incorporated continued an

exploration program for gold and rare earth elements (REE) on several properties in the Silica Mountain-Clear Lake area, Colchester County, during the year. Work on the properties included spectrometer surveys, soil sampling, rock sampling and XRF scanning. Sugarloaf Resources Incorporated, in an option agreement with Blackfly Exploration & Mining, completed an exploration program for gold and rare earth elements (REE) in the Nuttby and Nuttby Mountain areas, Colchester County. Work on the properties included prospecting, geological mapping, spectrometer surveys, soil sampling, stream sediment sampling and XRF scanning. NSU Resources Incorporated, under an option agreement with a private interest, initiated an exploration program gold and rare earth elements (REE) on several properties in the Warwick Mountain and Byers Lake areas in Colchester County during the year. Work on the properties included spectrometer surveys, soil sampling, rock sampling and XRF scanning.

Celtic Tiger Minerals Exploration Limited, under a 'memorandum of understanding' with Capella Resources Limited, completed diamond drilling for base- and precious-metals on three of Celtic's properties during the year, including the Shortliff Lake property in Digby County, and the Nictaux and Inglisville properties in Annapolis County. Pursuant to the terms of the agreement, Capella will earn a 50% interest in each of the properties. Under option agreements with Witch's Glen Gold Incorporated and private interests, the company also completed a preliminary exploration program for gold and base metals in the Whycomagh area, Inverness County. Work on the property included prospecting, rock sampling and stream sediment sampling.

Thundermin Resources Incorporated completed a preliminary exploration program for base metals in the St. Esprit-Stirling area in Richmond County. Work completed to date has included prospecting, geological mapping, soil geochemistry and an IP survey. Merrex Gold Corporation completed additional work on the Jubilee base metal deposit at Little Narrows, Victoria County, during the year, consisting of prospecting, geological mapping and rock sampling. 3228463 Nova Scotia Limited completed an exploration program for Cu and Mo

in the Oceanview area, Cape Breton County. Work included prospecting, rock sampling and soil geochemistry. Beaufield Resources Incorporated, in an option agreement with a private interest, completed a magnetometer survey in the McLeods Brook area, Victoria County, as part of a preliminary exploration program for base metals.

Yava Technologies Limited completed additional metallurgical testing during the year to evaluate an *in situ* leach mining process to recover Pb and associated by-products from the former Yava Lead mine near Sydney in Cape Breton County. The property is host to a 4.5 million ton base metal deposit in Carboniferous sandstones grading 2.79% Pb. The company also initiated an exploration program for manganese on the Dean Chapter Lake property in Lunenburg County. Work included prospecting, rock sampling and XRF scanning.

## Industrial Minerals

Exploration for industrial minerals continued at roughly the same level of activity as the previous two years, although down significantly from the level of activity prior to 2008. Current work has focused on a variety of industrial mineral commodities including graphite, titanium sands and pegmatitic minerals including feldspar, quartz, spodumene and associated rare metals.

Champlain Mineral Ventures Limited, in a joint venture agreement with Greenlight Resources Incorporated (formerly Petro Horizon Energy Corporation), continued to evaluate the Brazil Lake lithium property in Yarmouth County. Work on the property included prospecting and soil geochemistry.

Glencoe Resources Incorporated continued an exploration program on the Glencoe limestone deposit in Inverness County in 2011. Work on the property included geological mapping and percussion drilling. Mt. Cameron Minerals Incorporated continued an exploration program for graphite in the Rear Boisdale area, Cape Breton County. Work on the project included diamond-drilling and a lidar survey.

Rare Earth Mineral Sands Incorporated (formerly Maritime Titanium Incorporated) continued an exploration program for rare earths and titanium on the company's mineral sands holdings along the Shubenacadie River and in the Cobequid Bay area during the year. Work consisted of follow-up sand sampling and analytical studies.

## Reference

Keppie, J. D. (compiler) 1979: Geological map of the Province of Nova Scotia; Nova Scotia Department of Mines and Energy, Map 1979-001, scale 1:500 000.