

# Appendix 1

## Mining Industry Activity in Nova Scotia, 2003

### Mining Industry Exploration, Development, Capital and Repair Expenditures

Investment by the mining industry in Nova Scotia is monitored by means of annual surveys of all mining companies having operations or activity in the province. The Nova Scotia Department of Natural Resources (DNR), along with Natural Resources Canada (Minerals and Metals Sector - Minerals and Mining Statistics Division), and Statistics Canada (Investment and Capital Stock Division), carries out the surveys. The Mineral Management Division of DNR actively participates in the Annual Survey of Canadian Mineral Exploration Expenditures and the Annual Survey on Exploration, Development, Capital and Repair Expenditures.

Preliminary figures indicate mineral exploration expenditures in 2003 were up significantly from 2002. Exploration expenditures totalled \$6.4 million, up 85% from 2002. An additional \$10.2 million was spent on mine complex development, which was nearly double

that of the previous year (Table 1.1). Total diamond-drilling for 2003 tripled to 11 000 metres.

Capital expenditures at existing mines were higher in 2003, totalling over \$22.0 million, while repair and maintenance expenditures were reduced at \$14.7 million. Expenditures by aggregate producers are not included in Table 1.1.

### Mining Leases

There was one new Mining Lease issued in the province during the year. Black Bull Resources Inc. was issued a Mining Lease for its quartz property at Flintstone Rock, Yarmouth County.

Two Mining Leases held by Sifto Canada Inc. at Nappan were renewed during 2003.

A Special Lease was issued to Thomas Brogan & Sons Construction Limited for its coal property on Point Aconi.

### Mining Permits

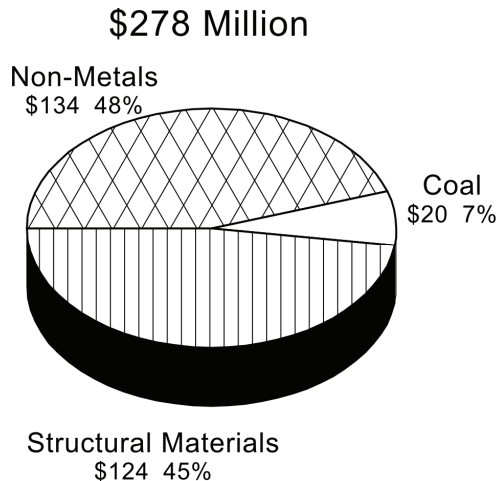
The department did not issue any new Mining Permits during the year.

**Table 1.1.** Mining industry expenditures in 2002 and 2003.

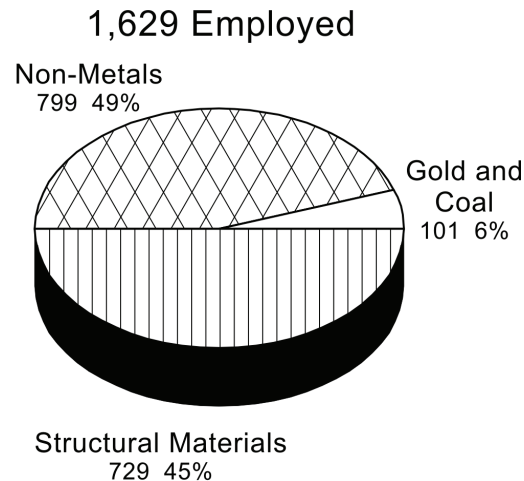
	2002	2003 <sup>1</sup>
<b>Mineral Exploration Expenditures<sup>2</sup></b> (field plus overhead)	<b>\$3,446,000</b>	<b>\$6,391,000</b>
Exploration diamond-drilling <sup>2</sup>	<b>3 500 m</b>	<b>11 100 m</b>
Exploration drilling - other	<b>N/A</b>	<b>N/A</b>
<b>Mine Complex Development Expenditures</b> (field plus overhead)	<b>\$5,627,000</b>	<b>\$10,151,000</b>
<b>Capital and Repair Expenditures at Mining Establishments</b>		
Capital Expenditures	<b>\$16,986,000</b>	<b>\$22,019,000</b>
Repair and Maintenance Expenditures	<b>\$18,118,000</b>	<b>\$14,708,000</b>

<sup>1</sup>preliminary

<sup>2</sup>includes deposit appraisal



**Figure 1.1.** Value of mineral production, in millions of dollars and per cent, by commodity group.



**Figure 1.2.** Employment, in numbers of persons and per cent, by mineral commodity group.

## Production Information from Mines, Quarries and Other Operations

In 2003, the estimated value of Nova Scotia's mineral production, including secondary mineral processing, totalled \$278 million (Fig. 1.1 and Table 1.2), up slightly from the total of \$269 million in 2002. Employment in Nova Scotia's mineral industry totalled 1,629 persons (Fig. 1.2 and Table 1.2), an increase of 13.8% from the previous year, and was mainly related to an increase in the structural materials sector.

There was no gold production in the province during 2003. However, the Dufferin Mine in Port Dufferin was re-activated in late 2003 following suspension of operations in late 2001.

Nova Scotia gypsum producers shipped 7.2 million tonnes in 2003. This represents a 3% increase over the 2002 gypsum production. Nova Scotia continues to be Canada's largest gypsum producer, accounting for approximately 80% of the country's total production. Most of the gypsum is shipped to wallboard plants along the U.S. Eastern Seaboard and central Canada.

Salt production decreased slightly to 914 000 tonnes. Total limestone mined increased 22% to 806 000 tonnes, most of which was related to a 35% increase in Portland cement/clinker production to 411 000 tonnes.

Coal production was up very slightly in 2003, to 378 000 tonnes from five surface mining

operations and a coal recovery project. There has been no underground coal mining in the province since the closure of Cape Breton Development Corporation's underground mines in 2001.

Aggregate (crushed stone, sand and gravel) production in 2003 decreased approximately 18% from 2002 to 10.8 million tonnes. The production of aggregates in 2002 was significantly higher than previous years and 2003 production was closer to historic levels. Peat moss production was down in 2003 to 2200 tonnes, with the suspension of production at two operations.

In the years prior to 2000, the value of petroleum production was included in the overall value of Nova Scotia's mineral production. However, there has been no production of crude oil since 1999 (Fig. 1.3), and the production of offshore natural gas is not included in this report.

This report covers the non-petroleum sectors of the mineral industry, providing a description of each mine site. Tables 1.3 to 1.5 provide more detailed information on the production of the commodities. Site locations are shown on the accompanying maps, Figures 1.4 and 1.5. Production data are for the calendar year 1 January 2003 to 31 December 2003.

## ***Metal and Gold Mines***

### ***Metal Mines***

There were no producing metal mines operating in the province in 2003.

**Table 1.2.** Summary of Nova Scotia mineral production, 2002 and 2003.

DESCRIPTION	2002		2003	
	VALUE <sup>1</sup> (\$ thousands)	EMPLOYMENT*	VALUE <sup>1</sup> (\$ thousands)	EMPLOYMENT*
<b><u>METALS</u></b>				
Gold	0	0	0	8
Total metals	0	0	0	8
<b><u>INDUSTRIAL MINERALS</u></b>				
<b>(Non-Metals)</b>				
Anhydrite	1,073	note <sup>3</sup>	1,919	note <sup>3</sup>
Barite	***	12	***	13
Gypsum	80,037	490	82,827	470
Limestone <sup>2</sup> and Dolomite	3,894	52	3,377	53
Peat	713	63	***	22
Salt**	43,021	233	41,292	233
Silica	***	7	***	8
Total Non-Metals	132,145	857	134,111	799
<b>(Structural Materials)</b>				
Dimension Stone and Marble	***	23	1,377	33
Cement**	***	65	***	81
Clay Products**	***	48	***	33
Crushed Stone	56,740	243	47,847	301
Sand & Gravel	20,609	127	18,588	281
Total Structural Materials	116,787	506	123,878	729
<b>Total Industrial Minerals</b>	<b>248,932</b>	<b>1,363</b>	<b>257,989</b>	<b>1,528</b>
<b>FUELS</b>				
Coal	20,000	68	20,000	93
<b>TOTAL MINERAL PRODUCTION</b>	<b>268,932</b>	<b>1,431</b>	<b>277,989</b>	<b>1,629</b>
<b>CHANGE FROM PREVIOUS YEAR</b>	<b>-15%</b>	<b>-28%</b>	<b>+3.4%</b>	<b>+13.8%</b>

<sup>1</sup>Estimated from Department of Natural Resources sources

<sup>2</sup>Does not include the value of limestone quarried for cement production

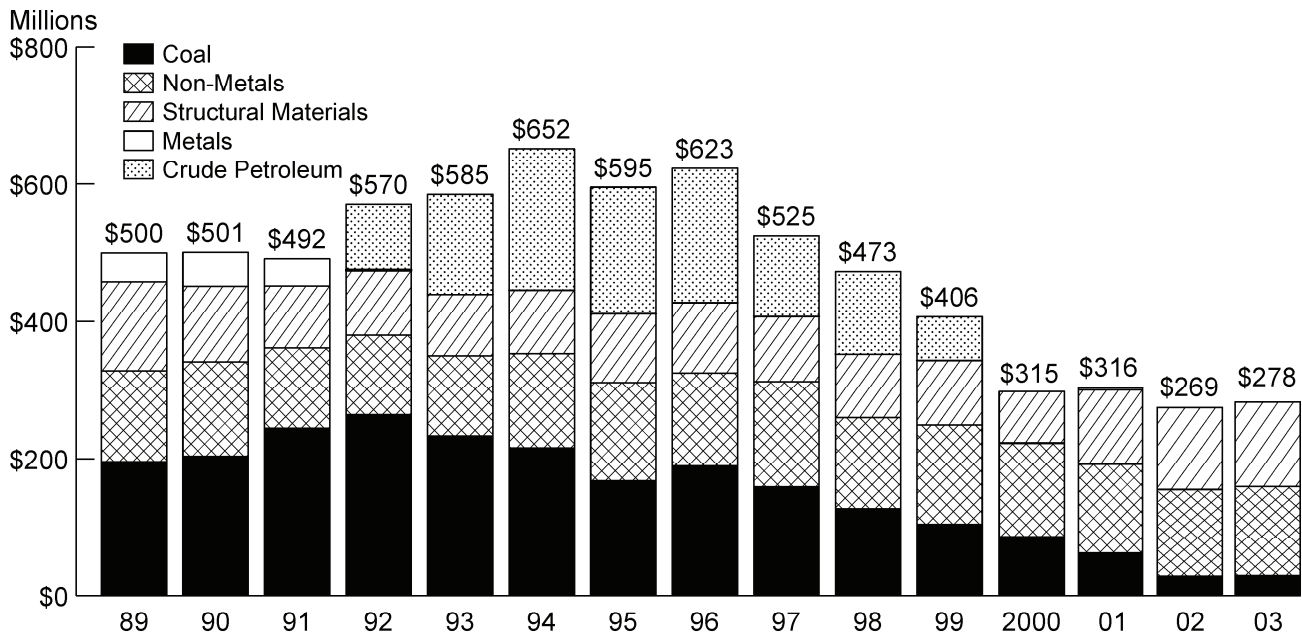
<sup>3</sup>Included in gypsum employment

\*Average number of persons during production period

\*\*Processed or manufactured value

\*\*\*Value not shown, but included in total

Note: Production represents shipments; numbers may not add to totals due to rounding



*Includes secondary mineral processing where applicable*

**Figure 1.3.** Historical trend in the value of mineral production in Nova Scotia, 1989-2003.

**Gold Mines**

DUFFERIN RESOURCES INCORPORATED  
Port Dufferin, Halifax County

Manager: W. Cole (Azure Resources)  
Address: 1600-5151 George St.  
Box 247  
Halifax, NS B3J 2N9  
Production: none  
Employees: 8

Azure Resources re-activated the Dufferin gold mine in the later part of 2003 pursuant to an agreement with Newfoundland Goldbar Resources Inc., parent company of Dufferin Resources Incorporated. The underground mine workings were dewatered and surveyed in preparation for further exploration and production activities. However, there was no gold production in 2003.

**Coal Mining Operations**

During 2003, there were five active surface coal mines and a coal recovery project operating in the province. There was also reclamation activity at a number of former coal-producing sites. The use of high-wall mining methods continued at two surface mines, which extended production beyond normal

economic surface mining limits. There were no producing underground coal mines in the province in 2003.

Production information is summarized in Table 1.3. The summaries below provide details of the coal mines operating in Nova Scotia.

**Surface Coal Mines**

PIONEER COAL LIMITED  
Stellarton, Pictou County

Manager: C. Chisholm  
Address: PO Box 1328  
Antigonish, NS B2G 2L7  
Production: 284 700 tonnes of coal  
Employees: 31

Pioneer Coal mined coal from two steeply dipping seams at the Stellarton surface mine. The company has been mining on the Foord Seam since 1996 and began mining on the Cage Seam in 2001. The Foord Seam is approximately 12 metres thick and the Cage Seam approximately 5 metres thick.

In 2003, both conventional surface mining and high-wall mining were used to mine the Foord seam. Production from the Cage Seam was by conventional surface mining methods. No blasting

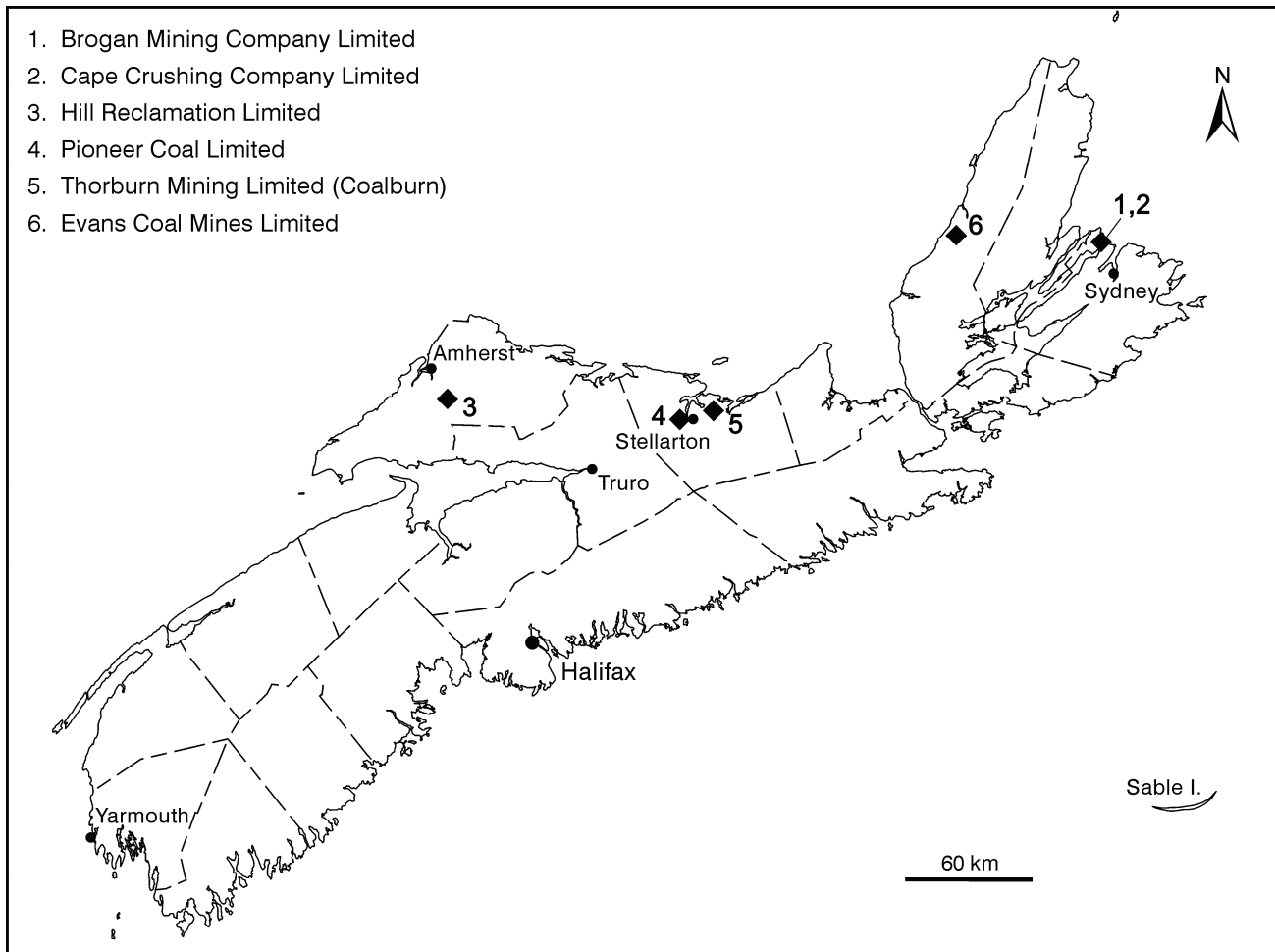
**Table 1.3.** Coal production for the 2003 calendar year.

COMPANY	MINE NAME	LOCATION	PRODUCTION TONNES	TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROX. VALUE(\$) <sup>2</sup>
<b>SURFACE MINING</b>					
Brogan Mining Company Limited	Little Pond Mine	Alder Point Cape Breton County	20 000	20	
Cape Crushing Company Limited	Merritt Point Mine	Alder Point Cape Breton County	9 987	10	
Evans Coal Mines Limited	St. Rose Mine	St. Rose Inverness County	3 007	7	
Hill Reclamation Limited		Springhill Cumberland County	8 973	7	
Pioneer Coal Limited	Stellarton Mine	Stellarton Pictou County	284 727	31	
Thorburn Mining Limited	Coalburn Mine	Coalburn Pictou County	51 779	18	
<b>Total for all coal producers</b>			378 473	93	20,000,000

<sup>1</sup> personnel employed in clerical, supervisory, etc., positions as well as mining personnel

<sup>2</sup> estimated from Nova Scotia Department of Natural Resources sources

NOTE: Production represents shipments; numbers may not add to totals due to rounding



**Figure 1.4** Location of coal mines in Nova Scotia, 2003.

is used at the Stellarton mine. The coal and overlying rock material are excavated using hydraulic excavators and transported using conveyors and off-road haul trucks. A large rock saw is used to establish pit walls.

Extensive reclamation work was conducted during the year, mostly related to backfilling the excavation associated with mining the Foord seam.

The coal mined at Stellarton is blended on-site with coal transported from the Coalburn Mine before being sold to Nova Scotia Power Inc. (NSPI).

**THORBURN MINING LIMITED**  
Coalburn, Pictou County

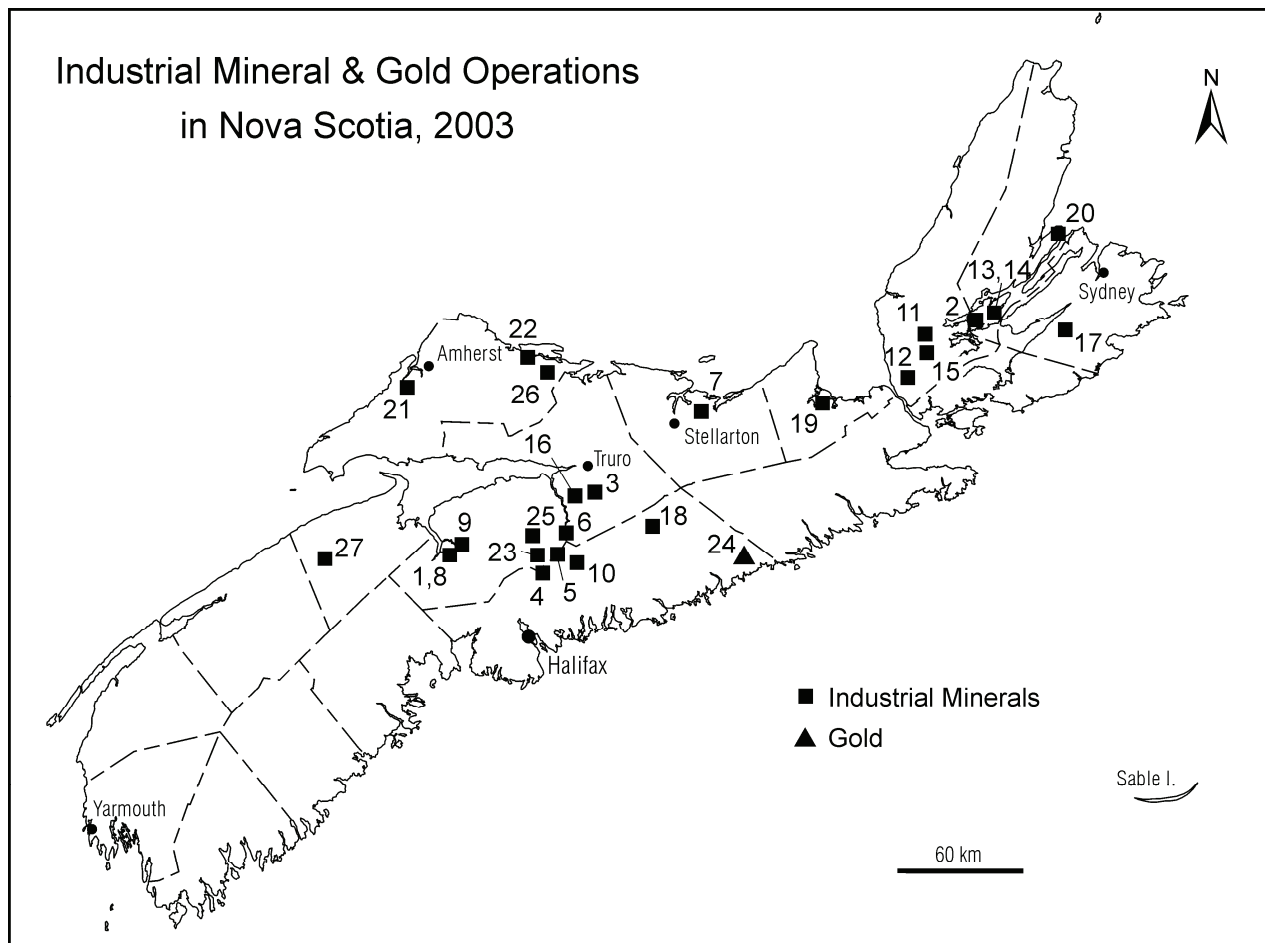
Manager: C. Chisholm  
Address: PO Box 1328  
Antigonish, NS B2G 2L7

Production: 51 800 tonnes of coal  
Employees: 18

The mine began operation in June 1999 and has extracted coal from both the Upper and Lower McKay seams. The seams are each approximately 1 metre in thickness. Mining is carried out using surface mining methods (including blasting) and high-wall mining. High-wall mining is conducted using a remotely controlled coal-cutting machine that extracts coal in a series of headings driven into the exposed coal seam face at the toe of the high-wall.

In 2003, coal was produced from the Lower McKay seam using high-wall mining methods. By the end of 2003, the south pit was mostly backfilled as part of mine reclamation.

Production from the Coalburn Mine is blended at Pioneer Coal Limited’s facility in Stellarton prior to sale, mainly to NSPI.



**Anhydrite**

- 1. Fundy Gypsum Co.
- 2. Little Narrows Gypsum Co.

**Barite**

- 3. E-Z-EM Canada Inc.

**Clay and Shale**

- 4-7. Shaw Brick, a member of the Shaw Group Limited

**Gypsum**

- 8-9. Fundy Gypsum Co.
- 10. National Gypsum (Canada) Ltd.
- 11-12. Georgia-Pacific Corp.
- 13-14. Little Narrows Gypsum Co.

**Marble**

- 15. MacLeod Resources Limited

**Limestone & Dolomite**

- 16. Lafarge Canada Inc.
- 17. Nova Scotia Power Incorporated

- 18. Mosher Limestone Co. Ltd.

- 19. Ridge Brokers Ltd.

- 20. Scotia Limestone Ltd.

**Salt**

- 21. Sifto Canada Inc.
- 22. The Canadian Salt Company Limited

**Silica Sand**

- 23. Shaw Resources, a member of the Shaw Group Limited

**Gold**

- 24. Dufferin Resources Inc.

**Dimension Stone**

- 25. Scotia Slate Products Ltd.
- 26. Wallace Quarries Ltd.

**Peat Moss**

- 27. Annapolis Valley Peat Moss Co.

**Figure 1.5.** Location of industrial mineral and gold operations in Nova Scotia, 2003.

Table 1.4. Industrial mineral production for the 2003 calendar year.

COMPANY	LOCATION	PRODUCTION TONNES	TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROXIMATE VALUE (\$) <sup>2</sup>
<b>GYPSUM</b>				
Fundy Gypsum Company	Miller Creek and Wentworth Road, Hants County	1 246 601	169	
Georgia-Pacific Canada, Inc.	Melford and Sugar Camp, Inverness County	1 469 386	105	
Little Narrows Gypsum Company	Little Narrows, Victoria County	1 192 306	98	
National Gypsum (Canada) Limited	East Milford, Halifax County	3 287 829	98	
Total (gypsum)		7 196 122	470	82,827,000
<b>ANHYDRITE</b>				
Fundy Gypsum Company	Wentworth Road, Hants County	92 445	included in gypsum	
Little Narrows Gypsum Company	Little Narrows, Victoria County	74 334	included in gypsum	
Total (anhydrite)		166 779		1,919,000
<b>SALT</b>				
The Canadian Salt Company Limited	Pugwash, Cumberland County	816 569	192	
Sifto Canada Inc.	Nappan, Cumberland County	97 573	41	
Total (salt)		914 142	233	41,292,000
<b>LIMESTONE AND DOLOMITE</b>				
Lafarge Canada Inc.	Brookfield, Colchester County	597 822	17	
Mosher Limestone Company Limited	Upper Musquodoboit and Hutchinson Settlement, Halifax County	28 027	12	
Nova Scotia Power Incorporated	Glen Morrison, Cape Breton County	170 463	17	
Ridge Brokers Limited	Southside Harbour, Antigonish County	4 680	6	
Scotia Limestone Limited	Kelly Cove, Victoria County	5 100	1	
Total (limestone and dolomite)		806 092	53	3,377,000 <sup>d</sup>
<b>BARITE</b>				
E-Z-EM Canada Inc.	Brookfield, Colchester County	486	13	
Total (barite)		486	13	*



Table 1.4. Continued.

COMPANY	LOCATION	PRODUCTION TONNES	TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROXIMATE VALUE <sup>2</sup> (\$)
<b>CLAY AND SHALE</b>				
Shaw Brick (a member of the Shaw Group Limited)	Lantz and Milford, Hants County New Glasgow, Pictou County	32 591	see clay products Table 1.5	n/a <sup>5</sup>
Total (clay and shale)		32 591	see clay products Table 1.5	n/a <sup>5</sup>
<b>SILICA SAND</b>				
Shaw Resources (a member of the Shaw Group Limited)	Nine Mile River, Hants County	59 509	8	
Total (silica sand)		59 509	8	*
<b>MARBLE</b>				
MacLeod Resources	River Denys, Inverness County	31 750	9	*
Total (marble)		31 750	9	*
<b>DIMENSION STONE</b>				
Scotia Slate Products Ltd.	Rawdon Hills, Hants County	n/a	18	
Wallace Quarries Ltd.	Quarry: Wallace, (Sandstone) Cumberland County	8 650	6	
Total (dimension stone)		n/a	24	*
<b>PEAT MOSS</b>				
Annapolis Valley Peat Moss Company	Berwick, Kings County	2 239	22	
Total (peat moss)		2 239	22	*
<b>AGGREGATES</b>				
Crushed Stone	Various	7 079 084	301	47,847,000
Sand and Gravel	Various	3 765 293	281	18,588,000
Total (aggregates)		10 844 377	582	66,435,000
<b>TOTAL FOR INDUSTRIAL MINERALS<sup>6</sup></b>				
			1 414	201,923,000

\* value not shown, but included in total

<sup>1</sup>total employees: mining, production, clerical, supervisory, etc.<sup>2</sup>estimate from Nova Scotia Department of Natural Resources sources<sup>3</sup>processed or manufactured value<sup>4</sup>does not include the value of Lafarge Canada Inc. production, which value is included in the higher manufactured value (cement)<sup>5</sup>value included in the higher manufactured valuation (bricks)<sup>6</sup>excluding secondary mineral manufacturing (Table 1.5)

Note: production represents shipments; numbers may not add to totals due to rounding

**Table 1.5.** Secondary mineral manufacturing for the 2003 calendar year.

COMPANY	LOCATION	PRODUCTION TONNES	TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROX. VALUE (\$) <sup>2</sup>
<b>CLAY PRODUCTS</b>				
Shaw Brick (a member of the Shaw Group Limited)	Lantz, Hants County	32 591	33	*
<b>PORTLAND CEMENT</b>				
Lafarge Canada Inc.	Brookfield, Colchester County	411 000	81	*
<b>TOTAL FOR SECONDARY MINERAL MANUFACTURING</b>			114	56,066,000
*value not shown, but included in total <sup>1</sup> total number of employees including office, clerical, supervisory and production <sup>2</sup> estimated from Nova Scotia Department of Natural Resources sources NOTE: Production represents shipments; numbers may not add to totals due to rounding				

**CAPE CRUSHING COMPANY LIMITED**  
Alder Point, Cape Breton County

Manager: E. Brogan  
Address: PO Box 265  
North Sydney, NS B2A 3M3  
Production: 10 000 tonnes of coal  
Employees: 10

The company operates a small-scale surface coal mine at Alder Point, Cape Breton County, extracting coal from the Lloyd Cove (Bonar) seam using excavators, bulldozers and haul trucks. Following the recovery of remnants of underground mine coal-pillars, the excavations are backfilled and the area reclaimed to a stable condition.

Coal is sold to the local domestic home heating market and NSPI.

**BROGAN MINING COMPANY LIMITED**  
Little Pond, Cape Breton County

Manager: R. Brogan  
Address: 638 Bras d'Or Road  
Florence, NS B1Y 1E4  
Production: 20 000 tonnes of coal  
Employees: 20

Brogan Mining Company Limited operated a small surface coal mine at Little Pond, Cape Breton County, in 2003. Coal was mined from the Lloyd Cove (Bonar) seam in an area containing extensive underground mine workings. The overlying overburden, waste rock and coal were excavated and reclaimed using a dragline, bulldozers, excavators and haul trucks.

In 2003, coal extraction was concluded and significant reclamation activity was carried out. The coal was marketed mainly to NSPI.

**HILL RECLAMATION LTD.**  
Springhill, Cumberland County

Manager: M. McCormick  
Address: R. R. #1  
Springhill, NS B0M 1X0  
Production: 9 000 tonnes of coal  
Employees: 7

Hill Reclamation operates a coal recovery plant near Springhill, Cumberland County. The company reclaims coal from material excavated from an abandoned railway bed. Coal is recovered in a heavy media wash plant and plant rejects are returned to the rail bed and reclaimed. The coal is marketed to NSPI.

**EVANS COAL MINES LIMITED**  
St. Rose, Inverness County

Manager: P. White  
Address: PO Box 1328  
Antigonish, NS B2G 2L7  
Production: 3 000 tonnes of coal  
Employees: 7

The company operated a surface coal mine at St. Rose, Inverness County and produced 3,000 tonnes of coal from the crown pillar of the No. 5 Seam and pillars left by the former underground mining operation. Coal production from this mine was completed in 2003.

Significant reclamation work was carried out at the mine during the year.

## **Industrial Minerals Mining**

### ***Gypsum and Anhydrite***

#### **FUNDY GYPSUM COMPANY**

Wentworth Road and Miller Creek, Hants County

Manager: B. Clarisse  
 Address: PO Box 400  
 Windsor, NS B0N 2T0  
 Production: 92 400 tonnes of anhydrite  
 (Wentworth)  
 133 700 tonnes of gypsum  
 (Wentworth)  
 1 112 800 tonnes of gypsum (Miller  
 Creek)  
 Employees: 169

The Fundy Gypsum Company operates quarries and crushing plants in the Wentworth Road and Miller Creek areas near Windsor, Hants County. In 2003, the company produced gypsum from its Bailey quarry at Miller Creek and both gypsum and anhydrite from the Wentworth quarry. Till overburden is removed and stockpiled on site. Rock is drilled, blasted and loaded onto trucks with loaders and hydraulic excavators. The Wentworth ore is processed in the company's heavy media plant to separate anhydrite and gypsum.

Crushed gypsum and anhydrite are transported by unit train to ship-loading facilities at Hantsport, a distance of 19 km. These products are shipped to wallboard and cement plants in the United States and Canada.

#### **GEORGIA-PACIFIC CANADA, INC.**

Sugar Camp and Melford, Inverness County

Manager: J. T. Kennedy  
 Address: PO Box 400  
 Port Hawkesbury, NS B0E 2V0  
 Production: 1 035 100 tonnes of gypsum (Sugar  
 Camp)  
 434 200 tonnes of gypsum (Melford)  
 Employees: 105

Georgia-Pacific Canada Inc. operates gypsum

quarries at Sugar Camp and Melford, Inverness County. At both mines overburden is stockpiled and reclaimed on site. The gypsum is drilled, blasted and loaded onto trucks with loaders and hydraulic excavators and crushed prior to shipping. Highway trucks transport crushed gypsum from both operations to ship-loading facilities at Point Tupper, Richmond County. These products are shipped to wallboard and cement plants in the United States.

The Melford mine began producing in late 2002 and gradually increased production during 2003.

#### **LITTLE NARROWS GYPSUM COMPANY**

Little Narrows, Victoria County

Manager: M. W. Bishop  
 Address: R. R. #1  
 Little Narrows, NS B0E 1T0  
 Production: 74 300 tonnes of anhydrite  
 1 192 300 tonnes of gypsum  
 Employees: 98

Little Narrows Gypsum Company operates gypsum and anhydrite quarries near Little Narrows, Victoria County. Till overburden is removed and stockpiled on site. Ore is drilled, blasted and loaded onto trucks with loaders and hydraulic excavators and then crushed and screened. All the gypsum and anhydrite produced is shipped from the company's dock on the Bras d'Or Lakes to destinations in Canada and the United States.

#### **NATIONAL GYPSUM (CANADA) LTD.**

East Milford, Halifax County

Manager: P. C. Mills  
 Address: PO Box 57  
 Milford Station, NS B0N 1Y0  
 Production: 3 287 800 tonnes of gypsum  
 Employees: 98

National Gypsum (Canada) Ltd. operates a gypsum quarry at East Milford, Halifax County. The quarry is believed to be the largest single producer of gypsum in the world. Till overburden is removed and stockpiled on site. Gypsum is drilled, blasted and loaded onto trucks with loaders and hydraulic excavators and then crushed,

screened, and transported by unit train from Milford to Wright's Cove, Dartmouth, a distance of 45 km.

The gypsum is loaded onto ships for customers in Canada and the United States. The quarry also sells products within Nova Scotia for use in cement manufacturing.

### **Salt**

THE CANADIAN SALT COMPANY LIMITED  
Pugwash, Cumberland County

Manager: G. Sutherland  
Address: PO Box 160  
Pugwash, NS B0K 1L0  
Production: 816 600 tonnes of salt products  
Employees: 192

The Canadian Salt Company Limited operates an underground salt mine at Pugwash Harbour, Cumberland County. The salt is accessed by vertical shafts and underground ramps, and mined using a room and pillar method. Primary mining equipment includes diesel/electric drills, undercutters, loaders and trucks. Production during the year was from the 1000, 830 and 730 levels.

A large part of the mine's production is for road de-icing applications. The processing plant at the site produces a wide range of salt products, including chemical, food and industrial grades of salt, salt blocks for farm use, and refined salt for domestic consumption. Transportation from the site is by road, rail or from the company owned ship-loading facility at Pugwash.

SIFTO CANADA INCORPORATED  
Nappan, Cumberland County

Manager: D. E. Dickie  
Address: PO Box 550  
Amherst, NS B4H 4A1  
Production: 97 600 tonnes of salt products  
Employees: 41

Salt has been produced from the solution salt mine at Nappan, Cumberland County, since 1947. Salt is extracted by solution mining, where water is pumped in underground wells and the salt is dissolved. The resulting brine solution is then returned to surface where salt is recovered from the brine using a 'mechanical vapour recompression

evaporating process' system. The processing plant produces a wide range of refined salt products.

Salt was produced from three brine wells in 2003.

### **Barite**

E-Z-EM CANADA, INC., NYSTONE DIVISION  
Brookfield, Colchester County

Manager: V. J. Prostak  
Address: PO Box 69  
Debert, NS B0M 1G0  
Production: 486 tonnes of pharmaceutical barite  
Employees: 13

E-Z-EM Canada's barite deposit is located 1.6 km northeast of Brookfield, Colchester County. During 2003, approximately 4,500 tonnes of ore were mined at the pit. Of this, 2,750 tonnes of crushed ore was trucked to the company's plant at Debert, where it was processed to a pharmaceutical grade barite product. The refined product is shipped to the parent company, E-Z-EM Corporation, New York, USA, for further processing and packaging.

### **Limestone and Dolomite**

LAFARGE CANADA INC.  
Brookfield, Colchester County

Manager: J. Cross  
Address: PO Box 5  
Brookfield, NS B0N 1C0  
Production: 597 800 tonnes of limestone  
Employees: 17 (quarry) 81 (cement plant)

Lafarge Canada Inc. has operated a limestone quarry adjacent to its Brookfield cement plant since 1965. The plant is located 5 km west of Brookfield, Colchester County. Till overburden is removed and limestone and waste rock are drilled, blasted and loaded on off-road haul trucks by mass excavators. All of the limestone produced from the quarry is crushed and used to manufacture Portland cement products.

During 2003 cement kiln #2 operated for eleven months and kiln #1 operated for eight months. The plant produced 411 000 tonnes of cement and clinker products.

**MOSHER LIMESTONE COMPANY LIMITED**  
Upper Musquodoboit and Hutchinson Settlement,  
Halifax County

Manager: D. M. Mosher  
Address: PO Box 28  
Upper Musquodoboit, NS B0N 2M0  
Production: 28 000 tonnes of dolomite/limestone  
Employees: 12

Mosher Limestone operates several quarries near Upper Musquodoboit, Halifax County. In 2003 production was limited to the Hutchinson Settlement quarry while reclamation activity took place at Upper Musquodoboit. The company produces agricultural grade dolomite/limestone from its grinding plant at Upper Musquodoboit. The product is bagged or supplied in bulk for distribution throughout the Atlantic Provinces. The company also produces a pelletized limestone product for the Atlantic market.

**NOVA SCOTIA POWER INCORPORATED**  
Glen Morrison, Cape Breton County  
(OPERATED BY KELLY ROCK LIMITED)

Manager: D. W. MacKenna (Kelly Rock Limited)  
Address: PO Box 1206  
Sydney, NS B1P 6J9  
Production: 170 500 tonnes of limestone  
Employees: 17

The limestone quarry at Glen Morrison, Cape Breton County, began production in 1993. Drilling and blasting of limestone follow overburden removal. Limestone is crushed and further processed at the on-site facility. The company produces several products for sale. Much of the production from the site was shipped to Point Aconi for use in NSPI's fluidized bed power generating station. Kelly Rock Limited operates the quarry on behalf of Nova Scotia Power.

**RIDGE BROKERS LIMITED**  
Southside Antigonish Harbour, Antigonish County

Manager: E. Alward  
Address: PO Box 2001  
Havelock, NB E4Z 6H3  
Production: 4 700 tonnes of limestone  
Employees: 6

The company operates a small quarry at Southside Antigonish Harbour, Antigonish County, producing limestone for the agricultural market. During 2003, 21 900 tonnes were drilled and blasted. Ore is crushed and/or pulverized on-site using portable equipment. Limestone is periodically shipped from on-site stockpiles.

**SCOTIA LIMESTONE LIMITED**  
New Campbellton, Victoria County

Manager: D. M. Mosher  
Address: PO Box 28  
Upper Musquodoboit, NS B0N 2M0  
Production: 5 100 tonnes of limestone/dolomite  
Employees: 1

The Kelly's Cove dolomite quarry and plant operation is located near New Campbellton, Victoria County. The plant produces an agricultural grade dolomite for domestic sale, a ground dolomite product for coal mine stone dust, and dolomite products for the offshore steel industry. In 2003 there was limited crushing and grinding from on-site ore inventory. No mining took place at the site during the year.

**Marble**

**MACLEOD RESOURCES LIMITED**  
River Denys, Inverness County

Manager: C. Trider  
Address: PO Box 10  
River Denys, NS B0E 2Y0  
Production: 31 750 tonnes (12 700 cubic metres)  
of marble  
Employees: 9

MacLeod Resources was issued a mining permit in November 2002 for marble at River Denys, Inverness County. In 2003, site activity included percussion drilling and diamond wire saw cutting of quarry benches to liberate large blocks of marble.

**Clay**

**SHAW BRICK**  
A MEMBER OF THE SHAW GROUP LIMITED  
Lantz, Hants County

Manager: B. Frizzell  
Address: PO Box 2130  
Lantz, NS B0N 1R0  
Production: 32 600 tonnes of clay & shale  
Employees: 33

Shaw Brick extracts clay from pits at Lantz, Milford and Shubenacadie, all in Hants County, and shale from quarries located in Hardwoodlands, Hants County, and New Glasgow, Pictou County. These materials are used in the company's plant in Lantz for the manufacture of bricks and other structural clay products.

### ***Silica Sand***

SHAW RESOURCES  
A MEMBER OF THE SHAW GROUP LIMITED  
Nine Mile River, Hants County

Manager: S. Smith  
Address: PO Box 60  
Shubenacadie, NS B0N 2H0  
Production: 59 500 tonnes of silica sand  
Employees: 8

Shaw Resources produces silica sand from a deposit at West Indian Road, Hants County. This sand is processed through a screening and milling plant into several products, including glass-grade silica.

In 2003, all production was drawn from existing on-site stockpiles.

### ***Dimension Stone***

WALLACE QUARRIES LIMITED  
Wallace, Cumberland County

Manager: S. Flynn  
Address: PO Box 203  
Wallace, NS B0K 1Y0  
Production: 8 700 tonnes of building stone  
Employees: 6

The Wallace Quarries, located near Wallace, Cumberland County, continued to supply building

stone for major building rehabilitation work in Halifax and central Canada. Blocks of stone are sent for cutting to processing facilities in Nova Scotia, New Brunswick and Quebec to supply local markets.

### ***Slate***

SCOTIA SLATE PRODUCTS LTD.

President: D. Donovan  
Address: Box 12, Comp 3  
Kennetcook, NS B0N 1P0  
Employees: 18

The company produces a range of slate products from its quarry at Rawdon Hills, Hants County.

### ***Peat Moss***

ANNAPOLIS VALLEY PEAT MOSS  
COMPANY LIMITED

President: H. Endres  
Address: Berwick, NS B0P 1E0  
Production: 2 200 tonnes of peat moss  
Employees: 22

The company uses vacuum harvesters to recover agricultural peat from a 200 ha bog located near Berwick, Kings County. Baled peat products are shipped to markets in Canada, the United States and Japan.

### ***Aggregate Resources***

Approximately 10.8 million tonnes of construction aggregate were produced in Nova Scotia in 2003. Crushed stone production totalled almost 7.1 million tonnes and sand and gravel production totalled almost 3.8 million tonnes. The majority of the aggregate was sold within the province, and over 2 million tonnes was transported by barge for export.