Appendix 1

Mining Industry Activity in Nova Scotia, 1998

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 indicate exploration expenditures in 1998 were down moderately from 1997 (Table 1.1), as was diamond-drilling. Capital expenditures at existing mines were down moderately in 1998 from 1997 while repair and maintenance expenditures were up moderately.

Mining Leases

There was one Mining Lease during the year. In November, Lynx Minerals Inc. was issued a Mining Lease for claims held over the Scotsville barite deposit in Inverness County. A Mining Lease renewal was also issued in September to Shaw Group Limited for silica at Nine Mile River, Hants County.

Mining Permits

The department issued one Mining Permit during the year. Tangier Limited Partnership was issued a Mining Permit to permit the extraction of gold and associated minerals at Tangier, Halifax County.

Production Information from Mines, Quarries and Other Operations

In 1998, the estimated total value of Nova Scotia's mineral production, including secondary mineral processing and crude petroleum, totalled $473 million (Fig. 1.1), a decrease of 10% from the year before. Excluding petroleum, the total value of Nova Scotia's mineral production totalled $352 million, down 14% from 1997's figure of $407 million. This decrease was due largely to lower outputs of salt, coal and construction aggregates. Employment in Nova Scotia's mineral industry totalled roughly 3700 persons (Fig. 1.2), a 3% decrease from the year before (Fig. 1.3).

Table 1.1. Mining industry expenditures in 1997 and 1998.

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>1997</th>
<th>1998</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Exploration Expenditures (field plus overhead)²</td>
<td>$6,726,000</td>
<td>$4,835,000</td>
</tr>
<tr>
<td>Exploration diamond-drilling²</td>
<td>26,487 m</td>
<td>20,964 m</td>
</tr>
<tr>
<td>Exploration drilling - other²</td>
<td>1,440 m</td>
<td>879 m</td>
</tr>
<tr>
<td>Mineral Development Expenditures (field plus overhead)</td>
<td>$5,483,000</td>
<td>$2,713,000</td>
</tr>
<tr>
<td>Capital and Repair Expenditures at Mining Establishments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Expenditures</td>
<td>$33,927,505</td>
<td>$27,604,870</td>
</tr>
<tr>
<td>Repair and Maintenance Expenditures</td>
<td>$25,048,754</td>
<td>$35,415,668</td>
</tr>
</tbody>
</table>

¹preliminary
²includes deposit appraisal
### Metal Mines and Gold Mines

#### Metal Mines

There were no producing metal mines in 1998.

#### Gold Mines

**TANGIER LIMITED PARTNERSHIP**

Manager: Peter Atkinson, General Manager  
Address: P. O. Box 8  
Tangier, N. S. B0J 3H0  
Production: 49 troy oz. (1524 g)  
Employees: 35

In 1998, Tangier Limited Partnership re-activated underground mining operations at the Tangier site. During the months of November and December, 309 tonnes of ore were mined from the Whin vein.
### Table 1.2. Summary of Nova Scotia mineral production, 1997 and 1998.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>1997 VALUE '000$</th>
<th>1997 EMPLOYMENT*</th>
<th>1998 VALUE '000$</th>
<th>1998 EMPLOYMENT*</th>
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</thead>
<tbody>
<tr>
<td><strong>METALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>Total metals</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td><strong>INDUSTRIAL MINERALS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Non-Metals)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anhydrite</td>
<td>2,148</td>
<td>1,733</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barite</td>
<td><strong>731</strong></td>
<td><strong>751</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gypsum¹</td>
<td>72,655</td>
<td>71,703</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limestone and Dolomite</td>
<td>4,776</td>
<td>2,824</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peat</td>
<td><strong>1,491</strong></td>
<td><strong>1,713</strong></td>
<td></td>
<td></td>
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<tr>
<td>Salt</td>
<td><strong>68,680</strong></td>
<td><strong>51,241</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silica</td>
<td><strong>2,600</strong></td>
<td><strong>2,400</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Non-Metals</td>
<td>153,081</td>
<td>867</td>
<td>132,365</td>
<td>872</td>
</tr>
<tr>
<td>(Structural Materials)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimension Stone</td>
<td>303</td>
<td>305</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cement</td>
<td><strong>32,260</strong></td>
<td><strong>35,065</strong></td>
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<td></td>
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<tr>
<td>Clay Products</td>
<td><strong>5,000</strong></td>
<td><strong>5,600</strong></td>
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<tr>
<td>Crushed Stone</td>
<td>43,575</td>
<td>40,445</td>
<td></td>
<td></td>
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<tr>
<td>Sand &amp; Gravel</td>
<td>14,032</td>
<td>11,164</td>
<td></td>
<td></td>
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<tr>
<td>Total Structural Materials</td>
<td>95,170</td>
<td>700</td>
<td>92,579</td>
<td>654</td>
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<tr>
<td>Total Industrial Minerals</td>
<td>248,251</td>
<td>1,570</td>
<td>224,944</td>
<td>1,526</td>
</tr>
<tr>
<td><strong>FUELS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal</td>
<td>158,949</td>
<td>1,868</td>
<td>127,142</td>
<td>1,790</td>
</tr>
<tr>
<td>Petroleum - Crude</td>
<td>117,450</td>
<td>340</td>
<td>120,830</td>
<td>340</td>
</tr>
<tr>
<td>Total Fuels</td>
<td>276,399</td>
<td>2,208</td>
<td>247,970</td>
<td>2,130</td>
</tr>
<tr>
<td><strong>TOTAL MINERAL PRODUCTION</strong></td>
<td>524,560</td>
<td>3,800</td>
<td>472,935</td>
<td>3,690</td>
</tr>
<tr>
<td><strong>CHANGE FROM PREVIOUS YEAR</strong></td>
<td><strong>-16%</strong></td>
<td><strong>-5%</strong></td>
<td><strong>-10%</strong></td>
<td><strong>-3%</strong></td>
</tr>
</tbody>
</table>

¹ Estimated from Department of Natural Resources sources  
² There were no metal mines operating in 1997  
³ Does not include the value of gypsum quarried for plaster products  
⁴ 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>
<thead>
<tr>
<th>COMPANY</th>
<th>MINE NAME</th>
<th>LOCATION</th>
<th>PRODUCTION</th>
<th></th>
<th>TOTAL NUMBER EMPLOYED</th>
<th>APPROX. VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>TONS</td>
<td>TONNES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNDERGROUND MINING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cape Breton Development Corp.</td>
<td>Prince Mine</td>
<td>Point Aconi, Cape Breton</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(CBDC)</td>
<td></td>
<td>County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phalen Mine</td>
<td>Lingan, Cape Breton County</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (underground)</td>
<td></td>
<td></td>
<td>1,888,090</td>
<td>1,712,872</td>
<td>1,658</td>
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</tr>
<tr>
<td>OPEN PIT MINING</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brogan Mining Company Limited</td>
<td>Sullivan Creek and Toronto Rd Mines</td>
<td>Sullivan Creek, Cape Breton County</td>
<td>48,232</td>
<td>43,756</td>
<td>20</td>
<td></td>
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<tr>
<td>Cape Crashing Company Limited</td>
<td>Merrit Point Mine</td>
<td>North Sydney, Cape Breton County</td>
<td>2,646</td>
<td>2,400</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Evans Coal Mines Limited</td>
<td>St. Rose Mine</td>
<td>St. Rose, Inverness County</td>
<td>106,134</td>
<td>96,254</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Pioneer Coal Limited</td>
<td>Stellarton Mine</td>
<td>Stellarton, Pictou County</td>
<td>243,157</td>
<td>220,591</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>Thorburn Mining Limited</td>
<td>Thorburn Mine</td>
<td>Thorburn, Pictou County</td>
<td>56,118</td>
<td>50,910</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Total (open pit)</td>
<td></td>
<td></td>
<td>456,287</td>
<td>413,941</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>TOTAL FOR ALL COAL PRODUCERS</td>
<td></td>
<td></td>
<td>2,344,372</td>
<td>2,126,809</td>
<td>1,790</td>
<td>127,142,000</td>
</tr>
</tbody>
</table>

*personnel employed in clerical, supervisory, etc. positions as well as mining personnel
Estimated from Nova Scotia Department of Natural Resources sources
NOTE: Production represents shipments; numbers may not add to totals due to rounding
Includes secondary mineral processing where applicable

Figure 1.3. Historical trend of the value of mineral production in Nova Scotia, 1985-1998.

**Coal Mining Operations**

During 1998, there were two underground coal mines and six surface coal mines operating in the province. Table 1.3 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): B. MacDonald, General Manager, Phalen Colliery  
T. Isaacs, General Manager, Prince Colliery

Address:  P. O. Box 2500  
Sydney, N. S. B1P 6K9

Raw Coal  
Production: 1,942,963 tons (1,762,645 tonnes)  
Employees: 1,658

The Cape Breton Development Corporation is a federal Crown Corporation that operated two underground coal mines in Cape Breton County during 1998.

**Phalen Colliery**

Raw Coal  
Production: 1,089,520 tons (988,406 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. 3 Center and No. 8 East longwall panels. A roof fall occurred on the main gate of 8 East wall in September 1998, halting production for six weeks.

**Prince Mine**

Raw Coal  
Production: 853,444 tons (774,239 tonnes)
Table 1.4. Industrial minerals production for the calendar year 1998.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>LOCATION</th>
<th>PRODUCTION</th>
<th>TONS</th>
<th>TONNES</th>
<th>TOTAL NUMBER EMPLOYED</th>
<th>APPROXIMATE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GYPSUM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundy Gypsum Company</td>
<td>Miller Creek and Wentworth Road, Hants County</td>
<td>1,839,417</td>
<td>1,608,208</td>
<td>166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia-Pacific Canada, Inc.</td>
<td>Sugar Camp, Inverness County</td>
<td>1,343,143</td>
<td>1,218,491</td>
<td>98</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little Narrows Gypsum Company</td>
<td>Little Narrows, Victoria County</td>
<td>1,090,527</td>
<td>989,383</td>
<td>104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Gypsum (Canada) Limited</td>
<td>East Milford, Halifax County</td>
<td>3,254,288</td>
<td>2,952,269</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (gypsum)</td>
<td></td>
<td>7,527,500</td>
<td>6,828,000</td>
<td>468</td>
<td></td>
<td>71,703,000</td>
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<tr>
<td><strong>ANHYDRITE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundy Gypsum Company</td>
<td>Miller Creek and Wentworth Road, Hants County</td>
<td>69,459</td>
<td>63,049</td>
<td>See gypsum</td>
<td></td>
<td></td>
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<tr>
<td>Little Narrows Gypsum Company</td>
<td>Little Narrows, Victoria County</td>
<td>84,562</td>
<td>76,714</td>
<td>See gypsum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (anhydrite)</td>
<td></td>
<td>154,021</td>
<td>139,763</td>
<td>1,723,000</td>
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<tr>
<td><strong>SALT</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Canadian Salt Company Limited</td>
<td>Pugwash, Cumberland County</td>
<td>836,351</td>
<td>758,738</td>
<td>210</td>
<td></td>
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<tr>
<td>Sifto Canada Inc.</td>
<td>Nappan, Cumberland County</td>
<td>97,810</td>
<td>88,733</td>
<td>73</td>
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<tr>
<td>Total (salt)</td>
<td></td>
<td>934,161</td>
<td>847,471</td>
<td>283</td>
<td></td>
<td>51,241,000</td>
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<tr>
<td><strong>LIMESTONE AND DOLOMITE</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lafarge Canada Inc.</td>
<td>Brookfield, Colchester County</td>
<td>543,434</td>
<td>493,000</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mosher Limestone Company Limited</td>
<td>Upper Musquodoboit, Halifax County</td>
<td>80,328</td>
<td>72,873</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nova Scotia Power Incorporated</td>
<td>Glen Morrison, Cape Breton County</td>
<td>98,847</td>
<td>89,673</td>
<td>14</td>
<td></td>
<td></td>
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<tr>
<td>Ridge Brokiers Limited</td>
<td>Southside Harbour, Antigonish County</td>
<td>5,989</td>
<td>5,433</td>
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<tr>
<td>Scotia Limestone Limited</td>
<td>Kelleys Cove, Victoria County</td>
<td>12,114</td>
<td>10,990</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (limestone and dolomite)</td>
<td></td>
<td>740,711</td>
<td>671,569</td>
<td>46</td>
<td></td>
<td>2,824,000</td>
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<tr>
<td><strong>BARITE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-Z-EM Canada Inc.</td>
<td>Brookfield, Colchester County</td>
<td>659</td>
<td>598</td>
<td>16</td>
<td>751,500</td>
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<tr>
<td>Total (barite)</td>
<td></td>
<td>659</td>
<td>598</td>
<td>16</td>
<td>751,500</td>
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</tr>
<tr>
<td><strong>CLAY</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Shaw Brick (a member of the Shaw Group Limited)</td>
<td>Lante, Hants County</td>
<td>18,194</td>
<td>16,514</td>
<td>See clay products</td>
<td>0⁴</td>
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</tr>
<tr>
<td>Shubenacadie, Halifax County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SIELE</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Shaw Brick (a member of the Shaw Group Limited)</td>
<td>Milford, Hants County</td>
<td>7,800</td>
<td>7,079</td>
<td>See clay products</td>
<td>0⁵</td>
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<tr>
<td>New Glasgow, Pictou County</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (clay and shale)</td>
<td></td>
<td>25,999</td>
<td>23,580</td>
<td>See clay products</td>
<td>0⁵</td>
<td></td>
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</tbody>
</table>
Table 1.4. Continued.

<table>
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<tr>
<th>COMPANY</th>
<th>LOCATION</th>
<th>PRODUCTION</th>
<th>TOTAL NUMBER EMPLOYED</th>
<th>APPROXIMATE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TONS</td>
<td>TONNES</td>
<td></td>
</tr>
<tr>
<td><strong>SILICA SAND</strong></td>
<td></td>
<td>61,729</td>
<td>56,000</td>
<td>6</td>
</tr>
<tr>
<td>Shaw Resources (a member of the Shaw Group Limited)</td>
<td>Nine Mile River, Hants County</td>
<td>61,729</td>
<td>56,000</td>
<td>6</td>
</tr>
<tr>
<td>Total (silica sand)</td>
<td></td>
<td>61,729</td>
<td>56,000</td>
<td>6</td>
</tr>
<tr>
<td><strong>DIMENSION STONE</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage Memorials Ltd.²</td>
<td>Quarry: Nictaux, Annapolis County (granite) Plant: Windsor, Hants County</td>
<td>1,854</td>
<td>1,682</td>
<td>20</td>
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<tr>
<td>Wallace Quarries Ltd.</td>
<td>Quarry: Wallace, (Sandstone) Cumberland County</td>
<td>448</td>
<td>406</td>
<td>5</td>
</tr>
<tr>
<td>Total (dimension stone)</td>
<td></td>
<td>2,302</td>
<td>2,088</td>
<td>25</td>
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<tr>
<td><strong>PEAT MOSS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annapolis Valley Peat Moss Company²</td>
<td>Berwick, Kings County</td>
<td>4,507</td>
<td>4,089</td>
<td>20</td>
</tr>
<tr>
<td>Clare Organic Products Ltd.²</td>
<td>Meteghan Station, Digby County</td>
<td>3,900</td>
<td>3,538</td>
<td>15</td>
</tr>
<tr>
<td>McDonald Peat Moss Limited²</td>
<td>Kennetcook, Hants County</td>
<td>1,752</td>
<td>1,589</td>
<td>18</td>
</tr>
<tr>
<td>Total (peat moss)</td>
<td></td>
<td>8,407</td>
<td>9,216</td>
<td>53</td>
</tr>
<tr>
<td><strong>AGGREGATES</strong></td>
<td></td>
<td>3,076,500</td>
<td>2,791,000</td>
<td>354</td>
</tr>
<tr>
<td>Crushed Stone</td>
<td>Various</td>
<td>8,916,505</td>
<td>8,089,000</td>
<td>153</td>
</tr>
<tr>
<td>Sand and Gravel</td>
<td>Various</td>
<td>3,076,500</td>
<td>2,791,000</td>
<td>354</td>
</tr>
<tr>
<td>Total (aggregates)</td>
<td></td>
<td>11,993,000</td>
<td>10,080,000</td>
<td>507</td>
</tr>
<tr>
<td><strong>TOTAL FOR INDUSTRIAL MINERALS³</strong></td>
<td></td>
<td>21,449,000</td>
<td>19,458,000</td>
<td>1,400</td>
</tr>
</tbody>
</table>

¹Total employees: mining, production, clerical, supervisory, etc.
²Estimate from Nova Scotia Department of Natural Resources sources
³Processed or manufactured value
⁴Does not include the value of Lafarge Canada Inc, production which value is transferred to the higher manufactured value (cement)
⁵Value assigned to the higher manufactured valuation (bricks)
⁶Excluding secondary mineral manufacturing (Table 1.7)
Note: production represents shipments; numbers may not add to totals due to rounding
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 1998, coal was mined from the No. 15 West and No. 9 East longwall panels. Development work continued on the No. 1 North longwall panel.

**Surface Coal Mines**

**EVANS COAL MINES LIMITED**

Manager: E. Fraser  
Address: R. R. #1  
Inverness, N. S. B0E 1N0  
Production: 106,134 tons (96,284 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. 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. During the year, the Duggan Mountain Road was reinstated to its original location upon completion of mining and reclamation in the area.

**PIONEER COAL LIMITED**

Manager: C. Chisholm  
Address: P. O. Box 929  
Westville, N. S. B0K 2A0  
Production: 243,157 tons (220,591 tonnes) of coal  
Employees: 58
Table 1.5. Secondary mineral manufacturing for the calendar year 1998.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>LOCATION</th>
<th>PRODUCTION</th>
<th>TOTAL NUMBER EMPLOYED</th>
<th>APPROXIM. VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shaw Brick (a member of the Shaw Group Limited)</td>
<td>Lantz, Hans County</td>
<td>26,000</td>
<td>23,587</td>
<td>45</td>
</tr>
<tr>
<td>Portland Cement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lafarge Canada Inc.</td>
<td>Brookfield, Colchester County</td>
<td>324,076</td>
<td>294,000</td>
<td>77</td>
</tr>
<tr>
<td>Total for Secondary Mineral Manufacturing</td>
<td></td>
<td></td>
<td>122</td>
<td>40,665,000</td>
</tr>
</tbody>
</table>

1Total number of employees including office, clerical, supervisory, mining and production.
2Estimated from Nova Scotia Department of Natural Resources sources.

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

Table 1.6. Metallic mineral production for the calendar year 1998.

<table>
<thead>
<tr>
<th>COMPANY</th>
<th>LOCATION</th>
<th>PRODUCTION</th>
<th>TOTAL NUMBER EMPLOYED</th>
<th>APPROXIMATE VALUE (S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tangier Limited Partnership</td>
<td>Tangier, Halifax County</td>
<td>49 troy ozs. 1524 g</td>
<td>35</td>
<td>21,400</td>
</tr>
<tr>
<td>Total for Metallic Mineral Production</td>
<td></td>
<td></td>
<td>35</td>
<td>21,400</td>
</tr>
</tbody>
</table>

1Operated for part of year only.
2Total number of employees including office, clerical, supervisory, mining and production.
3Value based on average annual metal price times weight. Also includes value of approximately 2 troy ozs. of bi-product silver.

Note: Production represents shipments; sum of components may not add to totals due to rounding.

Pioneer Coal began mining coal from the Foord Seam at the Stellarton mine site in March 1996, 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 and the Thorburn Mine before being shipped to the Trenton generating station.

THORBURN MINING LIMITED

Manager: C. Chisholm
Address: P. O. Box 929
Westville, N. S. B0K 2A0
Production: 56,118 tons (50,910 tonnes) of coal
Employees: 23

Mining at the Thorburn site began in June 1995. In 1998, the mine operated in January, February, June to October inclusive and December.

Coal was extracted from the McBean Seam crown pillar and from pillars remaining from the former underground mining operations. During the year,
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. Georgia-Pacific Corp.
12-13. Little Narrows Gypsum Co. Ltd.
14. Tusket Mining Incorporated

LIMESTONE AND DOLOMITE
15. Lafarge Canada Inc.
17. Mosher Limestone Co. Ltd.
18. Ridge Brokers Ltd.
19. Scotia Limestone Ltd.
20. Shaw Resources, a member of the Shaw Group Limited

SALT
21. SiPe Canada Inc.
22. The Canadian Salt Co. Ltd.

SILICA SAND
23. Shaw Resources, a member of the Shaw Group Limited

DIMENSION STONE
24. Heritage Memorials Ltd.
25. Lange Natural Rock and Stone Supplies
26. Scotia Slate Products Ltd.
27. Wallace Quarries Ltd.

PEAT MOSS
28. Annapolis Valley Peat Moss Co.
29. Clare Organic Products Limited
30. MacDonald Peat Moss Limited

GOLD
31. Tangier Limited Partnership

Figure 1.5. Location of industrial mineral and gold operations in Nova Scotia, 1998.
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 265
North Sydney, N. S. B2A 3M3
Production: 2,646 tons (2,400 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: 48,232 tons (43,756 tonnes) of coal
Employees: 20

During the year, Brogan Mining Limited completed surface mining operations at the Toronto Road mine site. Coal was recovered from both the Sydney Main and Stubbert coal seams. The coal was blended with coal mined from a bulk sample extracted from the Little Pond area. Mining is carried out using bulldozers, hydraulic excavators and dump trucks. The company conducted progressive reclamation of the mined areas during the year.

The company also operated a surface coal mine at Sullivans Creek, Cape Breton County, during 1998. Coal from both operations was blended to produce a saleable product.

BLACK GOLD ENTERPRISES LIMITED

Manager: M. McCormick
Address: R. R. #1
Springhill, N. S. B0M 1X0
Production: 0
Employees: 0

There was no production at the mine in 1998.

Industrial Minerals Mining

Gypsum and Anhydrite

GEORGIA-PACIFIC CANADA INCORPORATED

Manager: D. Duncan
Address: P. O. Box 406
Port Hawkesbury, N. S. B0E 2V0
Production: 0 tons (0 tonnes) of gypsum
Employees: 0

There was no production at the MacKay Settlement mine in 1998.

FUNDY GYPSUM COMPANY

Manager: B. MacMillon
Address: P. O. Box 400
Windsor, N. S. B0N 2T0
Production: 69,499 tons (63,049 tonnes) of anhydrite
1,839,417 tons (1,668,708 tonnes) of gypsum
Employees: 166

The Fundy Gypsum Company operates quarries and crushing plants in the Wentworth Road and Miller Creek areas near Windsor, Hants County. In 1998, the company produced gypsum from its Miller Creek quarry and both gypsum and anhydrite from the Wentworth quarry. The Wentworth ore is processed in the company’s heavy media plant to separate anhydrite from gypsum.

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

GEORGIA-PACIFIC CANADA INC.

Manager: R. L. Fraser
Address: P. O. Box 400
Port Hawkesbury, N. S. B0E 2V0
Production: 1,343,143 tons (1,218,491 tonnes) of gypsum
Employees: 98

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 19 km.

LITTLE NARROWS GYPSUM COMPANY
Manager: Bruce Allen
Address: R. R. #1
Little Narrows, N. S. B0E 1T0
Production: 63,049 tons (76,714 tonnes) of anhydrite 1,090,597 tons (989,383 tonnes) of gypsum
Employees: 104

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.

NATIONAL GYPSUM (CANADA) LIMITED
Manager: Pat Mills
Address: P. O. Box 57
Milford, N. S. B0N 1Y0
Production: 3,254,286 tons (2,952,269 tonnes)
Employees: 100

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 45 km, where it is loaded onto ships for points in Canada and the United States.

TUSKET MINING INCORPORATED
Manager: C. E. Bain
Address: P. O. Box 48100
Bedford, N. S. B4A 3Z2
Production: 9 tons (0 tonnes)

Production in 1998 was limited to a 10,000 tonne sample at the Murchyville Mine, Halifax County. There was no product shipped in 1998.

Salt

THE CANADIAN SALT COMPANY LIMITED
Manager: A. Davidson
Address: P. O. Box 166
Pugwash, N. S. B0K 1L0
Production: 836,351 tons (758,733 tonnes) of salt
Employees: 210

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.

SIFT CANADA INCORPORATED
Manager: D. Dickie
Address: P. O. Box 550
Amherst, N. S. B4H 1A1
Production: 97,810 tons (88,733 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 vapor 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: 659 tons (598 tonnes) of pharmaceutical grade barite
Employees: 16

The barite deposit is located 1.6 km northeast of Brookfield, Colchester County. During 1997, the surface mine was dewatered and approximately 5,425 tons of ore were mined from the pit. All of the material that had previously been mined and stockpiled
at the mine was trucked 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: 543,434 tons (493 000 tonnes) of limestone  
Employees: 11 (quarry) 77 (cement plant)

Lafarge Canada Inc. operates a limestone quarry at their Brookfield cement manufacturing plant, located 5 km west of Brookfield. The total production from the quarry is used to produce cement.

**MOSHER LIMESTONE COMPANY LIMITED**

Manager: D. Mosher  
Address: P. O. Box 28  
Upper Musquodoboit, N. S. B0N 2M0  
Production: 80,328 tons (72 873 tonnes) of limestone  
Employees: 17

Mosher Limestone operates quarries near Upper Musquodoboit, Halifax County. The company produces agricultural grade dolomitic limestone at 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

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: 5,989 tons (5 433 tonnes) of limestone  
Employees: 1

The company operates a small quarry at Southside, Antigonish Harbour, Antigonish County. No mining took place at the site in 1998. Production came from existing inventory.

**SCOTIA LIMESTONE LIMITED**

Manager: D. Mosher  
Address: P. O. Box 28  
Upper Musquodoboit, N. S. B0N 2M0  
Production: 12,114 tons (10 990 tonnes) of dolomite  
Employees: 3

In 1996, Mosher Limestone Company Limited purchased the assets of the Kelly’s Cove dolomite quarry from Scotia Limestone. The mine produced an agricultural grade dolomitic limestone for domestic sale as well as a product for the offshore steel industry. No mining took place at the site during 1998; all production came from existing inventory.

**NOVA SCOTIA POWER INCORPORATED (OPERATED BY KELLY ROCK LIMITED)**

Manager: D. MacKenna  
Address: P. O. Box 1206  
Sydney, N. S. B1P 6J9  
Production: 98,847 tons (89 673 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 1998, most of the production from this site was shipped to Point Aconi for use in the fluidized bed power generating station.

**Clay**

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

Manager: B. Frizzell  
Address: P. O. Box 2130  
Lantz, N. S. B0N 1R0  
Production: 25,999 tons (23 586 tonnes) of clay & shale  
Employees: 4
Shaw Brick mines clay from pits at Lantz, Milford and Shubenacadie, all in Hants County, and shale from quarries located in Hardwood Lands, 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**

Manager: K. Hardie  
Address: P. O. Box 60  
Shubenacadie, N. S. B0N 2H0  
Production: 61,729 tons (56 000 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: 1,854 tons (1 682 tonnes) of granite (estimated)  
Employees: 20

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: 448 tons (406 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.

**OTHER**

Two other stone operations, for which production information was not available at the time of publication, were Scotia State Products Ltd. and Lange Natural Rock and Stone Supplies. Scotia Slate operates a small slate quarry near East Gore, Hants County, while Lange operates a small granite quarry near Parkdale, Lunenburg County.

**Peat Moss**

**ANnapolis VALLEY PEAT MOSS COMPANY LIMITED**

President: H. Endres  
Address: Berwick, N. S. B0P 1E0  
Production: 4,507 tons (4 089 tonnes) of peat moss (estimated)  
Employees: 20 (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: 3,900 tons (3 538 tonnes) of peat moss (estimated)  
Employees: 15 (some part time)

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.

**MACDONALD PEAT MOSS LIMITED**

Owner: Lameque Quality Group Ltd.  
Address: 86 Tourbe Street  
Lameque, N. B. E8T 1A3  
Production: 1,752 tons (1 589 tonnes) of peat moss (estimated)  
Employees: 18
MacDonald Peat Moss Limited, a wholly-owned subsidiary of New Brunswick’s Lameque Quality Group Ltd., has lease rights to a 1700 acre (688 ha) peat bog located on Crown land, approximately 12 km west of Kentville, Hants County. 1998 was the first year of production for the company, which exports baled peat to international markets.

**Aggregate Resources**

Approximately 11 million tonnes of construction aggregates were produced in Nova Scotia in 1998. Twenty-four companies reported crushed stone production totalling 8.1 million tonnes while 47 producers reported sand and gravel production totalling 2.8 million tonnes. The majority of aggregate was consumed within the province, with approximately 2 million tonnes exported.

Two companies eclipsed the 1 million tonne mark for crushed stone production in 1998. Rocky Lake Quarry Limited of Bedford, Nova Scotia, reported shipments of 1.4 million tonnes while Martin Marietta Materials Canada Ltd. reported just over 2.0 million tonnes shipped. Martin Marietta’s Porcupine Mountain operation was the country’s seventh largest in 1998.