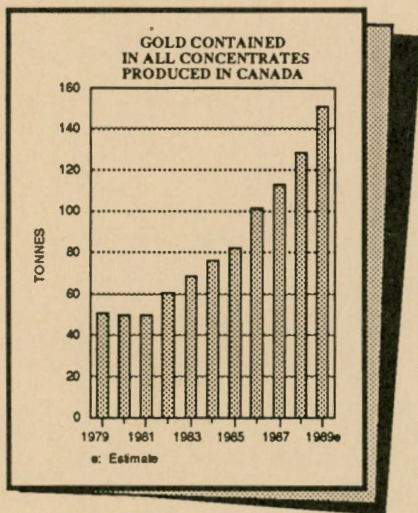


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CANADIAN MINERAL INDUSTRY

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THE ENERGY OF OUR RESOURCES

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ISSN 0229-1908

CANADIAN MINERAL INDUSTRY

MONTHLY REPORT



Energy, Mines and
Resources Canada

Énergie, mines et
Ressources Canada

PREFACE

This publication is prepared in the Mineral Policy Sector of the Department of Energy, Mines and Resources. It is compiled from many sources using the best information available to us. This report is intended to be a general review of the more important current developments that affect, or may affect, the Canadian mineral industry. It should not be considered an authority for exact quotation or an expression of the official views of the Government of Canada.

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THE CANADIAN MINERAL INDUSTRY FOR NOVEMBER

The following constitutes a brief summary of the Canadian mineral industry based on information that became available in November.

ECONOMIC TRENDS

Table 1 provides a comparison of the volume of production of Canada's leading minerals for the months of August and September 1990, the corresponding months a year ago and the year-to-date totals.

Table 2 provides information on Canada's Gross Domestic Product at factor cost by industry in 1986 prices. The data are annualized and seasonally adjusted. The annual rate shown for any given month has been calculated by multiplying the figure for that month by twelve. It is important to note, however, that if a particular month has been influenced by special factors such as a strike, the annualized data will reflect this bias.

Factor cost refers to output that is valued exclusive of excise taxes and duties, and provincial and municipal sales taxes. Factor cost does, however, include subsidies and other taxes that are not a function of the level of output or sale.

Seasonally adjusted data represent time-series data from which the effects of repetitive and clearly defined seasonal fluctuations have been removed. Such a practice permits the isolation of trends in the economy that might otherwise be obscured. Seasonal factors include such items as climate, trade practices and social institutions such as Christmas and Easter.

Because of conversion to a new base year, Statistics Canada's Gross Domestic Product at factor cost by industry is now valued in 1986 prices. The June 1990 issue of Statistics Canada Catalogue #15-001 (Gross Domestic Product by Industry) was the first issue on the new basis and was published in October. It contains historical

data in 1986 prices covering the years 1986 to 1989 inclusive. The historical record providing GDP data in 1986 prices from 1961 to 1985 inclusive will be published by Statistics Canada at the end of November.

The GDP data are reported each month by Statistics Canada and are subject to ongoing revision.

Based on the latest data available (September 1990 issue), Statistics Canada reported that the weakness that curtailed economic growth since January broadened and GDP tumbled 0.8% in September and 0.4% in August. These were the largest back to back declines since April 1982, and left output 1.1% below December 1989. Goods production fell 1.9% in September 1990 while services slipped 0.2%. Strikes in iron and steel, paper, and motor vehicles contributed to the declines in August and September. Excluding these industries, output fell 0.2% in August and 0.5% in September.

Goods production declined to its lowest level since October 1987. Although construction and manufacturing accounted for most of the decline, cutbacks were widespread elsewhere in the goods sector.

Manufacturers reduced output 1.9% in September following a decline of 1.2% in August. Broad cutbacks led by motor vehicles and parts, and pulp and paper industries were partially offset by advances in electrical products, petroleum refining and beverages.

Widespread declines elsewhere in manufacturing included machinery, nonmetallic mineral products, fabricated metals, and chemicals. Output of primary metals continued to be curtailed by the strike in iron and steel.

Industries related to construction such as forestry, manufacturers of wood products, asphalt roofing, clay and concrete paint, carpets and floor tiles, all pared production in September. A 2.0% drop in the output associated with mines, quarries and oil wells, contributed to the slump in goods production. Widespread declines were paced by reduced output of lead and zinc, crude oil and natural gas, and coal.

The 0.2% decline in services was the largest since October 1986. Losses in wholesale and retail trade, transportation communications, and finance, insurance, and real estate were partly offset by gains in community, business and personal services.

Transportation and storage output fell 1.4%, the largest decline since February 1990. Reduced rail shipments of coal, lumber, and potash, and lower truck and water transport more than offset a gain in pipeline throughput.

Table 3 shows the prices of selected metals for August, September and October 1990. With the exception of tin and tungsten, metal prices were generally down in October relative to the month before.

Table 4 deals with data pertaining to the census value added for both mining and mineral manufacturing. The data are presented in time-series format and cover the years 1982 through 1988 inclusive.

Value added associated with metallic minerals increased by about 37% in 1988 relative to 1987. This increase was largely attributable to nickel-copper-zinc and silver-lead-zinc mines.

Tables 5 through 11 provide the most recent employment data related to the mineral industry for the years 1961 to 1990 inclusive. The employment data are disaggregated into the four stages of mineral production as follows:

Stage I, referring to the discovery and extraction of the ore from the orebodies and the treatment of the ore to the concentrate stage.

Stage II, referring to the smelting and refining of the ore to produce a relatively pure mineral or metal.

Stage III, referring to the mineral-based semi-fabricating industry, the output of which include pipes, tubes, castings and forgings of metallic minerals, and also nonmetallic mineral basic products.

Stage IV, referring to the mineral-based fabricating industry that involves the conversion of Stage III output to finished products.

Tables 12 through 22 are related to data that provide information on the transportation of mineral commodities by rail and by water.

TABLE 1. CANADA, PRODUCTION OF LEADING MINERALS

		1989			1990			Percentage Changes		
		August	September	Total 9 Months	August	September	Total 9 Months	September 1990 September 1989	September 1990 August 1990	9 months 1990 1989
(000 tonnes except where noted)										
Metals										
Copper		42.1 ^r	52.2 ^r	510.8 ^r	74.4	56.7	592.4	8.7	-23.8	16.0
Gold	kg	14 781.4 ^r	14 108.8 ^r	115 205.8 ^r	15 184.9	13 773.6	123 429.2	-2.4	-9.3	7.1
Iron ore		3 179.7	3 660.5	28 593.0	3 711.1	3 347.5	24 271.1	-8.6	-9.8	-15.1
Lead		35.8	27.4	215.2	29.2	25.6	178.0	-6.7	-12.5	-17.3
Molybdenum	t	941.0 ^r	984.4 ^r	10 261.5 ^r	865.9 ^r	1 117.2	10 543.4	13.5	29.0	2.7
Nickel		12.6	17.9	142.1	15.5	16.7	143.1	-6.9	7.3	0.7
Silver	t	94.2	97.0	946.5	109.9	82.4	1 031.6	-15.0	-25.0	9.0
Uranium ¹	t	544.1	1 010.8	8 957.2	159.5	697.0	7 148.9	-31.0	337.0	-20.2
Zinc		164.9	137.9	1 002.2	140.4	140.4	1 069.5	1.8	0.0	6.7
Nonmetals										
Asbestos		66.3	69.0	531.3	57.9	59.4	504.5	-13.9	2.5	-5.0
Clay products	\$000	18 672.1 ^r	19 748.0 ^r	153 490.0 ^r	11 180.4	12 497.4	108 339.6	-36.7	11.8	-29.4
Gypsum		795.1 ^r	818.8 ^r	6 341.4 ^r	745.8	612.6	6 266.0	-25.2	-17.9	-1.2
Potash K ₂ O		461.5	455.6	5 260.6	667.9	449.4	5 393.7	-1.4	-32.7	2.5
Cement		1 274.8	1 269.2	8 898.1	1 211.7	1 155.8	8 515.7	-8.9	-4.6	-4.3
Lime		221.6 ^r	208.5	1 945.7	176.5	156.1	1 819.7	-25.1	-11.5	-6.5
Salt		874.8 ^r	850.5	7 875.0	987.2	1 044.1	7 830.8	22.8	5.8	-0.6
Fuels										
Coal		5 709.5	5 964.0	52 234.8	5 594.9	..	..	..	..	..
Natural gas	million m ³	8 646.0 ^r	9 035.0	86 016.0	..	..	..	..	..	..
Crude oil and equivalent	000 m ³	8 145.0 ^r	8 039.0	72 756.0	..	..	..	..	..	..

¹ Tonnes uranium (1 tonne U = 1.2999 short tons U₃O₈).

^r Revised; .. Not available.

Note: Percentage changes are calculated on the basis of actual production figures as opposed to the rounded figures as shown.

TABLE 2. CANADA, REAL GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY, IN 1986 PRICES, MONTHLY (SEASONALLY ADJUSTED AT ANNUAL RATES)

Industry Sector	1989	1990			Percentage Change
	September	July	August	September	September 1990 September 1989
	(\$ million)				
Total economy	510 455.7	512 248.0	510 328.7	506 415.1	-0.8
Primary industries					
Agriculture	9 984.7	10 492.8	10 506.0	10 483.2	5.0
Forestry	2 747.3	2 686.8	2 580.0	2 454.0	-10.7
Fishing and trapping	1 074.8	1 112.4	1 134.0	1 146.0	6.6
Mines, quarries and oil wells	19 755.5	19 786.8	19 650.0	19 249.2	-2.6
Mining industries	6 442.3	6 375.6	6 322.8	5 997.6	-6.9
Gold mines	1 592.2	1 690.8	1 569.6	1 524.0	-4.3
Iron mines	591.5	468.0	468.0	421.2	-28.8
Other metal mines	2 452.8	2 440.8	2 570.4	2 385.6	-2.7
Nonmetal mines	559.9	549.6	525.6	529.2	-5.5
Asbestos mines	113.2	108.0	110.4	93.6	-17.3
Mineral fuels					
Coal mines	1 007.5	985.2	945.6	883.2	-12.3
Crude petroleum and natural gas	11 543.0	11 438.4	11 428.8	11 373.6	-1.5
Secondary industries					
Manufacturing	95 363.9	93 556.8	92 391.6	90 644.4	-4.9
Non-durable manufacturing	44 073.8	43 448.4	43 196.4	42 693.6	-3.1
Durable manufacturing	51 290.1	50 108.4	49 195.2	47 950.8	-6.5
Primary metal industries	7 147.0	7 399.2	6 199.2	6 231.6	-12.8
Primary steel industries	2 989.5	3 486.0	2 310.0	2 353.2	-21.3
Steel, pipe and tube industry	350.9	336.0	333.6	308.4	-12.1
Iron foundries	407.1	396.0	385.2	369.6	-9.2
Smelting and refining	2 446.8	2 306.4	2 300.4	2 336.4	-4.5
Nonmetallic mineral products	3 279.0	3 036.0	2 986.8	2 902.8	-11.5
Clay products industry	163.6	153.6	145.2	135.6	-17.1
Cement industry	444.0	416.4	394.8	396.0	-10.8
Ready-mix concrete industry	554.2	451.2	442.8	436.8	-21.2
Construction industry	33 379.0	33 769.2	33 590.4	32 529.6	-2.5
Transportation and storage	23 388.1	22 467.6	22 365.6	22 052.4	-5.7
Communications	17 695.0	19 065.6	19 168.8	19 018.8	7.5
Other utilities	16 176.5	15 783.6	15 886.8	15 925.2	-1.6
Wholesale trade	28 120.6	27 190.8	26 672.4	26 251.2	-6.6
Retail trade	32 069.0	31 183.2	31 063.2	30 937.2	-3.5
Finance, insurance and real estate	80 201.6	80 092.8	80 478.0	80 340.0	0.2
Community, business and personal service	62 261.1	64 289.2	64 155.5	64 489.9	3.6

Note: Items may not add to totals given since all components are not shown.

TABLE 3. METAL PRICES, 1990

	August	September	October
Copper			
Electrolytic, U.S. producer f.o.b. refinery, cents (U.S.)	133.558	132.520	128.782
Electrolytic, COMEX, 1st pos. plus 5¢, cents (C.)	135.525	135.463	128.782
Electrolytic, LME Grade A settlement, cents (U.S.)	134.129	137.501	124.446
Lead			
New York, cents (U.S.)	50.000	47.500	42.600
Montreal, cents (C.)	58.000	57.250	53.800
LME cash, cents (U.S.)	39.701	37.997	34.471
Silver			
New York, cents (U.S.) per troy oz.	498.659	479.472	436.578
Toronto, cents (C.) per troy oz.	572.930	557.267	505.391
Zinc			
St. Louis, H.G., cents (U.S.)	78.984	77.771	67.535
Montreal, electrolytic, cents (C.)	..	..	..
Tin			
New York, dealers, cents (U.S.)	279.833	274.813	288.278
Metals Week, composite, cents (U.S.)	390.257	380.191	399.318
Gold			
London, p.m., US\$ per troy oz.	394.727	389.323	380.739
Mercury			
New York, dealers, US\$ per flask	241.304	220.000	200.455
Nickel			
New York, dealers, cathode, US\$	5.048	4.950	4.142
LME cash, US\$	4.970	4.919	4.148
Antimony			
New York, dealers, cents (U.S.)	82.000	80.000	80.000
Platinum			
New York, refined, US\$ per troy oz.	600.000	600.000	600.000
Cadmium			
New York, dealers, US\$	2.839	2.658	2.182
Aluminum			
LME cash, cents (C.)	92.503	108.565	102.358
LME cash, cents (U.S.)	80.831	93.736	88.255
Cobalt			
Shot/cathode/250 kg., US\$	8.400	8.400	8.400
U.S. spot cathode, US\$	11.588	12.025	13.000
Tungsten			
LMB ore, low, US\$/MTU	37.000	29.600	36.200
Molybdenum			
M.W. dealer oxide, US\$	2.775	2.818	2.686
Uranium			
Nuexco, US\$, U ₃ O ₈	11.700	11.575	10.100

Average U.S. Exchange Rate for August = 1.1444; September = 1.1582; October = 1.1598.

.. Not available.

Note: Prices are per pound unless otherwise stated.

TABLE 4. CANADA, CENSUS VALUE ADDED, TOTAL ACTIVITY, MINING AND MINERAL MANUFACTURING INDUSTRIES, 1982-88

	1982	1983	1984	1985	1986	1987	1988
	(\$ million)						
Mining							
Metallic minerals							
Nickel-copper-zinc	1 144.9	1 567.3	2 008.1	1 868.5	1 712.9	2 391.5	4 405.0
Gold	566.2	693.6	660.8	635.3	975.3	1 307.2	1 393.0
Uranium	600.1	496.9	772.5	813.1	802.0	898.3	858.6
Silver-lead-zinc	351.1	294.2	465.7	275.3	332.2	562.0	837.8
Iron	761.4	644.6	681.4	817.1	713.8	787.2	678.2
Miscellaneous metal mines	73.7	33.2	72.1	65.4	54.5	84.6	103.8
Total	3 497.4	3 729.8	4 660.6	4 474.7	4 590.7	6 030.8	8 276.4
Industrial minerals							
Potash	488.5	455.4	717.1	428.8	396.4	578.9	956.2
Stone	109.4	119.5	160.1	207.5	277.6	331.3	354.3r
Sand and gravel	75.6	90.3	104.9	132.9	220.0	306.5	287.3
Miscellaneous nonmetals	183.5	201.8	240.5	226.8	289.1	267.9	261.7
Asbestos	267.3	254.9	252.7	217.6	157.1	147.6	137.9
Peat	41.1	43.0	47.1	63.0	74.6	93.5	77.3r
Gypsum	26.6	35.1	40.2	50.7	56.6	67.2	64.1
Total	1 192.0	1 200.0	1 562.6	1 327.3	1 471.3	1 792.9	2 139.0r
Fuels							
Petroleum and natural gas	18 899.8	22 171.3	25 008.2	25 428.7	15 044.3	15 843.7	13 405.4
Coal	838.0	911.1	1 314.2	1 264.5	1 110.4	1 136.4	1 279.5
Total	19 737.8	23 082.4	26 322.4	26 693.2	16 154.7	16 980.1	14 684.9
Total mining industry	24 427.2	28 012.2	32 545.6	32 495.2	22 216.7	24 803.8	25 100.3r
Mineral manufacturing							
Primary metal industries							
Primary steel	2 149.9	2 464.9	2 939.6	3 105.9	3 001.6	3 424.6	..
Smelting and refining	1 493.0	1 912.4	2 236.9	2 202.4	2 372.8	3 050.9	..
Wire and wire products industries ¹	532.9	554.6	704.2	812.9	848.8	821.0	..
Aluminum rolling, casting and extruding	289.9	328.2	394.7	384.3	424.9	503.3	..
Iron foundries	279.9	326.0	447.7	471.5	510.7	479.7	..
Metal rolling, casting and extruding, n.e.s.	169.2	234.1	323.1	355.2	397.1	424.9	..
Steel pipe and tube	320.3	213.4	389.6	388.2	331.0	385.4	..
Copper and alloy rolling, casting and extruding	101.6	117.7	147.8	134.7	144.0	129.6	..
Total	5 336.7	6 151.3	7 583.6	7 855.0	8 030.9	9 219.5	..
Nonmetallic mineral products industries							
Other nonmetallic mineral products industries	426.7	487.6	571.5	672.4	781.7	924.7	..
Ready-mix concrete industries	388.6	405.0	397.5	455.3	626.3	748.4	..
Concrete products industries	349.7	333.6	376.5	463.9	522.2	590.8	..
Cement industries	387.4	407.5	421.9	490.7	500.2	558.4	..
Glass industries	339.6	403.8	460.9	466.4	482.4	532.7	..
Glass products industries	144.9	209.8	258.1	320.7	294.9	336.7	..
Clay products (domestic clay)	57.1	78.2	87.7	92.9	129.4	148.2	..
Clay products (imported clay)	37.9	37.2	37.3	41.4	98.6	130.4	..
Abrasive industries	80.4	91.4	101.9	97.8	100.5	105.2	..
Lime industries	60.1	66.2	75.4	70.1	78.0	87.4	..
Total	2 272.4	2 520.3	2 788.7	3 171.8	3 614.3	4 163.0	..

TABLE 4. (cont'd)

	1982	1983	1984	1985	1986	1987	1988
	(\$ million)						
Fabricated metal products industries							
Stamped and pressed metal products industries	1 265.1	1 303.6	1 417.2	1 612.4	1 729.2	2 069.7	..
Fabricated structural metal products industries	976.1	795.3	817.4	930.9	1 111.3	1 177.6	..
Hardware, tool and cutlery industry	653.8	650.7	786.7	932.0	993.4	1 025.5	..
Other metal fabricating industries	667.2	690.5	745.5	735.0	729.6	856.4	..
Ornamental and architectural metal products industries	529.5	491.2	519.9	608.4	722.2	813.1	..
Machine shop industry	444.7	451.3	549.5	611.2	636.6	692.4	..
Power boiler and heat exchanger industry	310.0	319.1	298.1	351.1	357.7	407.7	..
Heating equipment industry	188.5	182.0	162.6	243.9	262.6	269.5	..
Total	5 034.8	4 883.7	5 296.9	6 024.8	6 542.6	7 311.9	..
Petroleum and coal products industries							
Petroleum refining	2 108.4	2 563.7	2 498.2	2 478.8	1 755.6	1 860.1	..
Other petroleum and coal products industries	39.9	52.6	42.1	41.0	98.9	107.5	..
Manufacturers of lubricating oil and greases	31.7	24.8	56.1	75.7	82.5	99.0	..
Total	2 180.0	2 641.1	2 596.4	2 595.5	1 936.9	2 066.5	..
Total mineral manufacturing	14 824.0	16 196.4	18 265.6	19 647.0	20 124.7	22 760.9	..
Total mining and mineral manufacturing	39 251.2	44 208.6	50 811.2	52 142.2	42 341.4	47 564.8	..

Sources: Energy, Mines and Resources Canada; Statistics Canada.

1 Wire and wire products have been included in Primary Metal Industries.

r Revised; .. Not available; n.e.s. Not elsewhere specified.

Note: Totals may not add due to rounding.

TABLE 5. EMPLOYMENT IN THE MINERAL INDUSTRY, STAGE I - MINERAL EXTRACTION AND MILLING (total activity)¹, 1961-90

	Metal Mines	Nonmetal Mines	Structural Materials	Nonfuel Mining	Coal	Crude Oil and Natural Gas	Total Nonfuel and Fuel
SIC#	061	062	081, 082	061, 062 081, 082	063	071	
				(number)			
1961	58 591	11 003	5 235	74 829	10 302	11 184	96 315
1962	58 243	11 408	5 514	75 165	9 897	11 232	96 294
1963	57 119	11 661	5 686	74 466	9 828	11 237	95 531
1964	57 648	11 727	6 044	75 419	9 796	11 242	96 457
1965	60 942	12 116	6 248	79 306	9 697	11 817	100 820
1966	61 670	12 422	6 312	80 404	9 281	12 378	102 063
1967	61 728	13 077	5 779	80 584	8 981	13 113	102 678
1968	63 369	13 673	5 836	82 878	8 427	13 611	104 916
1969	60 550	14 322	5 692	80 564	7 371	14 153	102 088
1970	66 590	15 150	5 510	87 250	7 874	14 970	110 094
1971	66 012	15 105	5 328	86 445	8 069	15 896	110 410
1972	61 994	14 866	5 154	82 014	8 704	16 604	107 322
1973	66 134	15 391	5 276	86 801	7 856	16 786	111 443
1974	70 038	16 198	6 197	92 433	8 142	18 155	118 730
1975	69 161	13 703	6 382	89 246	8 416	18 053	115 715
1976	68 269	15 649	5 685	89 603	8 995	19 096	117 694
1977	67 242	16 608	5 190	89 040	9 781	20 240	119 061
1978	56 447	16 035	4 847	77 329	10 574	22 045	109 948
1979	58 960	16 770	4 692	80 422	10 269	24 554	115 245
1980	66 118	16 979	4 461	87 558	11 416	27 448	126 422
1981	68 712	16 391	4 183	89 286	11 182	28 783	129 251
1982	61 503	13 680	3 491	78 674	13 113	31 699	123 486
1983	52 194	13 170	3 403	68 767	11 646	33 418	113 831
1984	52 683	13 698	3 560	69 941	11 905	33 944	115 790
1985	48 672	12 974	3 941	65 587	12 076	39 498	117 161
1986	46 487	12 376	4 887	63 750	10 747	35 477	109 974
1987	45 496	12 181	5 738	63 415	10 406	33 842 ^r	107 512
1988	48 277	11 679	5 917	65 873	11 122	33 754	110 749
1989 ^p	49 150	11 618	5 886	66 654	10 780	34 673	112 107
1990 ^f	45 461	10 984	6 266	62 711	12 068	34 348	109 127

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices.

^p Preliminary; ^f Forecast; ^r Revised.

SIC: 1980 Standard Industrial Classification.

TABLE 6. EMPLOYMENT IN THE NONFUEL MINERAL INDUSTRY, STAGE I - MINERAL EXTRACTION AND MILLING (total activity)¹, 1961-90

	Gold	Uranium	Iron	Nickel, Copper, Zinc	Silver, Lead, Zinc	Other Nonferrous	Asbestos	Peat	Gypsum	Potash	Other Nonmetal	Stone Quarries	Sand and Gravel	Total Nonfuel Mining
SIC #	0611	0616	0617	0612, 0613	0614	0615, 0619	0621	0622	0623	0624	0625, 0629	081	082	
							(number)							
1961	15 994	(2)	8 446	23 351	4 524	6 276	6 773	1 207	549	(3)	2 424	3 173	2 062	74 829
1962	15 425	(2)	9 181	23 383	4 669	5 585	6 936	1 220	594	(3)	2 658	3 221	2 293	75 165
1963	14 639	(2)	9 608	22 703	5 163	5 006	6 828	1 303	677	(3)	2 853	3 477	2 209	74 466
1964	14 012	(2)	9 544	23 848	5 898	4 346	6 544	1 290	710	(3)	3 183	3 718	2 326	75 419
1965	13 155	(2)	11 739	25 892	6 121	4 035	6 536	1 201	646	1 050	2 683	3 511	2 737	79 306
1966	11 656	(2)	11 464	27 651	6 356	4 543	6 736	1 254	585	1 195	2 652	3 701	2 611	80 404
1967	10 355	(2)	10 899	29 288	6 030	5 156	6 931	1 261	505	1 724	2 656	3 381	2 398	80 584
1968	9 001	(2)	11 342	30 557	6 320	6 149	7 213	1 306	489	2 086	2 579	3 340	2 496	82 878
1969	8 221	(2)	10 490	28 679	6 467	6 693	7 242	1 156	657	2 713	2 554	3 252	2 440	80 564
1970	7 185	(2)	11 336	36 253	7 103	4 713	7 664	1 195	671	2 837	2 783	3 023	2 487	87 250
1971	6 148	(2)	11 524	37 713	6 506	4 121	8 101	1 269	603	2 519	2 613	2 832	2 496	86 445
1972	5 579	(2)	10 842	36 012	6 057	3 504	7 843	1 114	670	2 440	2 799	2 803	2 351	82 014
1973	5 603	(2)	13 395	37 602	6 112	3 422	8 027	1 236	676	2 684	2 768	3 097	2 179	86 801
1974	5 665	(2)	15 019	38 876	6 722	3 756	8 131	1 288	671	3 224	2 884	3 458	2 739	92 433
1975	5 798	(2)	16 155	35 538	7 362	4 308	6 042	1 303	576	3 351	2 431	3 544	2 838	89 246
1976	5 051	3 430	16 765	34 049	7 351	1 623	7 900	1 168	591	3 270	2 720	3 217	2 468	89 603
1977	4 643	4 140	15 550	33 703	7 512	1 694	8 302	1 244	652	3 628	2 782	3 004	2 186	89 040
1978	4 943	4 965	12 103	25 610	7 073	1 753	7 752	1 295	683	3 708	2 597	2 876	1 971	77 329
1979	5 013	5 858	14 563	25 116	7 081	1 329	8 067	1 372	738	3 905	2 688	2 860	1 832	80 422
1980	5 839	6 304	13 753	31 063	7 349	1 810	8 055	1 308	715	4 160	2 741	2 660	1 801	87 558
1981	6 809	6 869	12 397	33 246	7 740	1 651	6 829	1 441	711	4 661	2 749	2 418	1 765	89 286
1982	7 350	6 035	10 676	28 851	6 837	1 754	4 973	1 323	614	4 076	2 694	2 028	1 463	78 674
1983	7 956	5 390	8 236	24 953	5 073	586	4 617	1 301	682	3 696	2 874	1 980	1 423	68 767
1984	8 450	6 249	7 843	24 000	5 165	976	4 177	1 369	770	4 508	2 874	2 256	1 304	69 941
1985	7 862	5 989	7 077	22 073	4 724	947	3 569	1 363	753	4 488	2 801	2 340	1 601	65 587
1986	8 562	5 608	6 379	20 616	4 162	1 160	2 766	1 468	990	4 315	2 837	2 627	2 260	63 750
1987	9 757	5 289	6 039	18 979	4 372	1 060	2 858	1 510	929	4 094	2 790	2 911	2 827	63 415
1988	12 594	5 103	6 095	18 881	4 443	1 161	2 720	1 581	956	3 970	2 452	2 981	2 936	65 873
1989 ^p	12 645	4 765	6 303	19 626	4 522	1 289	2 800	1 581	966	3 893	2 378	3 053	2 833	66 654
1990 ^f	10 937	4 320	6 004	18 672	4 302	1 226	2 604	1 403	1 018	3 699	2 260	3 433	2 833	62 711

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices. (2) Included in "Other Nonferrous." (3) Included in "Other Nonmetal."

^p Preliminary; ^f Forecast.

SIC: 1980 Standard Industrial Classification.

TABLE 7. EMPLOYMENT IN THE MINERAL INDUSTRY, STAGE II - SMELTING AND REFINING (total activity)¹, 1961-90

	Smelting/ Refining	Iron and Steel Mills	Total Primary Metals	Petroleum Refineries	Total Smelting and Refining
SIC#	295	291	291, 295 (number)	3611	
1961	29 938	34 749	64 687	10 660	75 347
1962	29 693	36 593	66 286	10 184	76 470
1963	28 516	38 196	66 712	9 734	76 446
1964	30 153	41 505	71 658	9 547	81 205
1965	31 835	44 274	76 109	8 976	85 085
1966	34 237	45 999	80 236	8 996	89 232
1967	34 764	44 203	78 967	9 147	88 114
1968	34 710	44 634	79 344	9 091	88 435
1969	33 376	42 954	76 330	8 765	85 095
1970	37 298	49 169	86 467	14 725	101 192
1971	36 445	49 601	86 046	14 506	100 552
1972	33 829	49 758	83 587	14 376	97 963
1973	32 396	53 008	85 404	14 843	100 247
1974	35 249	54 253	89 502	15 967	105 469
1975	35 577	54 003	89 580	15 624	105 204
1976	34 246	51 978	86 224	15 105	101 329
1977	35 647	52 709	88 356	16 464	104 820
1978	32 652	56 669	89 321	18 958	108 279
1979	32 869	59 167	92 036	18 037	110 073
1980	36 137	61 238	97 375	18 743	116 118
1981	38 011	56 543	94 554	21 325	115 879
1982	33 215	52 330	85 545	20 155	105 700
1983	31 788	47 693	79 481	17 557	97 038
1984	31 752	48 899	80 651	15 847	96 498
1985	30 567	47 685	78 252	15 326	93 578
1986	29 058	46 461	75 519	13 287	88 806
1987	29 397	46 493	75 890	13 252	89 142
1988 ^e	30 195	47 169	77 365	13 566	90 931
1989 ^p	31 322	46 748	78 070	13 448	91 518
1990 ^f	31 209	44 267	75 476	13 087	88 563

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices.

^p Preliminary; ^f Forecast; ^e Estimate.

SIC: 1980 Standard Industrial Classification.

**TABLE 8. EMPLOYMENT IN THE MINERAL INDUSTRY,
STAGE III - SEMI-FABRICATION (total activity)¹, 1961-90**

SIC#	Total Nonfuel Semi-Fabrication	Miscellaneous Petroleum and Coal Products	Lubricating Oil and Greases	Total Semi-Fabrication
		369	3612	
		(number)		
1961	77 063	581	331	77 975
1962	80 606	608	352	81 566
1963	82 420	635	354	83 409
1964	87 843	726	373	88 942
1965	93 912	531	408	94 851
1966	98 602	585	424	99 611
1967	96 033	546	407	96 986
1968	96 375	518	397	97 290
1969	99 438	532	438	100 408
1970	96 144	499	423	97 066
1971	95 831	561	450	96 842
1972	101 109	555	478	102 142
1973	105 884	757	487	107 128
1974	109 818	954	514	111 286
1975	104 296	984	656	105 936
1976	103 411	982	602	104 995
1977	101 257	716	669	102 642
1978	107 234	683	712	108 629
1979	111 231	461	695	112 387
1980	105 902	532	798	107 232
1981	103 192	584	729	104 505
1982	90 194	571	792	91 557
1983	86 814	503	857	88 174
1984	91 405	521	896	92 822
1985	94 515	513	900	95 928
1986	96 744	778	1 001	98 523
1987 ^r	99 963	894	1 002	101 859
1988 ^e	101 842	873	978	103 693
1989 ^p	98 883	802	899	100 583
1990 ^f	94 425	839	940	96 204

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices.

^p Preliminary; ^f Forecast; ^r Revised; ^e Estimate.

SIC: 1980 Standard Industrial Classification.

TABLE 9. EMPLOYMENT IN THE MINERAL INDUSTRY, STAGE III - NONFUEL SEMI-FABRICATION (total activity)¹, 1961-90

	Steel Pipe and Tube	Iron Foundries	Aluminum Rolling, Casting, Extruding	Copper Rolling, Casting, Extruding	Other Rolling, Casting, Extruding	Wire and Wire Products	Clay and Clay Products	Cement	Concrete Products	Ready-Mix Concrete	Glass and Glass Products ²	Abrasives	Lime	Other Non- metallic Products	Total Nonfuel Semi- Fabrication
SIC#	292	294	296	297	299	305	351	352	354	355	356	357	358	359	
	(number)														
1961	3 407	8 178	5 095	3 482	2 731	12 227	5 327	3 590	8 503	4 232	9 802	2 481	847	7 161	77 063
1962	3 676	8 546	5 118	3 492	2 770	13 045	5 468	3 679	9 156	4 886	10 042	2 577	949	7 202	80 606
1963	3 840	8 216	5 164	3 651	3 038	13 743	5 376	3 566	9 317	5 411	10 346	2 464	886	7 402	82 420
1964	4 437	9 620	4 834	3 849	3 382	14 850	5 582	3 592	10 225	6 171	10 362	2 580	815	7 544	87 843
1965	4 799	11 714	4 654	3 620	3 736	16 099	5 675	3 837	10 988	6 559	10 873	2 821	800	7 737	93 912
1966	4 795	13 027	4 943	4 199	4 103	16 391	5 876	4 053	11 090	7 349	11 248	3 044	785	7 699	98 602
1967	5 012	11 970	5 468	4 027	4 287	16 060	5 559	3 972	10 321	7 137	11 388	2 734	724	7 374	96 033
1968	5 441	11 131	5 491	3 947	4 585	16 082	5 515	3 747	10 166	7 440	11 992	2 617	662	7 559	96 375
1969	5 146	11 582	6 028	3 922	4 856	17 014	5 383	3 778	11 011	7 509	12 031	2 697	707	7 774	99 438
1970	5 314	10 663	6 297	3 744	4 060	16 598	4 938	3 887	9 562	7 340	11 654	2 559	660	8 868	96 144
1971	5 306	9 897	5 612	3 608	3 845	16 272	4 682	3 954	10 719	7 997	11 672	2 310	670	9 287	95 831
1972	6 268	9 948	6 200	3 740	4 215	17 651	4 695	4 732	10 817	8 240	12 045	2 367	651	9 540	101 109
1973	5 288	10 965	6 206	3 736	4 863	18 877	5 001	4 871	10 790	9 233	12 840	2 555	724	9 935	105 884
1974	5 845	12 054	6 162	3 779	4 877	19 535	5 289	4 666	11 602	9 219	12 915	2 676	840	10 359	109 818
1975	5 785	11 480	5 672	3 240	4 573	17 614	5 042	4 577	11 201	9 541	11 779	2 318	790	10 684	104 296
1976	5 546	10 365	6 255	3 297	5 354	17 573	4 791	4 517	10 773	9 128	11 836	2 535	804	10 637	103 411
1977	5 634	10 459	6 884	3 183	4 703	17 886	4 553	4 265	10 001	8 521	11 204	2 557	828	10 579	101 257
1978	6 289	10 472	7 060	3 586	5 268	18 823	4 366	4 520	10 486	9 520	11 595	2 678	784	11 787	107 234
1979	6 480	10 520	7 698	3 728	6 292	19 765	4 947	4 828	9 766	9 332	11 835	2 660	925	12 455	111 231
1980	6 514	9 245	6 627	3 230	5 749	18 529	4 875	4 791	9 280	9 348	11 967	2 628	1 003	12 116	105 902
1981	7 531	8 358	6 512	3 031	5 182	17 309	4 145	4 726	9 121	10 053	12 003	2 571	968	11 682	103 192
1982	6 017	8 163	6 255	2 541	4 694	14 575	3 004	4 317	8 245	8 034	11 016	2 170	895	10 268	90 194
1983	4 521	7 364	6 415	2 744	4 827	13 493	3 008	4 057	7 286	8 390	11 896	1 852	862	10 099	86 814
1984	5 482	7 911	6 661	2 971	5 274	14 212	3 070	3 771	7 657	8 802	12 754	1 949	876	10 015	91 405
1985	5 978	7 750	6 196	3 012	5 620	15 354	2 727	3 533	8 336	9 210	12 872	1 895	783	11 249	94 515
1986	4 829	7 547	6 200	3 059	6 357	15 262	3 770	3 514	9 174	10 422	13 448	1 827	778	10 557	96 744
1987†	4 964	7 860	6 143	2 828	6 403	14 943	3 930	3 646	10 309	11 910	13 605	1 693	784	10 945	99 963
1988*	5 358	8 085	6 247	2 843	6 575	14 670	4 017	3 542	11 601	11 929	13 051	2 095	824	11 007	101 842
1989†	4 928	7 175	6 143	2 630	6 669	14 670	3 487	3 320	12 210	12 312	12 022	2 226	881	10 210	98 883
1990†	5 066	6 337	5 595	2 333	5 734	14 803	3 215	3 278	12 200	11 273	10 730	2 079	927	10 854	94 425

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices. ² Includes sealed window manufacturers until 1969; thereafter these are included in Stage IV - Ornamental Metal Products.

† Preliminary; ‡ Forecast; * Revised; • Estimate.

SIC: 1980 Standard Industrial Classification.

TABLE 10. EMPLOYMENT IN THE MINERAL INDUSTRY, STAGE IV - METALLIC MINERAL MANUFACTURING (total activity)¹, 1961-90

	Boilers	Structural Metal Products	Ornamental Metal Products	Stamped, Pressed and Coated Products	Hardware Tool and Cutlery	Heating Equipment	Machine Parts	Other Metal Fabricating	Total Mineral Manufacturing
SIC#	301	302	303	304	306	307	308	309	
	(number)								
1961	4 709	14 231	10 641	21 156	9 135	5 137	7 756	15 249	88 014
1962	4 886	14 802	11 640	23 606	10 223	5 349	8 603	16 283	95 392
1963	5 350	14 212	12 459	24 024	11 112	5 586	9 179	16 627	98 549
1964	5 429	14 602	12 808	25 192	13 110	5 673	10 137	18 088	105 039
1965	6 496	18 072	13 439	27 925	13 570	5 711	11 618	20 017	116 848
1966	7 239	21 038	13 488	29 577	14 326	5 464	13 235	21 431	125 798
1967	6 622	18 547	12 994	29 830	14 056	5 461	13 810	21 007	122 327
1968	7 962	17 150	12 664	29 560	14 166	4 930	13 501	20 825	120 758
1969	7 494	18 203	12 784	30 463	14 401	5 059	14 517	20 895	123 816
1970	7 661	19 104	12 417	29 709	15 241	4 670	14 221	20 543	123 566
1971	7 847	17 556	12 614	28 710	14 920	4 749	13 097	20 755	120 248
1972	8 136	17 113	13 611	27 939	16 386	4 238	11 731	21 504	120 658
1973	8 013	18 164	13 937	30 026	18 819	4 453	10 138	22 494	126 044
1974	8 681	20 020	14 470	31 276	20 234	4 930	10 936	23 663	134 210
1975	10 211	19 101	15 241	30 273	18 990	4 717	10 922	23 810	133 265
1976	10 704	18 056	15 541	31 487	19 316	4 977	10 764	23 704	134 549
1977	9 660	17 209	14 800	30 888	17 867	4 538	10 762	23 298	129 022
1978	9 124	16 759	16 753	34 181	18 856	5 086	12 029	24 904	137 692
1979	9 477	18 676	18 018	33 548	21 090	5 818	13 081	23 705	143 413
1980	10 374	17 700	17 890	32 266	20 830	5 993	13 449	24 217	142 719
1981	11 215	18 445	17 603	32 459	19 575	5 806	14 297	22 123	141 523
1982	10 965	17 021	15 228	29 865	17 342	5 317	13 083	18 167	126 988
1983	5 413	18 437	13 537	27 947	16 609	5 032	12 881	16 044	115 900
1984	4 548	17 162	13 538	27 758	17 308	4 220	14 200	16 256	114 990
1985	4 455	18 083	15 598	31 021	19 297	5 607	15 356	14 927	124 344
1986	4 990	19 213	17 462	31 584	21 164	5 779	17 259	15 170	132 621
1987 ^r	4 816	18 615	19 770	35 329	22 129	6 252	18 398	16 358	141 667
1988 ^e	5 022	20 110	21 656	36 611	20 556	6 429	16 520	17 302	144 204
1989 ^p	5 237	21 605	24 220	34 435	17 710	6 670	16 616	17 657	144 150
1990 ^f	5 349	20 778	27 073	31 705	17 043	6 302	16 728	17 795	142 773

Sources: Energy, Mines and Resources Canada; Statistics Canada.

¹ Total activity includes sales and head offices.

^p Preliminary; ^f Forecast; ^r Revised; ^e Estimate.

SIC: 1980 Standard Industrial Classification.

**TABLE 11. EMPLOYMENT FOR SERVICES
INCIDENTAL TO MINES, QUARRIES AND OIL WELLS,
1961-90**

	Petroleum and Natural Gas Contract Drilling	Mining Diamond Drilling	Other Services Incidental to Mines, Quarries and Oil Wells	Total
	(number)			
1961	4 144	2 025	1 409	7 578
1962	3 800	1 926	1 720	7 446
1963	4 179	2 201	1 491	7 871
1964	4 158	2 401	2 077	8 636
1965	4 648	2 776	3 137	10 561
1966	4 428	2 887	4 317	11 632
1967	4 249	2 669	5 425	12 343
1968	4 434	2 985	6 350	13 769
1969	4 821	3 109	6 967	14 897
1970	4 267	3 207	7 894	15 368
1971	4 093	2 514	7 710	14 317
1972	4 817	2 083	6 139	13 039
1973	5 680	2 123	5 193	12 996
1974	5 054	2 317	5 017	12 388
1975	5 096	1 899	4 139	11 134
1976	5 486	1 548	5 043	12 077
1977	6 054	1 682	5 723	13 459
1978	7 419	1 681	7 492	16 592
1979	9 076	2 420	8 436	19 932
1980	11 097	2 959	9 327	23 383
1981	8 448	2 721	9 856	21 025
1982	6 882	1 880	7 752	16 514
1983	12 032	1 575	12 254	25 861
1984	9 250	1 684	15 433	26 367
1985	13 150	1 625	19 358	34 133
1986	9 800	2 198	18 958	30 956
1987 ^r	8 883	3 353	23 267	35 503
1988 ^e	9 408	3 201	23 208	35 818
1989 ^p	7 108	1 903	21 233	30 245
1990 ^f	7 257	1 903	18 957	28 117

Sources: Energy, Mines and Resources Canada; Statistics Canada.

P Preliminary; ^f Forecast; ^r Revised; ^e Estimated.

TABLE 12. CANADA, CRUDE MINERALS TRANSPORTED BY CANADIAN RAILWAYS, 1986-88

	1986	1987	1988
	(kilotonnes)		
Metallic minerals			
Iron ores and concentrates	36 688	36 093	39 835
Nickel-copper ores and concentrates	4 084	3 797	3 742
Alumina and bauxite	3 503	3 363	3 224
Zinc ores and concentrates	993	1 380	1 554
Copper ores and concentrates	1 357	1 356	1 185
Lead ores and concentrates	912	514	590
Metallic ores and concentrates, n.e.s.	10	4	63
Nickel ores and concentrates	—	—	—
Total metallic minerals	47 547	46 509	50 193
Nonmetallic minerals			
Potash (KCl)	10 266	11 577	12 337
Sulphur, n.e.s.	5 831	5 731	6 559
Gypsum	5 512	5 636	5 418
Limestone, n.e.s.	2 997	3 301	3 008
Phosphate rock	1 612	1 162	1 236
Clay	790	750	1 025
Sulphur, liquid	839	970	1 002
Sand, industrial	888	948	985
Salt, rock	799	687	688
Sodium carbonate	560	663	659
Limestone, industrial	455	386	396
Nepheline syenite	242	252	302
Sodium sulphate	385	319	297
Nonmetallic minerals, n.e.s.	177	142	170
Salt, n.e.s.	101	146	161
Limestone, agricultural	128	93	122
Stone, n.e.s.	57	196	107
Silica	14	21	23
Abrasives, natural	17	21	21
Sand, n.e.s.	227	47	17
Barite	14	12	9
Asbestos	31	11	5
Peat and other mosses	10	2	1
Total nonmetallic minerals	31 951	33 072	34 550
Mineral fuels			
Coal, bituminous	40 386	39 051	47 117
Coal, lignite	1 236	2 549	2 976
Natural gas and other crude bituminous substances	31	43	34
Coal, n.e.s.	63	949	24
Oil, crude	8	7	12
Total mineral fuels	41 724	42 599	50 163
Total crude minerals	121 223	122 180	134 906
Total revenue freight ¹ moved by Canadian railways	249 786	261 406	269 354
Crude minerals as a percentage of total revenue freight	48.5	46.7	50.1

Source: Statistics Canada.

¹ Revenue freight refers to a local or interline shipment from which earnings accrue to a carrier.

n.e.s. Not elsewhere specified; — Nil.

TABLE 13. CANADA, FABRICATED MINERAL PRODUCTS TRANSPORTED BY CANADIAN RAILWAYS, 1986-88

	1986	1987	1988
	(kilotonnes)		
Metallic minerals			
Ferrous mineral products			
Iron and steel scrap	1 926	1 982	2 068
Sheets and strips, steel	829	1 140	1 191
Ingots, blooms, billets, slabs of iron and steel	804	659	674
Bars and rods, steel	683	648	593
Structural shapes and sheet piling, iron and steel	523	451	476
Plates, steel	350	311	311
Pipes and tubes, iron and steel	190	177	275
Rails and railway track material	62	70	91
Castings and forgings, iron and steel	94	67	83
Pig iron	59	68	36
Ferroalloys	48	37	27
Other primary iron and steel	33	23	9
Wire, iron or steel	10	5	4
Total ferrous mineral products	5 611	5 639	5 838
Nonferrous mineral products			
Aluminum and aluminum alloy fabricated material, n.e.s.	1 041	888	760
Zinc and alloys	483	433	517
Copper and alloys, n.e.s.	401	408	391
Aluminum paste, powder, pigs, ingots, shot	457	315	352
Other nonferrous base metals and alloys	205	123	167
Lead and alloys	143	116	163
Nonferrous metal scrap	86	104	94
Slag, dross, etc.	55	60	49
Copper matte and precipitates	4	1	-
Total nonferrous mineral products	2 875	2 449	2 493
Total metallic mineral products	8 486	8 088	8 332
Nonmetallic mineral products			
Fertilizers and fertilizer materials, n.e.s.	2 143	2 470	2 424
Portland cement, standard	1 665	1 873	1 813
Sulphuric acid	1 490	1 471	1 806
Gypsum basic products, n.e.s.	357	426	282
Cement and concrete basic products, n.e.s.	258	208	223
Nonmetallic mineral basic products, n.e.s.	197	210	210
Lime, hydrated and quick	104	177	185
Natural stone basic products, chiefly structural	172	185	166
Dolomite and magnesite, calcined	76	48	50
Glass basic products	40	43	45
Bricks and tiles, clay	18	104	30
Fire brick and similar shapes	23	23	24
Asbestos and asbestos-cement basic products	5	17	22
Plaster	5	6	9
Refractories, n.e.s.	10	9	6
Total nonmetallic mineral products	6 563	7 268	7 295
Mineral fuel products			
Refined and manufactured gases, fuel type	2 333	2 355	2 671
Diesel fuel	1 430	1 269	1 531
Gasoline	949	897	675
Fuel oil, n.e.s.	725	677	654
Coke, n.e.s.	732	633	623
Other petroleum and coal products	685	606	517
Petroleum coke	408	341	341
Lubricating oils and greases	312	308	304
Asphalts and road oils	347	284	248
Total mineral fuel products	7 922	7 371	7 566
Total fabricated mineral products	22 971	22 727	23 193
Total revenue freight ¹ moved by Canadian railways	249 786	261 406	269 354
Fabricated mineral products as a percentage of total revenue freight	9.2	8.7	8.6

Source: Statistics Canada.

¹ Revenue freight refers to a local or interline shipment from which earnings accrue to a carrier.

n.e.s. Not elsewhere specified; - Nil.

TABLE 14. CANADA, CRUDE MINERALS AND FABRICATED MINERAL PRODUCTS TRANSPORTED BY CANADIAN RAILWAYS, 1959-88

	Total Revenue Freight ¹	Total Crude Minerals	Total Fabricated Mineral Products	Total Crude and Fabricated Minerals	Crude and Fabricated Minerals as Percent of Revenue Freight
	(million tonnes)				
1959	150.6	68.2	15.3	78.1	51.9
1960	142.8	57.1	14.5	71.6	50.1
1961	138.9	54.1	13.6	67.7	48.7
1962	146.0	60.3	13.8	74.1	50.8
1963	154.6	62.9	15.5	78.4	50.6
1964	180.0	74.6	15.9	90.5	50.3
1965	186.2	80.9	17.3	98.2	52.7
1966	194.5	80.6	17.8	94.8	50.6
1967	190.0	81.2	17.7	98.9	52.1
1968	195.4	86.7	18.8	105.5	54.0
1969	189.0	81.9	27.6	109.5	57.9
1970	211.6	97.5	28.4	125.9	59.5
1971	214.5	95.6	27.4	123.0	57.3
1972	215.8	89.4	27.6	117.0	54.2
1973	241.2	113.1	29.1	142.2	59.0
1974	246.3	115.3	30.9	146.2	59.4
1975	226.0	110.6	26.6	137.2	60.7
1976	238.5	116.6	25.5	142.1	59.6
1977	247.2	121.1	25.7	146.8	59.4
1978	238.8	107.7	26.2	133.9	56.1
1979	257.9	127.2	26.6	153.8	59.6
1980	254.4	124.8	24.6	149.4	58.7
1981	246.6	120.7	26.4	147.1	59.7
1982	212.5	95.7	21.0	116.7	54.9
1983	222.8	95.3	22.7	118.0	53.0
1984	254.6	121.1	25.1	146.2	57.4
1985	250.6	125.2	24.3	149.5	59.7
1986	249.8	121.2	23.0	144.2	57.7
1987	261.4	122.2	22.7	144.9	55.4
1988	269.4	134.9	23.2	158.1	58.7

Source: Statistics Canada.

¹ Revenue freight refers to a local or interline shipment from which earnings accrue to a carrier.

TABLE 15. CANADA, CRUDE MINERALS AND FABRICATED MINERAL PRODUCTS TRANSPORTED THROUGH THE ST. LAWRENCE SEAWAY¹, 1987-89

	Montreal-Lake Ontario Section			Welland Canal Section		
	1987	1988	1989	1987	1988	1989
	(tonnes)					
Crude minerals						
Iron ore	9 557 376	10 810 682	11 185 264	6 180 641	7 083 883	7 293 840
Coal	233 756	712 945	776 999	5 644 283	7 029 061	6 321 198
Salt	928 559	1 027 602	1 377 273	1 766 446	1 672 709	2 176 005
Stone, ground or crushed	231 637	432 370	448 117	889 303	992 668	1 187 148
Other crude minerals	1 176 688	1 000 802	965 083	731 820	601 526	920 752
Sand and gravel	—	—	—	89 372	226 492	241 749
Clay and bentonite	164 766	240 823	215 214	164 766	240 823	215 214
Aluminum ores and concentrates	169 584	230 356	236 629	136 984	218 960	203 711
Potash	55 098	294 948	291 373	83 312	372 971	105 371
Stone, rough	21	41	530	—	15 021	113
Phosphate rock	47 223	2 833	6 120	—	—	—
Total crude minerals	12 564 708	14 753 402	15 502 602	15 686 927	18 454 114	18 665 101
Fabricated mineral products						
Iron and steel, manufactured	2 633 980	2 724 806	3 353 717	2 197 601	2 327 939	2 782 889
Coke	654 432	1 466 718	1 272 068	822 061	1 638 341	1 412 270
Fuel oil	481 049	879 438	529 627	569 051	669 756	637 605
Cement	242 758	32 101	27 463	549 874	488 672	367 748
Scrap iron and steel	344 352	369 397	320 630	372 318	364 658	313 738
Iron and steel, bars, rods, slabs	972 396	1 581 257	825 931	469 961	697 850	304 885
Gasoline	167 472	248 120	485 319	97 982	126 537	275 681
Other petroleum products	181 447	141 952	124 006	136 429	141 004	155 894
Pig iron	124 355	93 248	70 938	104 815	82 921	65 164
Tar, pitch and creosote	22 946	27 104	29 432	49 030	62 830	32 035
Lubricating oils and greases	59 826	28 128	42 923	27 119	18 544	22 531
Iron and steel, nails, wire	8 027	10 670	6 468	6 951	8 396	4 995
Total fabricated minerals	5 893 040	7 603 029	7 088 522	5 403 192	6 627 448	6 375 435
Total crude and fabricated minerals	18 457 748	22 356 431	22 591 124	21 090 119	25 081 562	25 040 536
Total, all products ²	39 968 615	40 557 669	37 070 370	42 724 755	43 536 317	39 909 450
Crude and fabricated minerals as a percentage of all products	46.2	55.1	60.9	49.4	57.6	62.7

Source: St. Lawrence Seaway Traffic Report.

¹ Total cargo transported regardless of travel direction. ² Includes crude minerals and fabricated mineral products along with all other cargo transported.

— Nil.

TABLE 16. CANADA, CRUDE MINERALS AND FABRICATED MINERAL PRODUCTS TRANSPORTED THROUGH THE ST. LAWRENCE SEAWAY¹, 1960-89

	Montreal-Lake Ontario Section				Welland Canal Section			
	Total All Products ²	Total Crude Minerals	Total Fabricated Mineral Products	Crude and Fabricated Minerals as Percent of All Products	Total All Products ²	Total Crude Minerals	Total Fabricated Mineral Products	Crude and Fabricated Minerals as Percent of All Products
	(kilotonnes)				(kilotonnes)			
1960	18 460	5 760	2 904	46.9	26 563	12 679	2 606	57.5
1961	21 212	6 706	2 358	42.7	28 490	12 599	2 378	52.6
1962	23 271	7 531	2 522	43.2	32 215	15 625	2 342	55.8
1963	28 198	9 507	2 804	43.7	37 490	18 094	2 524	55.0
1964	35 701	13 127	3 558	46.7	46 644	23 489	3 095	57.0
1965	39 352	13 788	6 024	50.3	48 477	23 555	4 933	58.8
1966	44 538	16 376	6 340	51.0	53 648	25 712	5 329	57.9
1967	39 918	17 800	6 430	60.7	47 945	26 010	5 459	65.6
1968	43 496	19 312	8 425	63.8	52 712	29 075	7 587	69.6
1969	37 256	12 682	8 263	56.2	48 601	25 090	6 715	65.4
1970	46 445	15 554	8 932	52.7	57 121	27 233	7 156	60.2
1971	48 069	14 204	9 263	48.8	57 205	23 903	7 914	55.6
1972	48 607	13 425	9 837	47.9	58 146	24 808	7 701	55.9
1973	52 285	17 111	9 639	51.2	60 958	26 907	7 718	56.8
1974	40 049	16 137	7 018	57.8	47 500	23 952	5 437	61.9
1975	43 554	15 698	6 071	50.0	53 387	26 100	5 129	58.5
1976	49 348	20 884	7 181	56.9	58 368	29 914	6 323	62.1
1977	57 456	23 008	9 918	57.3	65 079	30 459	8 933	60.5
1978	51 658	15 057	8 558	45.7	59 576	22 700	7 759	51.1
1979	50 187	16 408	8 104	48.8	60 023	24 851	7 940	54.6
1980	42 142	12 248	6 009	43.3	54 074	20 487	5 405	47.9
1981	45 876	15 453	5 711	46.1	53 389	22 132	5 529	51.8
1982	38 841	9 146	4 997	36.4	44 474	15 057	4 333	43.6
1983	45 061	12 443	5 422	39.6	50 145	17 412	5 618	45.9
1984	47 505	14 009	6 980	44.2	53 917	20 312	7 052	50.8
1985	37 322	11 689	6 152	47.8	41 852	16 203	6 127	53.4
1986	37 582	11 387	6 429	47.4	41 613	15 774	6 020	52.4
1987	39 969	12 565	5 893	46.2	42 725	15 687	5 403	49.4
1988	40 558	14 753	7 603	55.1	43 536	18 454	6 627	57.6
1989	37 070	15 503	7 089	60.9	39 909	18 665	6 375	62.7

Source: St. Lawrence Seaway Traffic Report.

¹ Total cargo transported regardless of travel direction. ² Includes crude minerals and fabricated mineral products along with all other cargo transported.

TABLE 17. CANADA, CRUDE MINERALS LOADED AND UNLOADED IN COASTWISE SHIPPING, 1989

	Loaded				Unloaded			
	Atlantic	Great Lakes	Pacific	Total	Atlantic	Great Lakes	Pacific	Total
	(tonnes)							
Metallic minerals								
Iron ore and concentrates	7 087 573	238 546	8 119	7 334 238	1 252 204	6 073 914	8 119	7 334 237
Titanium ore	2 041 074	—	—	2 041 074	2 041 074	—	—	2 041 074
Other metal ores, concentrates and scrap	29 556	72 409	181	102 146	323	101 642	181	102 146
Zinc bearing ore and concentrates	—	—	12 156	12 156	—	—	12 156	12 156
Lead in ores and concentrates	—	—	—	—	—	—	—	—
Total metallic minerals	9 158 203	310 955	20 456	9 489 614	3 293 601	6 175 556	20 456	9 489 613
Nonmetallic minerals								
Limestone	29 767	3 582 253	780 305	4 392 325	99 276	3 512 744	780 305	4 392 325
Salt	671 541	1 571 450	27 215	2 270 206	1 369 714	873 277	27 215	2 270 206
Sand and gravel	188 780	206 528	1 125 606	1 520 914	188 780	206 528	1 125 606	1 520 914
Gypsum	825 700	11 720	84 755	922 175	631 431	205 989	84 755	922 175
Stone, crude, n.e.s.	22 555	317 433	—	339 988	23 220	316 768	—	339 988
Other crude nonmetallic minerals, n.e.s.	5 860	306 879	—	312 739	219 523	93 216	—	312 739
Potash	—	122 210	—	122 210	32 134	90 076	—	122 210
Quartz-silica	21 772	—	454	22 226	—	21 772	454	22 226
Sulphur, crude and refined	7 499	—	—	7 499	7 499	—	—	7 499
Total nonmetallic minerals	1 773 474	6 118 473	2 018 335	9 910 282	2 571 577	5 320 370	2 018 335	9 910 282
Mineral fuels								
Coal and peat for fuel	424 541	3 049 346	59 507	3 533 394	424 541	3 049 346	59 507	3 533 394
Petroleum, crude	29 558	—	—	29 558	29 558	—	—	29 558
Total mineral fuels	454 099	3 049 346	59 507	3 562 952	454 099	3 049 346	59 507	3 562 952
Total crude minerals	11 385 776	9 478 774	2 098 298	22 962 848	6 319 277	14 545 272	2 098 298	22 962 847
Total all commodities ¹	20 947 863	19 467 524	20 706 163	61 121 550	21 471 952	18 927 680	20 721 919	61 121 551
Crude minerals as a percentage of all commodities	54.4	48.7	10.1	37.6	29.4	76.8	10.1	37.6

Source: Statistics Canada.

¹ Includes metallic minerals, nonmetallic minerals and mineral fuels, along with all other cargo loaded and unloaded in coastwise shipping.

— Nil; n.e.s. Not elsewhere specified.

Note: Totals may not add due to rounding.

TABLE 18. CANADA, FABRICATED MINERALS LOADED AND UNLOADED IN COASTWISE SHIPPING, 1989

	Loaded				Unloaded			
	Atlantic	Great Lakes	Pacific	Total	Atlantic	Great Lakes	Pacific	Total
	(tonnes)							
Metallic mineral products								
Ferrous mineral products								
Structural shapes, iron and steel	1 685	125 207	30 345	157 237	45	126 846	30 345	157 236
Plates and sheets, steel	508	17 459	—	17 967	508	17 459	—	17 967
Primary iron, steel	14 701	—	—	14 701	5 393	9 308	—	14 701
Castings and forgings, steel	—	—	9 925	9 925	—	—	9 925	9 925
Wire, iron and steel	595	—	—	595	595	—	—	595
Pipes and tubes, iron and steel	400	—	—	400	400	—	—	400
Rails and railway track material	271	—	—	271	271	—	—	271
Bars and rods, steel	—	—	—	—	—	—	—	—
Aluminum and aluminum products	128 775	—	—	128 775	128 775	—	—	128 775
Total metallic mineral products	146 935	142 666	40 270	329 871	135 987	153 613	40 270	329 870
Nonmetallic mineral products								
Cement	9 980	864 367	89 744	964 091	14 090	860 257	89 744	964 091
Cement basic products	4 097	49 369	43 817	97 283	53 164	302	43 817	97 283
Other nonmetallic mineral products	27 143	—	—	27 143	27 143	—	—	27 143
Sulphuric acid	12 626	—	6 046	18 672	12 626	—	6 046	18 672
Fertilizers and fertilizer material, n.e.s.	8 912	—	—	8 912	8 912	—	—	8 912
Bricks, tiles and pipes, clay	2 345	88	—	2 433	2 345	88	—	2 433
Glass basic products	—	—	191	191	—	—	191	191
Total nonmetallic mineral products	65 103	913 824	139 798	1 118 725	118 280	860 647	139 798	1 118 725
Mineral fuel products								
Fuel oil	4 235 884	1 079 470	954 815	6 270 169	4 555 103	762 774	952 291	6 270 168
Gasoline	2 599 063	420 707	529 942	3 549 712	2 577 292	442 698	529 723	3 549 713
Asphalts and road oils	240 827	86 344	—	327 171	198 291	128 880	—	327 171
Petroleum coke	55 301	90 630	—	145 931	134 830	11 101	—	145 931
Other petroleum and coal products	49 910	26 224	—	76 134	63 889	12 246	—	76 135
Lubricating oils and greases	274	7 114	—	7 388	274	7 114	—	7 388
Total mineral fuel products	7 181 259	1 710 489	1 484 757	10 376 505	7 529 679	1 364 813	1 482 014	10 376 506
Total fabricated mineral products	7 393 297	2 766 979	1 664 825	11 825 101	7 783 946	2 379 073	1 662 082	11 825 101
Total all commodities ¹	20 947 863	19 467 524	20 706 163	61 121 550	21 471 952	18 927 680	20 721 919	61 121 551
Fabricated mineral products as a percentage of all commodities	35.3	14.2	8.0	19.3	36.3	12.6	8.0	19.3

Source: Statistics Canada.

¹ Includes metallic mineral products, nonmetallic mineral products and mineral fuel products, along with all other cargo loaded and unloaded in coastwise shipping.

— Nil; n.e.s. Not elsewhere specified.

Note: Totals may not add due to rounding.

**TABLE 19. CANADA, CRUDE AND FABRICATED MINERALS
LOADED AT CANADIAN PORTS IN COASTWISE SHIPPING,
1960-89**

	Total All Commodities ¹	Total Crude Minerals	Total Fabricated Minerals	Crude and Fabricated Minerals as Percent of All Products
	(kilotonnes)			
1960	37 058	8 786	8 229	45.9
1961	41 861	9 527	8 857	43.9
1962	39 763	8 361	9 768	45.6
1963	40 328	7 998	9 942	44.5
1964	47 171	8 522	11 194	41.8
1965	48 200	9 183	11 766	43.5
1966	55 122	10 155	12 653	41.4
1967	49 799	11 509	12 207	47.6
1968	50 921	13 698	13 245	52.9
1969	51 890	12 746	14 181	51.9
1970	57 301	14 415	14 818	51.0
1971	55 128	14 783	15 374	54.7
1972	55 326	14 197	15 290	53.3
1973	55 314	16 573	15 615	58.2
1974	53 633	11 723	16 575	52.8
1975	54 373	15 687	17 510	61.1
1976	53 882	15 924	16 208	59.6
1977	58 309	18 131	17 435	61.0
1978	60 668	18 318	16 619	57.6
1979	79 950	22 130	17 486	49.6
1980	82 761	22 947	17 134	48.4
1981	71 271	17 849	16 669	48.4
1982	65 881	16 473	13 214	45.1
1983	67 598	21 248	12 025	49.2
1984	68 698	22 798	11 909	50.5
1985	61 717	19 867	10 291	48.9
1986	60 506	19 901	10 264	49.9
1987	67 572	20 969	11 118	47.5
1988	69 974	23 325	11 676	50.0
1989	61 122	22 963	11 825	56.9

Source: Statistics Canada.

¹ Includes metallic mineral products, nonmetallic mineral products and mineral fuel products, along with all other cargo loaded and unloaded in coastwise shipping.

TABLE 20. CANADA, CRUDE MINERALS LOADED AND UNLOADED AT CANADIAN PORTS IN INTERNATIONAL SHIPPING TRADE, 1987-89

	1987		1988		1989	
	Loaded	Unloaded	Loaded	Unloaded	Loaded	Unloaded
Metallic minerals						
Iron ore and concentrates	31 002 238	6 716 664	32 879 255	6 419 164	31 921 550	6 993 891
Other nonferrous ores, concentrates and metal scrap, n.e.s.	1 342 230	252 384	1 798 622	279 629	1 858 624	412 828
Copper ores and concentrates	1 601 356	155 112	1 271 805	158 305	1 249 357	172 477
Zinc ores and concentrates	994 894	629	1 276 705	605	822 867	262
Lead ores and concentrates	132 778	2 158	90 179	7 587	91 967	6 266
Alumina, bauxite ore	27 726	3 599 494	22 707	4 486 281	21 561	4 660 980
Titanium ore	(2)	(2)	(2)	(2)	(2)	(2)
Manganese ore	(2)	(2)	(2)	(2)	(2)	(2)
Nickel ore and concentrates	(1)	(1)	(1)	(1)	(1)	(1)
Total metallic minerals	35 101 222	10 726 441	37 339 273	11 351 571	35 965 926	12 246 704
Nonmetallic minerals						
Potash (KCl)	6 426 820	283 583	7 654 867	250 170	6 084 022	184 452
Gypsum	5 433 907	189 915	5 963 134	285 164	5 711 513	301 545
Sulphur	5 920 979	-	6 437 171	-	4 448 002	55 027
Crude nonmetallic minerals, n.e.s.	1 915 122	1 317 368	1 741 111	1 506 828	2 367 239	2 521 906
Salt	2 067 309	906 523	2 725 945	1 085 842	1 983 508	1 510 057
Limestone	1 421 705	1 188 278	1 667 478	1 003 680	1 149 695	684 279
Clay materials, n.e.s.	571 612	249 559	825 121	444 385	609 265	705 067
Asbestos	505 591	1 845	578 507	294	552 073	18 740
Sand and gravel	408 707	1 395 557	347 789	1 273 376	466 352	1 361 671
Phosphate rock	3 328	1 661 378	-	1 797 371	2 722	1 647 574
Bentonite	(4)	(4)	(4)	(4)	-	(4)
China clay	(4)	(4)	(4)	(4)	(4)	(4)
Dolomite	(3)	(3)	(3)	(3)	(3)	(3)
Stone, crude, n.e.s.	(3)	(3)	(3)	(3)	(3)	(3)
Stone, crushed	(3)	(3)	(3)	(3)	(3)	(3)
Fluorspar	(3)	(3)	(3)	(3)	(3)	(3)
Barite	(3)	(3)	(3)	(3)	(3)	(3)
Total nonmetallic minerals	24 675 080	7 194 006	27 941 123	7 647 110	23 374 391	8 990 318
Mineral fuels						
Coal, bituminous	25 324 002	14 334 318	31 604 994	17 777 159	29 940 842	15 180 835
Petroleum, crude	980 908	14 810 357	2 033 662	17 646 741	1 434 497	18 242 493
Fuels, n.e.s.	3 734	-	14 658	3	91 153	-
Total mineral fuels	26 308 644	29 144 675	33 653 314	35 423 903	31 466 492	33 423 328
Total crude minerals	86 084 946	47 065 122	98 933 710	54 422 584	90 806 809	54 660 350
Total all commodities⁵	158 993 861	68 025 360	171 064 410	78 911 838	156 568 302	79 670 214
Crude minerals as a percentage of all commodities	54.1	69.2	57.8	69.0	58.0	68.6

Source: Statistics Canada.

(1) Included with "Copper ores and concentrates." (2) Included with "Other nonferrous ores, concentrates and metal scrap, n.e.s." (3) Included with "Crude nonmetallic minerals, n.e.s." (4) Included with "Clay materials, n.e.s." ⁵ Includes metallic minerals, nonmetallic minerals and mineral fuels, along with all other cargo loaded and unloaded at Canadian ports.

- Nil; n.e.s. Not elsewhere specified.

TABLE 21. CANADA, FABRICATED MINERAL PRODUCTS LOADED AND UNLOADED AT CANADIAN PORTS IN INTERNATIONAL SHIPPING TRADE¹, 1987-89

	1987		1988		1989	
	Loaded	Unloaded	Loaded	Unloaded	Loaded	Unloaded
Metallic products						
Iron and steel, other	1 238 605	2 373 878	1 005 743	3 333 003	1 898 150	1 982 130
Nonferrous metals, n.e.s.	536 826	243 882	696 619	326 824	762 061	204 929
Total metals	1 775 431	2 617 760	1 702 362	3 659 827	2 660 211	2 187 059
Nonmetallic products						
Cement	1 875 476	515 100	1 579 898	778 713	1 494 839	625 672
Nonmetallic mineral basic products	289 902	389 752	112 017	468 563	270 415	492 025
Total nonmetals	2 165 378	904 852	1 691 915	1 247 276	1 765 254	1 117 697
Mineral fuel products						
Fuel oil	3 512 047	4 104 047	5 861 422	5 249 818	5 193 961	6 172 370
Gasoline	1 489 372	1 108 892	2 329 522	905 923	1 944 466	1 348 571
Coke	1 180 208	1 231 270	353 210	1 739 797	541 905	1 295 009
Petroleum and coal products, n.e.s.	365 073	783 366	288 917	694 674	1 518 112	1 069 244
Total fuels	6 546 700	7 227 575	8 833 071	8 590 212	9 198 444	9 885 194
Total fabricated mineral products	10 487 509	10 750 187	12 227 348	13 497 315	13 623 909	13 189 950
Total all commodities ²	158 993 861	68 025 360	171 064 410	78 911 838	156 568 302	79 670 214
Fabricated mineral products as a percentage of all commodities	6.6	15.8	7.1	17.1	8.7	16.6

Source: Statistics Canada.

¹ More detailed breakdown not presently available. ² Includes metallic products, nonmetallic products and mineral fuel products, along with all other cargo loaded and unloaded at Canadian ports.

n.e.s. Not elsewhere specified.

TABLE 22. CANADA, CRUDE MINERALS AND FABRICATED MINERAL PRODUCTS LOADED AT CANADIAN PORTS IN INTERNATIONAL SHIPPING TRADE, 1960-89

	Total All Commodities ¹	Total Crude Minerals	Total Fabricated Minerals	Crude and Fabricated Minerals as Percent of All Products
	(kilotonnes)			
1960	45 872	24 671	2 039	58.2
1961	48 771	23 241	2 133	52.0
1962	54 676	30 446	2 296	59.9
1963	62 031	32 214	2 503	56.0
1964	75 760	42 087	2 602	59.0
1965	74 521	41 338	2 746	59.2
1966	76 192	41 374	3 350	58.7
1967	72 598	42 704	3 701	63.9
1968	78 663	48 680	2 960	65.6
1969	70 432	42 442	3 456	65.2
1970	95 807	55 849	4 965	63.5
1971	95 887	53 245	5 022	60.8
1972	98 988	51 912	9 091	61.6
1973	112 434	64 195	10 103	66.1
1974	106 110	64 093	9 041	68.9
1975	102 444	61 970	7 495	67.8
1976	114 815	71 527	6 108	67.6
1977	119 770	70 257	5 979	63.7
1978	116 522	62 291	7 556	59.9
1979	134 639	79 685	8 901	65.8
1980	138 161	67 898	11 770	57.7
1981	145 445	83 007	9 022	63.3
1982	125 282	65 594	7 115	58.0
1983	129 490	67 152	6 197	56.6
1984	145 322	82 752	7 986	62.4
1985	143 421	83 878	10 814	66.0
1986	144 561	84 720	8 303	64.3
1987	158 994	86 085	10 488	60.7
1988	171 064	98 934	12 227	65.0
1989	156 568	90 807	13 624	66.7

Source: Statistics Canada.

¹ Includes metallic products, nonmetallic products and mineral fuel products, along with all other cargo loaded and unloaded at Canadian ports.

METALLIC MINERALS AND PRODUCTS

Nonferrous and Precious Metals Prices

NONFERROUS AND PRECIOUS METALS PRICES¹

	1980s Extremes				November 1990		
	Low		High		Low	High	Average
	(US\$/lb.)		(US\$/lb.)		(US\$/lb.)		
Aluminum	0.41	03/06/82	1.95	13/06/88	0.69	0.88	0.73
Copper	0.56	18/10/84	1.68	08/12/88	1.12	1.20	1.17
Lead	0.15	18/03/86	0.35	20/05/87	0.29	0.33	0.32
Nickel	1.42	26/11/82	10.84	28/03/88	3.60	4.08	3.90
Zinc	0.25	31/10/85	0.97	02/03/89	0.56	0.59	0.58
	(US\$/troy oz.)		(US\$/troy oz.)		(US\$/troy oz.)		
Gold	285.00	26/02/85	502.75	14/12/87	377.05	386.30	381.71
Silver	4.86	20/05/86	10.92	27/04/87	4.09	4.26	4.17

Source: Nonferrous Division, Mineral Policy Sector.

¹ Prices used are the London Metal Exchange (LME) settlement prices for the nonferrous metals and the London Bullion Market Association (LBMA) morning fix for the precious metals.

SPECIAL ITEM

Mineral Industry Highlights¹

Statistics Canada figures show that in May 1990, 65 000 workers were employed in metal, nonmetal and coal mines, 1700 more than in the previous month, and 4100 fewer than in May 1989.

Commercial production began in July at the La Fosse Platinum Group Inc. iron and manganese mine at Schefferville, Quebec, providing 80 jobs.

On August 23, NorthWest Gold Corp. officially opened its Colomac gold mine in the Indian Lake region of the Northwest Territories. A workforce of 300 commutes to the mine.

Newfoundland Zinc Mines Limited closed its zinc mine in Daniel's Harbour, Newfoundland in August, affecting 150 workers.

Rouyn Mining Resources Inc. stopped mining at its Francoeur gold mine in Rouyn-Noranda, Quebec in June. Ninety-six employees were affected.

Canamax Resources Inc. suspended gold production in August at its Kremzar mine in Wawa, Ontario and its Ketza River mine in Whitehorse, Yukon. One hundred workers were affected by each suspension.

Collective agreements were reached this quarter without strikes at the LAB Chrysotile Inc.'s B.C. and Bell asbestos mines in Thetford Mines, Quebec. Agreements were also reached without strikes at the Denison Mines Limited and the Rio Algom Limited uranium mines in Elliot Lake, Ontario, the Noranda Minerals Inc.'s Geco zinc-copper division at Manitouwadge, Ontario, the Inco Limited nickel operations at Thompson, Manitoba, and the Westar Mining Ltd.'s Greenhills coal operation in Elkford, British Columbia.

The Canadian Salt Company Limited signed an agreement with employees in August, ending a six-month strike at its Windsor, Ontario salt operations. Strikes were also settled at the Alcan Smelters and Chemicals Limited aluminum operation at Kitimat, and the Cominco Ltd. lead-zinc mine and refinery at Kimberley and Trail, British Columbia.

Strikes began at the Brunswick Mining and Smelting Corporation Limited lead-zinc operations at Bathurst and Belledune, New Brunswick, the Stelco Inc. steel plants in Quebec, Ontario and Alberta, and The Algoma Steel Corporation, Limited iron and steel operations in Wawa and Sault Ste. Marie, Ontario.

¹ Extracted from 'Mineral Industry Employment Update', Mineral Policy and Planning Division, Mineral Policy Sector. For further information contact N. Porter, (613) 995-1507.

NEW PUBLICATIONS

MRI 90/1 – Catalogue of Mineral Statistics – Federal and Provincial Publications and Surveys in Canada.

This publication includes lists of questionnaires used to survey companies in the mineral industry and titles of publications produced from the information received. It should be useful to mineral statistics users.

Reference: Catalogue No.: M35-2/90-1
ISBN: 0-662-57967-4

MRI 90/2 – Canadian Iron Ore Industry Statistics, 1989

This publication is to be used in conjunction with the Iron Ore chapter of the Canadian Minerals Yearbook for a comprehensive review of the iron ore industry for 1989.

Reference: Catalogue No.: M35-2/90-2
ISBN: 0-662-57968-2

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