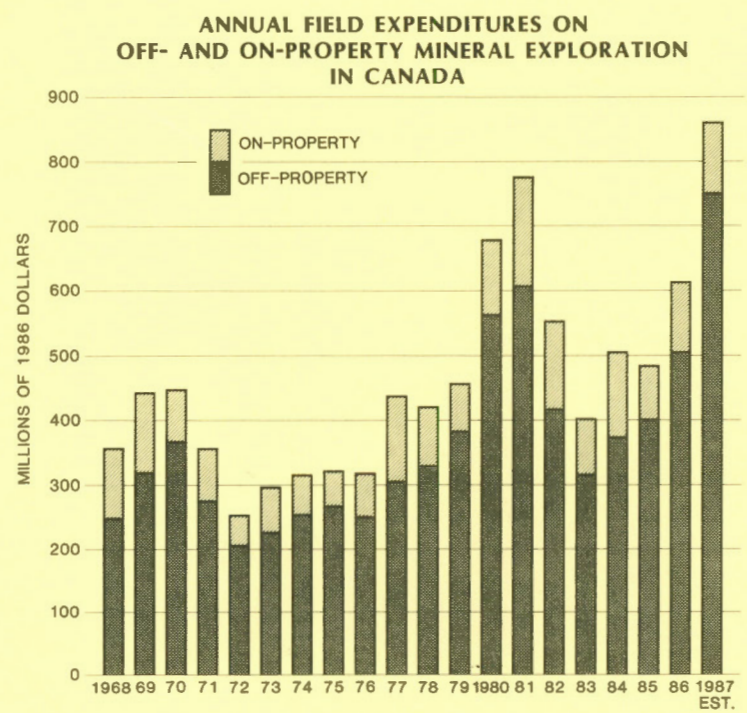
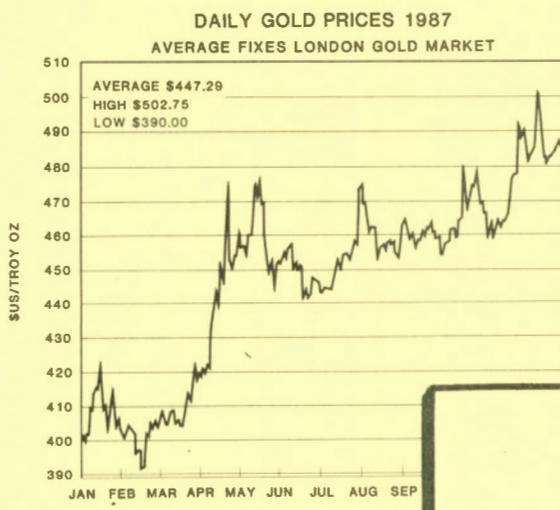


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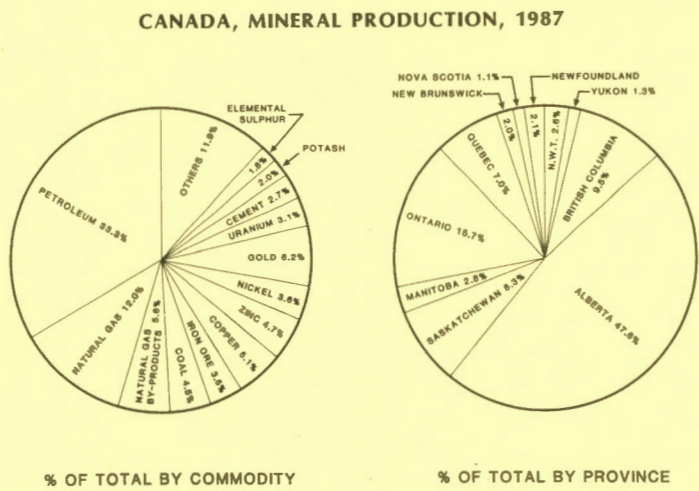
THE CANADIAN MINERAL INDUSTRY

MONTHLY REPORT

AUGUST 1988



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ISSN 0229-1908

THE CANADIAN MINERAL INDUSTRY

MONTHLY REPORT



Energy, Mines and
Resources Canada

Hon. Gerald S. Merrithew,
Minister of State
(Forestry and Mines)

Énergie, Mines et
Ressources Canada

L'Hon. Gerald S. Merrithew,
Ministre d'État
(Forêts et Mines)

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 AUGUST

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

HIGHLIGHTS

1. Copper prices averaged US99.49 ¢/lb. on the LME during the month of August, while the COMEX price averaged about US95.9 ¢/lb.
2. Magma Copper Company closed its last reverberatory furnace at its San Manuel, Arizona copper smelter. Its new flash smelter started up in July and is the largest smelter furnace in the world with a capacity of 0.9 Mt/y of concentrates.

ECONOMIC TRENDS

Table 1 provides a comparison of the volume of production of Canada's leading minerals for the months of May and June 1988 and the corresponding months last year, as well as the year-to-date totals. In the metals group, copper, gold, iron ore, silver, uranium and zinc showed gains in production during the first six months of 1988 compared to last year. Lead, molybdenum and nickel experienced decreases in production. All of the leading nonmetals showed increases over the same six-month period, except clay products.

Table 2 provides information on Canada's Gross Domestic Product at factor cost by industry at 1981 prices. The data is also annualized and seasonally adjusted.

The annual rate shown for any given month is 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 which is valued exclusive of excise taxes and duties, and provincial and municipal sales tax. Factor cost does, however, include subsidies and other taxes which 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 which might otherwise be obscured. Seasonal factors include such items as climate, trade practices and social institutions such as Christmas and Easter.

The GDP data are subject to ongoing revision.

GDP at factor cost in 1981 prices increased 0.2% in June following a 0.6% gain in May and a 0.1% decline in April. In June, GDP stood 4.9% above the level of the corresponding month last year. Output of services producing industries advanced 0.5% during June, while goods producing industries declined 0.3%.

Table 3 shows the prices of selected metals for May and June.

Table 4 provides the historical data for a number of important national economic indicators for the period 1973 to 1987.

Tables 5 and 6 show research and development expenditures for mining-related industries from 1982 to 1988 inclusive.

Tables 7 and 8 show exploration and capital expenditures in the mining industry from 1986 to 1988. It should be noted that the data for 1987 are preliminary, while those for 1988 reflect revised spending intentions for the year. Based on these revised intentions, total expenditures related to capital and exploration are anticipated to be \$5.3 billion in 1988, compared to \$4.6 billion in 1987.

Tables 9 through 14 report capital and repair expenditures from a variety of perspectives. Detail is provided for mining and mineral manufacturing, as well as for the petroleum, natural gas and allied industries. For the mining industry overall, including mineral fuels, total capital and repair expenditures are expected to show a significant increase this year, from \$9.2 billion in 1987 to \$11.4 billion in 1988.

TABLE 1. CANADA, PRODUCTION OF LEADING MINERALS ('000 TONNES EXCEPT WHERE NOTED)

		1987			1988			Percentage Changes		
		May	June	Total 6 Months	May	June	Total 6 Months	June 1988 June 1987	June 1988 May 1988	1st 6 months 1988 1987
Metals										
Copper		61.1	60.6	371.2	63.8	60.4	384.7	-0.3	-5.3	3.6
Gold	kg	8 123.1	9 946.3 ^r	52 240.2	10 358.4	11 002.4	61 156.0	10.6	6.2	17.1
Iron ore		3 120.9	3 864.1 ^r	16 328.7	3 647.8	3 650.9	17 601.8	-5.5	0.1	7.8
Lead		27.5	22.2 ^r	171.7	30.5 ^r	11.8	162.9	-46.8	-61.3	-5.1
Molybdenum	t	1 092.4	814.0 ^r	6 398.0	1 083.6	1 019.1	5 991.1	25.2	-6.0	-6.4
Nickel		18.1	16.0	106.1	18.0	14.3	100.9	-10.6	-20.6	-4.9
Silver	t	107.1	97.9 ^r	564.7	105.4	104.0	703.4	6.2	-1.3	24.6
Uranium ¹	t	950.0	1 127.0	6 662.9	919.7	978.5	6 709.9	-13.2	6.4	0.7
Zinc		103.7	64.3 ^r	564.1	92.7	88.4	582.2	37.5	-4.6	3.2
Nonmetals										
Asbestos		53.6	58.4	312.7	60.7	67.5	342.4	15.6	11.2	9.5
Clay products	\$000	21 685.5	20 591.0	98 311.0	18 956.8	19 177.6	85 890.8	-6.9	1.2	-12.6
Gypsum		964.0	998.3 ^r	4 144.6	822.3	737.6	4 180.1	-26.1	-10.3	0.9
Potash K ₂ O		686.5	585.9	4 162.0	803.5	631.2	4 445.1	7.7	-21.4	6.8
Cement		1 327.4	1 438.5 ^r	5 381.3	1 256.1	1 389.5	5 439.1	-3.4	10.6	1.1
Lime		197.6	227.5	1 168.9	222.7	214.6	1 234.8	-5.7	-3.6	5.6
Salt		834.9	734.5	4 560.2	840.4	894.1	5 018.3	21.7	6.4	10.0
Fuels										
Coal		4 694.9	4 962.1 ^r	28 568.3	5 517.9	..	..	..	..	..
Natural gas	million m ³	7 201.0	6 229.0 ^r	48 366.0	8 182.0	..	..	..	..	..
Crude oil and equivalent	000 m ³	7 782.0	7 900.0 ^r	45 646.0	8 419.0	..	..	..	..	..

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

^r Revised; .. Not available.

TABLE 2. CANADA, REAL GROSS DOMESTIC PRODUCT AT FACTOR COST BY INDUSTRY, IN 1981 PRICES, MONTHLY (SEASONALLY ADJUSTED AT ANNUAL RATES)

Industry Sector	1987	1988			Percentage Change June 1988 June 1987
	June	April	May	June	
	(\$ million)				
Total Economy	377 038.4	392 765.2	394 995.9	395 633.7	4.9
Primary Industries					
Agriculture	11 457.5	10 394.5	10 462.1	10 341.5	-9.7
Forestry	2 679.4	2 989.9	9 761.9	2 595.7	-3.1
Fishing and Trapping	703.6	666.2	723.5	698.9	-0.7
Mines, Quarries and Oil Wells	21 369.3	23 446.4	24 011.7	23 538.7	10.2
Mining Industries	7 982.6	8 281.9	8 391.1	8 290.2	3.9
Gold Mines	1 284.0	1 492.4	1 502.0	1 468.3	14.4
Iron Mines	611.6	605.6	674.1	599.6	-2.0
Other Metal Mines	4 132.5	3 936.6	3 994.3	3 990.7	-3.4
Nonmetal Mines	816.6	833.3	858.4	890.7	9.1
Asbestos Mines	148.1	157.5	161.0	154.0	4.0
Mineral Fuels					
Coal Mines	875.8	1 134.1	1 082.5	1 060.9	21.1
Crude Petroleum and Natural Gas	11 966.9	13 504.9	13 460.4	13 224.0	10.5
Secondary Industries					
Manufacturing	73 049.1	77 133.7	78 004.2	78 553.2	7.5
Non-durable Manufacturing	32 583.2	33 053.6	33 531.3	33 471.6	2.7
Durable Manufacturing	40 465.9	44 080.1	44 472.9	45 081.6	11.4
Primary Metal Industries	5 904.2	6 410.6	6 526.3	6 725.7	13.9
Primary Steel Industries	2 383.8	2 585.0	2 559.9	2 636.5	10.6
Steel, Pipe and Tube Industry	261.1	405.9	402.3	396.4	51.8
Iron Foundries	331.5	386.4	399.6	394.8	19.1
Smelting and Refining	2 241.6	2 309.0	2 407.7	2 554.5	14.0
Nonmetallic Mineral Products	2 359.7	2 444.5	2 366.5	2 451.7	3.9
Clay Products Industry	82.7	86.4	85.2	82.8	0.1
Cement Industry	314.3	339.6	296.4	337.2	7.3
Ready-mix Concrete Industry	462.1	469.3	448.9	442.9	-4.2
Construction Industry	26 382.6	27 351.6	27 493.2	27 051.6	2.5
Transportation and Storage	16 942.1	18 249.6	18 446.4	18 393.6	8.6
Communications	10 972.5	11 842.8	11 674.8	12 036.0	9.7
Other Utilities	11 366.9	11 398.8	11 300.4	11 437.2	0.6
Wholesale Trade	21 022.6	22 312.8	22 644.0	23 022.0	9.5
Retail Trade	24 801.3	25 075.5	25 335.1	25 341.2	2.2
Finance, Insurance and Real Estate	54 461.8	57 716.4	57 921.6	58 228.8	6.9
Community, Business and Personal Service	38 446.6	40 042.4	40 031.6	40 117.4	4.3

TABLE 3. METAL PRICES - 1988

	May	June
Copper		
Electrolytic, U.S. producer f.o.b. refinery, cents (U.S.)	102.973	112.875
Electrolytic, COMEX, 1st pos. plus 5¢, cents (C.)	128.970	138.745
Electrolytic, Standard, LME cash, cents (U.S.)	101.726	104.947
Lead		
New York, cents (U.S.)	34.800	36.000
Montreal, cents (C.)	43.600	44.500
LME cash, cents (U.S.)	30.267	30.678
Silver		
New York, cents (U.S.) per troy oz.	654.262	703.682
Toronto, cents (C.) per troy oz.	837.660	889.650
LME cash, cents (U.S.) per troy oz.	651.350	698.398
Zinc		
St. Louis, H.G., cents (U.S.)	56.036	62.550
Montreal, Electrolytic, cents (C.)	69.500	78.000
LME cash, cents (U.S.)	53.332	61.867
Tin		
New York, Straits, cents (U.S.)	321.571	330.886
Metals Week, composite, cents (U.S.)	424.996	439.836
Gold		
London, p.m., US\$ per troy oz.	451.068	451.280
Average, (Sharps Pixley) US\$ per troy oz.	451.194	451.494
High, (Sharps Pixley) US\$ per troy oz.	457.900	464.700
Low, (Sharps Pixley) US\$ per troy oz.	442.800	433.550
Mercury		
US\$ per flask	345.000	360.909
Nickel		
Major Producer Cathode, cents (C.)	-LPS-	-LPS-
Major Producer Cathode, cents (U.S.)	-LPS-	-LPS-
LME cash, US\$	7.722	7.071
Antimony		
New York, dealers, cents (U.S.)	108.000	96.773
Platinum		
New York, refined, US\$ per troy oz.	600.000	600.000
Cadmium		
New York, producers US\$	9.479	9.300
Aluminum		
LME cash, cents (C.)	167.651	197.571
LME cash, cents (U.S.)	135.541	162.289
Cobalt		
Shot/cathode/250 kg., US\$	7.500	7.500
U.S. spot cathode, US\$	6.950	6.950
Tungsten		
LMB ore, low, US\$/MTU	55.600	50.000
GSA domestic, US\$/MTU	-LPS-	-LPS-
Molybdenum		
M.W. dealer oxide, US\$	3.559	3.459
Uranium		
Nuexco, US\$ U ₃ O ₈	15.900	15.400

Average U.S. Exchange Rate for May = 1.2369, June = 1.2174.

Note: Prices are per pound unless otherwise stated.

LPS List Price Suspended.

TABLE 4. CANADA, GENERAL ECONOMIC INDICATORS, 1973-87

		1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
Gross domestic product, current dollars	\$ million	127 372	152 111	171 540	197 924	217 879	241 604	276 069	309 891	355 994	374 750	405 425	444 735r	478 765r	506 483	549 692
Gross domestic product, constant dollars (1981 = 100)	"	264 369	276 006	283 187	300 638	311 347	325 751	338 362	343 384	355 994	344 082	354 780	377 865r	395 217r	407 736	424 136
Mining's gross domestic product (1981 = 100)	"	25 996	23 776	19 521	19 586	18 894	17 879	20 215	19 660	17 453	16 463	17 019	20 753r	21 603r	21 114	21 883
Manufacturing's gross domestic product (1981 = 100)	"	53 679	55 294	51 601	55 382	57 391	60 006	62 254	59 461	61 648	54 844	57 954	65 979r	69 593r	71 180	74 575
Industrial production's gross domestic product (1981 = 100)	"	79 588	81 135	75 171	80 223	82 920	85 799	89 491	86 880	88 675	80 910	84 982	97 194r	102 265r	103 581	108 286
Value of manufacturing industry shipments	"	66 674	82 455	88 427	98 076	109 747	129 019	152 133	165 985	190 851	183 652	200 155	229 848r	248 415r	253 911	269 866
Value of mineral production	"	8 370	11 754	13 347	15 693	18 473	20 319	26 135	31 926	32 420	33 831	38 540	43 789	44 730r	32 446	36 039
Merchandise exports	"	25 649	32 738	33 616	38 166	44 495	53 361	65 582	76 681	84 432	84 560	90 700	112 219	120 258	119 889	126 125
Merchandise imports	"	22 726	30 903	33 962	36 606	41 523	49 048	61 157	67 903	77 140	66 739	73 054	91 493	102 783	110 079	115 149
Balance of payments, current account	"	312	-1 299	-4 631	-4 096	-4 322	-4 903	-4 864	-1 130	-6 131	2 906	2 942	2 695r	-1 935r	-10 496	-10 576
Corporation profits before taxes	"	15 417	20 062	19 663	19 985	21 090	25 360	34 884	36 456	32 638	21 110	32 684	45 855r	48 772r	46 124	57 254
Business investment, current dollars	"	24 588	30 370	35 602	40 462	43 485	47 496	56 096	64 065	76 672	71 067	70 862	73 309r	81 311r	88 773	101 581
Business investment, constant dollars (1981 = 100)	"	43 482	46 555	49 418	52 453	53 587	55 638	61 399	68 103	76 672	67 088	65 972	67 635r	72 985r	77 578	86 175
Population	000s	22 043	22 364	22 697	22 993	23 258	23 476	23 671	23 936	24 342	24 634	24 886	25 124	25 360	25 353	25 625
Labour force	"	9 276	9 639	9 974	10 203	10 500	10 895	11 231	11 573	11 904	11 958	12 183	12 399	12 639	12 870	13 121
Employed	"	8 761	9 125	9 284	9 477	9 651	9 987	10 395	10 708	11 006	10 644	10 734	11 000	11 311	11 634	11 955
Unemployed	"	515	514	690	726	849	908	836	865	898	1 314	1 448	1 399	1 328	1 236	1 167
Unemployment rate	per cent	5.5	5.3	6.9	7.1	8.1	8.3	7.4	7.5	7.5	11.0	11.9	11.3	10.5	9.6	8.9
Labour income	\$ million	68 423	81 656	95 277	110 419	122 476	133 383	150 172	169 736	196 002	209 449	219 352	236 204r	254 751r	271 026	288 987
Consumer price index	1981 = 100	47.6	52.8	58.5	62.9	67.9	73.9	80.7	88.9	100.0	110.8	117.2	122.4r	127.3r	132.7	129.6

P Preliminary; r Revised.

TABLE 5. CANADA, TOTAL INTRAMURAL RESEARCH AND DEVELOPMENT EXPENDITURES FOR MINING-RELATED INDUSTRIES IN CURRENT AND CONSTANT (1981) DOLLARS, 1982-88

	1982	1983	1984	1985	1986	1987 ^p	1988 ^f
	(\$ million)						
Current dollars							
Mining industry	132	92	115	119 ^r	86 ^r	81	91
Mines	48	43	48 ^r	51 ^r	49 ^r	50	58
Oil and gas wells	85	49	67 ^r	69 ^r	37 ^r	31	33
Mineral manufacturing	362	297	358	345	278 ^r	286	293
Ferrous primary metals	23	21	26	27	27 ^r	32	30
Nonferrous primary metals	86	82	95	93 ^r	88 ^r	103	104
Nonmetallic mineral products	9	10	17 ^r	19	16	17	17
Petroleum products	244	184	218	205	147 ^r	134	142
Constant dollars							
Mining industry	122 ^r	81 ^r	97 ^r	98 ^r	68 ^r	62	69
Mines	44 ^r	38 ^r	40 ^r	42 ^r	39 ^r	38	44
Oil and gas wells	78 ^r	43 ^r	57 ^r	56 ^r	30	24	25
Mineral manufacturing	333 ^r	261 ^r	301 ^r	282 ^r	221 ^r	220	221
Ferrous primary metals	21 ^r	19 ^r	22 ^r	22 ^r	21 ^r	25	23
Nonferrous primary metals	79 ^r	72 ^r	80 ^r	76 ^r	70 ^r	79	78
Nonmetallic mineral products	8 ^r	9 ^r	14 ^r	16 ^r	12 ^r	13	13
Petroleum products	225 ^r	161 ^r	185 ^r	168 ^r	118 ^r	103	107

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

Note: Components may not add due to rounding.

TABLE 6. CANADA, CURRENT AND CAPITAL INTRAMURAL RESEARCH AND DEVELOPMENT EXPENDITURES FOR MINING-RELATED INDUSTRIES, 1982-88

	1982	1983	1984	1985	1986	1987 ^p	1988 ^f
	(\$ million)						
Capital expenditures							
Mining industry	36	21	21	27 ^r	8 ^r	7	11
Mines	4	5 ^r	5 ^r	4	5 ^r	3	5
Oil and gas wells	33	16 ^r	16 ^r	23 ^r	3 ^r	4	6
Mineral manufacturing	81	48	97	82	30 ^r	38	32
Ferrous primary metals	1	1	1	3	3	7	4
Nonferrous primary metals	10	5	9	5	7	14	11
Nonmetallic mineral products	1	1	6	6	3	4	4
Petroleum products	69	41	81	68	17	13	13
Current expenditures							
Mining industry	96	71	94	92 ^r	78 ^r	74	79
Mines	44	38	43 ^r	47 ^r	44 ^r	47	52
Oil and gas wells	52	33	51 ^r	46 ^r	34 ^r	27	27
Mineral manufacturing	281	250	259 ^r	260 ^r	247 ^r	247	262
Ferrous primary metals	22	21	25	23	24 ^r	25	26
Nonferrous primary metals	76	77	86	87 ^r	80 ^r	88	93
Nonmetallic mineral products	8	9	11 ^r	13 ^r	12 ^r	13	13
Petroleum products	175	143	137	137 ^r	131 ^r	121	130
Total expenditures							
Mining industry	132	92	115	120 ^r	86 ^r	81	90
Mines	48	43	48 ^r	51 ^r	49 ^r	50	57
Oil and gas wells	85	49	67 ^r	69 ^r	37 ^r	31	33
Mineral manufacturing	362	297	356 ^r	344 ^r	277 ^r	285	294
Ferrous primary metals	23	21	26	26 ^r	27 ^r	32	30
Nonferrous primary metals	86	82	95	94	87 ^r	102	104
Nonmetallic mineral products	9	10	17 ^r	19	15 ^r	17	17
Petroleum products	244	184	218	205	148 ^r	134	143

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

Note: Components may not add due to rounding.

TABLE 7. CANADA, EXPLORATION AND CAPITAL EXPENDITURES IN THE MINING INDUSTRY¹ BY PROVINCES AND TERRITORIES, 1986-88

		Capital						Repair			Total Capital and Repair	Outside or General Exploration	Total, all Expenditures
		Construction				Machinery and Equipment	Total Capital						
		On-property Exploration	On-property Development	Structures	Total			Construction	Machinery and Equipment	Total Repair			
(\$ million)													
Newfoundland	1986	(2)	34.3	(2)	35.4	31.2	66.6	(2)	(2)	114.7	181.2	11.4	192.6
	1987 ^p	(2)	39.7	(2)	115.4	14.3	129.7	7.4	100.3	107.7	237.4	7.3	244.7
	1988 ⁱ	(2)	(2)	67.1 ^r	107.7 ^r	19.5 ^r	127.2 ^r	7.6	102.1	109.7	236.9 ^r	6.3 ^r	243.2 ^r
Prince Edward Island	1986	-	-	-	-	-	-	-	-	-	-	-	-
	1987 ^p	-	-	-	-	-	-	-	-	-	-	-	-
	1988 ⁱ	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	1986	(2)	(2)	57.1	169.7	53.1	222.8	1.5	23.1	24.6	247.4	20.5	267.9
	1987 ^p	(2)	73.5	(2)	91.2	49.8	141.0	4.4	36.3	40.7	181.7	15.2	196.9
	1988 ⁱ	(2)	13.4 ^r	(2)	20.2 ^r	61.7 ^r	81.9 ^r	3.9	36.5	40.4	122.3 ^r	20.1 ^r	142.4 ^r
New Brunswick	1986	1.5	39.2	20.4	61.1	24.5	85.6	9.4	59.8	69.2	154.8	9.3	164.1
	1987 ^p	(2)	(2)	6.4	30.0	39.5	69.5	7.6	67.9	75.5	145.0	9.0	154.0
	1988 ⁱ	(2)	(2)	(2)	28.2 ^r	31.2 ^r	59.4 ^r	7.9	74.2	82.1	141.5 ^r	17.1 ^r	158.6 ^r
Quebec	1986	27.9	172.0	61.6	261.5	60.8	322.3	29.1	193.1	222.2	544.5	236.8	781.3
	1987 ^p	44.8	199.3	66.2	310.3	82.9	393.2	30.1	190.4	220.5	613.7	432.7	1 046.4
	1988 ⁱ	42.3 ^r	216.1 ^r	82.8 ^r	341.2 ^r	107.3 ^r	448.5 ^r	29.9	192.5	222.4	670.9 ^r	452.8 ^r	1 123.7 ^r
Ontario	1986	33.3	309.3	91.3	433.9	154.0	587.9	40.5	324.5	365.0	952.9	127.1	1 080.0
	1987 ^p	32.9	350.6	69.5	453.0	200.2	653.2	38.9	357.4	396.3	1 049.5	171.4	1 220.9
	1988 ⁱ	43.9 ^r	426.9 ^r	137.1 ^r	607.9 ^r	334.1 ^r	942.0 ^r	46.1	368.7	414.8	1 356.8 ^r	186.1 ^r	1 542.9 ^r
Manitoba	1986	7.6	41.2	11.5	60.3	40.2	100.5	(2)	(2)	40.3	140.8	21.9	162.7
	1987 ^p	10.7	36.2	21.1	68.0	25.1	93.1	(2)	(2)	39.0	132.1	17.3	149.4
	1988 ⁱ	11.5 ^r	45.7 ^r	3.4 ^r	60.6 ^r	31.2 ^r	91.8 ^r	(2)	(2)	43.0	134.8 ^r	18.0 ^r	152.8 ^r
Saskatchewan	1986	5.8	54.9	47.9	108.6	87.2	195.8	6.5	135.9	142.4	338.2	32.6	370.8
	1987 ^p	4.3	111.0	11.1	126.4	43.5	169.9	7.3	128.7	136.0	305.9	36.7	342.6
	1988 ⁱ	(2)	100.1 ^r	(2)	129.1 ^r	75.5 ^r	204.6 ^r	6.9	130.7	137.6	342.2 ^r	44.2 ^r	386.4 ^r
Alberta	1986	(2)	(2)	5.4	22.2	26.0	48.2	2.8	73.0	75.8	124.0	11.5	135.5
	1987 ^p	(2)	8.5	(2)	13.8	26.1	39.9	0.4	73.7	74.1	114.0	4.0	118.0
	1988 ⁱ	(2)	15.4 ^r	(2)	25.9 ^r	46.3 ^r	72.2 ^r	0.4	81.8	82.2	154.4 ^r	5.1 ^r	159.5 ^r
British Columbia	1986	9.4	228.9	32.9	271.2	92.5	363.7	22.3	367.9	390.2	753.9	74.9	828.8
	1987 ^p	15.5	247.5	79.8	342.8	95.1	437.9	21.2	379.6	400.8	838.7	105.3	944.0
	1988 ⁱ	17.6 ^r	305.6 ^r	131.6 ^r	454.8 ^r	117.1 ^r	571.9 ^r	22.3	390.3	412.6	984.5 ^r	131.1 ^r	1 115.6 ^r
Yukon	1986	1.8	0.9	0.1	2.8	1.1	3.9	(2)	(2)	4.2	8.1	16.7	24.8
	1987 ^p	0.6	(2)	(2)	13.4	5.6	19.0	(2)	(2)	24.2	43.2	16.8	60.0
	1988 ⁱ	4.0 ^r	10.9 ^r	-	14.9 ^r	8.8 ^r	23.7 ^r	(2)	(2)	21.5	45.2 ^r	8.5 ^r	53.7 ^r
Northwest Territories	1986	19.9	16.9	18.7	55.5	5.4	60.9	4.5	54.4	58.9	119.8	26.5	146.3
	1987 ^p	2.1	20.6	9.0	31.7	18.2	49.9	2.8	45.2	48.0	97.9	33.9	131.8
	1988 ⁱ	(2)	24.3 ^r	(2)	64.7 ^r	31.0 ^r	95.7 ^r	14.9	47.1	62.0	157.7 ^r	24.3 ^r	182.0 ^r
Canada	1986	108.6	1 026.1	347.4	1 482.1	576.0	2 058.1	130.8	1 376.7	1 507.5	3 565.6	589.3	4 154.9
	1987 ^p	121.5	1 115.7	359.0	1 596.1	600.0	2 196.2	120.4	1 442.4	1 562.8	3 759.1	849.6	4 608.7
	1988 ⁱ	143.9 ^r	1 219.7 ^r	491.7 ^r	1 855.3 ^r	863.9 ^r	2 719.2 ^r	141.0	1 488.1	1 629.1	4 348.3 ^r	913.7 ^r	5 262.0 ^r

¹ Excludes crude oil and natural gas industries. (2) Confidential, included in total.^p Preliminary; ^r Revised; ⁱ Intentions; - Nil.

Note: Components may not add due to rounding.

TABLE 8. CANADA, EXPLORATION AND CAPITAL EXPENDITURES¹ IN THE MINING INDUSTRY¹ BY TYPE OF MINING, 1986-88

		Capital						Repair			Total Capital and Repair	Outside or General Exploration	Total, all Expenditures
		Construction				Machinery and Equipment	Total Capital	Construction	Machinery and Equipment	Total Repair			
		On-property Exploration	On-property Development	Structures	Total								
Metal Mines	1986	28.2	91.9	52.4	172.5	50.9	223.4	22.0	203.1	225.1	448.5	16.0	464.5
	1987 ^p	18.9	90.9	72.8	182.6	47.1	229.7	19.0	240.5	259.5	489.2	20.8	510.0
	1988 ⁱ	15.6 ^r	131.2 ^r	86.9 ^r	233.7 ^r	51.4 ^r	285.1 ^r	18.0	239.3	257.3	542.4 ^r	16.4 ^r	558.8 ^r
Gold	1986	51.3	223.1	121.5	395.9	120.1	516.0	22.5	103.5	126.0	642.0	69.2	711.2
	1987 ^p	65.5	337.2	179.2	581.9	155.2	737.1	17.0	119.6	136.6	873.7	95.2	968.9
	1988 ⁱ	76.8 ^r	408.3 ^r	266.1 ^r	751.2 ^r	275.6 ^r	1 026.8 ^r	34.4	138.2	172.6	1 199.4 ^r	113.3 ^r	1 312.7 ^r
Iron	1986	(4)	69.4	(4)	76.6	41.7	118.3	12.7	189.5	202.2	320.5	4.8	325.3
	1987 ^p	(4)	93.2	(4)	102.0	14.6	116.6	10.4	168.4	178.8	295.4	(4)	(4)
	1988 ⁱ	(4)	94.5 ^r	(4)	99.2 ^r	27.7 ^r	126.9 ^r	10.5	170.1	180.6	307.5 ^r	(4)	(4)
Silver-lead-zinc	1986	9.0	33.6	12.0	54.6	8.1	62.7	11.9	72.8	84.7	147.4	15.5	162.9
	1987 ^p	5.7	50.7	13.9	70.3	48.0	118.3	9.1	99.3	108.4	226.7	16.9	243.6
	1988 ⁱ	8.8 ^r	56.3 ^r	14.8 ^r	79.9 ^r	43.1 ^r	123.0 ^r	9.1	109.9	119.0	242.0 ^r	19.8 ^r	261.8 ^r
Uranium	1986	5.2	107.2	1.9	114.3	29.2	143.5	5.9	118.1	124.0	267.5	16.9	284.4
	1987 ^p	(4)	74.4	(4)	82.8	23.5	106.3	8.6	123.1	131.7	238.0	17.8	255.8
	1988 ⁱ	(4)	101.4 ^r	(4)	129.7 ^r	43.6 ^r	173.3 ^r	9.1	121.5	130.6	303.9 ^r	(4)	(4)
Other metal ² mining	1986	(4)	109.8	(4)	156.4	65.5	221.9	24.2	115.1	139.3	361.2	3.9	365.1
	1987 ^p	10.0	89.8	12.7	112.5	59.6	172.1	25.9	124.5	150.4	322.5	(4)	(4)
	1988 ⁱ	17.2 ^r	128.9 ^r	29.7 ^r	175.8 ^r	114.6 ^r	290.4 ^r	27.9	126.4	154.3	444.7 ^r	(4)	(4)
Total metal mining	1986	100.5	635.0	234.8	970.3	315.5	1 285.8	99.2	802.1	901.3	2 187.1	126.3	2 313.4
	1987 ^p	104.0	736.2	292.0	1 132.2	348.0	1 480.2	90.0	875.4	965.4	2 445.6	156.6	2 602.2
	1988 ⁱ	123.0 ^r	920.3 ^r	425.9 ^r	1 469.2 ^r	556.0 ^r	2 025.2 ^r	109.0	905.4	1 014.4	3 039.6 ^r	183.0 ^r	3 222.6 ^r
Nonmetal Mines													
Asbestos	1986	(4)	36.3	(4)	41.4	2.2	43.6	1.9	37.3	39.2	82.8	-	82.8
	1987 ^p	(4)	34.5	(4)	40.0	11.2	51.2	(4)	(4)	47.0	98.2	-	98.2
	1988 ⁱ	(4)	11.9 ^r	(4)	12.4 ^r	2.6 ^r	15.0 ^r	(4)	(4)	54.9	69.9 ^r	-	69.9 ^r
Coal	1986	2.5	307.8	29.6	339.9	89.2	429.1	15.9	310.9	326.8	755.9	20.5	776.4
	1987 ^p	2.1	236.6	19.9	258.6	96.5	355.1	13.2	300.8	314.0	669.1	8.4	677.5
	1988 ⁱ	(4)	195.0 ^r	(4)	210.8 ^r	155.9 ^r	366.7 ^r	13.7	302.0	315.7	682.4 ^r	5.0 ^r	687.4 ^r
Other nonmetal mining ³	1986	(4)	46.6	(4)	121.1	165.2	286.3	13.4	217.2	230.6	516.9	1.6	518.5
	1987 ^p	(4)	101.5	(4)	121.4	133.6	255.0	(4)	(4)	232.2	487.2	3.0	490.2
	1988 ⁱ	2.5 ^r	86.9 ^r	39.1 ^r	128.5 ^r	145.1 ^r	273.6 ^r	(4)	(4)	238.8	512.4 ^r	2.2 ^r	514.6 ^r
Total nonmetal mining	1986	8.1	390.7	103.6	502.4	256.6	759.0	31.2	565.4	596.6	1 355.6	22.1	1 377.7
	1987 ^p	6.4	372.6	41.0	420.0	241.3	661.2	27.5	565.7	593.2	1 254.4	11.4	1 265.9
	1988 ⁱ	4.5 ^r	293.8 ^r	53.4 ^r	351.7 ^r	303.6 ^r	655.3 ^r	28.4	581.0	609.4	1 264.7 ^r	7.2 ^r	1 271.9 ^r
Metal and Nonmetal Exploration Companies													
	1986	-	0.4	8.9	9.4	3.9	13.2	0.4	9.2	9.6	22.8	440.9	463.7
	1987 ^p	11.1	6.9	26.0	44.0	11.0	55.0	3.2	1.4	4.6	59.6	681.6	741.2
	1988 ⁱ	16.5 ^r	5.3 ^r	12.4 ^r	34.2 ^r	3.9 ^r	38.1 ^r	3.6	1.7	5.3	43.4 ^r	723.6 ^r	767.0 ^r
Total mining	1986	108.6	1 026.1	347.4	1 482.1	576.0	2 058.1	130.8	1 376.7	1 507.5	3 565.6	589.3	4 154.9
	1987 ^p	121.5	1 115.7	359.0	1 596.2	600.0	2 196.2	120.4	1 442.4	1 562.8	3 759.0	849.6	4 608.6
	1988 ⁱ	143.9 ^r	1 219.7 ^r	491.7 ^r	1 855.3 ^r	863.9 ^r	2 719.2 ^r	141.0	1 488.1	1 629.1	4 348.3 ^r	913.7 ^r	5 262.0 ^r

¹ Excludes expenditures in the petroleum and natural gas industries. ² Includes nickel-copper mines, silver-cobalt mines and other metal mines. ³ Includes gypsum mines, salt mines, potash mines, quarries, sand and gravel pits and other nonmetal mines. (4) Confidential, included in total.

^p Preliminary; ^r Revised; ⁱ Intentions; - Nil.

Note: Components may not add due to rounding.

TABLE 9. CANADA, CAPITAL AND REPAIR EXPENDITURES BY SELECTED INDUSTRIAL SECTOR, 1986-88

		Capital Expenditures			Repair Expenditures			Capital and Repair Expenditures		
		Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
		(\$ million)								
Agriculture	1986	781.3	1 980.0	2 761.3	241.6	1 217.3	1 458.9	1 022.9	3 197.3	4 220.2
	1987 ^p	739.1	1 875.0	2 614.1	254.1	1 271.4	1 525.5	993.2	3 146.4	4 139.6
	1988 ⁱ	766.6 ^r	1 906.6 ^r	2 673.2 ^r	267.8	1 360.1	1 627.9	1 034.4 ^r	3 266.7 ^r	4 301.1 ^r
Construction	1986	289.0	1 155.0	1 444.0	59.1	924.2	983.3	348.1	2 079.2	2 427.3
	1987 ^p	315.0	1 262.0	1 577.0	60.4	915.6	976.0	375.4	2 177.6	2 553.0
	1988 ⁱ	349.8 ^r	1 484.2 ^r	1 834.0 ^r	64.4	1 069.8	1 134.2	414.2 ^r	2 554.0 ^r	2 968.2 ^r
Forestry	1986	108.7	121.8	230.5	78.8	219.1	297.9	187.5	340.9	528.4
	1987 ^p	111.1	118.9	230.0	75.2	225.4	300.6	186.3	344.3	530.6
	1988 ⁱ	143.0 ^r	159.8 ^r	302.8 ^r	76.1	230.3	306.4	219.1 ^r	390.1 ^r	609.2 ^r
Housing	1986	25 764.3	—	25 764.3	3 121.0	—	3 121.0	28 885.3	—	28 885.3
	1987 ^p	32 803.3	—	32 803.3	3 200.0	—	3 200.0	36 003.3	—	36 003.3
	1988 ⁱ	33 324.8 ^r	—	33 324.8 ^r	3 300.0	—	3 300.0	36 624.8 ^r	—	36 624.8 ^r
Manufacturing	1986	2 525.5	11 723.8	14 249.3	868.9	5 651.4	6 520.3	3 394.4	17 375.2	20 769.6
	1987 ^p	2 703.2	12 250.3	14 953.5	935.6	5 837.7	6 773.3	3 638.8	18 088.0	21 726.8
	1988 ⁱ	3 229.1 ^r	15 933.9 ^r	19 163.0 ^r	973.2	6 128.3	7 101.5	4 202.3 ^r	22 062.2 ^r	26 264.5 ^r
Mining ¹	1986	6 624.5	1 072.4	7 696.9	447.3	2 082.2	2 529.5	7 071.8	3 154.6	10 226.4
	1987 ^p	5 621.9	1 080.6	6 702.5	432.9	2 110.5	2 543.4	6 054.8	3 191.1	9 245.9
	1988 ⁱ	7 178.4 ^r	1 549.0 ^r	8 727.4 ^r	492.4	2 223.2	2 715.6	7 670.8 ^r	3 772.2 ^r	11 443.0 ^r
Trade	1986	780.4	1 853.1	2 633.5	256.5	407.0	663.5	1 036.9	2 260.1	3 297.0
	1987 ^p	813.7	1 929.3	2 743.0	239.0	370.1	609.1	1 052.7	2 299.4	3 352.1
	1988 ⁱ	934.7 ^r	2 147.8 ^r	3 082.5 ^r	249.6	378.6	628.2	1 184.3 ^r	2 526.4 ^r	3 710.7 ^r
Utilities	1986	6 412.0	6 906.2	13 318.2	2 046.6	5 158.2	7 204.8	8 458.6	12 064.4	20 523.0
	1987 ^p	6 930.0	7 676.9	14 606.9	1 978.6	5 311.6	7 290.2	8 908.6	12 988.5	21 897.1
	1988 ⁱ	8 798.4 ^r	9 732.6 ^r	18 531.0 ^r	2 082.4	5 552.2	7 634.6	10 880.8 ^r	15 284.8 ^r	26 165.6 ^r
Other ²	1986	17 830.9	11 156.7	28 987.6	3 462.8	1 683.2	5 146.0	21 293.7	12 839.9	34 133.6
	1987 ^p	19 585.8	12 712.8	32 298.6	4 056.6	1 818.1	5 874.7	23 642.4	14 530.9	38 173.3
	1988 ⁱ	21 336.0 ^r	13 977.6 ^r	35 313.6 ^r	4 264.2	1 906.7	6 170.9	25 600.2 ^r	15 884.3 ^r	41 484.5 ^r
Total	1986	61 116.6	35 969.0	97 085.6	10 582.6	17 342.6	27 925.2	71 699.2	53 311.6	125 010.8
	1987 ^p	69 623.1	38 905.8	108 528.9	11 232.4	17 860.4	29 092.8	80 855.5	56 766.2	137 621.7
	1988 ⁱ	76 060.8 ^r	46 891.5 ^r	122 952.3 ^r	11 770.1	18 849.2	30 619.3	87 830.9 ^r	65 740.7 ^r	153 571.6 ^r
Mining as a percentage of total	1986	10.8	3.0	7.9	4.2	12.0	9.1	9.9	5.9	8.2
	1987 ^p	8.1	2.8	6.2	3.9	11.8	8.7	7.5	5.6	6.7
	1988 ⁱ	9.4 ^r	3.3 ^r	7.1 ^r	4.2	11.8	8.9	8.7 ^r	5.7 ^r	7.5

¹ Includes mines, quarries and oil wells. ² Includes finance, real estate, insurance, commercial services, institutions and government departments.

^p Preliminary; ^r Revised; ⁱ Intentions; — Nil.

TABLE 10. CANADA, CAPITAL AND REPAIR EXPENDITURES IN MINING¹ BY GEOGRAPHICAL REGION, 1986-88

		Capital Expenditures			Repair Expenditures			Capital and Repair Expenditures		
		Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
		(\$ million)								
Atlantic Region	1986	950.8	108.8	1 059.6	18.0	190.7	208.7	968.8	299.5	1 268.3
	1987 ^p	506.6	104.6	611.2	19.4	204.6	224.0	526.0	309.2	835.2
	1988 ⁱ	365.5 ^r	112.4 ^r	477.9 ^r	19.4	212.9	232.3	384.9 ^r	325.3 ^r	710.2 ^r
Quebec	1986	261.5	60.8	322.3	29.1	193.1	222.2	290.6	253.9	544.5
	1987 ^p	310.5	82.9	393.4	30.1	190.4	220.5	340.6	273.3	613.9
	1988 ⁱ	341.3 ^r	106.9 ^r	448.2 ^r	29.9	192.5	222.4	371.2 ^r	299.4 ^r	670.6 ^r
Ontario	1986	460.0	154.9	614.9	42.2	326.2	368.4	502.2	481.1	983.3
	1987 ^p	498.2	200.5	698.7	40.6	359.1	399.7	538.8	559.6	1 098.4
	1988 ⁱ	681.4 ^r	334.9 ^r	1 016.3 ^r	47.9	370.3	418.2	729.3 ^r	705.2 ^r	1 434.5 ^r
Prairie Region	1986	3 897.4	646.6	4 544.0	301.8	918.7	1 220.5	4 199.2	1 565.3	5 764.5
	1987 ^p	3 536.5	570.2	4 106.7	303.2	882.8	1 186.0	3 839.7	1 453.0	5 292.7
	1988 ⁱ	4 822.2 ^r	828.2 ^r	5 650.4 ^r	338.4	966.7	1 305.1	5 160.6 ^r	1 794.9 ^r	6 955.5 ^r
British Columbia	1986	493.5	94.0	587.5	45.9	389.1	435.0	539.4	483.1	1 022.5
	1987 ^p	540.2	97.1	637.3	36.6	400.0	436.6	576.8	497.1	1 073.9
	1988 ⁱ	734.9 ^r	119.4 ^r	854.3 ^r	41.7	411.7	453.4	776.6 ^r	531.1 ^r	1 307.7 ^r
Yukon and Northwest Territories	1986	561.3	7.3	568.6	10.3	64.4	74.7	571.6	71.7	643.3
	1987 ^p	229.9	25.3	255.2	3.0	73.6	76.6	232.9	98.9	331.8
	1988 ⁱ	233.1 ^r	47.2 ^r	280.3 ^r	15.1	69.1	84.2	248.2 ^r	116.3 ^r	364.5 ^r
Canada, total	1986	6 624.5	1 072.4	7 696.9	447.3	2 082.2	2 529.5	7 071.8	3 154.6	10 226.4
	1987 ^p	5 621.9	1 080.6	6 702.5	432.9	2 110.5	2 543.4	6 054.8	3 191.1	9 245.9
	1988 ⁱ	7 178.4 ^r	1 549.0 ^r	8 727.4 ^r	492.4	2 223.2	2 715.6	7 670.8 ^r	3 772.2 ^r	11 443.0 ^r

¹ Includes mines, quarries and oil wells.

^p Preliminary; ^r Revised; ⁱ Intentions.

Note: Components may not add due to rounding.

TABLE 11. CANADA, CAPITAL AND REPAIR EXPENDITURES IN THE MINERAL MANUFACTURING INDUSTRIES, 1982-88

	1982	1983	1984	1985	1986	1987 ^p	1988 ⁱ
	(\$ million)						
Primary Metal Industries¹							
Capital							
Construction	278.3	112.5	318.6	593.8	400.2	230.7	321.1 ^r
Machinery	927.5	550.6	712.6	1 019.0	1 333.6	1 272.8	1 496.3 ^r
Total	1 205.8	663.1	1 031.2	1 612.8	1 733.8	1 503.5	1 817.4 ^r
Repair							
Construction	99.2	111.4	119.6	125.2	126.9	152.1	165.3
Machinery	1 021.6	1 053.1	1 215.7	1 231.1	1 279.0	1 347.4	1 472.4
Total	1 120.8	1 164.5	1 335.3	1 356.3	1 405.9	1 499.5	1 637.7
Total capital and repair	2 326.6	1 827.6	2 366.5	2 969.1	3 139.7	3 003.0	3 455.1 ^r
Nonmetallic Mineral Products²							
Capital							
Construction	32.0	14.8	26.6	39.2	36.0	54.1	69.7 ^r
Machinery	134.4	125.5	151.0	193.2	295.1	272.0	421.2 ^r
Total	166.4	140.3	177.6	232.4	331.1	326.1	490.9 ^r
Repair							
Construction	20.7	20.7	26.3	21.2	24.7	19.8	19.7
Machinery	211.1	204.1	236.5	270.6	285.7	271.2	276.0
Total	231.8	224.8	262.8	291.8	310.4	291.0	295.7
Total capital and repair	398.2	365.1	440.4	524.2	641.5	617.1	786.6 ^r
Petroleum and Coal Products							
Capital							
Construction	890.8	629.6	321.4	248.3	272.3	437.2	507.4 ^r
Machinery	333.7	211.2	111.0	87.4	125.9	222.6	247.8 ^r
Total	1 224.5	840.8	432.4	335.7	398.2	659.8	755.2 ^r
Repair							
Construction	218.5	196.0	230.3	213.0	212.0	254.6	244.3
Machinery	101.2	68.6	79.3	74.9	91.9	120.1	115.0
Total	319.7	264.6	309.6	287.9	303.9	374.7	359.3
Total capital and repair	1 544.2	1 105.4	742.0	623.6	702.1	1 034.5	1 114.5 ^r
Total Mineral Manufacturing Industries							
Capital							
Construction	1 201.1	756.9	666.6	881.3	708.5	722.0	898.2 ^r
Machinery	1 395.6	887.3	974.6	1 299.6	1 754.6	1 767.4	2 165.3 ^r
Total	2 596.7	1 644.2	1 641.2	2 180.9	2 463.1	2 489.4	3 063.5 ^r
Repair							
Construction	338.4	328.1	376.2	359.4	363.6	426.5	429.3
Machinery	1 333.9	1 325.8	1 531.5	1 576.6	1 656.6	1 738.7	1 863.4
Total	1 672.3	1 653.9	1 907.7	1 936.0	2 020.2	2 165.2	2 292.7
Total capital and repair	4 269.0	3 298.1	3 548.9	4 116.9	4 483.3	4 654.6	5 356.2 ^r

¹ Includes smelting and refining. ² Includes cement, lime and clay products manufacturing.

^p Preliminary; ^r Revised; ⁱ Intentions.

Note: Components may not add due to rounding.

TABLE 12. CANADA, CAPITAL AND REPAIR EXPENDITURES IN THE MINING INDUSTRY¹, 1982-88

	1982	1983	1984	1985	1986	1987 ^p	1988 ⁱ
	(\$ million)						
Metal Mines							
Capital							
Construction	1 099.4	839.1	942.2	1 053.5	979.7	1 176.0	1 503.7 ^r
Machinery	370.6	312.0	372.7	322.4	319.4	359.1	559.4 ^r
Total	1 470.0	1 151.1	1 314.9	1 375.9	1 299.1	1 535.1	2 063.1 ^r
Repair							
Construction	112.4	93.3	99.6	104.5	99.6	93.0	112.4
Machinery	805.1	728.0	861.1	846.4	811.3	877.0	906.8
Total	917.5	821.3	960.7	950.9	910.9	970.0	1 019.2
Total capital and repair	2 387.5	1 972.4	2 275.6	2 326.8	2 210.0	2 505.1	3 082.3 ^r
Nonmetal Mines²							
Capital							
Construction	888.6	1 123.3	658.6	573.6	502.4	420.0	351.5 ^r
Machinery	563.3	433.9	571.7	350.1	256.6	241.2	303.5 ^r
Total	1 451.9	1 557.2	1 230.3	923.7	759.0	661.2	655.0 ^r
Repair							
Construction	28.6	25.5	47.2	39.3	31.2	27.4	28.2
Machinery	431.8	401.5	454.8	529.5	565.4	565.4	580.9
Total	460.4	427.0	502.0	568.8	596.6	592.8	609.1
Total capital and repair	1 912.3	1 984.2	1 732.3	1 492.5	1 355.6	1 254.0	1 264.1 ^r
Mineral Fuels							
Capital							
Construction	6 019.2	6 034.1	6 643.5	7 645.9	5 142.4	4 025.9	5 323.2 ^r
Machinery	1 420.5	880.6	686.7	959.7	496.4	480.3	686.1 ^r
Total	7 439.7	6 914.7	7 330.2	8 605.6	5 638.8	4 506.2	6 009.3 ^r
Repair							
Construction	484.4	427.4	283.4	374.3	316.5	312.5	351.8
Machinery	698.3	656.7	709.5	761.3	705.5	668.1	735.5
Total	1 182.7	1 084.1	992.9	1 135.6	1 022.0	980.6	1 087.3
Total capital and repair	8 622.4	7 998.8	8 323.1	9 741.2	6 660.8	5 486.8	7 096.6 ^r
Total Mining							
Capital							
Construction	8 007.2	7 996.5	8 244.3	9 273.0	6 624.5	5 621.9	7 178.4 ^r
Machinery	2 354.4	1 626.5	1 631.1	1 632.2	1 072.4	1 080.6	1 549.0 ^r
Total	10 361.6	9 623.0	9 875.4	10 905.2	7 696.9	6 702.5	8 727.4 ^r
Repair							
Construction	625.4	546.2	430.2	518.1	447.3	432.9	492.4
Machinery	1 935.2	1 786.2	2 025.4	2 137.2	2 082.2	2 110.5	2 223.2
Total	2 560.6	2 332.4	2 455.6	2 655.3	2 529.5	2 543.4	2 715.6
Total capital and repair	12 922.2	11 955.4	12 331.0	13 560.5	10 226.4	9 245.9	11 443.0 ^r

¹ Does not include cement, lime and clay products (domestic clays) manufacturing, smelting and refining. ² Includes coal mines, asbestos, gypsum, salt, potash, miscellaneous nonmetals, quarrying and sand pits.

^p Preliminary; ^r Revised; ⁱ Intentions.

Note: Components may not add due to rounding.

TABLE 13. CANADA, CAPITAL AND REPAIR EXPENDITURES IN MINING¹ AND MINERAL MANUFACTURING INDUSTRIES, 1986-88

	1986			1987 ^p			1988 ⁱ		
	Capital	Repair	Total	Capital	Repair	Total	Capital	Repair	Total
(\$ million)									
Mining Industry									
Metal mines									
Copper-gold-silver	223.4	225.1	448.5	229.8	259.5	489.3	285.1 ^r	257.3	542.4 ^r
Gold	516.0	126.0	642.0	737.1	136.7	873.8	1 026.5 ^r	172.5	1 199.0 ^r
Iron	118.3	202.2	320.5	116.7	178.7	295.4	126.9 ^r	180.5	307.4 ^r
Silver-lead-zinc	62.7	84.7	147.4	118.3	108.4	226.7	123.0 ^r	119.0	242.0 ^r
Other metal mines	378.7	272.9	651.6	333.2	286.7	619.9	501.6 ^r	289.9	791.5 ^r
Total metal mines	1 299.1	910.9	2 210.0	1 535.1	970.0	2 505.1	2 063.1 ^r	1 019.2	3 082.3 ^r
Nonmetal mines									
Asbestos	43.6	39.2	82.8	51.2	46.9	98.1	15.1 ^r	54.9	70.0 ^r
Other nonmetal mines ²	715.4	557.4	1 272.8	610.0	545.9	1 155.9	639.9 ^r	554.2	1 194.1 ^r
Total nonmetal mines	759.0	596.6	1 355.6	661.2	592.8	1 254.0	655.0 ^r	609.1	1 264.1 ^r
Mineral fuels									
Petroleum and gas ³	5 638.8	1 022.0	6 660.8	4 506.2	980.6	5 486.8	6 009.3 ^r	1 087.3	7 096.6 ^r
Total mining industries	7 696.9	2 529.5	10 226.4	6 702.5	2 543.4	9 245.9	8 727.4 ^r	2 715.6	11 443.0 ^r
Mineral Manufacturing									
Primary metal industries									
Aluminum rolling, casting and extruding	48.2	59.3	107.5	46.8	53.4	100.2	89.9 ^e	57.2	147.1 ^e
Copper and copper alloy, rolling, casting and extruding	8.6	9.7	18.3	13.9	14.5	28.4	8.9 ^e	14.2	23.1 ^e
Iron and steel mills	843.2	793.5	1 636.7	774.8	828.0	1 602.8	801.9 ^e	942.8	1 744.7 ^e
Iron foundries	51.4	62.3	113.7	42.3	57.3	99.6	25.6 ^e	58.6	84.2 ^e
Metal rolling, casting and extruding	28.9	22.6	51.5	25.4	16.8	42.2	21.2 ^e	17.5	38.7 ^e
Smelting and refining	583.1	403.6	986.7	541.3	467.1	1 008.4	813.7 ^e	479.9	1 293.6 ^e
Steel pipe and tube mills	170.4	54.9	225.3	59.0	62.4	121.4	56.2 ^e	67.5	123.7 ^e
Total primary metal industries	1 733.8	1 405.9	3 139.7	1 503.5	1 499.5	3 003.0	1 817.4 ^r	1 637.7	3 455.1 ^r
Nonmetallic mineral products									
Abrasives	5.3	13.3	18.6	7.0	11.3	18.3	9.0 ^e	11.7	20.7 ^e
Cement	52.2	85.7	137.9	42.0	86.8	128.8	108.7 ^e	94.0	202.7 ^e
Clay products	12.2	6.0	18.2	26.8	8.5	35.3	21.2 ^e	8.0	29.2 ^e
Concrete products	50.0	31.2	81.2	34.5	29.9	64.4	36.2 ^e	29.0	65.2 ^e
Glass and glass products	95.9	30.4	126.3	97.0	27.7	124.7	99.5 ^e	29.2	128.7 ^e
Lime	9.1	8.6	17.7	5.6	5.9	11.5	7.2 ^e	6.6	13.8 ^e
Ready-mix concrete	60.2	65.9	126.1	61.2	60.9	122.1	94.1 ^e	57.7	151.8 ^e
Stone products	2.2	0.4	2.6	7.2	1.5	8.7	2.0 ^e	1.6	3.6 ^e
Other nonmetallic mineral products	44.0	68.9	112.9	44.8	58.5	103.3	113.0 ^e	57.9	170.9 ^e
Total nonmetallic mineral products	331.1	310.4	641.5	326.1	291.0	617.1	490.9 ^r	295.7	786.6 ^r
Petroleum and coal products									
Petroleum refineries	392.8	288.1	680.9	650.8	359.6	1 010.4	747.7 ^e	344.2	1 091.9 ^e
Petroleum and coal products	5.4	15.8	21.2	9.0	15.1	24.1	7.5 ^e	15.1	22.6 ^e
Total petroleum and coal products	398.2	303.9	702.1	659.8	374.7	1 034.5	755.2 ^r	359.3	1 114.5 ^r
Total mineral manufacturing industries	2 463.1	2 020.2	4 483.3	2 489.4	2 165.2	4 654.6	3 063.5 ^r	2 292.7	5 356.2 ^r
Total mining and mineral manufacturing industries	10 160.0	4 549.7	14 709.7	9 191.9	4 708.6	13 900.5	11 790.9 ^r	5 008.3	16 799.2 ^r

¹ Does not include cement, lime and clay products (domestic clay) manufacturing, smelting and refining. ² Includes coal mines, gypsum, salt, potash and miscellaneous nonmetal mines and quarrying. ³ The total of capital expenditures shown under "petroleum and gas" is equal to the total capital expenditure under the columns entitled "petroleum and natural gas extraction", "natural gas processing plants" and "oil and gas drilling contractors" of Table 14.

^p Preliminary; ^r Revised; ^e Estimated; ⁱ Intentions.

Note: Components may not add due to rounding.

TABLE 14. CANADA, CAPITAL EXPENDITURES IN THE PETROLEUM, NATURAL GAS AND ALLIED INDUSTRIES¹, 1982-88

	Petroleum and Natural Gas Extraction	Transportation (Pipelines)	Marketing (Chiefly Outlets of Oil Companies)	Natural Gas Distribution	Petroleum and Coal Products Industries	Natural Gas Processing Plants	Oil and Gas Drilling Contractors	Total Capital Expenditures
	(\$ million)							
1982	6 743.4	1 994.3	320.5	517.6	1 224.5	522.8	173.5	11 496.6
1983	6 563.5	660.5	374.5	516.8	840.8	195.8	155.4	9 307.3
1984	6 946.4	795.4	422.9	604.1	432.4	340.0	43.8	9 585.0
1985	8 187.6	664.2	356.8	603.5	335.7	337.7	80.1	10 565.6
1986	5 401.1	586.9	344.9	573.9	398.2	207.8	29.9	7 542.7
1987 ^p	4 331.7 ^r	528.7 ^r	425.8 ^r	533.9 ^r	659.8	160.9	13.6	6 654.4 ^r
1988 ⁱ	5 746.2 ^r	915.2 ^r	470.5 ^r	544.9 ^r	755.2 ^r	245.0 ^r	18.1 ^r	8 695.1 ^r

¹ The petroleum and natural gas industries in this table include all companies engaged in whole or in part in oil and gas activities.

^p Preliminary; ^r Revised; ⁱ Intentions.

Note: Components may not add due to rounding.

METALLIC MINERALS AND PRODUCTS

Copper

W. McCutcheon (613) 992-4404

Metal Prices - US Cents/lb.

	London Metal Exchange (LME) Grade A Cash Settlement August 1-31	Commodities Exchange, Inc. (COMEX) 1st Position August 1-30
High	109.0	103.2
Low	95.0	89.4
Average	99.49	95.9
Year to date average	108.8	103.4
Year to date average cents (C)	133.7	128.2

Between July 29 and August 26, the combined LME and COMEX stocks rose from 135 067 t to 142 066 t.

Chilean copper production for the first five months of 1988 amounted to 543 900 t (compared with 560 200 t for the same period of 1987). Exports for the respective periods were 497 700 t (538 600 t), while Corporacion Nacional del Cobre de Chile's production was 396 700 t (445 400 t). During these periods, production at Chuquicamata was 172 300 t (199 400 t) and at El Salvador 26 600 t (41 900 t).

Magma Copper Company closed its last reverberatory furnace at its San Manuel Arizona copper smelter, in advance of its November 1 deadline to shut down the furnace. The new Outokumpu Oy flash smelter, which started up July 7, is the largest smelter furnace in the world with a capacity of 0.9 Mt/y of concentrates.

China's Ministry of Foreign Economic Relations and Trade announced restrictions on exports of copper and aluminum due to domestic shortages. Copper exports for the first half of 1988 were 34 300 t, five times higher than the same period in 1987. Copper and copper alloy exports for all of 1987 totalled 75 500 t.

SPECIAL ITEM

Advanced Industrial Materials
A. Werner (613) 992-7613

Research Funding through the National Sciences and Engineering Research Council of Canada (NSERC), 1984/85 – 1987/88.

A recent report, prepared for NSERC by J. Peacock, provides details about NSERC's grants to university researchers for studies in advanced materials and technologies in the fields of:

- ceramics, glasses and refractories;
- coatings, surfaces and interfaces;
- composites and compound materials;
- liquid crystal materials and applications;
- fiber-optic and laser materials and technologies;
- metals and alloys;
- photovoltaic materials;
- polymeric materials and processes;
- semi-conductor materials and technology; and
- robotics and system materials and technologies.

During the years in question, NSERC funded more than 2000 research projects in Advanced Materials and Technologies, at a cost of over \$93 million, in the Operating Grants and Targeted Research Programs. The largest share of the funds (almost \$18 million) was in the Metals and Alloys Field, closely followed by Robotics and Systems (\$14 million), Semi-conductors (\$14 million) and Polymers (\$13 million). Further information about the report is available from the Strategic Grants Section of NSERC (613) 996-2717.

