

## Appendix 1

# Mining Industry Activity in Nova Scotia, 1996

### Mining Industry Expenditures

Investment by the mining industry in Nova Scotia is monitored by means of annual surveys of all companies having operations or activity in the province. Aggregate producers are not included in this survey. The surveys are carried out by the Nova Scotia Department of Natural Resources (DNR) jointly with Natural Resources Canada (Minerals and Metals Sector - Minerals and Mining Statistics Division), and Statistics Canada (Investment and Capital Stock Division). The Mines and Energy Development 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 for 1996 (Table 1.1) indicate a substantial increase in exploration expenditures from 1995. Diamond-drilling was also up significantly in 1996 over 1995, while mine development expenditures rose slightly from the year before. Overall, expenditures at existing mines for capital improvements and repairs remained roughly at the same levels as in 1995.

### Mining Leases

There was one Mining Lease issued during the year. Pioneer Coal Limited was issued a Special Mining Lease for coal at Stellarton, Pictou County (Table 1.2).

### Mining Permits

During the year, one Mining Permit was issued for coal to Pioneer Coal Limited (Table 1.3).

### Production Information from Mines, Quarries and Other Operations

In 1996, the estimated total value of Nova Scotia's mineral production, including secondary mineral processing and crude petroleum, totalled \$623 million (Fig. 1.1), an increase of 5% from the year before. However, this increase was due largely to higher crude oil prices in 1996 as well as to increased coal sales from the year before. Production of both these commodities showed declines in output from the year before. Excluding petroleum, the

**Table 1.1.** Mining industry expenditures in 1995 and 1996.

	1995 <sup>1</sup>	1996 <sup>2</sup>
<b>Mineral Exploration Expenditures</b> (field plus overhead)	<b>\$2,843,000</b>	<b>\$6,892,000</b>
Exploration diamond-drilling	8000 m	13 895 m
Exploration drilling - other	2000 m	1 865 m
<b>Mineral Development Expenditures</b> (field plus overhead)	<b>\$5,779,000</b>	<b>\$6,036,266</b>
<b>Capital and Repair Expenditures at Mining Establishments</b>		
Construction:		
Capital	<b>\$14,860,000</b>	<b>\$ 7,730,000</b>
Repair	<b>\$ 750,000</b>	<b>\$ 2,600,000</b>
Machinery and Equipment		
Capital	<b>\$20,070,000</b>	<b>\$29,060,000</b>
Repair	<b>\$37,250,000</b>	<b>\$33,080,000</b>

<sup>1</sup> number revised from last year's preliminary report (Report 97-1)

<sup>2</sup> preliminary

**Table 1.2.** Mining Leases issued in 1996.

Company	Location	County	Mineral	Date Lease Issued
Pioneer Coal Limited	Stellarton	Pictou	Coal	January 15, 1996

**Table 1.3.** Mining Permits issued in 1996.

Company	Location	County	Mineral	Date Permit Issued
Pioneer Coal Limited	Stellarton	Pictou	Coal	January 27, 1996

value of Nova Scotia's mineral production totalled \$428 million, up 4% from 1995. Employment in Nova Scotia's mineral industry decreased in 1996, with approximately 4000 persons employed (Fig. 1.2). This decrease was primarily due to restructuring at the Cape Breton Development Corporation, the province's largest mining employer. Historical trends in the value of Nova Scotia's mineral production are shown in Figure 1.3.

Although petroleum is included in the overall value of Nova Scotia's mineral production, this appendix focuses on the non-petroleum sectors of the industry (Table 1.4), providing a description of each mine site. Tables 1.5 to 1.7 provide more detailed information on production of different commodities. Site locations are shown on the accompanying maps, Figures 1.4 and 1.5. Production data are for the calendar year 1 January 1996 to 31 December 1996.

## Metal Mines and Gold Mines

### *Metal Mines*

There were no producing metal mines in 1996.

### *Gold Mines*

In 1996, Tangier Limited Partnership conducted test mining at the Blueberry Hill Mine at Tangier, Halifax County. Approximately 10 000 tonnes of gold-bearing material was extracted from underground under the authority of an Excavation Permit.

## Coal Mining Operations

During 1996, there were two underground coal mines and seven surface coal mines operating in the province. Table 1.5 summarizes production information for the coal mines. The summaries below give brief details of the underground and surface coal mines operating in Nova Scotia.

### *Underground Coal Mines*

#### CAPE BRETON DEVELOPMENT CORPORATION

Manager(s): R. Ward, General Manager, Phalen Colliery  
F. Howard, General Manager, Prince Colliery  
Address: P. O. Box 2500  
Sydney, N. S. B1P 6K9

Raw Coal  
Production: 2,621,616 tons (2 378 315 tonnes)  
Employees: 1,906

The Cape Breton Development Corporation is a federal Crown Corporation that operated two underground coal mines in Cape Breton County during 1996.

#### Phalen Colliery

Raw Coal  
Production: 1,473,373 tons (1 336 635 tonnes)

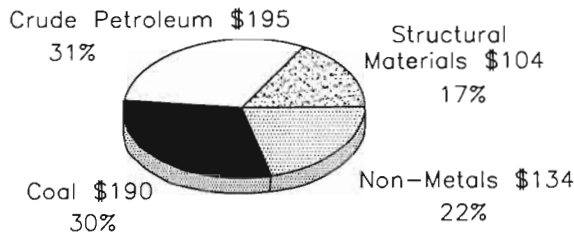
The Phalen Colliery, near New Waterford, Cape Breton County, commenced production in 1987 in the Phalen Seam. The coal is extracted by the mechanical retreat longwall method. During the year, coal was mined from the No. 2 East and No. 7 East longwall panels. Development work was conducted on the entries for the No. 3 Centre, No. 8 East and No. 9 East panels.

Mining operations in No. 7 East panel were restarted in June 1996 following a seven month shut down due to a roof fall that occurred on November 13, 1995. No. 7 East longwall experienced additional weighting problems between August and December, 1996 which resulted in lower production than anticipated.

#### Prince Mine

Raw Coal

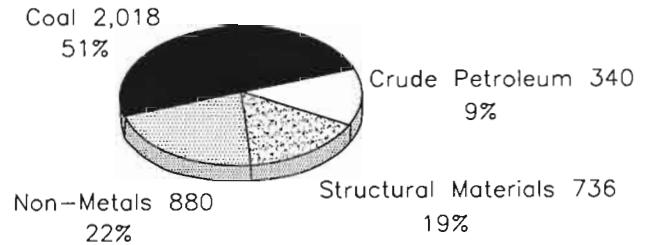
**\$623 Million**



Includes secondary mineral processing where applicable.

**Figure 1.1.** Value of mineral production by commodity group.

**4,000 Employed**



Includes secondary mineral processing where applicable.

**Figure 1.2.** Employment by mineral commodity group.

Production: 1,165,225 tons (1 057 085 tonnes)

The Prince Mine is located in Point Aconi, Cape Breton County. The mine began underground production from the Hub Seam in 1975, initially using room and pillar methods. Mechanized retreat longwall operations began in 1980.

During 1996, coal was mined from the No. 14 West longwall panel. Development work focused on completing No. 15 West longwall panel.

During the year, the colliery installed a new endless haulage system in the No. 4 slope.

**Surface Coal Mines**

**EVANS COAL MINES LIMITED**

Manager: E. Fraser  
 Address: R. R. #1  
 Inverness, N. S. B0E 1N0  
 Production: 39,765 tons (36 075 tonnes) of coal  
 Employees: 32

The Evans Coal Mines Limited began surface coal mining operations at St. Rose, Inverness County, in 1993, following the closure of the underground mine in 1992. Coal is extracted from the No. 5 Seam crown pillar and from the pillars left behind by the underground operation. In 1996, mining was conducted during the periods from January to May and September to December. Mining proceeded in a southerly direction. Overburden and waste rock were removed by blasting and ripping by bulldozers. Material is loaded and hauled using hydraulic excavators and dump trucks. Extensive underground workings were encountered during the coal extraction process.

**PIONEER COAL LIMITED**

Manager: C. Chisholm  
 Address: P. O. Box 929  
 Westville, N. S. B0K 2A0  
 Production: 217,258 tons (197 095 tonnes) of coal  
 Employees: 30

Work began at the Stellarton mine site in February 1996. In March, the company started mining coal from the Foord Seam using hydraulic excavators and dump trucks. The seam was mined in both an easterly and westerly direction from the existing pit. The Foord Seam is approximately 40 feet thick. Mining becomes more selective in the western end of the mine as the percentage of ash increases. The company conducted mining operations at the site from March to June and September to December.

The coal mined from the Stellarton operation was blended on-site with coal trucked from the Evans Coal Mine before being shipped to the Trenton generating station. In 1996, the company completed construction of an enclosed blending facility and loadout facility.

**THORBURN MINING LIMITED**

Manager: C. Chisholm  
 Address: P. O. Box 929  
 Westville, N. S. B0K 2A0  
 Production: 24,792 tons (22 491 tonnes) of coal  
 Employees: 21

Mining at the Thorburn site began in June 1995. In 1996, the mine operated from January to March.

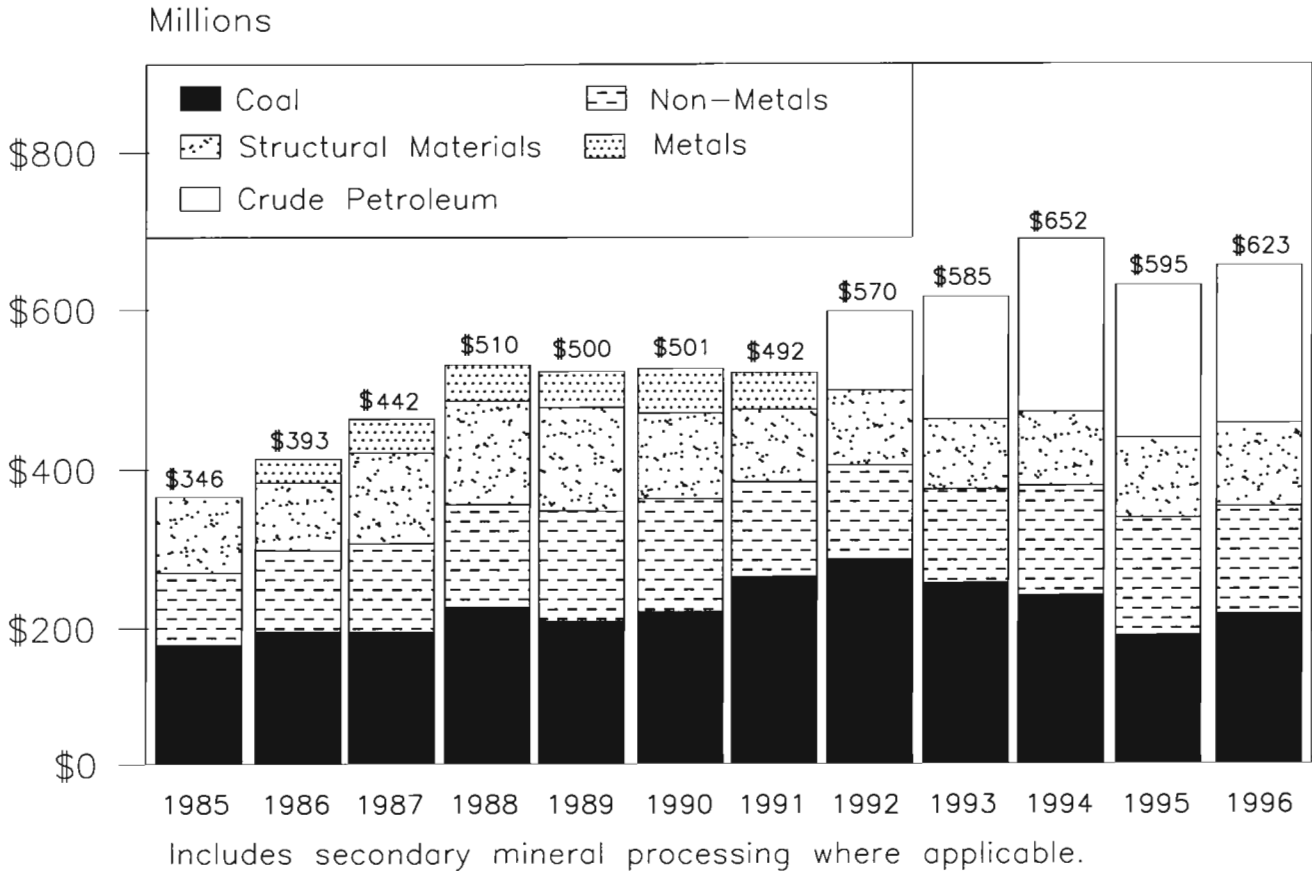


Figure 1.3. Historical trend of the value of mineral production in Nova Scotia, 1985-1996.

Coal was extracted from the McBean Seam crown pillar and from pillars remaining from the former underground mining operations. During the year, overburden and waste rock were removed by ripping with bulldozers. Material was loaded and hauled using hydraulic excavators and dump trucks. The seam varies in thickness from 4 to 7 feet.

CAPE CRUSHING COMPANY LIMITED

Manager: E. Brogan  
 Address: P. O. Box 365  
 North Sydney, N. S. B2A 3M3  
 Production: 2,319 tons (2 104 tonnes) of coal  
 Employees: 2

The company operates a small surface coal mine at Alder Point, Cape Breton County. Coal was mined during the year from the Upper and Lower Bonar Seams using small scale excavating equipment.

BROGAN MINING COMPANY LIMITED

Manager: R. Brogan

Address: 126 Main Street  
 North Sydney, N. S. B1V 2L6  
 Production: 30,864 tons (28 000 tonnes) of coal  
 Employees: 20

The company operated two surface coal mines in Cape Breton County during 1996. Coal from both operations was blended to produce a saleable product.

At Sullivans Creek, coal was mined from the Sydney Main Seam. The company operated at this site from June to December and mined an area south of Sullivans Creek. Overburden was removed using a dragline, while waste rock and coal is mined with bulldozers, excavators and dump trucks.

At the Toronto Road mine site, surface mining operations started in June and continued to the end of the year. Coal was mined from both the Sydney Main and Stubbart coal seams and was blended with coal mined from Sullivans Creek. Mining is carried out using bulldozers, hydraulic excavators and dump trucks.

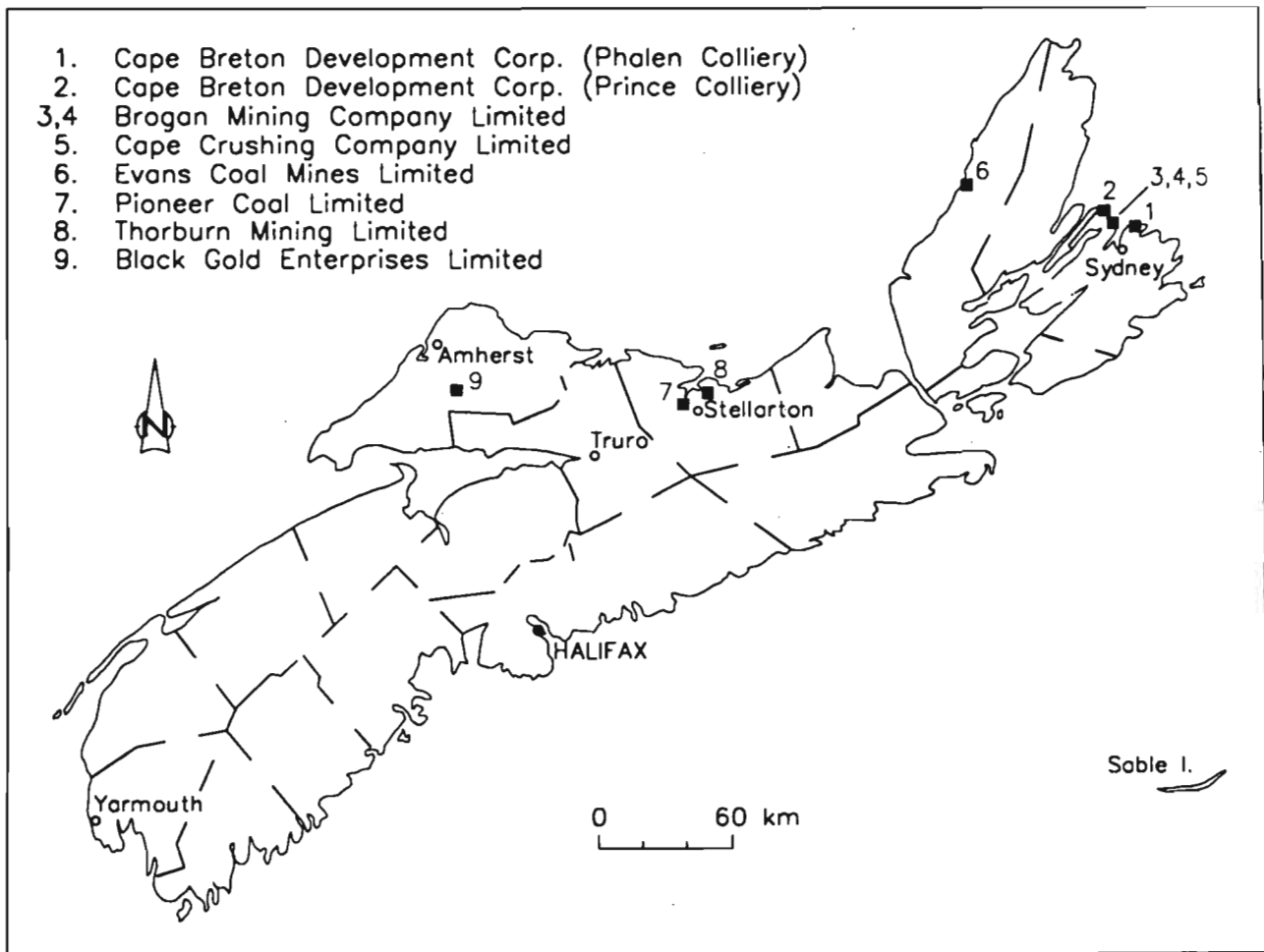


Figure 1.4. Locations of coal mines in Nova Scotia.

**BLACK GOLD ENTERPRISES LIMITED**

Manager: R. Smith  
 Address: P. O. Box 576  
 Springhill, N. S. B0M 1X0  
 Production: 3,118 tons (2 829 tonnes) of coal  
 Employees: 8

The company commenced operations at the site in 1995 to recover coal from an abandoned rail bed in the Springhill area. The coal material is processed in a small portable wash plant installed on site. Operations during the year began in May and continued until November.

**Industrial Minerals Mining**

***Gypsum and Anhydrite***

**GEORGIA-PACIFIC CANADA INCORPORATED**

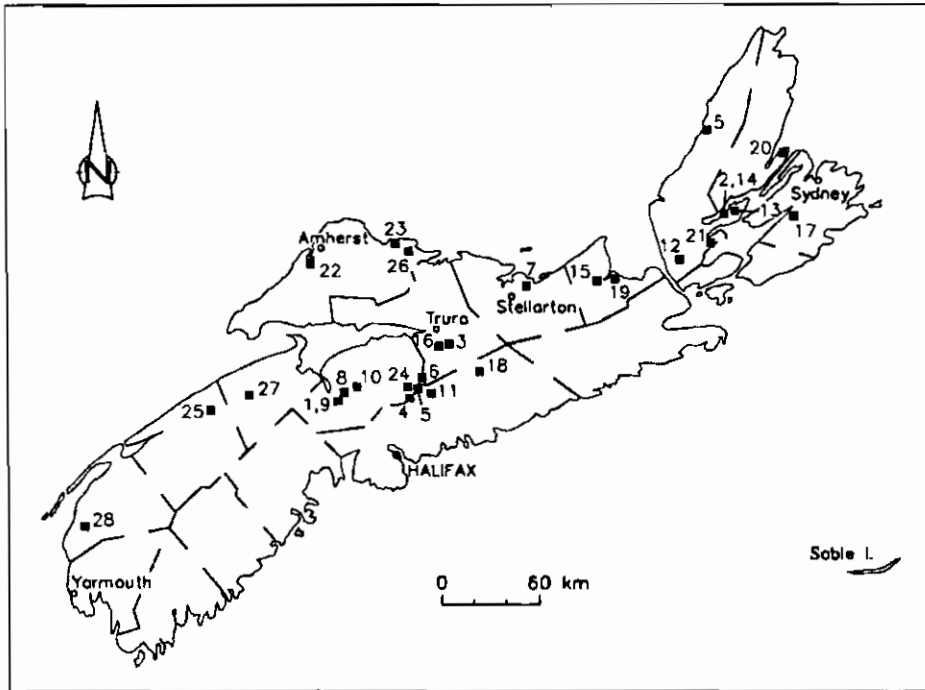
Manager: D. Duncan

Address: P. O. Box 400  
 Port Hawksbury, N. S. B0E 2V0  
 Production: 9,109 tons (8 264 tonnes) of gypsum  
 Employees: 4 (Mine) 12 (Plant)

In 1996, Georgia-Pacific purchased the MacKay Settlement surface gypsum mine and plaster mill from Domtar Gypsum. During the year, gypsum was transported from the stockpiles in the quarry to the plaster mill in Windsor, Hants County, where the gypsum is calcined to produce plaster products. No mining activity, overburden removal or reclamation took place at this site. Operations at the plaster mill ceased permanently in November 1996.

**FUNDY GYPSUM COMPANY LIMITED**

Manager: T. Davis  
 Address: P. O. Box 400  
 Windsor, N. S. B0N 2T0  
 Production: 97,789 tons (86 000 tonnes) of anhydrite  
 1,771,397 tons (1 607 001 tonnes) of gypsum



**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. Domtar Gypsum
- 11. National Gypsum (Canada) Ltd.
- 12. Georgia-Pacific Corp.
- 13-14. Little Narrows Gypsum Co. Ltd.
- 15. Nova Construction Co. Ltd.

**LIMESTONE AND DOLOMITE**

- 16. Lafarge Canada Inc.

- 17. Kelly Rock Limited
- 18. Mosher Limestone Co. Ltd.
- 19. Ridge Brokers Ltd.
- 20. Scotia Limestone Ltd.
- 21. Shaw Resources, a member of the Shaw Group Limited

**SALT**

- 22. Sifto Canada Inc.
- 23. The Canadian Salt Co. Ltd.

**SILICA SAND**

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

**DIMENSION STONE**

- 25. Heritage Memorials Ltd.
- 26. Wallace Quarries Ltd.

**PEAT MOSS**

- 27. Annapolis Valley Peat Moss Co.
- 28. Clare Organic Products Limited

Figure 1.5. Locations of industrial mineral operations in Nova Scotia.

**Table 1.4.** Summary of Nova Scotia mineral production, 1995 and 1996.

DESCRIPTION	1995		1996	
	VALUE '000\$ <sup>1</sup>	EMPLOYMENT*	VALUE '000\$ <sup>1</sup>	EMPLOYMENT*
<b><u>METALS</u></b>				
Gold	61			
Total metals	61		00 <sup>2</sup>	
<b><u>INDUSTRIAL MINERALS</u></b>				
<b>(Non-Metals)</b>				
Anhydrite	2,332		2,193	
Barite	**803		**1,071	
Gypsum <sup>3</sup>	68,000		65,554	
Limestone <sup>4</sup> and Dolomite	2,121		2,009	
Peat	** 870		**1,319	
Salt	**66,675		**60,312	
Silica	**1,800		**2,000	
Total Non-Metals	142,601	864	134,458	882
<b>(Structural Materials)</b>				
Dimension Stone	296		374	
Cement	**43,000		**45,000	
Clay Products	**5,145		**4,680	
Plaster Products	**2,000		**1,800	
Crushed Stone	34,104		33,939	
Sand & Gravel	16,087		17,751	
Total Structural Materials	100,632	753	103,544	797
<b>Total Industrial Minerals</b>	<b>243,233</b>	<b>1,617</b>	<b>238,002</b>	<b>1,680</b>
<b>FUELS</b>				
Coal	167,970	2,312	189,826	2,020
Petroleum - Crude	184,000	342	195,000	340
Total Fuels	351,970	2,654	384,826	2,360
<b>TOTAL MINERAL PRODUCTION</b>	<b>595,264</b>	<b>4,300</b>	<b>623,000</b>	<b>4,000</b>
<b>CHANGE FROM PREVIOUS YEAR</b>	<b>- 9%</b>	<b>0%</b>	<b>5%</b>	<b>-7%</b>

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

<sup>2</sup> There were no metal mines operating in 1996

<sup>3</sup> Does not include the value of gypsum quarried for plaster products

<sup>4</sup> Does not include the value of limestone quarried for cement production

\* Average number of persons during production period

\*\* Processed or manufactured value

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

Table 1.5. Coal production for the calendar year 1996.

COMPANY	MINE NAME	LOCATION	PRODUCTION		TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROX. \$VALUE <sup>2</sup>
			TONS	TONNES		
<b>UNDERGROUND MINING</b>						
Cape Breton Development Corp. (CBDC)	Prince Mine	Point Aconi, Cape Breton County				
	Phalen Mine	Lingan, Cape Breton County				
Total (underground)			3,194,465	2,898,000	1,906	
<b>OPEN PIT MINING</b>						
Black Gold Enterprises Limited	Springhill Rail Bed Project	Springhill, Cumberland County	3,118	2,829	8	
Brogan Mining Company Limited	Sullivan Creek and Toronto Rd. Mines	Sullivan Creek Cape Breton County	30,864	28,000	20	
Cape Crushing Company Limited	Merritt Point Mine	North Sydney, Cape Breton County	2,319	2,104	2	
Evans Coal Mines Limited	St. Rose Mine	St. Rose, Inverness County	39,765	36,075	32	
Pioneer Coal Limited	Stellarton Mine	Stellarton, Pictou County	217,258	197,095	30	
Thorburn Mining Limited	Thorburn Mine	Thorburn, Pictou County	24,792	22,491	21	
Total (open pit)			318,116	288,594	116	
<b>TOTAL FOR ALL COAL PRODUCERS</b>			<b>3,512,635</b>	<b>3,186,600</b>	<b>2,020</b>	<b>189,826,000</b>

<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

Table 1.6. Industrial minerals production for the calendar year 1996.

COMPANY	LOCATION	PRODUCTION		TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROXIMATE \$VALUE <sup>2</sup>
		TONS	TONNES		
<b>GYPSSUM</b>					
Domtar Gypsum	Windsor, Hants County	9,109	8 264	4	
Fundy Gypsum Co.	Miller Creek and Wentworth Road, Hants County	1,771,397	1 607 001	175	
Georgia-Pacific Corp.	Sugar Camp, Inverness County	991,512	899 494	75	
Little Narrows Gypsum Co.	Little Narrows, Victoria County	903,097	819 284	132	
National Gypsum (Canada) Limited	East Milford, Halifax County	3,559,961	3 229 575	103	
Total (gypsum)		7,235,056	6 563 600	489	65,554,000
<b>ANHYDRITE</b>					
Fundy Gypsum Co.	Miller Creek and Wentworth Road, Hants County	97,789	86 000	see gypsum	
Little Narrows Gypsum Co.	Little Narrows, Victoria County	112,402	101 970	see gypsum	
Total (anhydrite)		207,232	188 000		2,193,000
<b>SALT</b>					
The Canadian Salt Co. Ltd.	Pugwash, Cumberland County	1,084,390	983 752	206	
Sifto Canada Inc.	Nappan, Cumberland County	98,040	88 941	73	
Total (salt)		1,182,426	1 072 690	279	60,312,000 <sup>3</sup>
<b>LIMESTONE AND DOLOMITE</b>					
Kelly Rock Ltd.	Glen Morrison, Cape Breton County	118,913	107 877	17	
Lafarge Canada Inc.	Brookfield, Colchester County	490,775	445 228	11	
Mosher Limestone Co. Ltd.	Upper Musquodoboit, Halifax County	50,485	45 800	22	
Ridge Brokers Ltd.	Southside Harbour, Antigonish County	8,050	7 303	1	
Scotia Limestone Ltd.	Kellys Cove, Victoria County	22,900	20 775	12	
Total (limestone and dolomite)		691,123	626 983	63	2,009,000 <sup>4</sup>
<b>BARITE</b>					
E-Z-EM Canada Inc.	Brookfield, Colchester County	939	852	16	1,070,600 <sup>3</sup>
Total (barite)		939	852	16	1,070,600 <sup>3</sup>
<b>CLAY</b>					
Shaw Brick (a member of the Shaw Group Limited)	Lantz, Hants County Shubenacadie, Halifax County	16,800	15 241	2	0 <sup>5</sup>
<b>SHALE</b>					
Shaw Brick (a member of the Shaw Group Limited)	Milford, Hants County New Glasgow, Pictou County	7,200	6 532	2	0 <sup>5</sup>
Total (clay and shale)		24,000	21 773	4	0 <sup>5</sup>

Table 1.6. Continued.

COMPANY	LOCATION	PRODUCTION		TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROXIMATE \$VALUE <sup>2</sup>
		TONS	TONNES		
<b>SILICA SAND</b>					
Shaw Resources (a member of the Shaw Group Limited)	Nine Mile River, Hants County	49,664	45 055	6	2,000,000 <sup>3</sup>
Total (silica sand)		49,664	45 055	6	2,000,000 <sup>3</sup>
<b>DIMENSION STONE</b>					
Heritage Memorials Ltd. <sup>2</sup>	Quarry: Nictaux, Annapolis County (granite) Plant: Windsor, Hants County	1,011	917	21	
Wallace Quarries Ltd.	Quarry: Wallace, (Sandstone) Cumberland County	774	702	5	
Total (dimension stone)		1,785	1 619	26	374,000
<b>PEAT MOSS</b>					
Annapolis Valley Peat Moss Company	Berwick, Kings County	5,396	4 895	19	
Clare Organic Products Ltd. <sup>2</sup>	Meteghan Station, Digby County	1,124	1 020	10	
Total (peat moss)		6,520	5 915	29	1,319,000 <sup>3</sup>
<b>AGGREGATES</b>					
Crushed Stone	Various	7,482,106	6 788 000	350	33,939,000
Sand and Gravel	Various	4,891,646	4 438 000	290	17,751,000
Total (aggregates) <sup>6</sup>		12,373,320	11 225 000	640	51,690,000
<b>TOTAL FOR INDUSTRIAL MINERALS<sup>7</sup></b>		<b>21,772,000</b>	<b>19 751 000</b>	<b>1,550</b>	<b>186,522,000</b>

<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 transferred to the higher manufactured value (cement)

<sup>5</sup>value assigned to the higher manufactured valuation (bricks)

<sup>6</sup>for additional information see Table 1.8)

<sup>7</sup>excluding secondary mineral manufacturing (Table 1.7)

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

**Table 1.7.** Secondary mineral manufacturing for the calendar year 1996 (preliminary).

COMPANY	LOCATION	PRODUCTION		TOTAL NUMBER EMPLOYED <sup>1</sup>	APPROX. SVALUE <sup>2</sup>
		TONS	TONNES		
<b>CLAY PRODUCTS</b>					
Shaw Brick (a member of the Shaw Group Limited)	Lantz, Hants County	23,999	21 772	45	4,680,000
<b>PLASTER PRODUCTS</b>					
Domtar Gypsum	Windsor, Hants County	8,818	8 000	10	1,800,000
<b>PORTLAND CEMENT</b>					
Lafarge Canada Inc.	Brookfield, Colchester County	408,208	370 000	77	45,000,000
<b>TOTAL FOR SECONDARY MINERAL MANUFACTURING</b>				130	51,480,000
<sup>1</sup> total number of employees including office, clerical, supervisory, mining 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					

The Fundy Gypsum Company operates quarries and crushing plants in the Wentworth Creek and Miller Creek areas near Windsor, Hants County. In 1996, the company produced gypsum from its Miller Creek quarry and both gypsum and anhydrite from the Wentworth Creek quarry. Some of the Wentworth Creek ore is processed in the company's heavy media plant to separate anhydrite from gypsum.

The gypsum and anhydrite are transported by unit train to ship-loading facilities at Hantsport, a distance of 12 miles (19 km). These products are transported to wallboard and cement plants in the United States.

#### GEORGIA-PACIFIC CORPORATION

Manager: J. Graham  
 Address: P. O. Box 400  
 Port Hawksbury, N. S. B0E 2V0  
 Production: 991,512 tons (899 494 tonnes) of gypsum  
 Employees: 75

Georgia-Pacific Corporation operates a gypsum quarry at Sugar Camp, Inverness County. Overburden at the site is removed using a dragline and truck and shovels. The gypsum is drilled and blasted prior to being transported to the crusher by trucks. The crushed gypsum is then transported by truck to ship loading facilities at Point Tupper, Richmond County, a distance of 12 miles (19 km).

#### LITTLE NARROWS GYPSUM COMPANY LIMITED

Manager: Bruce Allan  
 Address: R. R. #1  
 Little Narrows, N. S. B0E 1T0  
 Production: 112,402 tons (101 970 tonnes) of anhydrite

903,097 tons (819 284 tonnes) of gypsum  
 Employees: 132

Little Narrows Gypsum Company Limited operates two gypsum quarries and one anhydrite quarry near Little Narrows, Victoria County. 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.

During the year, the Middle Shoal near New Campbellton, Victoria County, at the entrance of the Bras d'Or Lakes, was dredged to allow larger ships to access the Lakes.

#### NATIONAL GYPSUM (CANADA) LIMITED

Manager: Pat Mills  
 Address: P. O. Box 57  
 Milford, N. S. B0N 1Y0  
 Production: 3,559,960 tons (3 229 575 tonnes)  
 Employees: 103

National Gypsum (Canada) Limited operates the largest gypsum quarry in the province at East Milford, Halifax County. The gypsum is drilled and blasted and loaded onto trucks with hydraulic excavators and loaders. The gypsum is then transported by unit train from Milford to Wright's Cove, Dartmouth, a distance of 28 miles (45 km), where it is loaded onto ships for points in Canada and the United States.

#### NOVA CONSTRUCTION COMPANY LIMITED

President: J. Chisholm  
 Address: P. O. Box 1328  
 Antigonish, N. S. B2G 2L7

Production: 0 tons (0 tonnes) of gypsum  
Employees: 12 (when in production)

There was no production at this quarry at Brierly Brook, Antigonish County, in 1996.

### **Salt**

#### THE CANADIAN SALT COMPANY LIMITED

Manager: A. Davidson  
Address: P. O. Box 160  
Pugwash, N. S. B0K 1L0  
Production: 1,084,390 tons (983 752 tonnes) of salt  
Employees: 206

The Canadian Salt Company Limited mine is located at Pugwash, Cumberland County. The salt is mined by a room and pillar system of extraction, using diesel and electric drills, undercutters, loaders and trucks. Primary production during the year was from the 1000 foot level. Secondary production was from the 730 foot level and the 830 foot level.

The processing plant at the site produces industrial grades of salt, salt blocks for farm use and refined salt for domestic consumption. Transportation is either by road, rail or from the company owned ship-loading facility at Pugwash.

#### SIFTO CANADA INCORPORATED

Manager: D. Dickie  
Address: P. O. Box 550  
Amherst, N. S. B4H 4A1  
Production: 98,040 tons (88 941 tonnes) of salt  
Employees: 73

Salt has been produced from a solution salt mine at Nappan, Cumberland County, since 1947. Salt is mined by pumping water into underground wells where the salt is dissolved by the water and the resulting brine solution is then pumped back to the surface. The salt is then recovered from the brine in a processing plant, using a 'mechanical vapour recompression evaporating process' system.

During the year, salt was produced from the No. 7 and No. 8 brine wells.

### **Barite**

#### E-Z-EM CANADA INCORPORATED, NYSTONE DIVISION

Manager: V. Prostak  
Address: P. O. Box 69  
Debert, N. S. B0M 1G0  
Production: 939 tons (852 tonnes) of pharmaceutical grade barite  
Employees: 16

No mining took place at the barite deposit located 1 mile (1.6 km) northeast of Brookfield, Colchester County. During 1996, previously mined barite was transported from the stockpiles at the quarry to the company's plant at Debert where it was upgraded to a pharmaceutical quality product. Refined products are then transported to the parent company, E-Z-EM Corporation, New York, USA, for further processing and packaging.

### **Limestone and Dolomite**

#### LAFARGE CANADA INC.

Manager: J. Cross  
Address: P. O. Box 5  
Brookfield, N. S. B0N 1C0  
Production: 490,775 tons (445 228 tonnes) of limestone  
Employees: 11 (quarry) 77 (cement plant)

Lafarge Canada Inc. operates limestone quarries at the Brookfield plant site and at Manganese Mines, 6 miles (9 km) northeast of Truro. Their cement manufacturing plant is located 3 miles (5 km) west of Brookfield. The total production from the quarries is used to produce cement.

During 1996, mining operations were completed at Manganese Mines and the site was reclaimed.

#### MOSHER LIMESTONE COMPANY LIMITED

Manager: D. Mosher  
Address: P. O. Box 28  
Upper Musquodoboit, N. S. B0N 2M0  
Production: 50,485 tons (45 800 tonnes) of limestone  
Employees: 22

Mosher Limestone operates quarries near Upper Musquodoboit, Halifax County. The company produces agricultural grade dolomitic limestone in its grinding plant at Upper Musquodoboit. The product is bagged or supplied in bulk for distribution throughout the Atlantic Provinces. In 1996, the company began producing a pelletized limestone product for the domestic garden market.

**SHAW RESOURCES, A MEMBER OF THE SHAW GROUP LIMITED**

Manager: K. Hardie  
 Address: P. O. Box 60  
 Shubenacadie, N. S. B0N 2H0  
 Production: 0 tons (0 tonnes) of marble  
 Employees: 2 (when in production)

Shaw Resources produces marble intermittently from a quarry at Marble Mountain, Inverness County. This marble is used for brick manufacture and in landscaping.

**RIDGE BROKERS LIMITED**

Manager: A. Alward  
 Address: P. O. Box 59  
 Havelock, N. B. E0A 1W0  
 Production: 8,050 tons (7 303 tonnes) of limestone  
 Employees: 1

The company operates a small quarry at Southside, Antigonish Harbour, Antigonish County. No mining activity was recorded in 1996, other than shipping limestone from existing stockpiles.

**SCOTIA LIMESTONE LIMITED**

Manager: D. Mosher  
 Address: P. O. Box 28  
 Upper Musquodoboit, N. S. B0N 2M0  
 Production: 22,900 tons (20 775 tonnes) of limestone  
 Employees: 12

In 1996, Mosher Limestone Company Limited purchased the assets of the Kellys Cove dolomite quarry from Scotia Limestone. The mine produced an agricultural grade dolomite for domestic sale as well as a product for the offshore steel industry. Mining is conducted using a truck and loader operation.

**KELLY ROCK LIMITED**

Manager: D. MacKenna  
 Address: P. O. Box 1206

Sydney, N. S. B1P 6J9

Production: 118,913 tons (107 877 tonnes) of limestone  
 Employees: 17

The limestone quarry at Glen Morrison, Cape Breton County, began production in 1993. The company produces several products at the on-site milling facility. In 1996, the company completed construction of a secondary and tertiary processing plant and a large limestone storage facility. During the year, most of the production from this site was shipped to Point Aconi for use in the fluidized bed power generating station.

**SHAW BRICK, A MEMBER OF THE SHAW GROUP LIMITED**

Manager: B. Frizzell  
 Address: P. O. Box 2130  
 Lantz, N. S. B0N 1R0  
 Production: 23,999 tons (21 772 tonnes) of clay & shale  
 Employees: 4

Shaw Brick mines clay from pits at Lantz, Milford and Shubenacadie, all in Hants County, and shale from a quarry in 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**

Manager: K. Hardie  
 Address: P. O. Box 60  
 Shubenacadie, N. S. B0N 2H0  
 Production: 49,664 tons (45 005 tonnes) of silica sand  
 Employees: 6

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

***Dimension Stone***

**HERITAGE MEMORIALS LIMITED**

Manager: G. Nelson  
 Address: P. O. Box 308  
 Windsor, N. S. B0N 2T0  
 Production: 1,011 tons (917 tonnes) of granite  
 Employees: 21

The company periodically operates a small quarry at Nictaux West, Annapolis County. The grey granite is used as dimension stone at the company's memorial manufacturing plant at Windsor, Hants County.

#### WALLACE QUARRIES LIMITED

Manager: S. Flynn  
Address: P. O. Box 203  
Wallace, N. S. B0K 1Y0  
Production: 774 tons (702 tonnes) of building stone  
Employees: 5

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.

#### *Peat Moss*

#### ANNAPOLIS VALLEY PEAT MOSS COMPANY LIMITED

President: H. Endres  
Address: Berwick, N. S. B0P 1E0  
Production: 5,396 tons (4 895 tonnes) of peat moss  
Employees: 19 (some part time)

The company uses vacuum harvesters to recover agricultural peat from a 500 acre (200 ha) bog located

near Berwick, Kings County. Baled peat products are shipped to markets in Canada, the United States and Japan.

#### CLARE ORGANIC PRODUCTS LIMITED

Owner: Gerald Thimot  
Address: Box 174-A, Saulnierville  
Digby County, N. S. B0W 2Z0  
Production: 1,124 tons (1020 tonnes)  
Employees: 10 (some part time)

1996 was the first year of production for the company, which uses vacuum harvesters to recover agricultural peat from a 200 acre (81 ha) bog located near Meteghan Station, Digby County. The company has a contract to supply a major Maritime peat producer with baled peat destined for international markets.

#### *Aggregate Resources*

Production information for crushed stone, sand and gravel is summarized in Table 1.8.

Approximately 11 million tonnes of construction aggregates were produced in Nova Scotia in 1996. Twenty-six companies reported crushed stone production totalling 6.8 million tonnes while 46 producers reported sand and gravel production totalling 4.4 million tonnes. Close to 2 million tonnes of aggregate, almost all crushed stone, were exported in 1996.

Table 1.8. Aggregate materials production for the calendar year 1996.

COMPANY	LOCATION	PRODUCTION		NUMBER EMPLOYED <sup>1</sup>	APPROX. S VALUE <sup>2</sup>
		TONS	TONNES		
<b>CRUSHED STONE: 1996</b>					
1. Alva Construction Limited	Antigonish, Antigonish County	64,011	58 070	30	
2. Atlantic Explosives Limited	Upper Musquodoboit, Halifax County	19,841	18 000	2	
3. Canaan Aggregates (Shaw Resources)	New Canaan, Cumberland County	20,944	19 000	ie	
4. Chaisson Brothers	Cheticamp, Inverness County	6,614	6 000	ie	
5. Conrad Brothers Limited	Montague, Halifax County	859,682	779 898	45	
6. Coastal Construction Limited	North Sydney, Cape Breton County	35,047	31 794	4	
7. Dexter Construction Co. Ltd.	Bedford, Halifax County	213,830	193 985	ie	
8. Doug Burns Excavation Contr. Ltd.	Sydney, Cape Breton County	336,863	305 600	9	
9. Gateway Materials Limited	Kearney Lake Rd., Halifax County	491,130	445 550	16	
10. Kelli's Enterprises Ltd.	Antigonish, Antigonish County	25,503	23 136	ie	
11. Lafarge Construction Materials	Folly Lake, Cumberland County	264,552	240 000	15	
12. LeVatte Construction Co. Ltd.	Sydney, Cape Breton County	56,548	51 300	5	
13. L. M. Gallant Contracting Ltd.	Elmsdale, Hants County	298,031	270 372	9	
14. Martin Marietta Materials Canada Ltd.	Mulgrave, Guysborough County	1,895,846	1 719 900	56	
15. Mosher Limestone Company Limited	Upper Musquodoboit, Halifax County	30,237	27 431	2	
16. Muncieple Ready-Mix Limited	Sydney, Cape Breton County	163,918	148 705	24	
17. Nova Construction Company Limited	Antigonish, Antigonish County	283,291	257 000	ie	
18. NS Dept. of Agriculture & Marketing	Truro, Colechester County	11,092	10 063	n/a	
19. Parker Mountain Aggregates Ltd.	Deep Brook, Annapolis County	31,702	28 760	4	
20. Pictou County Aggregates	New Glasgow, Pictou County	37,348	33 882	17	
21. Rocky Lake Quarry Limited	Bedford, Halifax County	1,180,563	1 071 000	33	
22. South Shore Sand & Gravel Ltd.	Bridgewater, Lunenburg County	165,345	150 000	13	
23. Stanley J. Flynn Trucking Limited	Wallace, Cumberland County	3,333	3 024	1	
24. S. W. Weeks Construction Ltd.	New Glasgow, Pictou County	503,751	457 000	30	
25. Tidewater Construction Limited	Lower Sackville, Halifax County	453,045	411 000	30	
26. W. Eric Wheby Ltd.	Dartmouth, Halifax County	30,040	27 252	5	
<b>TOTAL CRUSHED STONE</b>		<b>7,482,106</b>	<b>6 787 722</b>	<b>350</b>	<b>33,938,610</b>

<sup>1</sup>Average number of people employed during production period<sup>2</sup>Estimate from Department of Natural Resources sources

n/a Not applicable; ie included elsewhere

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

Table 1.8. Aggregate materials production for the calendar year 1996 (con'td).

COMPANY	LOCATION	PRODUCTION		NUMBER EMPLOYED <sup>1</sup>	APPROX. \$VALUE <sup>2</sup>
		TONS	TONNES		
<b>SAND AND GRAVEL: 1996</b>					
1. Aberdeen Paving Limited	Halifax, Halifax County	209,534	190 088	38	
2. Alva Construction Limited	Antigonish, Antigonish County	88,807	80 565	30	
3. Antigonish Ready-Mix Limited	James River, Antigonish County	5,512	5 000	3	
4. Atlantic Paving Limited	Saulnierville, Digby County	5,205	4 722	2	
5. Budget Paving Ltd.	Liverpool, Queens County	7,441	6 750	3	
6. Canaan Aggregate (Shaw Resources)	New Cannan, Cumberland County	108,937	98 827	3	
7. Carson Enterprises Limited	West River, Antigonish County	3,858	3 500	1	
8. Chiasson Brothers Limited	Cheticamp, Inverness County	9,370	8 500	3	
9. Cumberland Aggregates Ltd.	Amherst, Cumberland County	95,900	87 000	8	
10. C. A. Williams & Sons Limited	Windsor, Hants County	53,165	48 231	6	
11. Deveau, Willard	Metegan River, Digby County	7,441	6 750	1	
12. Dexter Construction Co. Ltd.	Bedford, Halifax County	293,657	266 404	20	
13. Dillman Enterprises Limited	Shubenacadie, Colchester County	354,941	322 000	24	
14. D. W. Matheson & Sons Ltd.	Little Narrows, Victoria County	22,046	20 000	2	
15. Earle Toole Trucking Ltd.	Truro, Colchester County	13,228	12 000	2	
16. Hecket Canada Ltd. <sup>3</sup>	Sydney, Cape Breton County	50,706	46 000	5	
17. H. W. Phillips and Son Limited	Mira Gut, Cape Breton County	39,435	35 775	4	
18. Ideal Concrete Limited	Port Hood, Inverness County	44,643	40 500	2	
19. J. P. MacInnis Trucking Limited	Whycocomagh, Inverness County	68,811	62 425	2	
20. Keddy Aggregate (Shaw Resources)	Coldbrook, Kings County	363,759	330 000	5	
21. Kell's Enterprises Ltd.	Antigonish, Antigonish County	10,042	9 110	2	
22. Kel-Ann Enterprises Ltd.	Waterville, Hants County	73,956	67 092	5	
23. Kimberly Clark Worldwide, Inc.	New Glasgow, Pictou County	136,479	123 813	n/a	
24. Lafarge Construction Materials	Folly Lake, Cumberland County	240,188	217 897	ie	
25. Lafarge Construction Materials	Plymouth, Yarmouth County	65,900	59 784	8	
26. Malcom S. MacDonald Co. Ltd.	Sydney River, Cape Breton County	325,179	295 000	10	
27. Maurice's Ready-Mix Limited	Kentville, Kings County	83,137	75 421	3	
28. Meadows Sand & Gravel Co. Ltd.	Sydney, Cape Breton County	23,057	20 917	3	
29. Miller's Real Estate (1990) Limited	Truro, Colchester County	69,059	62 650	5	
30. Mosher and Rawling Ent. Ltd.	Liverpool, Queens County	27,558	25 000	5	
31. Municipal Ready-Mix Ltd.	Sydney, Cape Breton County	159,571	144 762	ie	

Table 1.8. Aggregate materials production for the calendar year 1996 (con'td)

COMPANY	LOCATION	PRODUCTION		NUMBER EMPLOYED <sup>1</sup>	APPROX. S VALUE <sup>2</sup>
		TONS	TONNES		
32. North River Sand & Gravel Ltd.	Truro, Colchester County	1,102	1 000	1	
33. Nova Construction Company Limited	Antigonish, Antigonish County	399,584	362 500	14	
34. Nova Scotia Sand & Gravel (Shaw Resources)	Shubenacadie, Hants County	81,570	74 000	6	
35. Pictou County Aggregates	New Glasgow, Pictou County	12,394	11 244	ie	
36. Pictou West Crushing Limited	Scottdburn, Pictou County	18,188	16 500	2	
37. R. B. Ferguson Construction	Marion Bridge, Cape Breton County	44,739	40 587	5	
38. Standard Paving Maritime Ltd.	Halifax, Halifax County	224,610	203 765	26	
39. Stanley J. Flynn Trucking Limited	Wallace, Cumberland County	282	256	ie	
40. S. W. Weeks Construction Limited	New Glasgow, Pictou County	125,662	114 000	ie	
41. Tidewater Construction Limited	Lower Sackville, Halifax County	165,345	150 000	ie	
42. Warren Maritimes Ltd.	New Glasgow, Pictou County	123,914	112 414	10	
43. Will-Kare Paving & Contracting Ltd.	Truro, Colchester County	275,577	250 002	13	
44. W. C. Hall & Sons Excavating Ltd.	Cornwallis, Annapolis County	14,330	13 000	3	
45. W. K. Sharpe & Sons Contracting Ltd.	Avonport, Kings County	9,921	9 000	4	
	<b>SUB-TOTAL</b>	<b>4,557,736</b>	<b>4 134 751</b>	<b>289</b>	<b>16,539,004</b>
<b>OTHER (mainly Nova Scotia Department of Transportation &amp; Communications)</b>		<b>333,910</b>	<b>302 921</b>	<b>n/a</b>	<b>1,211,684</b>
	<b>TOTAL SAND AND GRAVEL</b>	<b>4,891,646</b>	<b>4 437 672</b>	<b>289</b>	<b>17,750,688</b>
	<b>TOTAL FOR AGGREGATE MATERIALS PRODUCTION</b>	<b>12,373,752</b>	<b>11 225 394</b>	<b>639</b>	<b>51,689,298</b>

<sup>1</sup> Average number of people employed during production period<sup>2</sup> Estimate from Department of Natural Resources sources<sup>3</sup> Slag from Sydney Steel

n/a Not applicable; ie included elsewhere

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