

# Mineral Exploration Activity in Nova Scotia, 2009

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## 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 (Brendan MacKenzie), 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 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 auditing confidential assessment reports that are submitted in the support of the renewal of exploration licences. In 2009, 118 assessment reports were received and audited for compliance with the Mineral Resources Regulations. The number of reports was down by almost half of the 234 reports submitted for assessment credit in 2008.

## Mineral Exploration Activity in 2009

Mineral exploration in Nova Scotia during 2009 dropped sharply in comparison to the level of activity of the previous two years, with field expenditures estimated to be in the range of \$6 million compared with \$11 million in 2008 and \$10.6 million in 2007 (Fig. 1). The global financial crisis that developed in the third quarter of 2008 had a direct impact on the mining industry in Canada and negatively impacted mineral exploration activities in 2009. The impact on economic growth resulted in rapidly falling commodity prices, a sharp decline in global demand and growing metal inventories. This was accompanied by temporary mine closures, production cuts and reduced operation of processing facilities. Development projects and planned mine expansions were put on hold and companies struggled to raise funds for mineral exploration programs.

The price of gold averaged roughly \$900US/oz. during the first half of 2008, and declined sharply to just over \$700US/oz. by the fall of 2008 as investors reacted to the news of the growing financial crisis in the United States and Europe. The trend then reversed as investors began to lose confidence in the traditional currency markets and stocks, with gold prices climbing to roughly \$870US/oz. by the end of 2008. The price of gold continued to climb steadily throughout 2009 and then climbed sharply during the fall, reaching a high of just over \$1200US/oz. at the beginning of December and then settling to approximately \$1100US/oz. by the end of 2009. Continued strength in the price of gold has had a positive

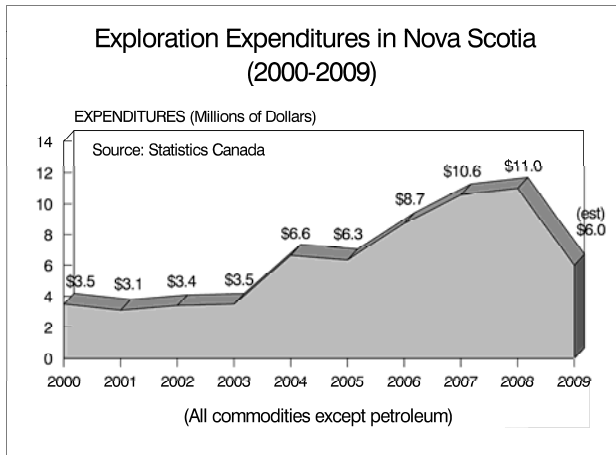
**Table 1.** Details of exploration and development activity in Nova Scotia, 2000-2009.

	2000	2001	2002	2003	2004	2005	2006	2007	2008	p2009
Total Field Exploration Expenditures (\$)	3 500 000	3 100 000	3 400 000	3 491 710	6 632 520	6 337 550	8 735 000	10 600 000	11 000 000	6 000 000
Total Licences Issued (all categories)	606	498	552	744	570	762	938	1400	1377	800
Claims In Good Standing (new and re-issued)										
General	10 951	8 406	12 492	18 947	11 242	22 204	26 494	51 213	48 499	20 500
Special (Order in Council)										
Salt and Potash	255	255	500	500	218	349	349	263	131	131
Coal	-	-	102	102	102	128	1380	1348	1252	1251
Geothermal	158	158	158	158	-	-	-	-	-	-
Underground Gas Storage	106	183	183	183	201	201	201	-	-	-
Tailings	-	-	-	-	-	-	-	-	-	-
Other (gold, base metals)	10	10	10	78	78	78	100	100	100	100
Uranium*	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)
Total (excluding closures and uranium licences)	11 480	90 12	13 445	19 968	11 841	22 960	28 524	52 924	49 982	21 982
Total Area Held Under Licence										
(ha)	185 838	145 886	217 647	323 241	191 681	371 676	461 745	856 732	809 107	355 844
(acres)	459 200	360 480	537 800	798 720	473 640	918 400	1 140 960	2 116 960	1999 280	879 280
Work Reported For Licence Renewals (\$)	1 136 304	2 811 393	1 457 012	1 197 208	4 270 042	5 704 121	6 273 377	9 632 665	15 035 159	3 743 728
Number Of Assessment Reports Received	85	72	102	96	141	113	162	200	234	118

p Preliminary figures

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

December 31, 2009



**Figure 1.** Exploration expenditures in Nova Scotia, 2000-2009.

impact on gold exploration in the province with a gradual increase in the level of activity in the second half of 2009.

Base metals followed a similar trend over the same period. Copper prices climbed sharply in early 2008, reaching a high of just under \$4.00US/lb. in the first half of 2008 and then dropping precipitously during the second half of 2008, ending the year at approximately \$1.40US/lb. Prices began to climb steadily throughout 2009 and reached a high of \$3.30/lb. at the end of the year. Lead prices began to slide in early 2008 and ended the year at approximately \$0.50US/lb. Prices began to rise steadily throughout 2009 and reached a high of \$1.10/lb. at the end of 2009. Zinc prices also began to slide in early 2008 and ended the year at approximately \$0.50US/lb. Prices began to rise steadily throughout 2009 and reached a high of \$1.15/lb. at the end of 2009. In contrast to gold, the strengthening in prices for base metals was not reflected in a significant increase in exploration for base metal commodities in 2009.

Preliminary figures for the total number of general claims staked in 2009 show a significant drop of approximately 52% over the previous year from 48,499 to 20,500 claims (Table 1, Fig. 2). A preliminary total of 21,982 claims for all commodities were in effect at the end of 2009, represented by approximately 800 general and special licences covering an area of 355 844 ha or 3,558 km<sup>2</sup>, approximately 6.5% of the total area of the province. The amount of exploration drilling

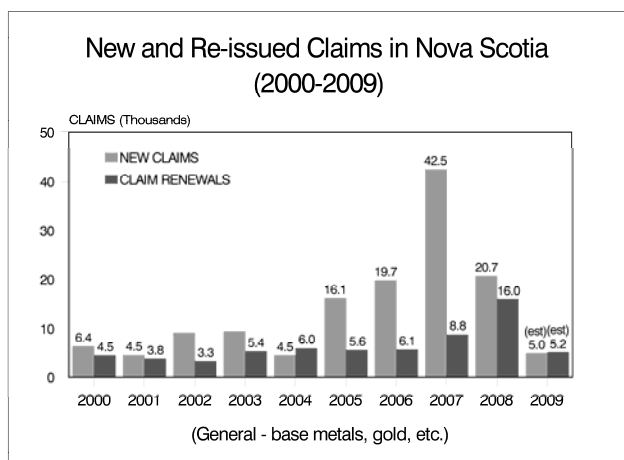
was down significantly over the previous year with a preliminary estimate of 9000 m in 2009 compared with 25 900 m in 2008 and 37 400 m in 2007 (Fig. 3). In addition, an estimated 300 m of reverse circulation drilling was also completed in 2009, compared with 2900 m in 2008 and 14 200 m in 2007 (Fig. 3).

Approximately 153 companies and individuals held exploration interests (licences or options) in the province in 2009 including 2 major, 14 junior and 44 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 2009 (Fig. 4) included 1 major, 10 junior and 12 private companies (Tables 2, 3, 4 and 5), as well as a number of individuals.

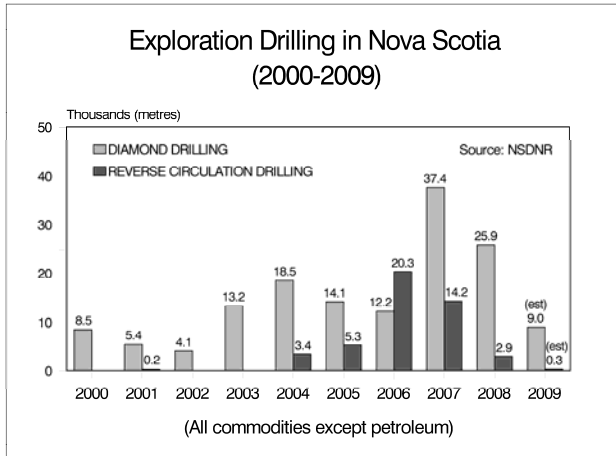
## Overview of Exploration Activities

### Gold

Exploration for gold continued to be a prominent focus for mineral exploration during 2009, with the level of activity similar to 2008. The lower Paleozoic Meguma Supergroup of southern mainland Nova Scotia continued to be the principal focus for gold exploration, with the majority of exploration work concentrated on the historical



**Figure 2.** Claim staking in Nova Scotia, 2000-2009.



**Figure 3.** Exploration drilling in Nova Scotia, 2000-2009.

gold districts in Halifax and Guysborough counties (Table 5). Although gold prices weakened moderately during 2008, prices began to rebound late in 2008 and continued to strengthen significantly throughout 2009. Interest in the exploration and development of the Meguma-hosted gold deposits has been sustained largely as a result of gold prices reaching historical highs in late 2009, along with an improvement in the investment climate for the junior mining sector.

Atlantic Gold NL, through its wholly owned Canadian subsidiary DDV Gold Limited, continued to evaluate the gold potential along the northeast and southwest strike extension of the Moose River (Touquoy) property in Halifax County during 2009. Work included the continuation of a regional reverse-circulation drilling program and geochemical analysis of till and basement rocks on several properties including the Beaver Dam, Icelandic Road and West Lake areas, and the Higgins & Lawlor and Stillwater properties immediately west of the Touquoy deposit. Encouraging results on the company's Touquoy West property will be followed in early 2010 with a diamond-drilling program. Work also continued on the development phase of the Touquoy deposit and included continuation of a Definitive Feasibility Study by Ausenco Limited, with an estimated completion date of mid-2010, the finalization of remaining permitting (Industrial Approval and Mining Lease grant), and the acquisition of surface land titles. Current resources for the Touquoy property consist of 8.9 million tonnes grading

1.7 g Au/t with an expected recovery of 450,000 ounces of gold (based on a gold price of \$875US/oz.).

Atlantic Gold also entered into an option agreement with Scorpio Gold Corporation in May 2007 to undertake a resource evaluation of the Cochrane Hill gold deposit in Guysborough County. Resource development drilling was initiated on the property in 2008 and a second phase of drilling was completed in 2009. Work to date has confirmed indicated and inferred resources for the deposit of 10.11 million tonnes grading 1.69 g Au/t with a contained reserve of 549,000 ounces of gold.

Orex Exploration Incorporated completed the first three phases of a five-part drilling program in October 2008 to evaluate the bulk mining potential of the Upper Seal Harbour gold deposit near Goldboro, Guysborough County. Additional drilling that had been planned for 2009 was postponed pending the completion of updated Mineral Resource Estimates (MRE) for the property. The MRE was completed in August 2009 with revised resource estimates at a cut-off of 1.5 g Au/t consisting of measured and indicated reserves of 2 711 000 t grading 4.56 g Au/t and inferred reserves of 3 438 000 t grading 3.67 g Au/t. Orex signed an option agreement with Osisko Mining Corporation in November 2009, wherein Osisko would acquire a 50% undivided interest in the Goldboro gold property following the completion of \$1.5 million in exploration expenditures on or before September 29, 2013. Under the option agreement, Osisko will manage the project and plans to proceed with the final two phases of the Orex drilling program in 2010.

Acadian Mining Corporation continued exploration on several gold properties throughout Halifax and Guysborough counties during 2009, including the Beaver Dam, Dufferin Mines, Fifteen Mile Stream, Harrigan Cove, Kent Lake, Lake Catcha, Oldham, Ragged Falls and Tangier properties in Halifax County, and the Crows Nest, Forest Hill, and Upper Seal Harbour properties in Guysborough County. Work on these properties included geological mapping, prospecting, rock sampling and till sampling. Diamond-drilling was also undertaken on two of the company's advanced

properties, including Beaver Dam and Fifteen Mile Stream. Annapolis Properties Corporation, a wholly owned subsidiary of Acadian, continued exploration on two additional properties acquired by Acadian, including the Cranberry Lakes and Upper Seal Harbour areas in Guysborough County.

Alpha Uranium Resources Limited continued an exploration program for gold near Mill Village in Queens County and in the Gold Lake area in Halifax County. Work on the properties included geological mapping, prospecting and rock sampling. Nycon Resources Incorporated carried out exploration for gold on several properties in Halifax County during 2009, including geological mapping and prospecting in the Alder Island Stillwater area, ground geophysics in the Muskrat Lake area, and diamond-drilling in the Salmon River area.

Dufferin Resources Incorporated carried out an exploration program for gold in the Chocolate Lake area, Halifax County, consisting of prospecting, geological mapping and rock sampling. Scratch Exploration & Mining Corporation Limited carried out exploration for gold in the Mooseland area, Halifax County, consisting of prospecting, geological mapping, rock sampling, till sampling and trenching. RJZ Mining Corporation continued an exploration program for gold in the Union Dam Flowage area, east of the Beaver Dam gold property, consisting of geological mapping and till sampling. Globex Mining Enterprises Incorporated completed an exploration program for gold in the

Indian Path area, Lunenburg County, consisting of rock sampling and soil sampling.

Several individuals and private interests also carried out exploration for gold throughout southern mainland Nova Scotia during the year (Table 5).

## Base Metals

The level of exploration for base metals in 2009 dropped significantly in comparison to the previous year. This was reflected by the sharp drop in metal prices that continued unabated throughout 2008. Metal prices at the beginning of 2009 had dropped to their lowest levels since the end of 2005, and although prices rebounded throughout the year, exploration for base metals was slow to recover. Current activity has focused primarily on the exploration for base metals in the Lower Carboniferous Windsor Group sediments in northern mainland Nova Scotia and Cape Breton Island. Exploration for base metals was also undertaken in several other geological environments, including polymetallic mineralization associated with highly altered granites, pegmatites and vein systems in the South Mountain Batholith, polymetallic mineralization occurring in highly altered Precambrian metasediments in the French Road area in southeastern Cape Breton Island, and base metals associated with Pennsylvanian sandstones in south-central Cape Breton Island.

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

	2007	2008	2008
Acadian Mining Corporation	x	x	x
Aur Resources Incorporated	-		
Georgia-Pacific Canada Incorporated	-	-	-
Intragaz Limited Partnership	-		

x indicates work performed

- company inactive

blanks indicate that the company did not hold an exploration license or option in that particular year

82 Mineral Resources Branch

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

	2007	2008	2009
Annapolis Properties Corporation		x	x
Atlantic Gold NL (formerly Diamond Ventures NL)	x	x	x
Avalon Rare Metals Incorporated (formerly Avalon Ventures Limited)	x	x	x
Black Bull Resources Incorporated	-	-	-
Canstar Resources Incorporated (formerly Candor Ventures Corporation)	-		
Cornerstone Resources Incorporated			-
Exploration Orex Incorporated	-	x	x
Globex Mining Enterprises Incorporated	-	x	-
Greyhawk Ridge Minerals Incorporated		-	
Heartland Resources Limited	-		
Landis Mining Corporation	x	-	-
Merrex Gold Incorporated	x	x	x
Minotaur Atlantic Exploration Limited	x	x	
Monster Copper Resources Incorporated	-		
Pan East Petroleum Corporation	-		
RJZ Mining Incorporated	x	-	x
Scorpio Gold Corporation	x	x	
ScoZinc Limited	x	x	x
Silvore Fox Minerals Corporation			x
Tripple Uranium Resources Inc.	x	x	x

x indicates work performed

- inactive

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

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

	2007	2008	2009
2134889 Ontario Incorporated	-	-	
2403496 Nova Scotia Limited	-		
2501023 Nova Scotia Ltd.	-		
6179053 Canada Incorporated	x	x	-
6531954 Canada Incorporated	-		
Ace In The Hole Excavation	-		
Alpha Uranium Resources Incorporated	-	x	x
Ayarco Gold Corporation Limited	x	x	-
Alva Construction Limited	-	-	-
Billnor Forest Products Ltd.	-		
Blackfly Exploration & Mining	x	x	-
Burnt Point Resources Incorporated	x	-	-
Champlain Resources Incorporated	-	-	-
Chebucto Resources	-	-	
Cobequid Gold Corporation	-		
Conrad Brothers Limited	x	x	x
Coxheath Resources Limited	-	x	-
D&D Metal Detectors Limited	-		
D.D.V. Gold Limited	x	x	x
Donkin Tenements Incorporated	x	x	x
Dufferin Resources Incorporated	-	x	
Ecum Secum Enterprises Limited	-	x	x
Elk Exploration Limited	x	x	x
Gifhorse Resources Incorporated	x	x	-
Glencoe Resources Incorporated	x	x	x
Gray Jay Holdings	-		
Hudgtec Consulting Limited	-	x	-
J. W. Tanner Logging Limited	-	-	
John Logan Enterprises Limited	-	-	-
Jubilee Minerals	-		

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

	2007	2008	2009
Kaoclay Resources Incorporated	-	-	-
Kelly Rock Limited	x		
MacLeod Resources Limited	-	-	-
Meguma Resource Enterprises Incorporated	x	x	x
Millbrook Minerals Incorporated	-	-	
Moose River Resources Limited	-	-	-
Mosher Limestone Company Limited	-		
Mt. Cameron Minerals Incorporated	-	-	-
Municipal Capitol Incorporated	-	-	-
New Road Resources Limited	-		
Nycon Resources Incorporated	x	x	x
Pettizite Minerals and Exploration	-		
Rainbow Resources Limited	-	x	-
Raw Earth Explorations	-		
Ressources Appalaches	x		
Scratch Exploration and Mining Company Limited	x	x	x
Senternet Technologies Incorporated	-	-	
The Shaw Group Limited	-	-	-
True Metallic Exploration Incorporated	x	x	-
Unama'ki Resource Exploration and Investment	x	-	-
United Reef Limited	x	x	-
Votix Corporation Limited	-		
Yava Technologies Incorporated	x	x	x

x indicates work performed

- inactive

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

Acadian Mining Corporation acquired extensive ground holdings throughout the province over the past two years as part of an ongoing exploration program to expand on the company's base metal reserves. The company scaled back its work program for base metals in 2009 following the closure of the Scotia Mine on March 24, 2009. Work continued on ground held at Smithfield and in the Eastville area in Colchester County and included prospecting, geological mapping, rock sampling and till sampling.

Yava Technologies Limited continued to work on an *in situ* leach mining process during the year to recover Pb and associated by-products from the former Yava lead mine near Sydney in Cape Breton County. Work included the continuation of a hydrogeological study of the property and drill core sampling. The property is host to a 4.5 million ton base metal deposit in Carboniferous sandstones grading 2.79% Pb with minor levels of Zn.



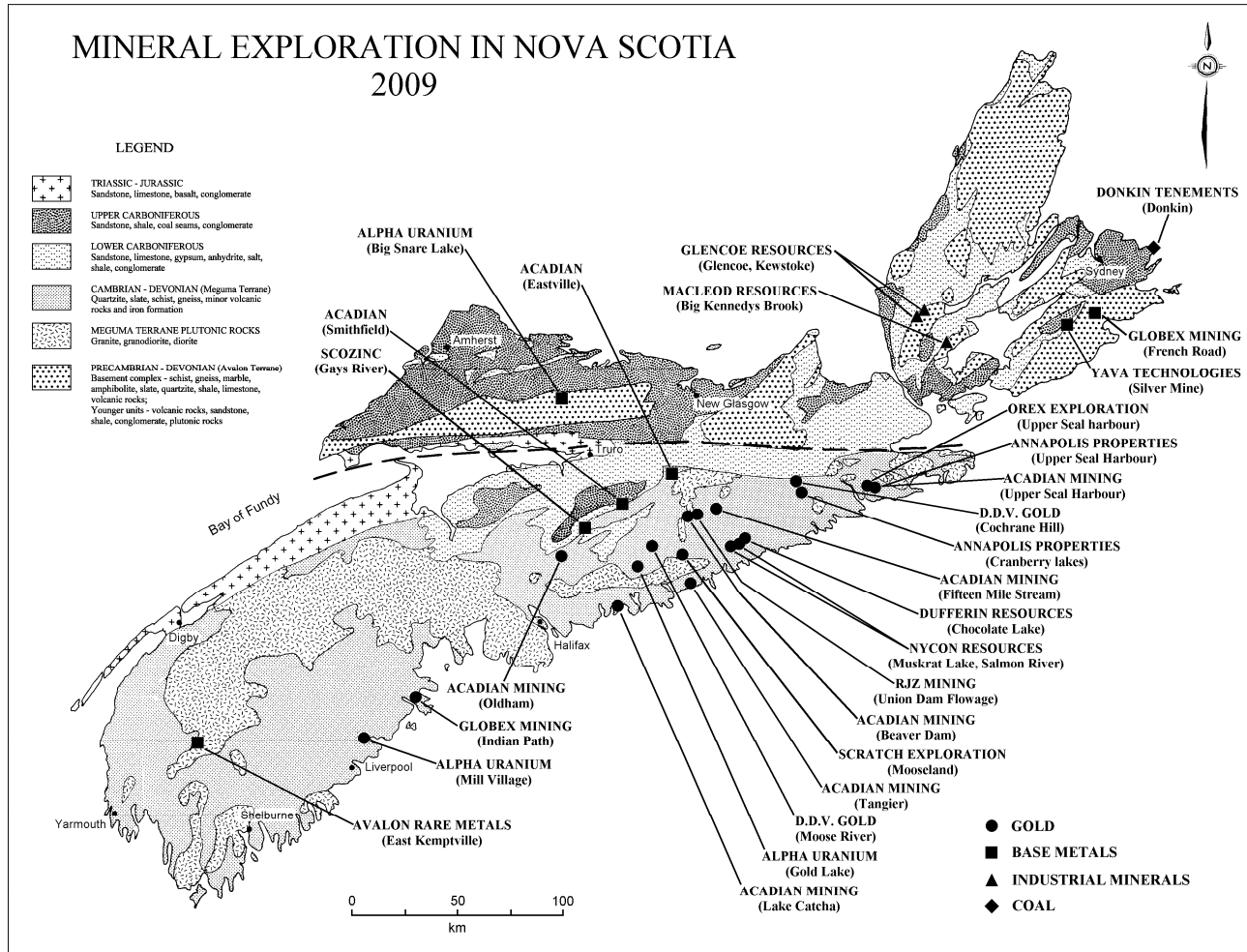


Figure 4. Mineral exploration programs in Nova Scotia, 2009.

Avalon Rare Metals Incorporated continued a comprehensive review of the former Rio Kemptville Tin Corporation mine at East Kemptville, Yarmouth County, during the year. The company is evaluating the potential for developing mineable reserves of tin and indium at the former mine. A Preliminary Economic Assessment (PEA) of the property is currently being undertaken by Wardrop Engineering Incorporated. The company also continued a comprehensive review of previous exploration work along the southwest strike extension of the granitic contact zone that is host to the East Kemptville Sn-Cu-Zn deposit. Fieldwork, consisting of ground geophysical surveys and soil geochemical sampling, was conducted during the year in conjunction with the historical review.

Globex Mining Enterprises Limited carried out soil sampling in the French Road area, Cape Breton County, as part of a continuing program to evaluate the potential for polymetallic mineral deposits in altered Precambrian metasediments of the Trout Brook Formation.

Alpha Uranium Resources Incorporated initiated an exploration program for Rare Earth Elements (REE) in the Big Snare Lake area, Colchester County, in 2009. Work on the property included prospecting and rock sampling.

Scozinc Limited, a wholly owned subsidiary of Acadian Mining Corporation, completed a soil geochemical survey along the northeast strike

Table 5. Exploration programs in Nova Scotia, 2009.

COMPANY / INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Acadian Mining Corporation	Beaver Dam, Halifax County	Gold	Diamond drilling
	Crows Nest, Guysborough County	Gold	Geological mapping, prospecting
	Dufferin Mines, Halifax County	Gold	Geological mapping, rock sampling
	Eastville, Colchester County	Base metals	Prospecting, rock sampling, till sampling
	Fifteen Mile Stream, Halifax County	Gold	Prospecting, rock sampling, till sampling
	Forest Hill, Guysborough County	Gold	Till sampling
	Harrigan Cove, Halifax County	Gold	Prospecting, till sampling
	Lake Catcha, Halifax County	Gold	Geological mapping, rock sampling
	Oldham, Halifax County	Gold	Prospecting, till sampling
	Ragged Falls, Halifax County	Gold	Geological mapping, rock sampling
	Smithfield, Colchester County	Base metals	Geological mapping, rock sampling
	Tangier, Halifax County	Gold	Geological mapping, rock sampling, till sampling
	Upper Seal Harbour, Guysborough County	Gold	Geological mapping, rock sampling, till sampling
	Alex DeBay	Hurricane Island, Guysborough County	Gold
Aerotech Park, Halifax County		Gold	Prospecting, rock sampling
Annapolis Properties Corporation	Cranberry Lakes, Guysborough County	Gold	Geological mapping, rock sampling, till sampling
	Upper Seal Harbour, Guysborough County	Gold	Geological mapping, rock sampling, till sampling
Anthony Barrett	Scotch Lake, Cape Breton County	Dolomite	Geological mapping, bulk sampling
Alpha Uranium Resources Limited	Big Snare Lake, Colchester County	Rare earths	Prospecting, rock sampling
	Gold Lake, Halifax County	Gold	Prospecting, rock sampling
	Mill Village, Queens County	Gold	Geological mapping, prospecting
	East Kemptville, Yarmouth County	Base metals	Rock sampling, soil sampling, compilation
Conrad Brothers Limited	Lake Charles, Halifax County	Aggregates, gold	Geological mapping

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

COMPANY / INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
D.D.V. Gold Limited (subsidiary of Atlantic Gold NL)	Beaver Dam, Halifax County	Gold	Reverse circulation drilling, basement rock sampling
	Creelmans Crossing, Halifax County	Gold	Prospecting
	Icelandic Road, Halifax County	Gold	Reverse circulation drilling, basement rock sampling
	Moose River, Halifax County	Gold	Water sampling, till sampling
	Shingle Brook, Guysborough County	Gold	Reverse circulation drilling, basement rock sampling
	West Lake, Halifax County	Gold	Reverse circulation drilling, basement rock sampling
	Glace Bay, Cape Breton County	Coal	Underground drilling, coal testing
	Chocolate lake, Halifax County	Gold	Geological mapping, prospecting, rock sampling
Gerard Mazerolle	Lochaber Lake, Antigonish County	Copper, gold	Drill core sampling
Glencoe Resources Incorporated	Glencoe, Inverness County	Marble	Reverse circulation drilling, basement rock sampling
	Kewstoke, Inverness County	Marble	Reverse circulation drilling, basement rock sampling
Globex Mining Enterprises Limited	French Road, Cape Breton County	Base metals	Soil sampling
	Indian Path, Lunenburg County	Gold	Rock sampling, soil sampling
	Rear Judique, Inverness County	Marble	Prospecting, geological compilation
Joe Richman	Scotch lake, Cape Breton County	Marble	Prospecting, geological compilation
Ken Hiltz	Pleasant River Barrens, Lunenburg County	Gold	Rock sampling
Lyndon Jensen	Upper Falmouth, Hants County	Gold	Rock sampling, stream sediment sampling

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

COMPANY / INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
MacLeod Resources Incorporated	Kennedys Big Brook, Inverness County	Marble	Pitting, rock sampling
Nyon Resources Incorporated	Alder Island Stillwater, Halifax County	Gold	Geological mapping, prospecting
	Muskkrat lake, Halifax County	Gold	Magnetometer survey
	Salmon River, Halifax County	Gold	Diamond-drilling
Perry Bezanson	Ecum Secum, Guysborough County	Gold	Prospecting, rock sampling
Perry MacKinnon	Creignish River, Inverness County	Marble	Geological mapping, prospecting, rock sampling
	Glendale, Inverness County	Marble	Prospecting, rock sampling
RJZ Mining Corporation	Union Dam Flowage, Halifax County	Gold	Geological mapping, till sampling
Robert MacDonald	Kewstoke, Inverness County	Marble	Reverse circulation drilling, basement rock sampling
Scott Grant	Renfrew, Hants County	Gold	Prospecting, rock sampling
Scozinc Limited	Gays River, Halifax/Colchester Counties	Base metals	Soil sampling
Scratch Exploration & Mining Corporation Limited	Mooseland, Halifax County	Gold	Geological mapping, prospecting, trenching, rock sampling, till sampling,
	Coxheath, Cape Breton County	Base metals	Diamond-drilling
Yava Technologies Limited	Silver Mine, Cape Breton County	Lead	Hydrogeological studies, drill core sampling

extension of the Scotia Mine property as part of a program to evaluate the potential for additional lead-zinc deposits in the Gays River area.

## Industrial Minerals

Exploration for industrial minerals continued at roughly the same level of activity as 2008, down significantly from the level of activity in recent years. Current work has centred on the evaluation of carbonate resources in Cape Breton Island.

Glencoe Resources Incorporated continued to evaluate the Glencoe limestone deposit, as well as carbonate resources in the Kewstoke area west of Whycocomagh in Inverness County in 2009. Work on the properties included reverse-circulation drilling and bedrock sampling. MacLeod Resources Incorporated carried out pitting, rock sampling, and slabbing and polishing tests on a marble occurrence in the Big Kennedys Brook area, Inverness County.

Several individuals and private interests also carried out exploration for industrial mineral commodities in Inverness and Cape Breton counties during the year (Table 5).

## Coal

Exploration for coal during the year focused on the Pennsylvanian sedimentary rocks of the Sydney coal basin in southeastern Cape Breton Island.

The Donkin Coal Alliance, a joint venture between Xstrata Coal Canada Limited and Erdene Gold Incorporated, began a program in the fall of 2006 to evaluate the feasibility of re-opening the Donkin coal mine near Sydney. Initial work included the removal of the Donkin tunnel seals followed by the de-watering and rehabilitation of the 3500 m tunnels and a comprehensive review of previous exploration work completed on the property. The de-watering was completed in the fall of 2007 and this was followed by the extraction of a bulk sample from the Harbour seam late in the year. Development drilling was started at the coal face at the end of the year. Work on the project in 2008 included underground drilling and coal analyses, underground channel sampling and coal quality testing, analysis of previous seismic testing, and re-logging of drill core from previous exploration work on the property.

The 2008 exploration program continued in 2009, with the completion of underground drilling and coal testing. Planning is currently underway to prepare for the implementation of the Continuous Miner Exploration Phase in 2010. Current resources for the Donkin project include 227 million tonnes indicated and 254 million tonnes inferred of thermal- and metallurgical-grade coal from three coal seams.