

Mineral Exploration Activity in Nova Scotia, 2003

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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 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, which are submitted to support the renewal of exploration licences. In 2003, 96 assessment reports were received and audited for compliance with the Mineral Resources Regulations.

Mineral Exploration Activity in 2003

Mineral exploration in Nova Scotia during 2003 demonstrated a modest increase in the level of activity in comparison to the previous three years,

with field expenditures estimated at \$4.5 million compared with \$3.5 million in 2000, \$2.9 million in 2001 and \$2.0 million in 2002 (Table 1, Fig. 1). This increase has reversed a gradual downward trend that began after 1998, when field exploration expenditures peaked at \$6.7 million. Work was concentrated primarily on gold and base metals, although exploration for industrial minerals also continued to be a focus with the level of activity reflecting the increased interest in industrial mineral commodities over the past several years. In general, exploration budgets for the mineral industry were higher in 2003, and exploration activities by junior companies has also been on the increase. This increased activity is reflected in the sustained rise in gold and base metal prices over the past year.

Preliminary figures for the total number of general claims staked in 2003 show an increase of 42% over the previous year to 17,837 claims, and more than double the amount of claim staking recorded in 2001 (Table 1, Fig. 2). Preliminary figures indicate that 18,858 claims for all commodities were in effect at the end of 2003, represented by 669 general and special licences covering an area of 305 272 ha or 3 052 km², approximately 5.6% of the total area of the province. The amount of exploration drilling also increased significantly in comparison to the previous two years, with a preliminary estimate of 10 000 metres in 2003, compared with 3 500 metres in 2002 and 5 400 metres in 2000.

Approximately 177 companies and individuals held exploration interests (licences or options) in the province in 2003, including 4 major, 18 junior and 39 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). The levels of exploration in 2003 were much higher than in 2002, when organizations actively engaged in exploration included 1 major, 10 junior and 18

Table 1. Details of exploration and development activity in Nova Scotia, 1994-2003.

	1994	1995	1996	1997	1998	1999	2000	2001	2002	P ²⁰⁰³
Total Field Exploration Expenditures (\$)	1 400 000	2 843 000	5 752 000	6 700 000	5 600 000	3 800 000	3 500 000	2 900 000	2 000 000	4 500 000
Total Licences Issued (all categories)	673	698	1 127	978	711	707	606	498	551	669
Claims in Good Standing (new and reissued)										
General	13 740	15 861	33 399	25 190	11 452	14 045	10 951	8 406	12 494	17 837
Special (Order in Council)										
Salt and Potash	66	-	214	214	820	804	255	255	500	500
Coal	218	218	311	240	253	173	-	-	102	102
Geothermal	158	158	158	158	158	158	158	158	158	158
Underground Gas Storage	-	-	-	-	106	106	106	183	183	183
Tailings	146	146	146	146	-	-	-	-	-	-
Other (gold, base metals)	255	130	130	130	130	132	10	10	10	78
Uranium*	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)	(226)
Total (excluding closures and uranium licences)	14 583	16 513	34 358	26 078	12 219	15 418	11 480	9 012	13 447	18 858
Total Area Held Under Licence (ha)	236 069	267 312	556 186	422 150	209 132	249 586	185 838	145 886	217 679	305 272
(acres)	583 320	660 520	1 374 320	1 043 120	516 760	616 720	459 200	360 480	537 880	754 320
Work Reported for Licence Renewals (\$)	1 694 368	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
Number of Assessment Reports Received	84	111	108	133	134	100	85	72	102	96

P²⁰⁰³Preliminary figures for 2003

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

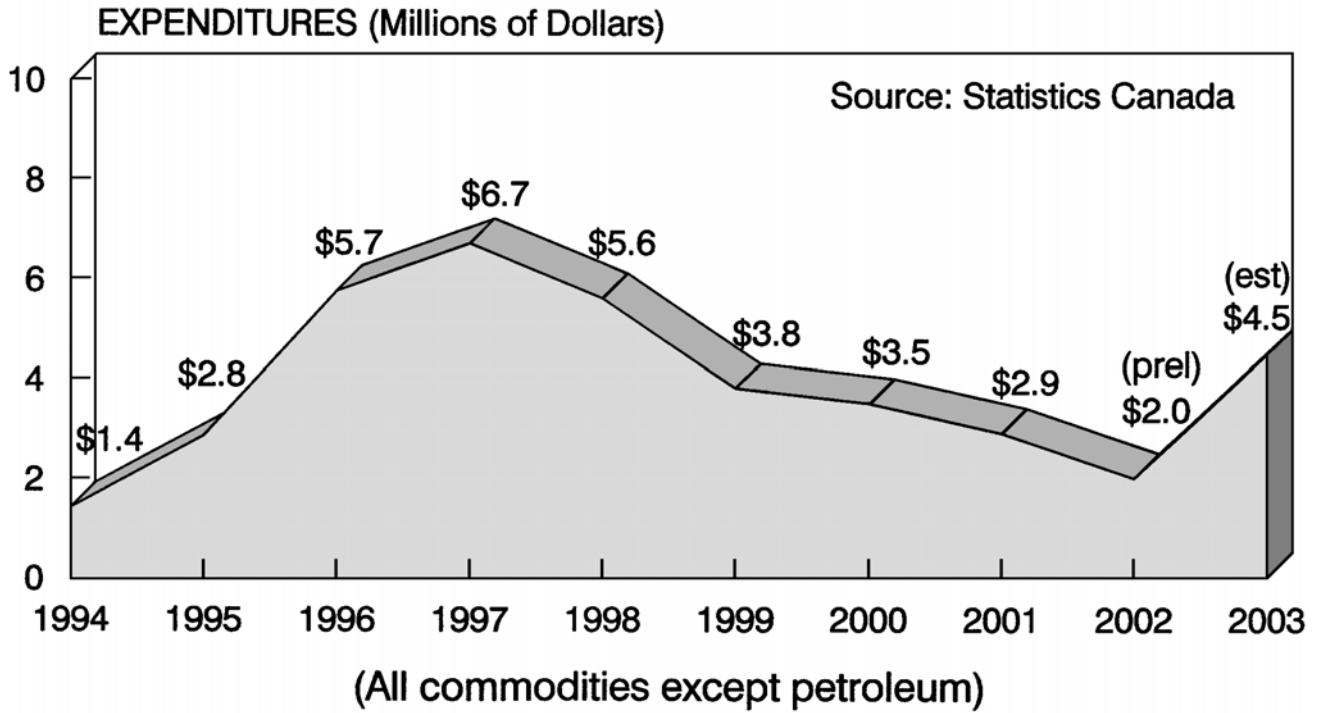


Figure 1. Exploration expenditures in Nova Scotia, 1994-2003.

New and Re-issued Claims in Nova Scotia (1994 - 2003)

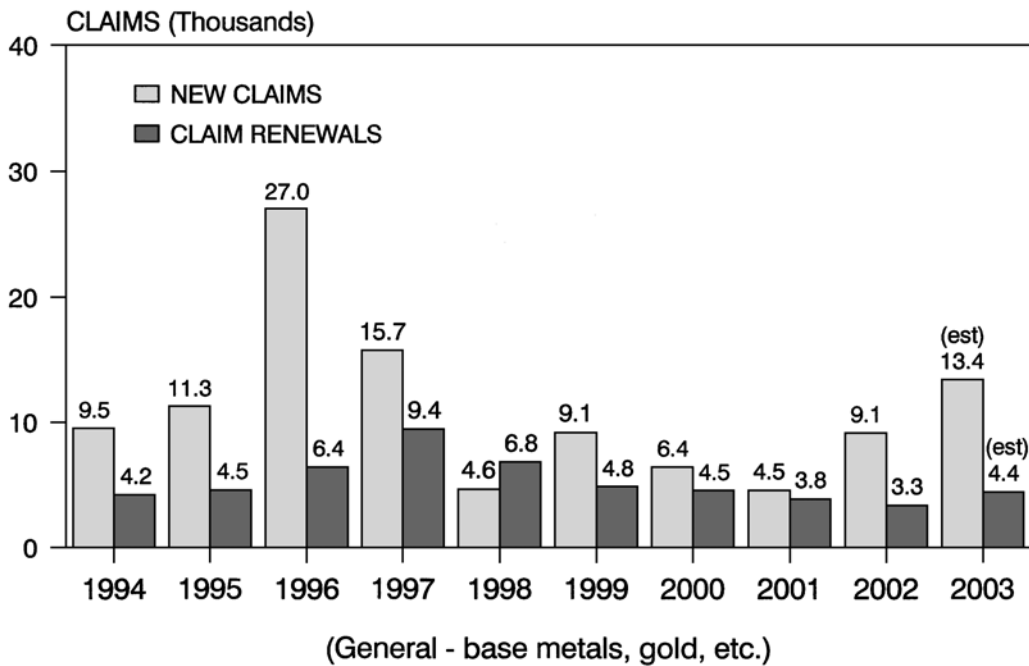


Figure 2. Claim staking in Nova Scotia, 1994-2003.

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

	2001	2002	2003
Aur Resources Incorporated		-	-
Georgia-Pacific Canada Incorporated			-
Intragaz Limited Partnership	x	x	x
Lafarge Canada Incorporated	x	-	
Pasminco Resources Canada Company (formerly Savage Resources Canada Limited)	x	-	
Statia Terminals Canada Limited	x	-	-
W. M. C. International Limited	-		

x indicates work performed

- company inactive

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

private companies (Fig. 3, Table 5), as well as a number of individuals.

Exploration Activities

Gold

Exploration for gold increased significantly in comparison to the level of activity demonstrated over the previous three years. 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 undertaken in Halifax and Guysborough counties. A steady increase in the price of gold over the past two years, and a more favourable investment climate for junior mining companies, have contributed to a renewed interest in the exploration and development of Meguma-hosted gold deposits.

Azure Resources Corporation continued a detailed evaluation of the Mooseland gold property in Halifax County during 2003. The company optioned the property from Globex Mining Enterprises Incorporated in September 2002, and completed surface diamond-drilling and a preliminary underground bulk sampling program on the property in 2003. In June 2003, Azure also entered into an option agreement with

Newfoundland Goldbar Resources Incorporated for the Dufferin Mine property. Azure initiated a rehabilitation of the Dufferin Mine mill facilities and completed the construction of an assay lab on the property to process underground samples from both the Mooseland and Dufferin Mine properties. Under an option agreement with Meguma Resource Enterprises Incorporated, the company also completed a trenching and rock sampling program on the Miller Lake gold property in Guysborough County.

Diamond Ventures NL, under an option agreement with Moose River Resources Incorporated, completed a diamond-drilling program on the Moose River gold property to evaluate the potential for additional gold reserves along the strike extension of the Touquoy deposit. The company recently acquired additional ground to the northeast of the Touquoy deposit and plans to carry out additional drilling in 2004.

Scorpio Mining Corporation entered into an option agreement to evaluate the Cochrane Hill gold property in Guysborough County. The company initiated a detailed evaluation of previous work on the property and completed geological mapping, prospecting and rock sampling during the year. Strikezone Minerals (Canada) Limited, under an option agreement with Ellsin Resources

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

	2001	2002	2003
Acadian Gold Corporation			x
Avalon Ventures Limited			x
Aurogin Resources Limited		x	x
Azure Resources Corporation			x
Black Bull Resources Incorporated	x	x	x
C ₂ C Mining Corporation	x	-	
Corner Bay Silver Incorporated (formerly Corner Bay Minerals Incorporated)	-	-	-
Diamond Ventures NL			x
Emerald Isle Resources Incorporated	-	x	
Exploration Orex Incorporated	-	-	-
Gammon Lake Resources Incorporated	-	-	
Globex Mining Enterprises Incorporated	-	x	-
Heartland Resources Limited	-	-	-
Landis Mining Corporation			x
Monster Copper Resources Incorporated			x
Newfoundland Goldbar Resources Incorporated		-	-
Pan East Petroleum Corporation (formerly Pan East Resources Incorporated)	-	-	-
Regal Goldfields Limited	-	-	-
RJZ Mining Incorporated	-	x	-
Scorpio Mining Corporation			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, continued work on the Lake Charlotte gold property during the year. The company completed additional soil sampling, and a diamond-drilling program was undertaken on the property during the fall.

AYARCO Gold Corporation Limited continued work on the Kemptville gold property in Yarmouth County following a preliminary evaluation of the property in 2002. The company completed soil geochemical sampling, trenching and a two phase diamond-drilling program on the property during the year. Nycon Resources Incorporated continued an exploration program along the southern extension of the Salmon River anticline on the company's Muskrat Lake property in Halifax County. The company completed

additional prospecting and soil geochemical sampling on the property in 2003.

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 began an extensive diamond-drilling program on the property in mid-2003. The company also completed geochemical and geophysical compilation work on three additional gold exploration properties in Halifax and Guysborough counties, including the Mile Lake, Ragged Falls, and Killag Mines areas.

Table 4. Private exploration companies in Nova Scotia.

	2001	2002	2003
AYARCO Gold Corporation Limited			x
166881 Canada Incorporated	-	-	
3779751 Canada Incorporated	-	x	
Alva Construction Limited		-	x
Annapolis Valley Goldfields Incorporated			x
Atlantic Industrial Minerals Limited	-		
Asedex Minerals Corporation Limited	x	-	-
Aurion Minerals Limited	-	-	
Blackfly Exploration & Mining			-
Benrock Limited			-
Burnt Point Resources Incorporated	-	-	x
Candor Ventures Corporation		x	x
Cannova Goldfields Incorporated	-	-	
Cape Minerals Limited	-		
Celtic Clays			-
Champlain Resources Incorporated	-	x	
Cobequid Life Sciences Limited	-		
Conrad Brothers Limited	-	x	
Datum Quest Explorations		-	
Dufferin Resources Incorporated	x	-	x
Earth Search Sciences, Incorporated	-		
Ellsin Resources Incorporated	x	x	x
Elmsdale Landscaping Limited	-	-	
Erdene Gold Incorporated			x
Gallant Aggregates Limited	-	-	-
Geosearch	-	-	-
Geostorage Associates	x	x	x
Glencoe Resources Incorporated	-	x	x
Gold 'n' Crystal Minerals	-	x	-
Golden Ace Mineral Explorations Limited	-	-	-
Goliath Copperfields Limited	-		
H & E Mullen Investments Limited	-	-	x
Hansone Limited	x	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).

	2001	2002	2003
Meguma Resource Enterprises Incorporated		x	x
Minas Basin Pulp & Paper Company Limited	-	-	-
Mineral City Enterprises Incorporated	-		
Mount Cameron Minerals Incorporated	-	-	-
North Cape Breton Resources Limited	-		
Nycon Resources Incorporated	-	x	x
Oceanview Minerals Limited	-	-	
Ochter Holdings Limited			-
Prodigy Resources Incorporated	-		
Rainbow Resources Limited	-	-	-
Robert Stewart-Patterson & Associates	-	-	
The Shaw Group Limited (formerly L. E. Shaw Limited)	x	-	-
Tri-Explorations Limited			-
True Metallic Explorations	x	-	-
Votix Corporation Limited	-	-	x
Yava Technologies Incorporated			x

x indicates work performed

- inactive

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

Votix Corporation Limited recently acquired several gold exploration properties in Halifax and Guysborough counties, including the Beaver Dam, Mooseland, Moser Lake, Fifteen Mile Stream, Goldenville and Cochrane Hill areas. The company completed geochemical and geophysical compilation work on the properties during the year. Hudgtec Consulting Limited completed a detailed evaluation of a large northwest-trending fault zone in the Stewart Lake area south of Forest Hill, Guysborough County. The company completed a comprehensive analysis of previous geochemical work in the area and carried out reconnaissance till geochemical sampling during the year.

Burnt Point Resources Incorporated carried out prospecting and rock geochemical sampling in the

French Road-Oceanview area in southeastern Cape Breton County for gold and silver. The area is host to numerous mineral occurrences, including Cu-Zn-Co-Bi mineralization in skarn, and porphyry-related Cu-Mo-Bi-Ag mineralization.

A number of small exploration programs were also completed on several properties throughout the Meguma Group by individuals and private interests. Scott Grant carried out rock sampling and analytical work on the Harrigan Cove gold property in Halifax County, and Robert MacDonald completed a geochemical and geophysical compilation of previous work on the Gold Lake gold property in Halifax County. Avard Hudgins carried out rock sampling and reconnaissance till sampling on the Oldham gold property, and

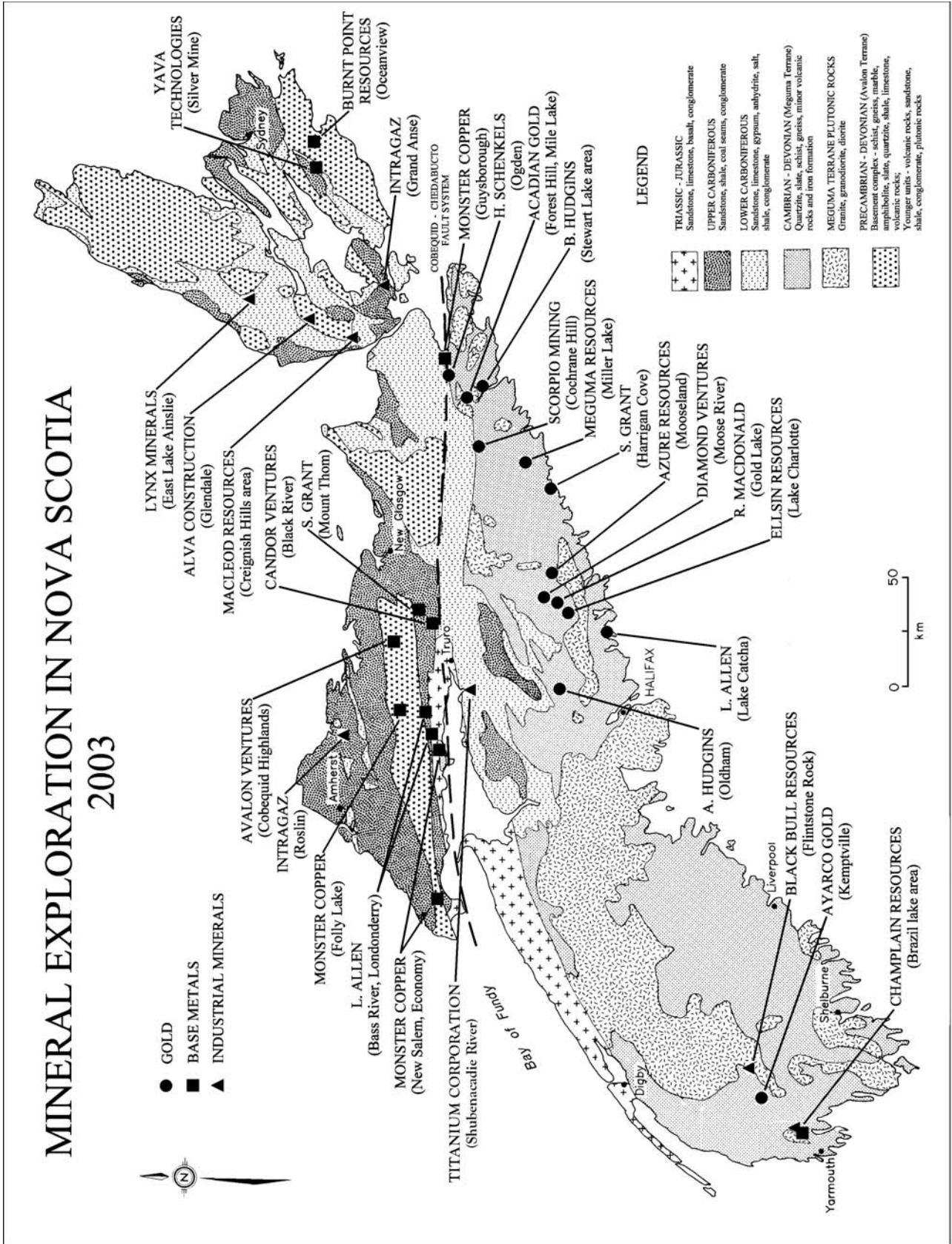


Figure 3. Mineral exploration programs in Nova Scotia, 2003.

Lindsay Allen carried out trenching and rock sampling on the Lake Catcha property in Halifax County. Henry Schenkels continued work on a gold prospect in the Susies Lake area, Guysborough County, including trenching and rock sampling.

Base Metals

Exploration for base metals showed a moderate increase in the level of activity over the previous three years. The increase in activity in 2003 was reflected primarily in a shift in focus to new 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, occur along this major structural zone. Other exploration work focused on areas of known mineral occurrences in the Carboniferous sediments of the Windsor Group in central mainland Nova Scotia and southeastern Cape Breton Island.

OntZinc Corporation, through the company's wholly owned subsidiary ScoZinc Limited, continued exploration in the Gays River area north of Halifax to evaluate the potential for additional Pb-Zn reserves in Lower Carboniferous sediments of the Windsor Group in the immediate vicinity of the Gays River Pb-Zn deposit. Work in the area included a compilation of previous work and diamond-drilling.

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 iron oxide-copper-gold (IOCG) deposits in iron-rich breccias. The company carried out geological studies, ground geophysical surveys, prospecting, and rock geochemical sampling on several properties in 2003, including the New Salem area in Cumberland County, the Economy and Folly Lake areas in Colchester County, the Lansdowne

area in Pictou County, the Copper Lake area in Antigonish County, and the North Ogden area in Guysborough County.

Cobequid Gold Corporation, under an option agreement with Avalon Ventures Limited, carried out a preliminary exploration program to evaluate the potential for gold and base metals in Silurian and Devonian volcanic and intrusive rocks in the eastern Cobequid Highlands area north of the town of Truro in Colchester County. Initial work on the property included prospecting, geological mapping and stream sediment geochemical sampling. Avalon Ventures Limited entered into an option agreement in 2003 to evaluate the potential for iron oxide-copper-gold (IOCG) deposits in the Mount Thom area northeast of the town of Truro bordering Pictou and Colchester Counties. The project area includes the Mount Thom Cu-Co-Au prospect. Preliminary work on the property included prospecting and rock geochemical sampling.

Candor Ventures Corporation continued work in the Black River area near Riversdale, Colchester County, to evaluate the iron oxide-copper-gold potential in the area of a known copper showing along the Cobequid-Chedabucto Fault Zone. Work on the property included prospecting, geological mapping and soil sampling. Elk Explorations Limited carried out prospecting and rock geochemical sampling for gold and base metals in the immediate vicinity of the Bass River magnetite prospect north of Bass River, and in the Londonderry area, Colchester County.

Yava Technologies Incorporated completed a diamond-drilling program during the fall on 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% lead with minor zinc. The company is currently evaluating the feasibility of using low-cost extraction methods for the lead ore.

Industrial Minerals

Exploration for industrial minerals continued at approximately the same level as the previous three

Table 5. Mineral exploration programs in Nova Scotia, 2003.

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
L. Allen	Lake Catcha, Halifax County	Gold	Trenching, rock sampling
Acadian Gold Corporation	Forest Hill, Guysborough County	Gold	Compilation work, diamond-drilling
Alva Construction Limited	Glendale area, Inverness County Churchview area, Inverness County	Carbonates (marble)	Trenching, rock sampling, diamond-drilling Test pitting
A. Hudgins	Oldham, Halifax County	Gold	Rock and till sampling
Avalon Ventures Limited	Mount Thom area, Colchester County	Base metals, gold	Prospecting, rock sampling
AYARCO Gold Corporation	Kemptville, Yarmouth County	Gold	Soil sampling, trenching, diamond-drilling
Azure Resources Corporation	Mooseland, Halifax County	Gold	Diamond-drilling, underground bulk sampling
Burnt Point Resources Incorporated	French Road area, Cape Breton County	Gold, silver	Prospecting, rock sampling
Candor Ventures Corporation	Black River area, Colchester County	Base metals, gold	Geological mapping, prospecting, soil sampling
Champlain Resources Incorporated	Brazil Lake area, Yarmouth County	Industrial mineral commodities	Mineral processing studies, diamond-drilling
Cobequid Gold Corporation	North-central mainland Nova Scotia	Base metals, gold	Geological mapping, prospecting, silt sampling
Diamond Ventures NL	Moose River, Halifax County	Gold	Diamond-drilling
Elk Exploration Limited	Bass River area, Colchester County Londonderry area, Colchester County	Base metals, gold	Prospecting, rock sampling
Glencoe Resources Incorporated	Upper Glendale area, Inverness County	Carbonates (marble)	Trenching, rock sampling
Hudgtec Consulting Limited	Stewart Lake area, Guysborough County	Gold	Compilation work, till sampling
H. Schenkels	Susies Lake area, Guysborough County	Gold	Trenching, rock sampling
Intragaz Energy Limited Partnership	Roslin area, Cumberland County Grande Anse area, Richmond County	Salt (underground storage)	Compilation work
Landis Mining Corporation	Shubenacadie area, Colchester County	Mineral sands (titanium)	Sand sampling
Lynx Minerals Incorporated	Trout Brook area, Inverness County	Barite	Trenching, diamond-drilling
M. Cullen	Staples Brook, Colchester County Kemptown, Colchester County	Coal	Diamond-drilling
MacLeod Resources Limited	Creignish area, Inverness County	Carbonates (marble)	Geological mapping, trenching, rock sampling
Meguma Resource Enterprise Inc.	Miller Lake, Guysborough County	Gold	Trenching, rock sampling
Monster Copper Resources Incorporated	Central mainland Nova Scotia	Base metals, gold	Geological studies, prospecting, ground geophysics

Table 5. Mineral exploration programs in Nova Scotia, 2003 (cont'd)

COMPANY/INDIVIDUAL	LOCATION	COMMODITY	PROGRAM
Nycon Resources Incorporated	Muskkrat Lake, Halifax County	Gold	Prospecting, soil sampling
P. MacKinnon	Glendale area, Inverness County	Graphite	Rock sampling
ScoZinc Corporation	Gays River, Halifax County	Base metals	Compilation work, diamond-drilling
R. MacDonald	Gold Lake, Halifax County	Gold	Compilation work
Scorpio Mining Corporation	Cochrane Hill, Guysborough County	Gold	Geological mapping, prospecting, rock sampling
S. Grant	Harrigan Cove, Halifax County	Gold	Prospecting, rock sampling
Strikezone Minerals (Canada) Limited	Lake Charlotte, Halifax County	Gold	Soil sampling, diamond-drilling
Titanium Corporation Incorporated	Cobequid Bay area, Hants County	Minerals sands (titanium)	Drilling
Votix Corporation Limited	Beaver Dam, Halifax County	Gold	Compilation work
Yava Technologies Incorporated	Silver Mine, Cape Breton County	Lead	Diamond-drilling

years, with activity focused on commodities including titanium, marble (carbonate), barite, pegmatite minerals (mica, quartz, feldspar, spodumene), and graphite.

Titanium Corporation Incorporated continued a detailed evaluation of the titanium-bearing heavy mineral sands in the Shubenacadie River - Cobequid Bay area near Maitland, Hants County. The company completed additional drilling and sample analysis in the Cobequid Bay during the summer to evaluate part of a high-grade, titanium-bearing sandbar outlined in a previous drilling program. Landis Mining Corporation carried out a preliminary sampling program in the Shubenacadie area, Colchester County, in 2003 to evaluate the titanium-bearing heavy mineral sands along the Shubenacadie River between Fort Ellis and Pine Grove. The claim group lies immediately south of the Titanium Corporation Incorporated claim holdings.

Alva Construction Limited continued exploration activities on the Glendale carbonate deposit located approximately 4 km north of Glendale, Inverness County. Work on the property included trenching, rock sampling and diamond-drilling. The company also excavated a test pit in the Churchview area, Inverness County, in the immediate vicinity of the company's quarry operation along the Soapstone-Roseburn Road.

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 trenching and rock sampling. MacLeod Resources Limited carried out detailed work in the Creignish area, Inverness County, to evaluate the resource potential for marble occurrences identified in a reconnaissance program in 2002. Work on the property included geological mapping, trenching and rock sampling.

Perry MacKinnon completed additional work on a graphite prospect located approximately 3 km north of Glendale, Inverness County. Work on the property included a detailed examination of till that had been excavated during a trenching program completed in 2002, and analytical work on graphite samples.

Lynx Minerals Incorporated, in association with Atlantic Industrial Minerals Incorporated, continued to evaluate the potential for discovering additional barite reserves in the area immediately north of Trout Brook along the southeast side of Lake Ainslie, Inverness County. The company completed trenching and diamond-drilling on the property during 2003.

Champlain Resources Incorporated continued a detailed exploration program in the Brazil Lake area, Yarmouth County, to evaluate the Brazil Lake pegmatite occurrences for industrial mineral commodities. The company carried out mineral processing studies and diamond-drilling on the property early in 2003.

Other

Intragas Energy Limited Partnership carried out an evaluation of the potential for developing underground bulk hydrocarbon storage in the extensive salt deposits in Lower Carboniferous sediments of the Windsor Group in the Roslin area, Cumberland County, and in the Grande Anse area, Richmond County. The current work program consisted of a review of previous geological and geophysical exploration.

Exploration for coal resources was undertaken by Michael Cullen in the Staples Brook and Kemptown areas, Colchester County, during the fall of 2003. The current work program consisted of diamond-drilling on the two properties.