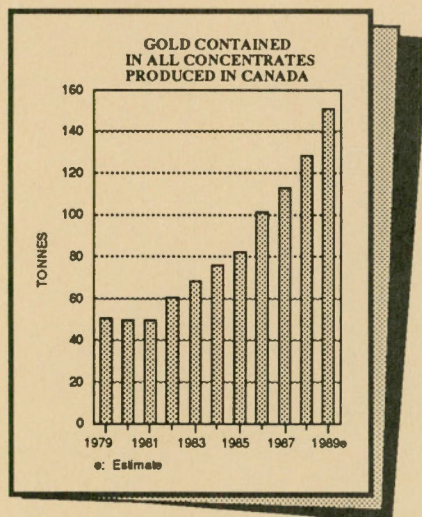


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**CANADIAN
MINERAL
INDUSTRY**



Energy, Mines and
Resources Canada

Hon. Jake Epp,
Minister

Énergie, Mines et
Ressources Canada

L'hon. Jake Epp,
Ministre

Canada

THE ENERGY OF OUR RESOURCES

THE POWER OF OUR IDEAS

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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.

Mineral Policy Sector
Department of Energy, Mines and Resources
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Ottawa, Ontario K1A 5H3

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THE CANADIAN MINERAL INDUSTRY FOR DECEMBER

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

ECONOMIC TRENDS

Table 1 provides a comparison of the volume of production of Canada's leading minerals for the months of September and October 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 sales.

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 (published in October) of Statistics Canada Catalogue #15-001 (Gross Domestic Product by Industry) was the first

issue on the new basis. 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 January 1991.

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

Statistics Canada reported that, "Economic activity continued to abate in October. The rate of decline, however, slowed to -0.1% from -0.7% and -0.4% in September and August respectively." Goods production dropped by 0.5% in October while services output increased by 0.1% for that month.

For the fourth consecutive month, construction output dropped, primarily due to a decrease in residential construction. As a consequence, outputs of industries related to the construction industry, including forestry and the nonmetallic mineral products industry (manufacturing products such as cement and concrete) continued to move downward. Mines, quarries and oil wells experienced a marginal growth (0.3%) from September 1990 led by a 0.9% increase in crude petroleum and natural gas.

The same overall growth (0.3%) occurred between October 1989 and the same month in 1990, again largely as a result of the upward trend (+4.6%) in crude petroleum and natural gas. This was offset by significant declines in the mining sector particularly in asbestos mines (-29.5%) and iron mines (-22.4%). The overall decline in the output of the mining industry was measured at 5.1%.

Table 3 shows the prices of selected metals for September, October and November 1990.

Tables 4 and 5 summarize the value of Canadian imports and exports, respectively, for minerals, metals and their products for the first nine months of 1990. During this period exports exceeded imports by \$12.3 billion dollars. The United States continued to be our leading trading

partner accounting for approximately two-thirds of our exports and 54% of our imports.

Tables 6 and 7 provide intramural expenditures on research and development for

mining-related industries from 1984 to 1990 (forecast). In constant dollars, the overall level of expenditure over the past five years has remained fairly steady, after a significant drop from the levels of expenditure occurring during 1984 and 1985.

TABLE 1. CANADA, PRODUCTION OF LEADING MINERALS

		1989			1990			Percentage Changes		
		September	October	Total 10 Months	September	October	Total 10 Months	October 1990 October 1989	October 1990 September 1990	10 months 1990 1989
(000 tonnes except where noted)										
Metals										
Copper		52.2 ^r	64.1 ^r	574.9 ^r	56.7	61.1	653.5	-4.6	7.8	13.7
Gold	kg	14 108.8 ^r	14 963.1 ^r	130 168.9 ^r	13 773.6	14 148.6	137 577.8	-5.4	2.7	5.7
Iron ore		3 660.5	3 397.8 ^r	31 990.8 ^r	3 347.5	3 439.2	27 710.3	1.2	2.7	-13.4
Lead		27.4	27.9	243.1	25.6	31.9	209.9	14.4	24.7	-13.7
Molybdenum	t	984.4 ^r	1 184.8	11 446.3	1 117.2	1 095.0	11 418.1	-7.6	-2.0	-0.2
Nickel		17.9	18.3	160.4	16.7	13.2	156.3	-28.1	-21.0	-2.6
Silver	t	97.0	97.0	1 043.4	82.4	128.0	1 159.5	32.0	55.3	11.1
Uranium ¹	t	1 010.8	487.1	9 444.2	697.0	1 183.7	8 332.6	143.0	69.8	-11.8
Zinc		137.9	121.2	1 123.4	140.4	188.2	1 257.7	55.2	34.0	12.0
Nonmetals										
Asbestos		69.0	60.3	591.5	59.4	60.2	564.8	-0.0	1.5	-4.5
Clay products	\$000	19 748.0 ^r	22 487.0 ^r	175 977.1 ^r	12 497.4	13 719.3	122 043.8	-39.0	9.8	-30.6
Gypsum		818.8 ^r	834.8	7 176.2	638.7 ^r	688.4	6 980.5	-17.5	7.8	-2.7
Potash K ₂ O		455.6	672.2 ^r	5 932.8 ^r	449.4	602.1	5 995.8	-10.4	34.0	1.1
Cement		1 269.2	1 252.2	10 150.2	1 155.8	1 098.8	9 614.5	-12.2	-4.9	-5.3
Lime		208.5	207.4	2 153.2	156.1	152.6	1 972.3	-26.5	-2.3	-8.4
Salt		850.5	1 124.9	8 999.9	1 044.1	1 157.1	8 987.9	2.9	10.8	-0.1
Fuels										
Coal		5 964.0	6 362.6	58 597.4	..	..	..	..	..	..
Natural gas	million m ³	9 035.0	9 805.0 ^r	95 821.0 ^r	..	..	..	..	..	..
Crude oil and equivalent	000 m ³	8 039.0	8 151.0 ^r	80 907.0 ^r	..	..	..	..	..	..

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	
	October	August	September	October	<u>October 1990</u> October 1989
(\$ million)					
Total economy	509 670.4	510 191.8	506 706.7	506 263.5	-0.7
Primary industries					
Agriculture	9 963.7	10 515.6	10 480.8	10 455.6	4.9
Forestry	2 680.4	2 580.0	2 454.0	2 420.4	-9.7
Fishing and trapping	1 094.9	1 134.0	1 146.0	1 131.6	3.4
Mines, quarries and oil wells	19 471.8	19 706.4	19 472.4	19 521.6	0.3
Mining industries	6 385.7	6 322.8	6 031.2	6 057.6	-5.1
Gold mines	1 585.0	1 562.4	1 512.0	1 506.0	-5.0
Iron mines	562.6	469.2	422.4	436.8	-22.4
Other metal mines	2 443.2	2 568.0	2 378.4	2 384.4	-2.4
Nonmetal mines	553.8	529.2	538.8	567.6	2.5
Asbestos mines	107.2	108.0	94.8	75.6	-29.5
Mineral fuels					
Coal mines	1 005.1	951.6	926.4	938.4	-6.6
Crude petroleum and natural gas	11 188.3	11 482.8	11 600.4	11 704.8	4.6
Secondary industries					
Manufacturing	94 489.8	92 082.0	90 578.4	90 662.4	-4.1
Non-durable manufacturing	43 990.6	43 069.2	42 654.4	42 604.8	-3.2
Durable manufacturing	50 499.2	49 012.8	47 924.4	48 057.6	-4.8
Primary metal industries	6 934.4	6 156.0	6 140.4	5 973.6	-13.9
Primary steel industries	2 960.6	2 278.8	2 287.2	2 146.8	-27.5
Steel, pipe and tube industry	344.9	338.4	302.4	364.8	5.8
Iron foundries	392.7	386.4	373.2	369.6	-5.9
Smelting and refining	2 313.6	2 275.2	2 304.0	2 186.4	-5.5
Nonmetallic mineral products	3 239.5	2 968.8	2 913.6	2 859.6	-11.7
Clay products industry	167.2	145.2	138.0	130.8	-21.8
Cement industry	435.6	394.8	396.0	385.2	-11.6
Ready-mix concrete industry	538.7	441.6	433.2	424.8	-21.1
Construction industry	33 765.6	33 711.6	32 764.8	31 802.4	-5.8
Transportation and storage	22 978.2	22 363.2	21 895.2	22 375.2	-2.6
Communications	17 871.4	19 184.4	18 955.2	18 938.4	6.0
Other utilities	15 802.5	15 931.2	15 942.0	15 955.2	1.0
Wholesale trade	27 841.1	26 650.8	26 372.4	26 209.2	-5.9
Retail trade	31 761.6	31 024.8	30 882.0	30 567.6	-3.8
Finance, insurance and real estate	80 248.5	80 426.4	80 368.8	80 734.8	0.6
Community, business and personal service	62 755.0	64 177.0	64 476.7	64 423.5	2.7

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

TABLE 3. METAL PRICES, 1990

	September	October	November
Copper			
Electrolytic, U.S. producer f.o.b. refinery, cents (U.S.)	132.520	128.782	118.362
Electrolytic, COMEX, 1st pos. plus 5¢, cents (C.)	135.463	128.782	120.750
Electrolytic, LME Grade A settlement, cents (U.S.)	137.501	124.446	117.294
Lead			
New York, cents (U.S.)	47.500	42.600	39.500
Montreal, cents (C.)	57.250	53.800	50.250
LME cash, cents (U.S.)	37.997	34.471	31.772
Silver			
New York, cents (U.S.) per troy oz.	479.472	436.578	416.833
Toronto, cents (C.) per troy oz.	557.267	505.391	487.200
Zinc			
St. Louis, H.G., cents (U.S.)	77.771	67.535	62.941
LME S.H.G. cash, cents (U.S.)	69.741	61.352	57.956
Tin			
New York, dealers, cents (U.S.)	274.813	288.278	283.225
Metals Week, composite, cents (U.S.)	380.191	399.318	394.400
Gold			
London, p.m., US\$ per troy oz.	389.323	380.739	381.725
Mercury			
New York, dealers, US\$ per flask	220.000	200.455	191.300
Nickel			
New York, dealers, cathode, US\$	4.950	4.142	3.995
LME cash, US\$	4.919	4.148	3.895
Antimony			
New York, dealers, cents (U.S.)	80.000	80.000	79.500
Platinum			
New York, refined, US\$ per troy oz.	600.000	600.000	600.000
Cadmium			
New York, dealers, US\$	2.658	2.182	1.515
Aluminum			
LME cash, cents (C.)	108.565	102.358	85.334
LME cash, cents (U.S.)	93.736	88.255	73.368
Cobalt			
Shot/cathode/250 kg., US\$	8.400	8.400	8.400
U.S. spot cathode, US\$	12.025	13.000	12.400
Tungsten			
LMB ore, low, US\$/MTU	29.600	36.200	36.500
Molybdenum			
M.W. dealer oxide, US\$	2.818	2.686	2.536
Uranium			
Nuexco, US\$, U ₃ O ₈	11.575	10.100	8.350

Average U.S. Exchange Rate for September = 1.1582; October = 1.1598; November = 1.1631.
 Note: Prices are per pound unless otherwise stated.

TABLE 4. CANADA, VALUE OF IMPORTS OF MINERALS, METALS AND THEIR PRODUCTS FOR 1990 (9 MONTHS)

Chapter ¹	Description	United States	EEC	Japan	Other	Total
				(\$000)		
25	Salt; sulphur; earths and stone, plastering material, lime and cement	257 832	6 744	2 488	64 305	331 369
26	Ores, slag and ash	319 826	33 802	0	216 903	570 531
27	Mineral fuels, oils and products of their distillation; bituminous substances; mineral waxes ²	1 750 670	1 436 929	199	2 333 234	5 521 032
28	Inorganic chemicals; compounds of precious metals, radioactive elements, etc.	547 813	71 191	29 016	322 997	971 017
31	Fertilizers	124 858	18 284	692	7 802	151 636
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	186 229	79 445	3 088	22 816	291 578
69	Ceramic products	153 519	157 971	39 857	80 556	431 903
70	Glass and glassware	577 604	70 060	31 715	70 930	750 309
71	Natural/cultured pearls, precious stones and metals, coins, etc.	644 280	115 742	4 867	234 840	999 729
72	Iron and steel	784 428	243 777	76 145	221 633	1 325 983
73	Articles of iron or steel	1 298 687	209 528	137 158	254 183	1 899 556
74	Copper and articles thereof	317 350	31 015	5 756	54 823	408 944
75	Nickel and articles thereof	51 940	25 299	804	61 927	139 970
76	Aluminum and articles thereof	1 025 048	97 931	4 812	60 151	1 187 942
78	Lead and articles thereof	18 286	330	10	2 710	21 336
79	Zinc and articles thereof	20 377	2 200	78	12 056	34 711
80	Tin and articles thereof	9 066	4 153	1	21 780	35 000
81	Other base metals; cermets; and articles thereof	109 349	15 819	4 087	19 625	148 880
	Total	8 197 162	2 620 220	340 773	4 063 271	15 221 426

Source: Statistics Canada, Catalogue 65-006 (Quarterly).

¹ Chapter refers to a group of commodities covered in a specified chapter of the "Harmonized Commodity Description and Coding System", as of January 1, 1988. Canadian external trade statistics are classified according to the Harmonized System. ² Total value of coal imports included in Chapter 27 is \$494 million.

TABLE 5. CANADA, VALUE OF EXPORTS OF MINERALS, METALS AND THEIR PRODUCTS FOR 1990 (9 MONTHS)

Chapter ¹	Description	United States	EEC	Japan	Other	Total
				(\$000)		
25	Salt; sulphur; earths and stone, plastering material, lime and cement	393 206	125 859	42 131	516 930	1 078 126
26	Ores, slag and ash	496 020	1 015 326	793 159	333 870	2 638 375
27	Mineral fuels, oils and products of their distillation; bituminous substances; mineral waxes ²	8 350 672	134 259	1 143 563	466 537	10 095 031
28	Inorganic chemicals; compounds of precious metals, radioactive elements, etc.	993 104	95 092	20 186	74 556	1 182 938
31	Fertilizers	732 216	49 037	48 447	384 607	1 214 307
68	Articles of stone, plaster, cement, asbestos, mica or similar materials	237 737	9 542	1 557	8 343	257 179
69	Ceramic products	35 248	1 419	529	6 427	43 623
70	Glass and glassware	249 608	28 211	1 156	13 646	292 621
71	Natural/cultured pearls, precious stones and metals, coins, etc.	616 392	275 691	321 065	875 849	2 088 997
72	Iron and steel	1 237 065	213 275	10 284	278 549	1 739 173
73	Articles of iron or steel	1 159 708	27 827	4 849	78 450	1 270 834
74	Copper and articles thereof	674 638	299 634	3 846	73 406	1 051 524
75	Nickel and articles thereof	590 999	198 199	19 597	304 181	1 112 976
76	Aluminum and articles thereof	1 911 031	123 905	232 685	265 873	2 533 494
78	Lead and articles thereof	55 251	22 408	6 939	7 181	91 779
79	Zinc and articles thereof	567 907	20 848	30 282	61 615	680 652
80	Tin and articles thereof	5 019	111	94	806	6 030
81	Other base metals; cermets; and articles thereof	96 251	17 238	3 337	22 503	139 329
	Total	18 402 072	2 657 881	2 683 706	3 773 329	27 516 988

Source: Statistics Canada, Catalogue 65-003 (Quarterly).

¹ Chapter refers to a group of commodities covered in a specified chapter of the "Harmonized Commodity Description and Coding System", as of January 1, 1988. Canadian external trade statistics are classified according to the Harmonized System. ² Total value of coal exports included in Chapter 27 is \$1850 million.

TABLE 6. CANADA, TOTAL INTRAMURAL RESEARCH AND DEVELOPMENT EXPENDITURES FOR MINING-RELATED INDUSTRIES IN CURRENT AND CONSTANT (1986) DOLLARS, 1984-90

	1984	1985	1986	1987	1988	1989 ^p	1990 ^f
	(\$ million)						
Current dollars							
Mining industry	115	119	90	76	83	88	91
Mines	48	51	52	46 ^r	47	51	58
Oil and gas wells	67	69	38	30 ^r	33	32	33
Mineral manufacturing	356	342	279	275 ^r	331	335	332
Ferrous primary metals	26	26	27	31 ^r	32	33	37
Nonferrous primary metals	95	92	88	111	130	141	149
Nonmetallic mineral products	17	19	16	15	20	22	23
Petroleum products	218	205	148	118	149	139	123
Metal fabricating	24	30	34	35 ^r	38	49	52
Constant dollars							
Mining industry	121	123	90	73	73	72	76
Mines	50	52	52	44 ^r	43	44	49
Oil and gas wells	70	71	38	29 ^r	30	28	28
Mineral manufacturing	374	350	279	262 ^r	301	291	279
Ferrous primary metals	27	27	27	30 ^r	29	29	31
Nonferrous primary metals	100	94	88	106	118	122	125
Nonmetallic mineral products	18	19	16	14	18	19	19
Petroleum products	229	210	148	113	136	121	103
Metal fabricating	25	31	34	33 ^r	35	43	44

Source: Statistics Canada.

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

Note: Totals may not add due to rounding.

TABLE 7. CANADA, CAPITAL AND CURRENT INTRAMURAL RESEARCH AND DEVELOPMENT EXPENDITURES FOR MINING-RELATED INDUSTRIES, IN CURRENT DOLLARS, 1984-90

	1984	1985	1986	1987	1988	1989p	1990f
	(\$ million)						
Capital expenditures							
Mining industry	21	27	11	7	6	11	11
Mines	5	4	8	4	3	8	7
Oil and gas wells	16	23	3	3	3	3	4
Mineral manufacturing	97	82	30	34	53	58	40
Ferrous primary metals	1	3	3	4	3	4	7
Nonferrous primary metals	9	5	7	15	15	11	12
Nonmetallic mineral products	6	6	3	2	2	3	3
Petroleum products	81	68	17	13	33	40	18
Metal fabricating	3	2	4	4	4	4	5
Current expenditures							
Mining industry	94	92	79	69r	77	77	80
Mines	43	47	44	42r	44	43	51
Oil and gas wells	51	46	35	27r	30	29	29
Mineral manufacturing	259	260	249	241r	278	277	292
Ferrous primary metals	25	23	24	27r	29	29	30
Nonferrous primary metals	86	87	81	96	115	130	137
Nonmetallic mineral products	11	13	13	13	18	19	20
Petroleum products	137	137	131	105	116	99	105
Metal fabricating	21	28	30	31r	34	45	47
Total expenditures							
Mining industry	115	119	90	76	83	88	91
Mines	48	51	52	46r	47	51	58
Oil and gas wells	67	69	38	30r	33	32	33
Mineral manufacturing	356	342	279	275r	331	335	332
Ferrous primary metals	26	26	27	31r	32	33	37
Nonferrous primary metals	95	92	88	111	130	141	149
Nonmetallic mineral products	17	19	16	15	20	22	23
Petroleum products	218	205	148	118	149	139	123
Metal fabricating	24	30	34	35r	38	49	52

Source: Statistics Canada.

p Preliminary; f Forecast; r Revised.

Note: Capital Expenditures are expenditures on construction, acquisition or preparation of land, buildings, machinery and equipment. All other expenditures are current expenditures. Totals may not add due to rounding.

METALLIC MINERALS AND PRODUCTS

Nonferrous and Precious Metals Prices

NONFERROUS AND PRECIOUS METALS PRICES¹

	1980s Extremes				December 1990		
	Low		High		Low	High	Average
	(US\$/lb.)		(US\$/lb.)		(US\$/lb.)		
Aluminum	0.41	03/06/82	1.95	13/06/88	0.68	0.72	0.69
Copper	0.56	18/10/84	1.68	08/12/88	1.11	1.16	1.13
Lead	0.15	18/03/86	0.35	20/05/87	0.27	0.30	0.29
Nickel	1.42	26/11/82	10.84	28/03/88	3.56	3.86	3.70
Zinc	0.25	31/10/85	0.97	02/03/89	0.56	0.60	0.57
	(US\$/troy oz.)		(US\$/troy oz.)		(US\$/troy oz.)		
Gold	285.00	26/02/85	502.75	14/12/87	371.10	391.00	378.16
Silver	4.86	20/05/86	10.92	27/04/87	3.95	4.19	4.08

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.

NEW PUBLICATION

MR 226 – Metallurgical Works in Canada, Primary Iron and Steel 1990.

This report lists the facilities, productive capacities, products and other data of companies that comprised the primary iron and steel industry in Canada as of January 1, 1990. It also covers the steel pipe and tube industry, the iron powder and ferrite industry.

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