Stone

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The volume of all types of stone shipped in Canada in 1994 increased approximately 2%, based on preliminary figures. Characterized by end use, production and shipments included dimension stone, chemical and metallurgical grades of stone, and pulverized and crushed stone. The reported value of shipments decreased in 1994 by about 2% to \$515 million, based on a comparison with final figures for 1993.

Additional detailed information, particularly on regular aggregates, including crushed stone and sand and gravel, as well as on numerous lightweight aggregates, is included in a separate chapter entitled *Mineral Aggregates*.

Dimension stone relates to a variety of rock types that may be cut, shaped or simply selected for a broad range of construction/engineering, architectural or monumental requirements. The types of stone available are dependent on local geology, but mainly include granite, limestone, marble, sandstone and slate, as summarized in Tables 3 to 8 inclusive. The term "granite," as commercially applied, includes true granite, granodiorite, gneiss, and other mediumto coarse-grained igneous rocks. However, "black granite" includes anorthosite and other dark-coloured igneous rocks. Limestone and marble are often confused, marble being the metamorphosed equivalent of the former and usually including both dolomitic and calcitic varieties. As an industrial term, marble is used for recrystallized calcareous rock capable of taking a polish.

Slate is becoming more important in world markets for its natural unpolished appearance, its non-slippery and multicoloured durable surfaces, and its relatively low price.

CANADIAN DEVELOPMENTS

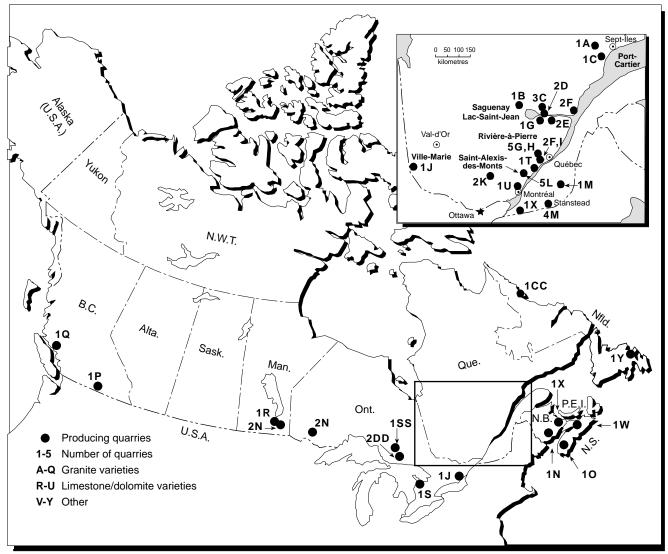
Shipments of dimension stone (mainly granite and limestone) in 1994 are expected to be about the same as in 1993, although final figures are not available. Canadian companies, with up-to-date technology and aggressive marketing, remain an important part of the international stone industry. Granite, particularly for a wide variety of construction uses in domestic and international markets, continues to be important with most output centred in Quebec (80-90%). Limestone/marble, sandstone and slate are also important in several parts of Canada.

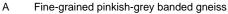
The 1980s saw considerable growth in the volume and value of rough granite produced in Canada for use in the construction sector, rising from 27 000 t valued at less than \$1.2 million in 1978 to 84 000 t valued at \$13.8 million in 1992 (Table 5). The peak production for rough construction granite was 108 000 t valued at \$19.6 million in 1990.

The value added by further processing in the Canadian granite industry is substantial; for example, the total value of thin-cut tiles (1.3 cm and 1.0 cm), custom-cut panels, slabs, monuments and furniture was estimated to be about \$110 million in 1990. More than 90% of this output was from Quebec, with panels and thin tiles in 1990 accounting for approximately 70% (\$50 million and \$25 million, respectively) and monuments accounting for the remainder. (In 1993, the total value of furtherprocessed granite was estimated to be between \$110 million and \$120 million.) Many provincial authorities continued assessments of their stone resources and, with the rejuvenated interest in much of the historical record, early works such as those by W.A. Parks² and M.F. Goudge³ have proven to be classics on the subject.

The Canada Centre for Mineral and Energy Technology (CANMET) completed in 1993 the final report in a series of summary reports on industrial minerals entitled, *Summary Report No. 20:*Limestone, Calcite and Lime. Processing and analytical data for the subject rocks and minerals from several provinces are reported in tabular format; detailed assessments of individual testwork are presented in an appendix.

Figure 1 Canada, Architectural and Monumental/Ornamental Stone-Producing Centres, 1993





- Medium-grained mahogany granite
- Coarse-grained black anorthosite
- Medium-grained "Reflect blue" anorthosite
- Medium-grained black gabbroic anorthosite
- DD Blue-grey, and black and white anorthosite
- Medium-grained pinkish-grey quartz monzonite
- Fine-grained pink granitic gneiss
- G Coarse-grained green charnockite
- Coarse-grained pink-grey or brown-grey granite
- Medium-grained grey dioritic gneiss
- Medium-grained red granite
- Fine-grained pink aplite Κ
- Coarse-grained brown or red quartz monzonite
- Μ Medium-grained grey granite
- Ν Medium-grained pink granite
- 0 Fine-grained blue-grey granite

Ρ Coarse coral pink granite

Q Medium-grained blue-grey granite R

Light-coloured mottled dolomitic limestone

S Fine-medium crystalline blue-grey to buff marble/dolostone (Arriscraft)

SS Fine-grained, multicoloured pre-Cambrian marble

Medium-grained light brownish-grey limestone Т (Deschambault)

U Medium-grained blue-grey limestone (Chazy)

Medium-grained olive sandstone

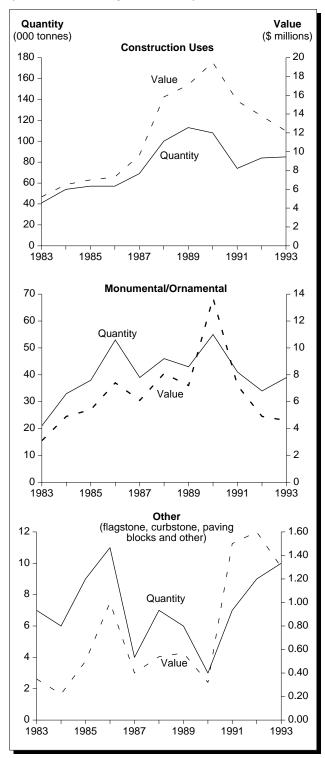
W Fine-medium-grained olive-brown and blue-grey sandstone

Χ Fine-medium-grained white to buff sandstone (Potsdam)

Υ Very fine-grained varicoloured slate

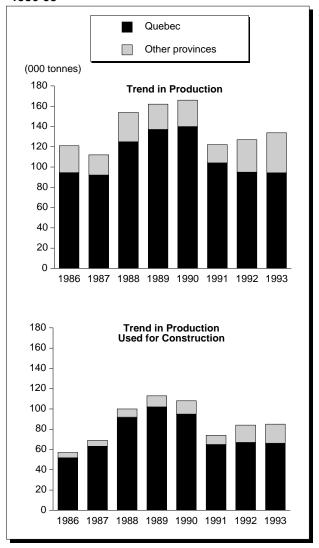
Mainly provincial departments of Mines and Energy.

Figure 2 Canada, Production of Rough Granite (Sold and Used by Producers), 1983-93



Sources: Natural Resources Canada; Statistics Canada.

Figure 3 Canada, Trends in Production of Rough Granite, 1986-93



Sources: Natural Resources Canada; Quebec Ministry of Natural Resources.

Atlantic Provinces

Limestone

In Newfoundland, production is mainly related to the output of cement by North Star Cement Limited at Corner Brook, large-volume aggregate and high-purity carbonate quarries operated by Newfoundland Resources & Mining Company Limited at Lower Cove on the Port au Port Penninsula, and an agricultural limestone quarry at Cormack. Atlantic Industrial Minerals Inc. supplied limestone from its Glen Morrison, Cape Breton deposit to Nova Scotia Power Corporation's Point Aconi thermal-electric station. Lafarge Canada Inc. developed a new quarry site in Colchester County to produce high-quality limestone

for specialty cements needed for the Prince Edward Island fixed link project. In New Brunswick, quarries operate at four locations: Brookville; Havelock; east of Havelock, in Westmoreland County; and Elm Tree, north of Bathhurst.

Granite and Marble

The activity relating to granite in Nova Scotia, as well as to other types of stone, has been summarized in two publications. ^{5,6} Construction Aggregates Ltd., owned by Lone Star Industries, Inc. of Greenwich, Connecticut, continued shipping high-quality granite aggregate from the company's Porcupine Mountain quarry on the Strait of Canso. Plans to develop a granite aggregates quarry at Kelly's Mountain on Cape Breton Island remained on hold pending an environmental review.

Granite is quarried intermittently for uses that include building stone and monumental stone at a number of sites in New Brunswick. A red, fine-to-medium-grained granite is available near St. Stephen, and fine-grained pink, grey and blue-grey granites are available in the Hampstead (Spoon Island) district. Other stone is available on demand.

In addition to intermittent quarrying at several sites, exploration and assessment continued on a variety of granite and marble in Newfoundland and Labrador. Some of this work represented a continuation of activities that were reported earlier. On the northern Labrador coast, work concentrated on a large complex that hosts a uniform medium-grained, lightgrey anorthosite containing up to 20% labradorite crystals exhibiting flashes of blue chatoyance on cut surfaces. Rough blocks continued to be shipped from a deposit being developed under the direction of the Labrador Inuit Development Corporation (LIDC).

Sandstone and Slate

Newfoundland Slate Inc. continued to expand markets served by a new slate production plant at Nut Cove, Trinity Bay, Newfoundland. More than \$9 million was invested to bring the former Newfoundland Slate Quarries site into production. The company operates as a joint venture with The Miller Group of Companies; distribution networks have been established in Canada, the United States and Europe.

In Nova Scotia, a medium-grained buff sandstone known as "Wallace sandstone" is quarried for use as heavy riprap and for dimension stone. This stone enjoyed widespread architectural use in the past in central and Atlantic Canada and, as a result, is seeing growing use for renovation and restoration work.

In New Brunswick, a red fine-to-medium-grained sandstone has been quarried in Sackville for use in construction. Deposits are exploited on demand throughout Kent and Westmoreland counties.

Quebec

Limestone

Limestone occurs in the St. Lawrence and Ottawa River valleys and in the Eastern Townships. St. Marc-des-Carrières is one of the few locations where blocks and other shapes are produced from time to time.

A high-purity dolomite deposit at Portage-du-Fort has been developed to serve the Glaverbec glass plant in Saint-Augustin, near Québec City. A similar highpurity deposit is being evaluated in the Havre-Saint Pierre area for use in iron ore pelletizing.

Granite

Development mainly associated with granite continues to be important. Quarries have been opened from near Rouyn-Noranda in the west to Magpie, about 100 km east of Sept-Îles. About 20 companies quarry granite, mainly in the Rivière-à-Pierre, Lac St-Jean, St. Lawrence North Shore, the Eastern Townships, and Appalachian regions. These companies now account for about 60 quarries classified as producers of granite for construction, monuments and/or furniture. Also in the province, there are 46 fabricating plants involved in processing granite for monumental and construction uses, according to a recent poster map and listing by the Quebec Ministry of Energy and Resources.

Granicor Inc./Columbia Granite Inc. quarries numerous types of rough granite for its fabricating plants as well as for export markets. In 1993, Granicor introduced a new black granite to the market and established Tulinor USA as the company's distributor in the Atlantic states. In 1993, members of the Association des Producteurs de Granite du Québec (including Groupe Polycor Inc., A. Lacroix Ltée, and Granilac Inc.) merged with the Canadian Granite Association to create a single organization representing a very broad range of quarriers, processors and distributors in both domestic and international markets.

Dumas & Voyer, a quarrier of Caledonia granite since 1885 and a major fabricator of curbstones, is now owned by Groupe Polycor. Groupe Polycor's other quarrying divisions include Société Minière Polycor Inc. and also Carrières Norgranit Inc., which is owned jointly with Rock of Ages. In addition to Dumas & Voyer Ltée, the Groupe's manufacturing division includes Granite Bussière Inc. Detailed activity throughout Quebec, as well as in other provinces where applicable, has been highlighted in a directory published by Natural Resources Canada. 10

Ancor Granite Tile Inc. operates a modern fabricating plant in Lachine. A wide range of thin-cut granite tiles serve the domestic and international markets; two new stones were introduced to the market in 1993.

Sandstone

Les Carrières Ducharme Inc., in Hemmingford, Huntingdon County, produces flagstone and construction blocks. This operation is the only company in Quebec producing this type of dimensional stone.

Ontario

Limestone

Major production is from deposits of Paleozoic age. A three-volume study entitled *Limestone Industries of Ontario* is a thorough assessment of the geological resources, economic factors and related industries associated with limestone, dolostone and marble. 11

Arriscraft Corporation quarries a blue-grey to buffcoloured dolostone from the Wiarton/Colpoy Bay member of the Middle Silurian Amabel formation near Wiarton. Sold under the name of Adair marble, this attractive stone has increasingly been used for up-scale construction projects, including the Canadian Chancery in Washington, D.C.

Marble

In the past, only a few uses for local constructionquality marble have been reported.

Jarvis Resources Ltd., a Canadian-controlled public company, continued to develop markets for marble produced from its new \$2 million slab and tile manufacturing plant near Sudbury. The plant is designed to produce a total of about 400 m² per day of material (two shifts per day). Rough blocks of multi-coloured marble are quarried approximately 35 km north of Sudbury where extensive reserves have been defined.

In the Bruce Peninsula region, Owen Sound Ledgerock Limited and Ebel Quarries Limited produce polished marble products on demand from rough stone as part of their quarrying and cutting operations. Other products produced by these and other companies in the region mainly relate to flagstone, landscaping stone and masonry stone using light-to-dark-brown-coloured dolostone from the Eramosa Member of the Amabel formation, locally referred to as Wiarton Dolostone.

Two Island Marble Corporation, located in the Renfrew area of eastern Ontario, has operated intermittently, producing crushed stone at the site most recently.

Granite

Granite occurs in northern, northwestern and southeastern Ontario. The Sudbury area in particular has attracted much activity in recent years. ¹² In northwestern Ontario, Nelson Granite Limited continued to expand access to granite to complement its needs, mainly for the manufacture of monuments by affiliates in Ontario and New Brunswick. Canital Granite Ltd. of Winnipeg has quarried granite north of Kenora in northwestern Ontario. Current exploration and development work carried out by an associated group, Manex Granit Inc. of Winnipeg, extends into adjacent regions of Manitoba and also throughout the Sudbury area. Palin Granite (Canada) Inc., owned by the largest private stone producer in Finland, quarried granite from a new site about 35 km northeast of Kenora. Its production serves both domestic and export markets. Eastern Stone Products Ltd. and its subsidiary, Belmont Rose Granite Corporation, re-opened the Belmont Rose quarry in 1993. Monument-quality blocks were quarried for finishing and distribution by processing companies. Several other companies are active in Ontario and quarry mainly on demand. These include Vior Inc.; Positano Granite, a division of Poscan Ltd.; Granite Quarriers (G.Q.I.) Inc.; Granimar Quarries Ltd.; and Les Granites Gibson. Granits Malette Granite Inc. opened a new granite processing plant in Iroquois Falls. A range of products including flooring, monuments, counter tops and slabs are being manufactured. Detailed activity relating to all types of dimension stone in the province has been highlighted in a directory published by the Ontario Ministry of Northern Development and Mines. 13

Sandstone

Sandstone quarried near Toronto, Ottawa and Kingston has been widely used in Ontario as building stone. Medina sandstone is fine-to-medium-grained and varies from grey, through buff and brown to red, with some mottled units. Potsdam stone is medium-grained and varies from grey-white through salmon-red to purple, and is mottled. Current uses are as rough building stone, mill blocks from which sawn pieces are obtained, ashlar, flagstone, and as a source of silica for ferrosilicon and glass.

Western Provinces

Limestone

From east to west through the southern half of Manitoba, rocks of Precambrian, Paleozoic and Cretaceous ages occur.

Tyndall Stone, a mottled dolomitic limestone often referred to as "tapestry" stone, is the best-known Manitoba limestone. It is quarried by Gillis Quarries, Limited at Garson, about 50 km northeast of Winnipeg. Limestone from Moosehorn, 160 km northwest of Winnipeg, and from Mafeking, 40 km east of the Saskatchewan border and 160 km south of The Pas. has been used in several industries.

The eastern ranges of the Rocky Mountains contain Cambrian to Triassic limestones. Their development is based on accessibility and quarriability, and extensive recent work has been conducted on Alberta limestones in selected areas. ¹⁴ Most recently, focus has been on the potential use of the limestone for precipitated calcium carbonate (PCC). In southwestern Alberta, high-calcium limestone is mined at Exshaw, Kananaskis and Crowsnest, chiefly for the production of cement and lime, for metallurgical and chemical uses, and for use as crushed stone. Similar uses are made of limestone quarried at Cadomin, near Jasper.

In British Columbia, large volumes of limestone are mined each year for cement and lime manufacture, for use by the pulp and paper industry, and for various construction applications. Quarries on Texada Island, British Columbia, have for many years provided limestone to markets in Vancouver and in Washington State by virtue of their quality and location relative to tidewater shipping facilities.

Granite

In Manitoba, several companies quarry pink-to-reddish granite. Canital Granite Ltd., along with associate Manex Granit Inc., obtains granite from several sites to serve Canital's large tile manufacturing plant in Winnipeg. Exports of manufactured products vary considerably depending on construction activity, with the United States accounting for most of the demand. Cold Spring Granite (Canada) Limited, situated 14 km south of Lac du Bonnet, continues to produce about five "colours" of granite, mainly as large blocks for cutting and polishing in the United States. Some of the most recent work by the provincial government has been concentrated in southeastern Manitoba. ¹⁵

In Saskatchewan and Alberta, granite is not quarried on a regular basis. Some detailed work to evaluate potential reserves in Saskatchewan has been undertaken by the Saskatchewan Geological Survey and is highlighted in one of several reports. 16

In British Columbia, Quarry Pacific Industries Ltd., along with Margranite Industries Ltd. and C&S Ceramic Tile Distributors, the related processing and distribution companies respectively, produced a range of granite tile at a new manufacturing plant in Burnaby. West Coast Granite Manufacturing Inc. (formerly Pacific Granistone Mfg. Inc.) of Delta started up in 1993 and operates a fully equipped plant to produce granite slabs. A recent publication by the British Columbia Ministry of Energy, Mines and Petroleum Resources describes some properties that are attracting attention. 17

Sandstone

Sandstone for building and ornamental uses quarried near Banff, Alberta, is referred to as "Rundle Stone." This stone is very popular locally and is best known for its use in the Banff Springs Hotel. Two companies are active, Thunderstone Quarries Ltd. and Rundle Rock Building Stone (1980) Ltd., both situated outside of the national park near Canmore.

Yukon and Northwest Territories

Sidco Explorations Ltd., a Whitehorse-based processor of architectural stone, has evaluated several sites to produce granite for construction uses. Preliminary work concentrated on grey-white and beige-coloured granites that are expected to attract outside interest given the favourable backhaul rates to Vancouver and Edmonton.

A large, unique occurrence of limestone has been recognized in the Arctic at Bear Island, about 12 km south of the community of Coral Harbour. Preliminary work suggests that this fine-grained, attractively veined stone will be excellent for sculptural and architectural uses, and possibly for some ornamental uses. A permit to quarry at the site is held by the Keewatin Inuit Association for the community of Coral Harbour.

SPECIFICATIONS

Several test methods apply to dimension stone, but generally begin with compressive strength (ASTM C170) and absorption (ASTM C97). The compressive strength is defined as the maximum load per unit area that can be applied before the rock fails, reported in pounds per square inch (psi) and in megapascals (MPa). Absorption is defined as the percentage of water by weight that is absorbed over a 48-hour period.

CONSUMPTION AND MARKETS

The very wide range of uses for several types of stone, including granite, limestone, marble, sandstone and slate, is highlighted in Tables 3 to 7, inclusive. Limestone in particular has chemical-related uses, along with its large-scale use in the cement, lime, glass and metal-smelting industries.

Detailed consumption data for rough and finished granite, as well as for other types of stone, are not available. However, trends can be established based on production, imports, and less well-defined export data. During the 1980-90 period, Canada's production of rough granite approximately doubled, and then weakened during the recession. Imports of roughly trimmed and cut granite block (codes 2516.11 and 2516.12) more than doubled during the interval and then remained relatively stable as the domestic industry strengthened (Table 9). Exports of rough granite have increased about 7.5 times in terms of volume since 1986 in response to demand in Japan, the United States and Italy. Total exports of granite monumental or building stone, as represented by codes 6802.23, 6802.93 and 6802.99 relating to a range of cut, sawn or worked products, were valued at \$29.1 million in 1994 (Table 1). The United States accounted for about 95% of this market.

Dolomite is the source of magnesium metal produced by Haley Industries Limited at Haley Station, Ontario; the company also uses a high-calcium lime from southeastern Ontario in the production of calcium metal. Dead-burned dolomitic limestone for use as a refractory is produced at Dundas, Ontario, by Redland Quarries Inc.

WORLD TRENDS, TRADE AND TARIFFS

World annual production of raw dimension stone is estimated to be about 34 Mt (about 12.6 million m³), with Europe accounting for about two thirds of total output. About 50% of world production comes from six leading countries: Italy, Spain, Greece, the United States, France and China. Italy has traditionally been the world's leading producer, accounting for about 7 Mt. Also, Italy was the world's leading exporter of rough stone, accounting for about 2.5 Mt in 1993; China ranked second with nearly 15% of the world's exports.

Along with China, India and Brazil have become important producers of granite and are expanding production rapidly. These producers, along with the Republic of South Africa, Spain and the Scandinavian countries, account for approximately 70% of the world's exports of granite. Interest in developing stone resources and technology is worldwide, as partially indicated by several relatively new international stone exhibitions which include: 1) the International Granite, Marble and Decorative Stones Fair, to be held in Sao Paulo, Brazil in March 1995; 2) the Japan Stone Fair International '94, held in November; and 3) Chinastone '94, a biannual international stone industry exhibition that was held in early December. In the former Soviet Union, some Western companies have investigated the possibility of joint ventures. However, a range of uncertainties, including the political climate and transportation problems, has discouraged progress.

Japan continued to be Canada's major customer for rough granite in 1994 accounting (by value) for about 50% of total exports. In the case of processed products (represented as granite monumental or building stone, as described), the United States is by far the leading customer. Tariffs between Canada and the United States relating to other types of worked stone, simply cut or sawn, as well as to tiles and similar articles, were phased out in 1993. Some natural stone products classified as millstones or grindstones are subject to a later phase-out in 1998.

The impact of the North American Free Trade Agreement (NAFTA) is uncertain; however, in the longer term, it is expected that there will be an expansion of markets for Canadian granite in Mexico, and possibly for Mexican marble in Canada.

An independent investigation by Revenue Canada, beginning in December 1993, determined that imports of black granite memorials and black granite slabs originating in, or exported from, India were being dumped and subsidized. A final ruling indicated that 34.5% of the imports were dumped by a weighted dumping margin of 27.9%; the weighted average percentage of subsidy for exporters was from 27.8% to 50.4%.

OUTLOOK

The demand for structural stone products in North America in 1995/96 is expected to remain about the same as in 1994. Although relatively high commercial vacancy rates persist, the outlook is encouraging because of a trend toward using more natural materials in renovation and in up-scale housing. Also, a U.S.-based equipment purchasing plans survey of the dimension stone industry indicated a positive outlook for 1995 as well as for the longer term. Although the most rapid expansion has been associated with new quarries and fabricating plants in Quebec, modernization by several producers across Canada has increased the availability of high-quality finished products at competitive prices. Producers continue to emphasize import replacement and the penetration of foreign markets; the relatively large Japanese market for high-quality rough granite blocks is expected to remain firm. Within the next two years it is expected that annual shipments of fabricated constructionrelated granite products to all countries will be maintained at about \$100 million, the level reached in 1991/92. Although new entrants are joining international stone markets, the Canadian dimension stone industry is expected to remain competitive because of its advanced quarrying, processing and installation technology.

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Notes: (1) For definitions and valuation of mineral production, shipments and trade, please refer to Chapter 60. (2) Information in this review was current as of February 1, 1995.

TARIFFS

			United States		
Item No.	Description	MFN	GPT	USA	Canada
2514.00	Slate, whether or not roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape				
2514.00.10	Crude or roughly trimmed	Free	Free	Free	Free
2514.00.20	Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	5.1%	3.5%	Free	Free
2514.00.90	Other, including powder and waste	9.5%	6.5%	Free	Free
25.15	Marble, travertine, ecaussine and other calcareous monumental or building stone of an apparent specific gravity of 2.5 or more, and alabaster, whether or not roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape Marble and travertine:				
2515.11.00 2515.12.00	Crude or roughly trimmed Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	Free 3.7%	Free Free	Free Free	Free Free
2515.20	Ecaussine and other calcareous monumental or building stone; alabaster				
2515.20.10	Crude or roughly trimmed	Free	Free	Free	Free
2515.20.20	Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	5.1%	3.5%	Free	Free
25.16	Granite, porphyry, basalt, sandstone and other monumental or building stone, whether or not roughly trimmed or merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape Granite:				
2516.11.00 2516.12	Crude or roughly trimmed Merely cut, by sawing or otherwise, into	Free Free-5.1%	Free Free	Free Free	Free Free
2010.12	blocks or slabs of a rectangular (including square) shape Sandstone:	F166-5.1%	riee	riee	riee
2516.21.00	Crude or roughly trimmed	Free	Free	Free	Free
2516.22.00	Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	5.1%	3.5%	Free	Free

TARIFFS (cont'd)

	.		Canada		United States
Item No.	Description	MFN	GPT	USA	Canada
2516.90 2516.90.10 2516.90.20	Other monumental or building stone Crude or roughly trimmed Merely cut, by sawing or otherwise, into blocks or slabs of a rectangular (including square) shape	Free 5.1%	Free 3.5%	Free Free	Free Free
25.17	Pebbles, gravel, broken or crushed stone, of a kind commonly used for concrete aggregates, for road metalling or for railway or other ballast, shingle and flint, whether or not heat-treated; macadam of slag, dross or similar industrial waste, whether or not incorporating the materials cited in the first part of the heading; tarred macadam, granules, chippings and powder, of stones of heading nos. 25.15 or 25.16, whether or not heat-				
2517.10.00	treated Pebbles, gravel, broken or crushed stone, of a kind commonly used for concrete aggregates for road metalling or for railway or other ballast, shingle and flint, whether or not heat-treated	Free	Free	Free	Free
2517.20.00	Macadam of slag, dross or similar industrial waste, whether or not incorporating the materials cited in subheading no. 2517.10	Free	Free	Free	Free
2517.30.00	Tarred macadam Granules, chippings and powder, of stones of heading nos. 25.15 or 25.16,	9.5%	6.5%	Free	Free
2517.41.00	whether or not heat-treated: Of marble Other	Free	Free	Free	Free
2517.49 2517.49.10 2517.49.90	Limestone roofing granules Other	Free 9.5%	Free 6.5%	Free Free	Free Free
6801.00.00	Setts, curbstones and flagstones of natural stone (except slate)	5.1%	Free	Free	Free
68.02	Worked monumental or building stone (except slate) and articles thereof, other than goods of heading no. 68.01; mosaic cubes and the like, of natural stone (including slate), whether or not on a backing; artificially coloured granules, chippings and powder, of natural stone (including slate) Tiles, cubes and similar articles, whether or not rectangular (including square), the largest surface area of which is capable of being enclosed in a square which is less than 7 cm; artificially coloured				
6802.10.10 6802.10.90	granules, chippings and powder Roofing granules, artificially coloured Other Other monumental or building stone and articles thereof, simply cut or sawn, with a	Free 11.6%	Free 8%	Free Free	Free Free
6802.21.00 6802.22.00 6802.23.00 6802.29.00	flat or even surface: Marble, travertine and alabaster Other calcareous stone Granite Other stone	5.3% 7.5% 5.1% 7.5%	3.5% 5% Free 5%	Free Free Free Free	Free Free Free
6802.91.00 6802.92.00 6802.93.00 6802.99.00	Other: Marble, travertine and alabaster Other calcareous stone Granite Other stone	8.4% 9.2% 9.5% 9.5%	Free 6.5% 6.5% 6.5%	Free Free Free Free	Free Free Free
6803.00	Worked slate and articles of slate or of				
6803.00.10 6803.00.90	agglomerated slate Roofing slate Other	Free 9.5%	Free 6.5%	Free Free	Free Free
68.04	Millstones, grindstones, grinding wheels and the like, without frameworks, for grinding, sharpening, polishing, trueing or cutting, hand sharpening or polishing stones, and parts thereof, of natural stone, of agglomerated natural or artificial abrasives, or of ceramics, with or without parts of other metaliale.				
6804.10.00	parts of other materials Millstones and grindstones for milling,	9.5%	Free	3.0%	Free
6804.23.00	grinding or pulping Of natural stone	9.5%	Free	3.0%	1.4%

TABLE 1. CANADA, STONE EXPORTS AND IMPORTS, 1992-94

Item No.		19	92	19	93	199	1994 p	
•		(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)	
EXPORTS 2514.00	Slate, whether or not roughly trimmed or merely cut, etc.	24r	12r	5	10	89	122	
2515.11	Marble and travertine, crude or roughly	32	4	230	126	-	_	
2515.12	trimmed Marble and travertine, merely cut, by sawing or otherwise, into blocks, etc.	61	36	80	60	86	73	
		(cubic metres)		(cubic metres)		(cubic metres)		
2516.11 2516.12	Granite, crude or roughly trimmed Granite, merely cut, by sawing or	34 709 813	20 005 1 413	49 238 3 898	18 742 1 598	41 241 4 748	18 064 1 941	
2516.21	otherwise, into blocks, etc. Sandstone, crude or roughly trimmed	_	_	738	10	1	7	
		(tonnes)		(tonnes)		(tonnes)		
2516.22	Sandstone, merely cut, by sawing or	3	23	43	9	28	84	
2516.90	otherwise, into blocks, etc. Monumental or building stone, n.e.s.	1 961	422	3 391	893	2 543	595	
2517.10	Pebbles, gravel, broken or crushed	1 958 085r	12 295r	2 009 014	14 655	2 057 112	17 718	
2517.41	stone used for aggregates, etc. Marble granules, chipping and powder	5 632	712	33 673	4 360	50 401	6 495	
2517.49	of 25.15 or 25.16, heat-treated or not Granules, chippings and powder n.e.s. of 25.15 or 25.16, heat-treated or not	57	12	27 545	173	3 014	179	
6801.00	Setts, curbstones and flagstones of natural stone (except slate)		45		126		444	
6802.10	Tiles, etc., rectangular or square not more than 7 cm, etc., artificially coloured granules, chippings and		306		232		227	
6802.21	powder Monumental or building stone, cut or		819		114		222	
6802.22	even, marble, travertine and alabaster Monumental or building stone, cut or sawn, flat or even, other calcareous		148		89		42	
6802.23	stone Monumental or building stone, cut or sawn, flat or even, granite		4 561		3 592		2 342	
6802.29	Monumental or building stone, cut or		211		186		139	
6802.91	sawn, flat or even, n.e.s. Worked monumental or building stone,		476		909		621	
6802.92	n.e.s., marble, travertine or alabaster Worked monumental or building stone,		22		97		36	
6802.93	n.e.s., calcareous stone, n.e.s. Worked monumental or building stone,		17 180		16 505		19 477	
6802.99	n.e.s., granite Worked monumental or building stone, n.e.s.		6 321		6 678		7 309	
6803.00	Worked slate and articles of slate or agglomerated slate		44		512		1 357	
6804.10	Millstones and grindstones for milling,		4 616r		5 085		4 437	
6804.23	grinding or pulping Millstones, grindstones, etc., of natural stone		1 723		2 633		3 218	
IMPORTS 2514.00	Slate, whether or not roughly trimmed or merely cut, etc.	1 677	643	4 462	831	3 287	984	
2515.11	Marble and travertine, crude or roughly	899	285	2 024	652	1 436	570	
2515.12	trimmed Marble and travertine, merely cut, by sawing or otherwise, into blocks, etc.	2 332	1 862	2 724	1 726	1 490	1 098	
2516.11 2516.12	Granite, crude or roughly trimmed Granite, merely cut, by sawing or otherwise, into blocks, etc.	42 151 2 800	9 021 1 447	36 918 4 566	8 673 1 574	29 261 6 363	7 096 3 008	

TABLE 1 (cont'd)

Item No.		19	92	19	93	1994 p	
	·	(tonnes)	(\$000)	(tonnes)	(\$000)	(tonnes)	(\$000)
IMPORTS 2516.21 2516.22	Sandstone, crude or roughly trimmed Sandstone, merely cut, by sawing or	1 406 6 377	152 1 355	1 928 6 342	324 1 447	1 679 5 873	248 1 419
2516.90	otherwise, into blocks, etc. Monumental or building stone, n.e.s.	8 608	1 320	7 958	1 412	7 049	1 236
2517.10	Pebbles, gravel, broken or crushed	912 774r	6 981r	950 046	7 460	634 216	6 736
2517.41	stone used for aggregates, etc. Marble granules, chipping and powder of 25.15 or 25.16, heat-treated or not	72 728	8 369	55 677	7 362	51 138	7 346
2517.49	Granules, chippings and powder n.e.s. of 25.15 or 25.16, heat-treated or not	99 229	1 595	173 934	2 236	221 692	3 587
6801.00	Setts, curbstones and flagstones of natural stone (except slate)		641		409		402
6802.10	Tiles, etc., rectangular or square not more than 7 cm, etc., artificially coloured granules, chippings and powder	47 458	5 517	35 287	4 281	45 203	5 950
6802.21	Monumental or building stone, cut or sawn, flat or even, marble, travertine and alabaster		6 268		5 942		4 873
6802.22	Monumental or building stone, cut or sawn, flat or even, other calcareous stone		225		114		103
6802.23	Monumental or building stone, cut or sawn, flat or even, granite		5 758		9 123		9 065
6802.29	Monumental or building stone, cut or sawn, flat or even, n.e.s.		594		517		285
6802.91	Worked monumental or building stone, n.e.s., marble, travertine or alabaster		15 646		15 129		14 392
6802.92	Worked monumental or building stone, n.e.s., calcareous stone, n.e.s.		1116		434		312
6802.93	Worked monumental or building stone, n.e.s., granite		13 804		13 120		13 565
6802.99	Worked monumental or building stone, n.e.s.		913		1 043	• •	1 109
6803.00	Worked slate and articles of slate or agglomerated slate		5 218		5 117	• •	5 597
6804.10	Millstones and grindstones for milling, grinding or pulping		1 348		1 320		1 493
6804.23	Millstones, grindstones, etc., of natural stone		7 269		13 118		14 804

Sources: Natural Resources Canada; Statistics Canada.

– Nil; . . Not available or not applicable; n.e.s. Not elsewhere specified; p Preliminary; r Revised.

TABLE 2. CANADA, TOTAL PRODUCTION OF STONE, 1992-94

Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone 186 19 517 363 22 766 Rough 186 19 517 363 22 766 Other (flagstone, curbstone, paving 57 5 720 42 4 724	(\$000) 15 304 27 733 15 300 186 107 215 649 11 208 4 126 36 774 2 848 515 050
Newfoundland 1 000 4 758 1 871 7 186 2 388 Nova Scotia 4 705 24 910 5 179 24 563 5 461 New Brunswick 2 784 15 799 3 217 18 553 2 599 Quebec 36 524 207 500 33 294 202 708 30 892 Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	27 733 15 300 186 107 215 649 11 208 4 126 36 774 2 848 515 050
Nova Scotia 4 705 24 910 5 179 24 563 5 461 New Brunswick 2 784 15 799 3 217 18 553 2 599 Quebec 36 524 207 500 33 294 202 708 30 892 Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	27 733 15 300 186 107 215 649 11 208 4 126 36 774 2 848 515 050
New Brunswick 2 784 15 799 3 217 18 553 2 599 Quebec 36 524 207 500 33 294 202 708 30 892 Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	15 300 186 107 215 649 11 208 4 126 36 774 2 848 515 050
Quebec 36 524 207 500 33 294 202 708 30 892 Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	186 107 215 649 11 208 4 126 36 774 2 848 515 050
Ontario 37 666 219 388 37 925 223 496 40 833 Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving 57 3 606 33 23 2 366	215 649 11 208 4 126 36 774 2 848 515 050
Manitoba 1 549 7 770 2 476 10 948 2 693 Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving 57 3 606 33 23 766	11 208 4 126 36 774 2 848 515 050
Alberta 316 3 600 325 3 176 346 British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (falagstone, curbstone, paving	4 126 36 774 2 848 515 050
British Columbia 3 910 30 113 4 253 32 265 4 987 Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving 57 3 666 33 2 366	36 774 2 848 515 050
Northwest Territories and Yukon 884 2 679 821 4 560 854 Total 89 338 516 518 89 361 527 454 91 053 BY USE ² Dimensional stone Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagsotone, curbstone, paving	2 848 515 050
BY USE ² Dimensional stone Rough Rough Monumental and ornamental stone (n.f.) Other (flagstone, curbstone, paving	
Dimensional stone Rough Nonumental and ornamental stone (n.f.) Other (flagstone, curbstone, paving	
Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	
Rough 186 19 517 363 22 766 Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flag stone, curbstone, paving	
Monumental and ornamental stone (n.f.) 57 5 720 42 4 724 Other (flagstone, curbstone, paving	
blocks ata \	
blocks ata \	
DIOCKS, etc.) 57 3 606 33 3 336	
Lining open-hearth furnaces – – 5 46	
Chemical and metallurgical	
Cement plants, Canada 10 360 30 247 11 472 35 993	
Cement plants, foreign 1 036 4 141 1 329 5 643	
Flux in iron and steel furnaces 562 2 864 198 1 446	
Flux in nonferrous smelters 167 799 230 1 601	
Clay plants, Canada 686 1 839 623 1 951	
Glass factories 154 2 724 184 3 491	• •
Lime plants, Canada 3 142 22 880 2 893 21 897	• •
Lime plants, foreign 214 1 495 420 2 474 Pulp and paper mills 231 2 178 224 2 355	• •
Sugar refineries	
Other chemical uses 264 2 055 244 1 810	
Duly arized atoms	
Pulverized stone Whiting 35 2 973 41 2 909	
Appholi filler 202 1.071 54 205	• •
Dusting coal mines 1 44 7 321	
Agricultural purposes and	
fertilizer plants 916 13 337 844 13 006	
Other uses 953 14 785 999 14 612	
Miscellaneous stone	
Manufacture of artificial stone 35 424 18 185	
Roofing granules 321 6 853 388 8 048	
Poultry grit 53 1 411 48 954	
Stucco dash 5 424 15 1 147	
Terrazzo chips 5 403 2 308	
Rock wool 18 450 18 440	• •
Rubble and riprap 664 4 177 997 7 035	• •
Other uses 1 379 8 952 1 357 9 162	• •
Crushed stone for	
Concrete aggregate 8 057 49 402 10 253 57 962	
Asphalt aggregate 9 237 53 849 10 130 56 608	• •
Road metal 34 646 165 053 32 752 162 634	
Railroad ballast 1 684 13 705 1 876 14 243 Other uses 28 090 133 048 26 280 127 919	• •
Other uses 28 090 133 048 26 280 127 919	• •
Total 103 526 571 483 104 350 587 295	

Note: Numbers may not add to totals due to rounding.

Sources: Natural Resources Canada; Statistics Canada.
.. Not available; n.f. Not finished or dressed; P Preliminary.

1 Data exclude stone used in the Canadian cement and lime industries. 2 Data include stone used in the Canadian cement and lime industries.

TABLE 3. CANADA, PRODUCTION OF LIMESTONE, 1992-94

	19	992	19	993	1	994
	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)
BY PROVINCE1						
Newfoundland	858	3 695	1 489	3 826	1 820	9 293
Nova Scotia	127	2 076	207	2 968	245	3 852
New Brunswick	480	5 511	506	6 509	438	5 456
Quebec	23 810	121 367	22 686	119 180	22 320	115 265
Ontario	35 529	188 678	36 138	193 071	39 144	189 534
Manitoba	1 400	6 243	2 018	8 318	2 207	9 056
Alberta	265	2 959	247	2 561	291	3 237
British Columbia	2 830	20 243	2 559	18 732	3 190	23 412
Northwest Territories and Yukon	224	1 326	586	2 722	114	534
Total	65 522	352 099	66 437	357 887	69 769	359 640
BY USE ²						
Dimensional stone						
Rough	49	1 932	232	4 098		
Monumental and ornamental stone (n.f.) Other (flagstone, curbstone, paving	19	564	2	56		
blocks, etc.)	35	1 260	12	1 343		
Lining, open-hearth furnaces	_	-	5	46		
Chemical and metallurgical						
Cement plants, Canada	10 079	29 949	11 154	35 115		
Cement plants, foreign	1 036	4 141	1 329	5 643		
Flux in iron and steel furnaces	562	2 864	198	1 446		
Flux in nonferrous smelters	167	799	176	1 001		
Glass factories	154	2 724	161	2 830		
Lime plants, Canada	3 142	22 880	2 893	21 897		
Lime plants, foreign	214	1 495	420	2 474		
Pulp and paper mills	231	2 178	224	2 355		
Sugar refineries	19	99	14	64		
Other chemical uses	264	2 055	244	1 810		
Pulverized stone						
Whiting (substitute)	35	2 973	41	2 909		
Asphalt filler	237	1 819	20	112		
Dusting, coal mines	1	44	7	321		
Agricultural purposes and fertilizer plants	867	12 624	820	12 486		
Other uses	680	3 494	709	3 448		
Miscellaneous stone	25	44.4	40	405		
Manufacture of artificial stone	35 50	411	18	185		
Roofing granules	50	484	118	1 211		• •
Poultry grit	49	1 008	47	835		
Stucco dash	402	2 724	11 469	743 3 375		
Rubble and riprap Other uses	810	6 311	742	6 468		
Crushed stone for						
Concrete aggregate	6 888	41 574	9 297	51 653		
Asphalt aggregate	5 776	32 335	6 395	34 446		
Road metal	30 262	143 398	27 745	136 953		
Railroad ballast	180	797	707	3 329		
Other uses	16 501	81 991	16 277	76 247	• •	
Total	78 742	404 928	80 484	414 900		

Note: Numbers may not add to totals due to rounding.

Sources: Natural Resources Canada; Statistics Canada.

- Nil; . Not available; n.f. Not finished or dressed.

1 Data exclude stone used in Canadian cement and lime industries. 2 Data include stone used in the Canadian cement and lime industries.

TABLE 4. CANADA, PRODUCTION OF MARBLE, 1 1992-94

	1992		1993		19	1994	
	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)	
BY PROVINCE							
Nova Scotia	2	173	-	_	-	_	
Quebec	391	8 072	393	8 433	410	9 099	
Ontario	257	9 047	312	11 238	318	9 074	
Total	650	17 292	705	19 671	728	18 173	
BY USE							
Dimensional stone							
Rough	10	523	6	2 779			
Monumental and ornamental stone (n.f.)		7		1			
Other (flagstone, curbstone, paving,							
blocks, etc.)	_	_	_	_			
Chemical process stone			00	004			
Glass factories	_	_	23	661	• •		
Pulverized stone	50	713	24	519			
Agricultural purposes and fertilizer plants Other uses	50				• •	• •	
Other uses Miscellaneous stone	273	11 292	289	11 164	• •		
	1	17					
Roofing granules	•	17	_	_ 5	• •		
Poultry grit					• •	• •	
Stucco dash	5	400	4 1	404			
Terrazzo chips	5	388	•	185			
Rubble and riprap	15	462	12	399			
Other uses	10	672	11	701			
Crushed stone for	400	4.054	400	007			
Concrete aggregate	136	1 251	102	927			
Asphalt aggregate	4	31	1	5			
Road metal	-	-	2	9	• •		
Other uses	142	1 527	231	1 913	• •	• •	
Total	650	17 292	705	19 671			

Sources: Natural Resources Canada; Statistics Canada.

<sup>Not available; . . . Amount too small to be expressed; n.f. Not finished or dressed.
Marble refers to a commercial definition that may also include limestone, travertine and greenstone (serpentinite or amphibole).
Note: Numbers may not add to totals due to rounding.</sup>

TABLE 5. CANADA, PRODUCTION OF GRANITE, 1992-94

	1992		19	1993		1994	
<u> </u>	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)	
BY PROVINCE							
Newfoundland	53	462	296	2 118	480	3 050	
Nova Scotia	3 618	18 459	3 878	17 046	4 051	18 673	
New Brunswick	2 225	9 991	2 507	11 299	1 974	9 254	
Quebec	9 941	63 123	7 497	59 049	6 055	48 125	
Ontario	1 873	20 491	1 469	18 121	1 364	15 924	
Manitoba	132	1 510	366	2 597	351	2 069	
Alberta	4	360	8	461	6	582	
British Columbia	1 080	9 870	1 693	13 533	1 797	13 362	
Northwest Territories and Yukon	171	877	195	1 761	202	1 827	
Total	19 096	125 143	17 909	125 985	16 279	112 866	
BY USE							
Dimensional stone							
Rough	84	13 801	85	12 158			
Monumental and ornamental stone (n.f.) Other (flagstone, curbstone, paving	34	4 948	39	4 603			
blocks, etc.)	9	1 554	10	1 304			
Chemical and metallurgical							
Flux in nonferrous smelters	_	_	54	600			
Pulverized stone							
Asphalt filler	55	151	34	93			
Agricultural purposes and fertilizer plants	-	_		1			
Miscellaneous stone							
Artificial stone	:::	13	- -	-			
Roofing granules	270	6 352	271	6 837			
Poultry grit	4	393	1	115			
Stucco dash		24	_	400			
Terrazzo chips		15	1	123			
Rock wool	18	450	18	440			
Rubble and riprap	126	659	334	2 485	• •	• •	
Other uses	521	1 899	378	1 737	• •		
Crushed stone for	956	6 104	758	4 766			
Concrete aggregate Asphalt aggregate	3 010	18 583	3 340	4 766 19 784		• •	
Road metal	3 586	17 712	4 001	20 833	• •		
Railroad ballast	1 504	12 908	1 111	20 633 10 594	• •		
Other uses	8 916	39 578	7 476	39 512			
Total	19 096	125 143	17 909	125 985			

Sources: Natural Resources Canada; Statistics Canada.

– Nil; . . Not available; . . . Amount too small to be expressed; n.f. Not finished or dressed. Note: Numbers may not add to totals due to rounding.

TABLE 6. CANADA, PRODUCTION OF SANDSTONE, 1992-94

	1992		19	1993		994
-	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)
BY PROVINCE1						
Newfoundland Nova Scotia New Brunswick Quebec Ontario Alberta	90 935 33 2 006 7 4	396 4 116 66 13 371 1 171 200	84 1 067 95 1 930 5	408 4 436 147 12 819 1 066 24	85 1 140 107 1 601 7 4	411 5 145 185 11 603 1 117 222
Total	3 074	19 320	3 183	18 900	2 943	18 683
BY USE ²						
Dimensional stone Rough Monumental and ornamental stone (n.f.) Other (flagstone, curbstone, paving blocks, etc.)	44 4 12	3 261 200 647	39 1 12	2 994 64 593		
Chemical process stone Cement plants, Canadian	_	_	24	83		
Miscellaneous stone Rubble and riprap Other	111 -	306 -	172 90	746 135		
Crushed stone for Concrete aggregate Asphalt aggregate Road metal Railroad ballast Other uses	78 411 722 _ 1 692	472 2 725 3 631 - 8 076	95 345 747 – 1 681	615 2 096 3 838 - 7 820		
Total	3 074	19 320	3 207	18 983		• •

Sources: Natural Resources Canada; Statistics Canada.

– Nil; . . Not available; . . . Amount too small to be expressed; n.f. Not finished or dressed.

1 Data exclude stone used in Canadian cement and lime industries. 2 Data include stone used in Canadian cement and lime industries.

Note: Numbers may not add to totals due to rounding.

TABLE 7. CANADA, PRODUCTION OF SHALE, 1 1992-94

	1992		19	1993		1994	
	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)	
BY PROVINCE2							
Newfoundland Nova Scotia New Brunswick Quebec	x 23 46 377	x 85 232 1 567	1 26 108 788	833 113 598 3 227	3 25 81 506	2 550 64 405 2 015	
Ontario Manitoba Alberta Northwest Territories and Yukon	- x 43 489	- x 81 476	93 70 41	32 130 77	136 46 538	83 85 487	
Total	997	2 663	1 128	5 011	1 334	5 687	
BY USE3							
Dimensional stone		205	1	833			
Chemical and metallurgical Cement plants, Canadian Clay plants, Canadian	281 686	298 1 839	295 623	795 1 951			
Miscellaneous stone Rubble and riprap Other uses	10 37	25 69	10 136	29 122			
Crushed stone for Asphalt aggregate Road metal Railway ballast Other uses	35 75 - 839	175 312 - 1 877	50 257 58 614	277 1 001 321 2 428	 	 	
Total	1 964	4 800	2 044	7 756			

Note: Numbers may not add to totals due to rounding.

Sources: Natural Resources Canada; Statistics Canada.

– Nil; . . Not available; . . . Amount too small to be expressed; x Confidential.

1 May include slate. ² Data exclude stone used in the Canadian cement and lime industries. ³ Data include stone used in the Canadian cement and lime industries.

TABLE 8. CANADA, PRODUCTION OF STONE BY TYPES, 1 1980, 1985, AND 1992-94

	19	980	1	985	1	992	1	993	19	994 p
	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)	(000 t)	(\$000)
Granite Limestone Marble Sandstone Shale ²	39 983 58 191 316 3 064 1 812	140 914 185 085 1 807 11 540 1 810	17 219 77 874 571 3 011 1 561	95 424 317 862 13 966 15 310 3 059	19 096 65 522 650 3 074 997	125 143 352 099 17 292 19 320 2 663	17 909 66 437 705 3 183 1 128	125 985 357 887 19 671 18 900 5 011	16 279 69 769 728 2 943 1 334	112 866 359 640 18 173 18 683 5 687
Total	103 366	341 156	100 236	445 622	89 338	516 518	89 361	527 454	91 053	515 050

Sources: Natural Resources Canada; Statistics Canada.

p Preliminary.

Note: Numbers may not add to totals due to rounding.

TABLE 9. CANADA, ROUGH GRANITE, SUMMARY OF PRODUCTION AND TRADE, 1980 AND 1985-94

	Quantity Value	Production1	Imports ²	Exports ²
1980	t	81 000	24 130	5 019 a
	\$ millions	5.6	1.9	0.7
1985	t	104 000	34 468	12 511 a
	\$ millions	12.8	6.2	1.7
1986	t	121 000	33 994	18 450 a
	\$ millions	15.7	6.6	2.7
1987	t	112 000	46 370	37 450 a
	\$ millions	16.1	7.9	6.0
1988	t	153 000	46 282	86 940r
	\$ millions	24.4	11.2	16.2r
1989	t	162 000	52 337	107 105
	\$ millions	24.8	11.7	17.3
1990	t	166 000	46 163	88 775
	\$ millions	33.6	11.2	19.4
1991	t	122 000	35 038	94 529
	\$ millions	24.0	8.5	22.6
1992	t	127 000	44 951	101 957
	\$ millions	20.3	10.5	21.4
1993	t	134 000	41 484	117 600 b
	\$ millions	18.1	10.2	20.1
1994	t	129 000 e	35 624	113 500 b
	\$ millions	18.0	10.1	19.9

Sources: Natural Resources Canada; Statistics Canada.

¹ Data exclude stone used in the Canadian cement and lime industries. 2 May include slate.

e Estimated; r Revised.

a Coded as building stone, rough (90% is considered to be granite). b Assumes a factor of 3.5 for converting cubic metres to tonnes.

¹ Includes rough stone for construction, monumental/ornamental and other uses.
2 Includes codes 2516.11 (roughly trimmed block) and 2516.12 (cut block by sawing or otherwise). Some re-exports to the United States may also be involved.

TABLE 10. CANADA, VALUE OF CONSTRUCTION BY PROVINCE, 1 1991-93

	1991			1992			1993		
	Building Construction ²	Engineering Construction ²	Total	Building Construction2	Engineering Construction ²	Total	Building Construction ²	Engineering Construction ²	Total
	(\$ millions)								
Newfoundland	906	871	1 777	824	1 048	1 873	836	1 438	2 275
Nova Scotia	1 544	955	2 499	1 460	696	2 157	1 526	602	2 129
New Brunswick	1 150	837	1 987	1 160	1 057	2 217	1 120	712	1 832
Prince Edward Island	257	99	356	242	106	348	227	98	326
Quebec	14 032	6 369	20 401	13 106	7 027	20 133	13 261	7 323	20 584
Ontario	24 980	8 978	33 958	23 132	8 941	32 074	23 473	9 502	32 974
Manitoba	1 500	1 226	2 725	1 517	1 200	2 717	1 578	1 135	2 713
Saskatchewan	1 269	2 254	3 523	1 306	1 754	3 060	1 286	1 449	2 735
Alberta	5 577	7 170	12 747	6 204	5 995	12 199	6 030	6 348	12 378
British Columbia, Yukon and Northwest Territories	9 684	4 497	14 182	10 995	4 088	15 083	11 978	4 488	16 465
Total Canada	60 901	33 254	94 155	59 948	31 913	91 861	61 315	33 096	94 411

Sources: Natural Resources Canada; Statistics Canada, Catalogue no. 64-201 discontinued, to be replaced with Catalogue no. 61-223.

1 Actual expenditures 1991, preliminary 1992, intentions 1993.

2 Includes total value of new and repair work purchased.

Note: Numbers may not add to totals due to rounding.