

# Mineral Exploration Activity in Nova Scotia, 2004

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## Mineral Exploration Monitoring

Monitoring of mineral exploration activity in Nova Scotia is coordinated through the Mineral and Petroleum Titles Section of the Minerals 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 (Don MacNeil), Truro (Donald Weir) and Bridgewater (Sandra Johnson) 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 auditing confidential assessment reports that are submitted in support of the renewal of exploration licences. In 2004, 141 assessment reports were received and audited for compliance with the Mineral Resources Regulations. This number is up substantially from the 96 reports submitted for assessment credit in 2003.

## Mineral Exploration Activity in 2004

Mineral exploration in Nova Scotia during 2004 demonstrated a significant increase in the level of activity in comparison to the previous three years, with field expenditures estimated at \$6.5 million

compared with \$2.9 million in 2001, \$2.0 million in 2002 and \$3.2 million in 2003 (Table 1, Fig. 1). This increase is primarily reflected in a renewed interest in gold exploration, with the majority of work centred on the historical gold mining districts in Halifax and Guysborough Counties. Exploration for base metals continued at roughly the same level of activity as in 2003, with the majority of work concentrated on Cu-Au exploration along the Cobequid-Chedabucto Fault Zone in northern mainland Nova Scotia. Exploration also continued for industrial minerals, although the number of active exploration programs showed a modest decrease from the level of activity of the previous two years. Overall, the amount of money available for mineral exploration was significantly higher in 2004, with most of the exploration activities carried out by the junior mining sector. This increase in exploration funding is reflected both in the continuing rise in the price of gold over the past three and a half years, which reached a high of \$450 at the end of 2004, as well as the sharp increase in base metal prices that began in the fall of 2003.

Preliminary figures for the total number of general claims staked in 2004 showed a drop of 37.4% over the previous year from 18,027 to 11,275 claims (Table 1, Fig. 2). Preliminary estimates show that 11,788 claims for all commodities were in effect at the end of 2004, represented by 563 general and special licences covering an area of 190,824 ha or 1908 km<sup>2</sup>, approximately 3.5% of the total area of the province. The amount of exploration drilling increased significantly in comparison to the previous two years, with a preliminary estimate of 17 100 m in 2004 compared with 12 200 m in 2003 and 4 100 m in 2002.

Approximately 169 companies and individuals held exploration interests (licences or options) in Nova Scotia in 2004 including 4 major, 17 junior and 42 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

Table 1. Details of exploration and development activity in Nova Scotia 1995-2004.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	<sup>P</sup> 2004
Total Field Exploration Expenditures (\$)	2 843 000	5 752 000	6 700 000	5 600 000	3 800 000	3 500 000	3 100 000	3 400 000	3 200 000	6 500 000
Total Licences Issued (all categories)	698	1 127	978	711	707	606	498	551	678	563
Claims in Good Standing (new and re-issued)										
General	15 861	33 399	25 190	11 452	14 045	10 951	8 406	12 494	18 027	11 275
Special (Order in Council)										
Salt and Potash	-	214	214	820	804	255	255	500	500	-
Coal	218	311	240	253	173	-	-	102	102	102
Geothermal	158	158	158	158	158	158	158	158	158	-
Underground Gas Storage	-	-	-	106	106	106	183	183	183	201
Tailings	146	146	146	-	-	-	-	-	-	-
Other (gold, base metals)	130	130	130	130	132	10	10	10	78	210
Uranium*	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)
Total (excluding closures and uranium licences)	16 513	34 358	26 078	12 219	15 418	11 480	9 012	13 447	19 048	11 788
Total Area Held Under Licence (ha)	267 312	556 186	422 150	209 132	249 586	185 838	145 886	217 679	308 348	190 824
(acres)	660 520	1 374 320	1 043 120	516 760	616 720	459 200	360 480	537 880	761 920	471 520
Work Reported for Licence Renewals (\$)	1 601 639	2 376 023	3 146 899	5 385 194	2 969 047	1 136 304	2 811 393	1 457 012	1 197 208	4 270 042
Number of Assessment Reports Received	111	108	133	134	100	85	72	102	96	141

<sup>P</sup>Preliminary figures for 2004

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

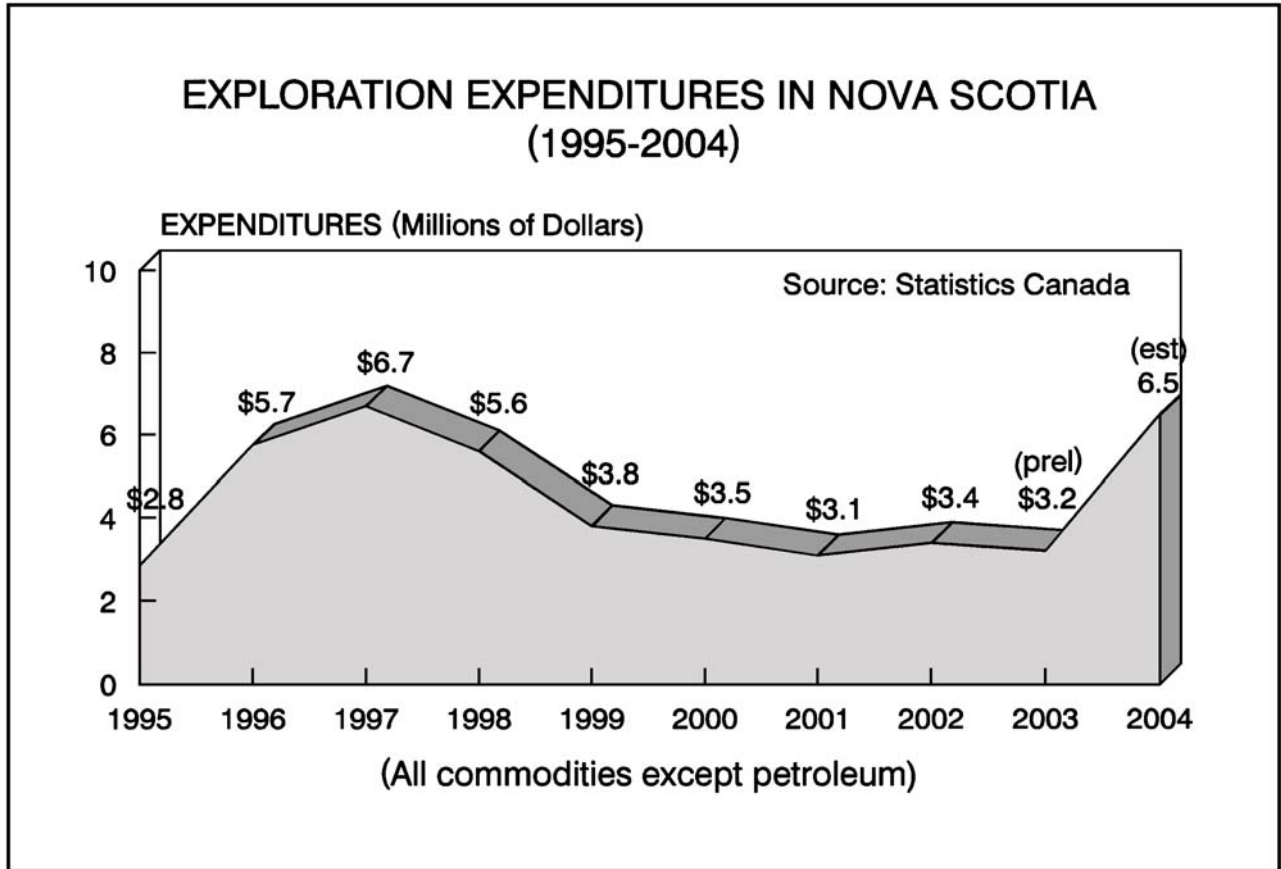


Figure 1. Exploration expenditures in Nova Scotia, 1995-2004.

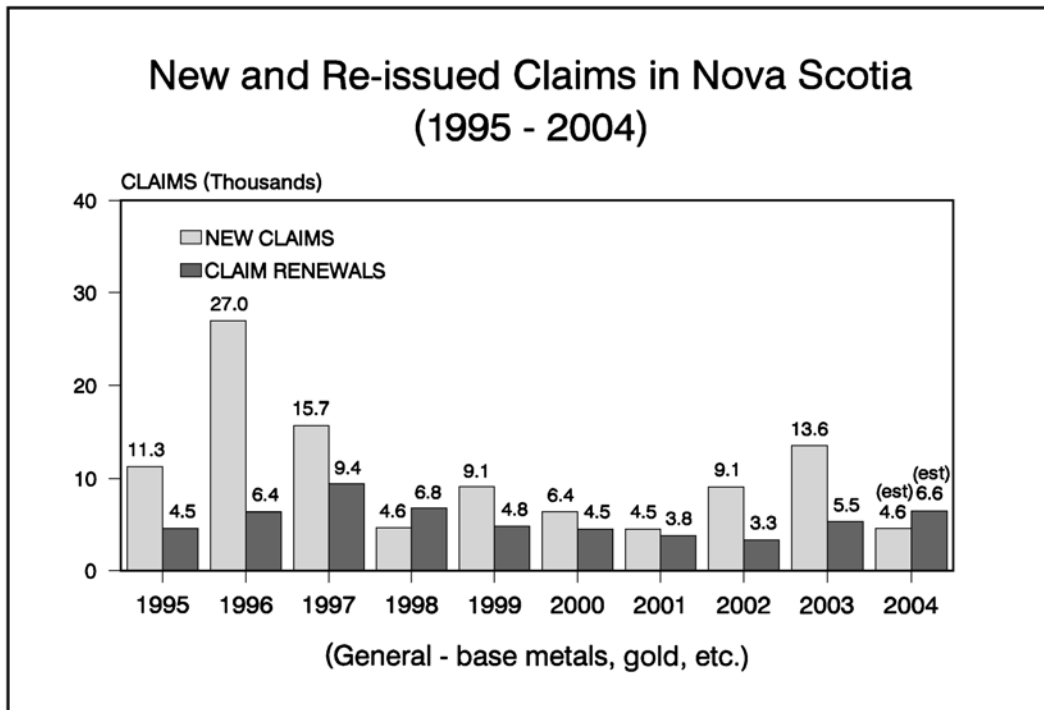


Figure 2. Claim staking in Nova Scotia, 1995-2004.

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

	2002	2003	2004
Aur Resources Incorporated	-	-	-
Georgia-Pacific Canada Incorporated		-	x
Intragaz Limited Partnership	x	x	-
Lafarge Canada Incorporated	-		
Pasminco Resources Canada Company (formerly Savage Resources Canada Limited)	-		
Statia Terminals Canada Limited	-	-	-

x indicates work performed

- company inactive

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

require licences (e.g. limestone, gypsum). Organizations actively engaged in exploration during 2004 included 1 major, 11 junior and 19 private companies (Fig. 3, Table 5), as well as a number of individuals.

## Exploration Activities

### Gold

Exploration for gold continued to dominate mineral exploration in the province during 2004, with the level of activity showing a significant increase over 2003. The lower Paleozoic Meguma Group of southern mainland Nova Scotia continued to be the principal focus for gold exploration, with the majority of exploration work concentrated on the historical gold districts in Halifax and Guysborough Counties. A steady increase in the price of gold, as well as the continuation of an improved investment climate for the junior mining sector, have contributed to a renewed interest in the exploration and development of the Meguma gold deposits. In addition, recognition of geological environments with the potential to host IOCG deposits (iron oxide-copper-gold) along the Cobequid-Chedabucto Fault Zone in the northern mainland has also contributed to the current level of gold exploration.

Azure Resources Corporation continued a detailed evaluation of the Mooseland gold property

in Halifax County during the first quarter of 2004. The company optioned the property from Globex Mining Enterprises Incorporated in September 2002 and conducted surface diamond-drilling during the first half of 2003. A decline was collared on the West Zone during the second half of 2003, followed by detailed underground mapping and sampling during the fall and the extraction of a 2000 tonne bulk sample in early 2004. Processing of the bulk sample was undertaken during the spring of 2004 at the company's Dufferin Mine property, Halifax County. Exploration activities are expected to resume in 2005 with a surface and underground diamond-drilling program and additional underground bulk sampling. In June 2003, Azure Resources also entered into an option agreement with Newfoundland Goldbar Resources Incorporated for the Dufferin Mine property. The company completed rehabilitation of the Dufferin Mine mill facilities and completed construction of an assay lab on the property to process underground samples from both the Mooseland and Dufferin Mine properties. Underground mining was resumed on the property in March 2004, along with bulk sampling and processing. An underground diamond-drilling program was completed in August 2004. The company expects to continue mining operations in 2005 and is planning to complete a surface and underground drilling program on the property.

Diamond Ventures NL, under an option agreement with Moose River Resources

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

	2002	2003	2004
Acadian Gold Corporation		x	x
Avalon Ventures Limited		x	x
Aurogin Resources Limited	x	x	
Azure Resources Corporation		x	x
Black Bull Resources Incorporated	x	x	x
C <sub>2</sub> C Mining Corporation	-		
Corner Bay Silver Incorporated (formerly Corner Bay Minerals Incorporated)	-	-	
Diamond Ventures NL		x	x
Emerald Isle Resources Incorporated	x		
Exploration Orex Incorporated	-	-	-
Gammon Lake Resources Incorporated	-		
Globex Mining Enterprises Incorporated	x	-	x
Heartland Resources Limited	-	-	-
Landis Mining Corporation		x	-
Monster Copper Resources Incorporated		x	x
Newfoundland Goldbar Resources Incorporated	-	-	-
Pan East Petroleum Corporation	-	-	-
Regal Goldfields Limited	-	-	-
RJZ Mining Incorporated	x	-	x
Scorpio Mining Corporation		x	x
ScoZinc Limited			x
Titanium Corporation Incorporated (formerly Titanium Corporation of Canada Ltd)	x	x	x

x indicates work performed

- inactive

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

Incorporated, completed a preliminary diamond-drilling program on the Moose River gold property at the end of 2003 to evaluate the potential for additional gold reserves along the strike extension of the Touquoy deposit. During the first half of 2004, the company completed additional drilling on the Touquoy deposit and carried out a percussion drilling and till sampling program to evaluate the exploration potential for additional ore reserves along the strike extension of the Touquoy zone, both to the northeast of the deposit and to the southwest in the vicinity of the Higgins and Lawlor and Stillwater gold deposits. Drilling on the Touquoy deposit to date has outlined indicated and inferred reserves of 6.91 million tonnes grading 2.1g/t gold with 472,000 contained ounces of gold. The company plans to complete additional drilling on the Touquoy and Higgins and Lawlor properties

in 2005.

Scorpio Mining Corporation entered into an option agreement in 2003 to evaluate the potential for re-opening the Cochrane Hill gold deposit in Guysborough County. The company completed a detailed compilation and review of previous surface and underground exploration work on the property, including diamond-drilling and various sampling programs, in late 2003 and early 2004 to confirm estimates for current gold reserves as well as the potential for developing new reserves on the property. As a result of this work, resource estimates include indicated reserves of 588,794 tons grading 0.191 oz./ton gold with 112,460 contained ounces of gold. The company has recommended the initiation of an advanced exploration program on the property, including surface and underground drilling and surface

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

	2002	2003	2004
AYARCO Gold Corporation Limited		x	x
166881 Canada Incorporated	-		
3779751 Canada Incorporated	x		
Alva Construction Limited	-	x	-
Annapolis Valley Goldfields Incorporated		x	x
Asedex Minerals Corporation Limited	-	-	
Aurion Minerals Limited	-		
Blackfly Exploration & Mining		-	-
Benrock Limited		-	
Burnt Point Resources Incorporated	-	x	-
Candor Ventures Corporation	x	x	-
Cannova Goldfields Incorporated	-		
Celtic Clays		-	
Champlain Resources Incorporated	x		x
Cobequid Gold Corporation Limited			x
Conrad Brothers Limited	x	x	x
Copper Valley Holdings Limited			-
Datum Quest Explorations	-		
D&D Metal Detectors Limited			-
Dufferin Resources Incorporated	-	x	x
Ecum Secum Enterprises Limited			-
Ellsin Resources Incorporated	x	x	x
Elmsdale Landscaping Limited	-		
Erdene Gold Incorporated		x	
Gadon James Resources Company			-
Gallant Aggregates Limited	-	-	
Geosearch	-	-	-
Geostorage Associates	x	x	-
Glencoe Resources Incorporated	x	x	x
Gold 'n' Crystal Minerals	x	-	
Golden Ace Mineral Explorations Limited	-	-	x
Golden Mining Corporation			x
H & E Mullen Investments Limited	-	x	x
Hansone Limited	x	x	-
Highland Range Minerals Limited	-	-	-
Huntington Explorations Incorporated	-	-	
John Logan Enterprises Limited	-	-	-
Jubilee Minerals	x	-	-
KaoClay Resources Incorporated	-	-	-
Kelly Rock Limited	-	-	
Lynx Minerals Corporation	-	x	
MacLeod Resources Limited	x	x	x
Maritime Mica Incorporated	-		

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

	2002	2003	2004
McLaren and Associates Geological Services			-
Meguma Resource Enterprises Incorporated	x	x	x
Minas Basin Pulp & Paper Company Limited	-	-	-
Moose River Resources Limited			x
Mt. Cameron Minerals Incorporated	-	-	x
New Road Resources Limited			-
Nycon Resources Incorporated	x	x	x
Oceanview Minerals Limited	-		
Ochter Holdings Limited		-	
Rainbow Resources Limited	-	-	x
Robert Stewart-Patterson & Associates	-		
South-Malartic Exploration Incorporated			-
The Shaw Group Limited (formerly L. E. Shaw Limited)	-	-	-
S. W. Weeks Construction Limited			-
Tri-Explorations Limited		-	-
True Metallic Explorations	-	-	-
Votix Corporation Limited	-	x	x
Yava Technologies Incorporated		x	x

x indicates work performed

- inactive

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

exploration to evaluate the potential for additional gold resources along the strike extension of the known reserves.

Acadian Gold Corporation acquired the mineral rights, including an option agreement on ground optioned from Mr. Henry Schenkels, for the Forest Hill gold property in 2002. The company completed a detailed compilation and technical review of the deposit in 2002 and initiated a diamond-drilling program on the property in mid-2003. Drilling continued on the property during the first half of 2004 and plans are in place to proceed with underground diamond-drilling and bulk sampling in 2005. Resource

estimates to date have increased reserves to an estimated 588,794 tons grading 0.191 oz./ton with 112,460 contained ounces of gold. The company has also carried out preliminary exploration programs on a number of other gold properties throughout Halifax and Guysborough Counties during 2004, including several properties recently acquired from Goldenville Mining Corporation as a result of an agreement in mid-2004 to acquire the privately owned company.

Highlights of the work undertaken by Acadian Gold in Halifax County include rotary percussion drilling, till sampling and rock sampling in an area immediately west of the Beaver Dam gold

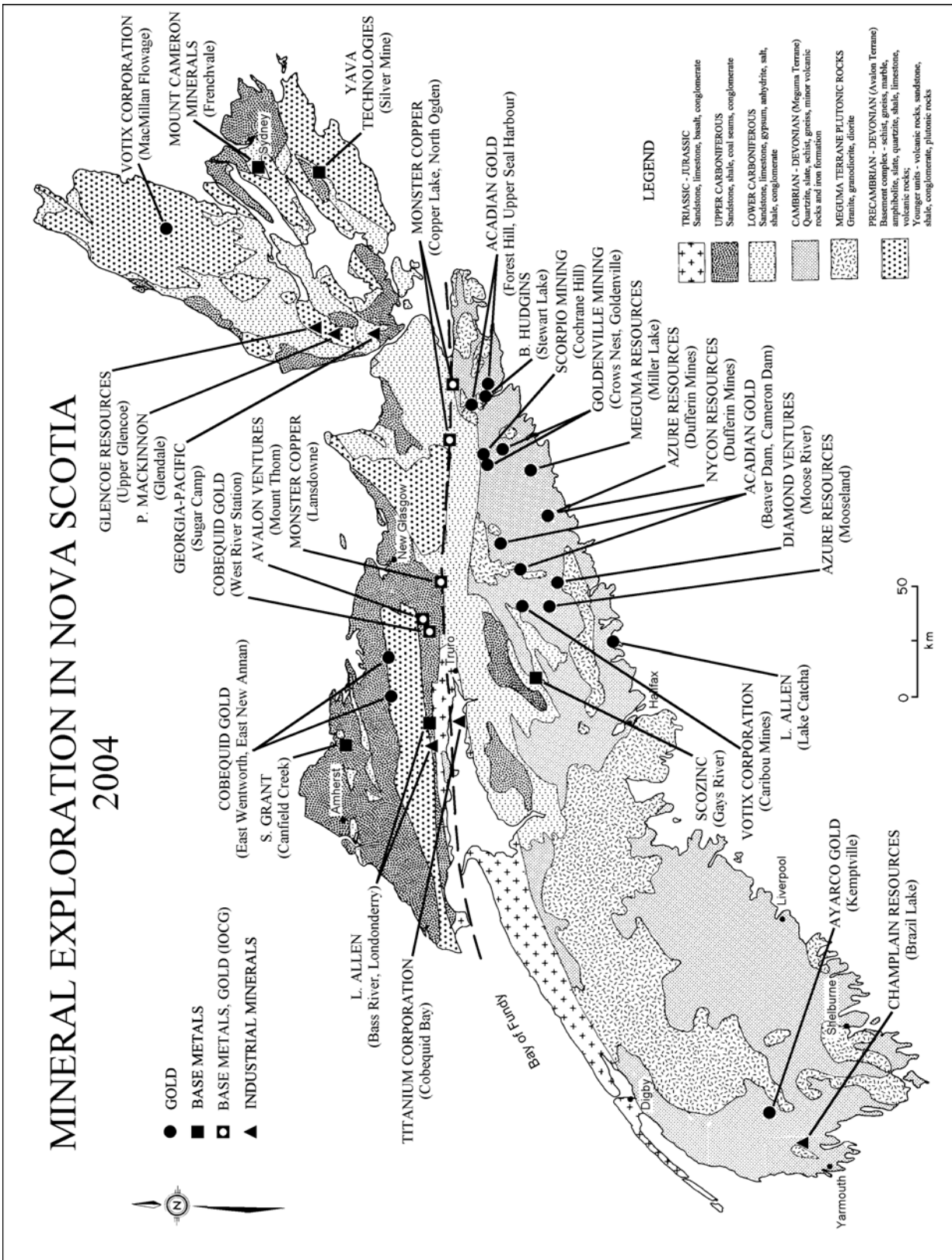


Figure 3. Mineral exploration programs in Nova Scotia, 2004.



property, diamond-drilling in an area immediately to the west of the former Cameron Dam gold district along the Cameron Dam-Cochrane Hill anticline, and diamond-drilling on the Lake Lode zone on the eastern extension of the Caribou Mines gold property. Other work, including prospecting and geological mapping, rock sampling, and reconnaissance soil and stream sediment sampling, was completed in the immediate vicinity of the Killag Mines and Ragged Falls gold properties, in an area immediately west of the Fifteen Mile Stream gold property, and in an area immediately east of the Moose River and Mooseland gold properties. Work carried out by the company in Guysborough County included diamond-drilling on the eastern extension of the Boston-Richardson gold deposit at Upper Seal Harbour, diamond-drilling in the vicinity of Costley Lake, Garry Lakes and Lawlors Lake east of the Forest Hill gold property and in the Big Lake area south of the Forest Hill gold property, and diamond-drilling in the immediate vicinity of the former Goldenville Mine property. Prospecting, rock sampling, and soil sampling were also completed in an area immediately east of the former Crows Nest mine property along the west strike extension of the Cochrane Hill gold property. The company also completed preliminary field work consisting of reconnaissance till sampling in the MacMillan Flowage and Indian Brook areas of Inverness and Victoria Counties in the central Cape Breton Highlands.

Nycon Resources Incorporated completed a diamond-drilling program on the Salmon River gold property in Halifax County, and Azure Resources Corporation, in an option agreement with Meguma Resource Enterprises Incorporated, completed prospecting and geological mapping on the Miller Lake gold property in Guysborough County. Hudgtec Consulting Limited continued a detailed evaluation of a large northwest-trending fault zone in the Stewart Lake area south of Forest Hill, Guysborough County. Work on the property included prospecting, geological mapping, and rock, till and stream sediment sampling. AYARCO Gold Corporation Limited completed additional soil geochemical sampling on the Kemptville gold property in Yarmouth County.

Cobequid Gold Corporation Limited completed a preliminary exploration program for gold and

silver on several properties in the East Wentworth-Earltown area of Colchester County, consisting of prospecting, geological mapping and rock, soil and stream sediment sampling. The area is underlain by volcanic and sedimentary rocks of the Middle Devonian Fountain Lake Group in the eastern Cobequid Highlands.

Rainbow Resources Limited completed additional work on the Widow Point gold prospect in Guysborough County, consisting of prospecting, geological mapping and soil sampling, and Conrad Brothers Limited completed additional prospecting and trenching at Lake Charles in Halifax County. A preliminary evaluation and technical review of the Upper Seal Harbour property was undertaken during 2004 by Orex Exploration Incorporated, and Meguma Resource Enterprises Incorporated completed additional prospecting and rock sampling on the Ecum Secum gold property in Halifax County.

A number of small exploration programs were also completed on several properties throughout the Meguma Group by several individuals and private interests. Scott Grant carried out prospecting and rock sampling on the Harrigan Cove and Ecum Secum gold properties in Halifax County, and on the Renfrew gold property in Hants County. Lindsay Allen completed prospecting and rock sampling on the Oldham gold property in Halifax County, and Dennis Forgeron carried out prospecting and geological mapping on the Country Harbour gold property in Guysborough County. Albert Crouse carried out prospecting, trenching and rock sampling on the North Brookfield gold property in Queens County and Allen Hooper completed a similar program on the Molega gold property in Queens County. Work in other areas of the province was undertaken by William Burrell at Gold Brook in Victoria County, consisting of prospecting and pitting, and Scott Grant completed prospecting and rock sampling in the Whycocomagh Mountain area in Inverness County.

## **Base Metals**

Exploration for base metals showed a moderate increase in the level of activity over the previous three years. The increase in activity over the year was reflected primarily in a shift in focus to new

Table 5. Mineral exploration programs in Nova Scotia, 2004.

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
A. Crouse	North Brookfield, Queens County	Gold	Prospecting, trenching, rock sampling
A. Hooper	Molega, Queens County	Gold	Prospecting, trenching, rock sampling
Acadian Gold Corporation	Beaver Dam area, Halifax County	Gold	Percussion drilling, till and rock sampling
	Cameron Dam, Halifax County	Gold	Diamond-drilling
	Caribou Mines, Halifax County	Gold	Diamond-drilling
	Killag Mines, Halifax County	Gold	Prospecting, geological mapping, rock sampling
	Ragged Falls, Halifax County	Gold	Prospecting, geological mapping, rock sampling
	Fifteen Mile Stream area, Halifax County	Gold	Prospecting, geological mapping, rock sampling
	Moose River area, Halifax County	Gold	Prospecting, geological mapping, rock sampling
	Mooseland area, Halifax County	Gold	Diamond-drilling
	Upper Seal Harbour, Guysborough County	Gold	Diamond-drilling
	Forest Hill, Guysborough County	Gold	Diamond-drilling
	Goldenville, Guysborough County	Gold	Diamond-drilling
	Crows Nest, Guysborough County	Gold	Prospecting, geological mapping, rock sampling
	MacMillan Flowage area, Inverness and Victoria Counties	Gold	Till sampling
	Avalon Ventures Limited	Mount Thom area, Colchester County	Copper, gold
AYARCO Gold Corporation	Upper Kempton-West River Station area, Colchester and Pictou Counties	Copper, gold	Prospecting, geological mapping, rock sampling, soil sampling, airborne geophysics
	Kemptville, Yarmouth County	Gold	Soil sampling
	Mooseland, Halifax County	Gold	Underground bulk sampling
Azure Resources Corporation	Dufferin Mines, Halifax County	Gold	Underground bulk sampling and diamond-drilling
	Miller Lake, Guysborough County	Gold	Prospecting, geological mapping
B. Hudgins	Round Lake area, Guysborough County	Copper, gold	Prospecting, geological mapping, rock sampling stream sediment sampling
Champlain Resources Incorporated	Brazil Lake, Yarmouth County	Quartz, mica, spodumene	Metallurgical studies
Cobequid Gold Corporation	East Wentworth-Earltown area, Colchester County	Gold, silver	Prospecting, geological mapping, rock sampling, till sampling, stream sediment sampling
Conrad Brothers Limited	Lake Charles, Halifax County	Gold	Prospecting, trenching
D. Forgeron	County Harbour, Guysborough County	Gold	Prospecting, geological mapping

Table 5. Mineral exploration programs in Nova Scotia, 2004 (cont'd).

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Diamond Ventures NL	Moose River, Halifax County	Gold	Diamond-drilling, percussion drilling
Elk Explorations Limited	Bass River, Colchester County Cross Roads Ohio, Antigonish County Oldham, Halifax County	Barite Base metals, gold Gold	Prospecting, rock sampling Prospecting, rock sampling, soil sampling Prospecting, rock sampling
Exploration Orex Incorporated	Upper Seal Harbour, Guysborough County	Gold	Compilation work
Georgia-Pacific Canada Incorporated	Sugar Camp, Inverness County	Anhydrite	Percussion drilling, rock sampling
Glencoe Resources Incorporated	Upper Glencoe, Inverness County	Carbonates (marble)	Rock sampling, review of previous drilling
Golden Ace Mineral Explorations Limited	MacNeils Lake area, Cape Breton County	Base metals, gold	Prospecting, geological mapping, rock sampling
Hudgrec Consulting Limited	Stewart Lake area, Guysborough County	Gold	Prospecting, geological mapping, rock sampling, till sampling, stream sediment sampling
H. Schenkels	Polson Brook, Antigonish County	Copper, gold	Trenching, rock sampling
M. Cullen	Staples Brook, Colchester County Kemptown, Colchester County	Coal	Diamond-drilling
Meguma Resource Enterprises Inc.	Ecum Secum, Halifax County	Gold	Prospecting, rock sampling
Monster Copper Resources Incorporated	Bass River, Colchester County Copper Lake, Antigonish County	Copper, gold Copper, gold	Prospecting, rock sampling Prospecting, geological mapping, ground geophysical surveys, rock sampling, soil sampling
	Lansdowne, Pictou County	Copper, gold	Prospecting, geological mapping, airborne geophysics, rock sampling, soil sampling
	North Ogden, Guysborough County	Copper, gold	Prospecting, geological mapping, airborne geophysics, rock sampling, soil sampling
Mt. Cameron Minerals Incorporated	Frenchvale, Cape Breton County	Base and precious metals	Prospecting, diamond-drilling
Nycon Resources Incorporated	Salmon River, Halifax County	Gold	Diamond-drilling
P. MacKinnon	Glendale area, Inverness County	Carbonates (marble)	Prospecting, geological mapping, trenching, rock sampling

**Table 5.** Mineral exploration programs in Nova Scotia, 2004 (cont'd).

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Rainbow Resources Limited	Widow Point, Guysborough County	Gold	Prospecting, geological mapping, soil sampling
SeoZinc Corporation	Gays River, Halifax County	Base metals	Prospecting, diamond-drilling
Scorpio Mining Corporation	Cochrane Hill, Guysborough County	Gold	Review and compilation of previous work
S. Grant	Ecum Secum, Halifax County Harrigan Cove, Halifax County Renfrew, Hants County Whycocomagh Mountain, Inverness County	Gold Gold Gold Gold	Prospecting, rock sampling Prospecting rock sampling Prospecting rock sampling Prospecting rock sampling
Titanium Corporation Incorporated	Cobequid Bay area, Hants County	Mineral sands (titanium)	Drilling, mineralogical studies
W. Burrell	Gold Brook, Victoria County	Gold	Prospecting, pitting
Yava Technologies Incorporated	Silver Mine, Cape Breton County	Lead	Review and analysis of field work

geological environments associated with the potential for the discovery of Olympic Dam style 'iron, oxide-copper-gold' (IOCG) deposits along the Cobequid-Chedabucto Fault Zone in central mainland Nova Scotia. Numerous Cu-Fe occurrences, with other mineral associations including cobalt and precious metals, lie along this major structural zone. Exploration also focused on known mineral occurrences in various geological environments in mainland Nova Scotia and Cape Breton Island.

Monster Copper Resources Incorporated continued a detailed exploration program to evaluate the base metal and precious metal potential of several properties along the Cobequid-Chedabucto Fault Zone in central mainland Nova Scotia. The company, along with exploration partner Wallbridge Mining Company, began work on the project in 2002 to evaluate the potential for IOCG deposits in iron-rich breccia occurrences in Nova Scotia. The company carried out geological studies, ground geophysical surveys, prospecting, and rock geochemical sampling on several properties in 2003 and expanded on the exploration program in 2004 to evaluate properties in the Lansdowne area in Pictou County, the Copper Lake area in Antigonish County, and the North Ogden area in Guysborough County. Work on these properties included prospecting, geological mapping, and rock and soil sampling. In addition, ground geophysical surveys were completed in the Copper Lake area and an aeromagnetic survey was completed in the Lansdowne and North Ogden areas. Additional work was also completed in the Bass River area in Colchester County, consisting of prospecting and rock sampling.

Avalon Ventures Limited entered into an option agreement with private interests in the fall of 2003 to evaluate the potential for IOCG deposits in the Mount Thom area northeast of the town of Truro, bordering Pictou and Colchester Counties. The project area is host to the Mount Thom Cu-Co-Au prospect. Preliminary work on the property included prospecting and rock geochemical sampling. The company continued with a large-scale exploration program on the property in 2004 which included prospecting, geological mapping, soil geochemical sampling, surface and airborne geophysical surveys and diamond-drilling. The company also entered into an option agreement

with Wallbridge Mining Company and Cobequid Gold Corporation Limited in 2003 to evaluate the potential for IOCG deposits in the Upper Kemptown-West River Station area along the Cobequid-Chedabucto Fault Zone covering the area to east and west of the Mount Thom property. The 2004 exploration program concentrated on detailed prospecting and geological mapping, rock and soil geochemical sampling, and extension of the airborne geophysical survey completed on the Mount Thom property.

Using the IOCG model, a preliminary assessment was undertaken during the year by Bruce Hudgins in the Round Lake area, Guysborough County, consisting of prospecting, geological mapping, rock sampling and stream sediment sampling. Henry Schenkels carried out prospecting and rock sampling in the Polson Brook area in Antigonish County.

ScoZinc Limited continued exploration work in the Gays River area north of Halifax County to evaluate the potential for outlining additional Pb-Zn reserves in the Lower Carboniferous sediments of the Windsor Group in the immediate vicinity of the Gays River Pb-Zn deposit. Work on the property included prospecting and diamond-drilling. Golden Ace Mineral Explorations Limited completed a preliminary evaluation of the gold and base metal potential in the vicinity in the MacNeils Lake area near Oceanview, Cape Breton County. Work on the property included prospecting, geological mapping, and rock sampling.

Yava Technologies Incorporated continued a detailed evaluation of the former Yava lead deposit located near Silver Mine in Cape Breton County. The property hosts a 4.5 million ton stratabound lead deposit in Carboniferous sandstones grading 2.79% Pb with minor zinc levels. The company is currently evaluating the feasibility of utilizing *in situ* leach mining to recover the low-grade lead. Diamond-drilling and a series of test wells were completed in the fall of 2003, and a comprehensive review and analysis of the results of the field work were undertaken during 2004.

Mt. Cameron Minerals Incorporated, under an option agreement with Mountain Lake Resources Incorporated, initiated an exploration program for base metals and precious metals in the Frenchvale area, Cape Breton County, in 2004. Work on the property included prospecting and diamond-

drilling. Elk Explorations Limited completed a preliminary exploration for base metals and gold in the Cross Roads Ohio area in Antigonish County consisting of prospecting, rock sampling and soil sampling.

## Industrial Minerals

Exploration for industrial minerals continued at approximately the same level of activity as in the previous three years, with activity focused on commodities including titanium, carbonate resources, pegmatites (quartz, mica, spodumene), barite and gypsum.

Titanium Corporation Incorporated continued a detailed evaluation of the titanium-bearing heavy mineral sands in the Cobequid Bay area near Maitland, Hants County. The company completed additional drilling, sample analysis and mineralogical studies during the summer to evaluate an area of titanium-bearing sands outlined in a previous drilling program. Georgia-Pacific Canada Incorporated completed a percussion drilling program and rock sampling to evaluate anhydrite resources in the immediate vicinity of the company's Sugar Camp gypsum quarry located north of Port Hawkesbury in Inverness County.

Glencoe Resources Incorporated completed additional work on the Upper Glencoe carbonate deposit located approximately 5 km south of Upper Glencoe, Inverness County. Work on the property included a detailed review of previous drilling in the area and rock sampling. Perry MacKinnon completed a preliminary examination of a carbonate occurrence in the Cameron Mountain Road area north of Glendale, Inverness County, during the year, consisting of prospecting, geological mapping, trenching and rock sampling.

Champlain Resources Incorporated continued a detailed evaluation of the Brazil Lake pegmatite deposit in Yarmouth County during the year. Work on the property consisted of the continuation of metallurgical studies on the quartz, muscovite and spodumene components of bulk samples collected prior to 2004. Elk Explorations Limited carried out prospecting and rock sampling for barite in the immediate vicinity of the Bass River barite showing north of Bass River in Colchester County.

## **Coal**

Michael Cullen continued to explore for coal resources in the Staples Brook and Kempton

areas, Colchester County, during the fall of 2003. The work program in 2004 consisted of additional diamond-drilling on the two properties.