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THE CANADIAN MINERAL INDUSTRY

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MONTHLY REPORT

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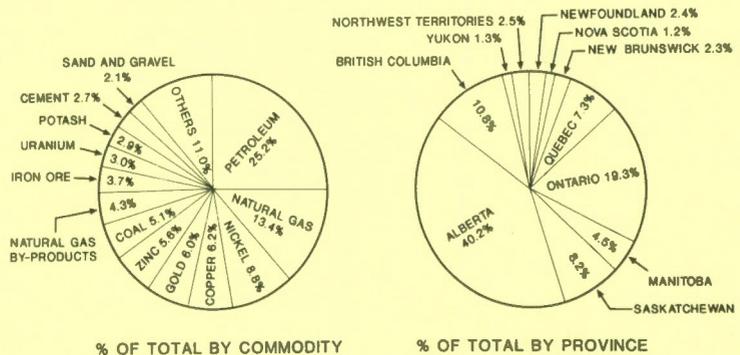
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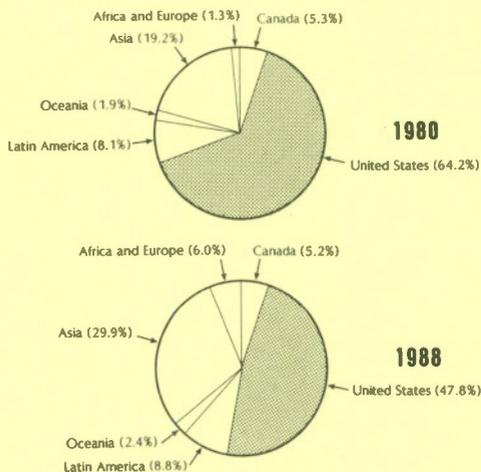
TABLE 3. METAL PRICES - 1988

	October	November
Copper		
Electrolytic, U.S. producer f.o.b. refinery, cents (U.S.)	136.648	150.920
Electrolytic, COMEX, 1st pos. plus 5¢, cents (C.)	166.904	185.133
Electrolytic, Standard, LME cash, cents (U.S.)	127.646	143.821
Lead		
New York, cents (U.S.)		
Montreal, cents (C.)		
LME cash, cents (U.S.)		
Silver		
New York, cents (U.S.) per troy oz.		
Toronto, cents (C.) per troy oz.		
LME cash, cents (U.S.) per troy oz.		
Zinc		
St. Louis, H.G., cents (U.S.)		
Montreal, Electrolytic, cents (C.)		
LME cash, cents (U.S.)		
Tin		
New York, dealers, cents (U.S.)		
Metals Week, composite, cents (U.S.)		
Gold		
London, p.m., US\$ per troy oz.		
Average, (Sharps Pixley) US\$ per troy oz.		
High, (Sharps Pixley) US\$ per troy oz.		
Low, (Sharps Pixley) US\$ per troy oz.		
Mercury		
New York, dealers, US\$ per flask		
Nickel		
New York, dealers, cathode (U.S.)		
LME cash, US\$		
Antimony		
New York, dealers, cents (U.S.)		

CANADA, VALUE OF MINERAL PRODUCTION, 1988



CANADIAN POTASH SALES
% DISTRIBUTION



600.000
7.010
131.520
108.035
8.400
7.300
55.000
3.429
13.150
B.

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Canada

THE ENERGY OF OUR RESOURCES

THE POWER OF OUR IDEAS

THE 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
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Ottawa, Ontario K1A 0E4

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THE CANADIAN MINERAL INDUSTRY FOR JULY

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

HIGHLIGHTS

1. As of July 27, the LME settlement price during the month averaged US80¢/lb. for aluminum, US\$1.13/lb. for copper, US\$5.55/lb. for nickel, US76¢/lb. for zinc, and US31¢/lb. for lead.
2. Gold prices averaged about US\$376/oz. in July, while silver prices averaged US\$5.24/oz.
3. Consumption of potash in the United States this spring was lower than had been expected. Prices continue to be sustained at a relatively strong level, as producers attempt to adjust production to demand. Seasonal closure of potash mines will take place according to planned company shutdowns.

ECONOMIC TRENDS

Table 1 provides a comparison of the volume of production of Canada's leading minerals for the months of April and May 1989, 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 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.

Statistics Canada reported that GDP at factor cost at 1981 prices increased by 0.1% in May, following a 0.3% increase in April and a 0.2% decline in March. The monthly growth rate for the first five months of 1989 has averaged 0.1%, down from 0.3% for 1988. Output of both goods producing and services producing industries increased by 0.1% in May.

Table 3 shows the prices of selected metals for April, May, and June 1989.

Tables 4, 5, and 6 provide the principal statistics of the mineral industry by commodity sector and by region. Principal statistics include such items as the number of establishments, the value of production and the costs associated with that production. Costs include salaries and wages, materials and supplies, and fuel and electricity.

Tables 7 and 8 give more detailed information on the consumption and cost of fuel and electricity in the mining industry.

Tables 9 through 15 provide various data on employment, salaries and wages in the mining industry.

Tables 16 and 17 provide a summary of general exploration and capital expenditures for 1988 (preliminary) and 1989 (intentions), including the revised intentions for 1989.

TABLE 1. CANADA, PRODUCTION OF LEADING MINERALS

	1988			1989			Percentage Changes		
	April	May	Total 5 Months	April	May	Total 5 Months	May 1989	May 1989	1st 5 months
							May 1988	April 1989	1989 1988
(000 tonnes except where noted)									
Metals									
Copper	60.8 ^r	63.8	330.1 ^r	67.4 ^r	68.0	320.2	6.6	0.9	-3.0
Gold	10 347.4 ^r	10 720.4 ^r	51 224.7 ^r	12 509.6 ^r	13 280.5	59 508.3	23.9	6.2	16.2
Iron ore	3 250.8	3 647.8	13 950.9	3 710.4	3 752.5	13 470.9	2.9	1.1	-3.4
Lead	28.8 ^r	30.0 ^r	152.9 ^r	25.3 ^r	21.4	113.6	-28.7	-15.5	-25.7
Molybdenum	1 076.1 ^r	1 179.8 ^r	5 340.8 ^r	1 334.0 ^r	1 233.7	6 021.7	4.6	-7.5	12.7
Nickel	18.3 ^r	18.4 ^r	87.7 ^r	17.3	17.3	87.4	-6.3	-0.5	-0.4
Silver	126.0 ^r	103.8 ^r	595.2 ^r	116.8 ^r	117.7	548.1	13.4	0.7	-7.9
Uranium ¹	1 002.1	919.7	5 731.4	1 225.7	1 234.3	5 614.6	34.2	0.7	-2.0
Zinc	101.1 ^r	93.2 ^r	492.4 ^r	117.4 ^r	115.4	472.9	23.8	-1.7	-4.0
Nonmetals									
Asbestos	60.2	60.7	274.9	55.0	58.2	275.0	-4.1	5.8	0.0
Clay products	17 874.7	18 956.8	66 713.2	22 210.6	18 945.1	72 667.1	-0.1	-14.7	8.9
Gypsum	620.7 ^r	820.8 ^r	3 426.5 ^r	645.7	736.0	3 247.1	-10.3	14.0	-5.2
Potash K ₂ O	861.7	803.5	3 813.9 ^r	811.4	769.4	3 436.9	-4.2	-5.2	-9.9
Cement	822.3 ^r	1 207.1 ^r	3 842.6 ^r	911.3	1 222.3	3 823.3	1.3	34.1	-0.5
Lime	211.1 ^r	222.7	1 016.0 ^r	207.2	233.5	1 082.9	4.9	12.7	6.6
Salt	747.5	840.4	4 124.2	732.2	911.2	4 501.3	8.4	24.4	9.1
Fuels									
Coal	5 782.1 ^r	5 555.7 ^r	29 561.6 ^r	5 461.0	..	..	..	..	..
Natural gas	9 036.0 ^r	8 542.0 ^r	49 547.0 ^r	9 749.0	..	..	..	..	..
Crude oil and equivalent	8 007.0 ^r	8 410.0 ^r	41 115.0 ^r	7 954.0	..	..	..	..	..

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 1981 PRICES, MONTHLY
(SEASONALLY ADJUSTED AT ANNUAL RATES)**

Industry Sector	1988		1989		Percentage Change May 1989 May 1988
	May	March	April	May	
	(\$ million)				
Total Economy	394 532.0	403 195.5	404 539.1	404 902.8	2.6
Primary Industries					
Agriculture	10 251.4	10 984.8	11 014.8	11 023.2	7.5
Forestry	2 916.8	2 824.8	2 799.6	2 808.0	-3.7
Fishing and Trapping	765.4	518.4	523.2	550.8	-28.0
Mines, Quarries and Oil Wells	24 021.1	23 542.3	23 839.3	23 834.5	-0.8
Mining Industries	8 582.5	8 641.2	8 713.2	8 803.2	2.6
Gold Mines	1 525.6	1 771.2	1 809.6	1 870.8	22.6
Iron Mines	738.5	667.2	716.4	703.2	-4.8
Other Metal Mines	4 099.0	3 934.8	3 937.2	3 902.4	-4.8
Nonmetal Mines	849.3	810.0	852.0	842.4	-0.8
Asbestos Mines	166.8	182.4	183.6	202.8	21.6
Mineral Fuels					
Coal Mines	1 086.6	1 154.4	1 102.8	1 166.4	7.3
Crude Petroleum and Natural Gas	13 412.2	13 598.2	13 792.5	14 054.8	4.8
Secondary Industries					
Manufacturing	77 849.4	78 779.9	79 585.3	79 837.8	2.6
Non-durable Manufacturing	33 373.8	33 346.9	33 655.3	33 763.7	1.2
Durable Manufacturing	44 475.6	45 433.0	45 930.0	46 074.1	3.6
Primary Metal Industries	6 403.6	6 260.1	6 277.3	6 329.8	-1.2
Primary Steel Industries	2 543.0	2 587.2	2 578.8	2 607.6	2.5
Steel, Pipe and Tube Industry	400.4	304.8	348.0	375.6	-6.2
Iron Foundries	384.5	357.3	348.5	356.2	-7.4
Smelting and Refining	2 331.6	2 250.0	2 274.0	2 239.2	-4.0
Nonmetallic Mineral Products	2 329.0	2 456.3	2 472.5	2 474.9	6.3
Clay Products Industry	81.3	87.3	89.9	88.2	8.5
Cement Industry	295.1	322.8	321.6	316.8	7.4
Ready-mix Concrete Industry	443.8	478.4	478.4	475.9	7.2
Construction Industry	27 669.7	29 556.0	29 480.4	29 414.4	6.3
Transportation and Storage	18 064.2	18 250.8	18 177.6	18 190.8	0.7
Communications	11 623.3	13 017.6	13 162.8	13 315.2	14.6
Other Utilities	11 307.8	11 445.6	11 450.4	11 354.4	0.4
Wholesale Trade	22 427.4	22 708.8	22 495.2	22 404.0	-0.1
Retail Trade	25 547.3	25 797.2	26 218.6	26 140.1	2.3
Finance, Insurance and Real Estate	57 711.1	59 489.3	59 416.8	59 617.3	3.3
Community, Business and Personal Service	40 168.4	41 331.2	41 397.5	41 401.1	3.1

TABLE 3. METAL PRICES - 1989

	April	May	June
Copper			
Electrolytic, U.S. producer f.o.b. refinery, cents (U.S.)	140.720	125.746	114.501
Electrolytic, COMEX, 1st pos. plus 5¢, cents (C.)	141.580	125.725	109.452
Electrolytic, LME Grade A Settlement, cents (U.S.)	141.426	124.238	116.485
Lead			
New York, cents (U.S.)	35.000	36.200	38.500
Montreal, cents (C.)	42.000	42.800	46.250
LME cash, cents (U.S.)	27.599	29.146	30.161
Silver			
New York, cents (U.S.) per troy oz.	579.075	544.705	528.023
Toronto, cents (C.) per troy oz.	713.950	675.557	656.029
LME cash, cents (U.S.) per troy oz.	572.938	541.488	526.009
Zinc			
St. Louis, H.G., cents (U.S.)	88.065	84.644	80.590
Montreal, Electrolytic, cents (C.)	104.000	101.000	97.250
LME cash, cents (U.S.)	74.430	73.778	69.720
Tin			
New York, dealers, cents (U.S.)	471.000	473.278	467.056
Metals Week, composite, cents (U.S.)	623.632	621.182	607.957
Gold			
London, p.m., US\$ per troy oz.	382.770	371.045	367.598
Mercury			
New York, dealers, US\$ per flask	295.000	295.000	295.000
Nickel			
New York, dealers, cathode (U.S.)	6.745	6.102	5.400
LME cash, US\$	6.760	6.103	5.508
Antimony			
New York, dealers, cents (U.S.)	98.000	95.000	98.636
Platinum			
New York, refined, US\$ per troy oz.	600.000	600.000	600.000
Cadmium			
New York, dealers, US\$	7.050	7.005	6.527
Aluminum			
LME cash, cents (C.)	114.468	122.228	104.045
LME cash, cents (U.S.)	96.305	102.480	86.820
Cobalt			
Shot/cathode/250 kg., US\$	8.400	8.400	8.400
U.S. spot cathode, US\$	7.500	7.650	7.663
Tungsten			
LMB ore, low, US\$/MTU	55.000	52.200	51.000
Molybdenum			
M.W. dealer oxide, US\$	3.685	3.676	3.600
Uranium			
Nuexco, US\$ U ₃ O ₈	10.700	10.100	9.850

Average U.S. Exchange Rate for April = 1.1886, May = 1.1927, June = 1.1984.

Note: Prices are per pound unless otherwise stated.

Please note: The LME copper price reported since January 1989 is the "LME Grade A Settlement" price and not the "LME Standard Cash" price which is no longer reported by Metals Week.

TABLE 4. CANADA, PRINCIPAL STATISTICS OF THE MINERAL INDUSTRY¹, 1987

	Mining Activity										
	Production and Related Workers				Costs				Total Activity ²		
	Establishments	Employees	Person-hours Paid	Wages	Fuel and Electricity	Materials and Supplies	Value of Production	Value Added	Employees	Salaries and Wages	Value Added
	(number)	(number)	(000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(number)	(\$000)	(\$000)
Metals											
Nickel-copper-zinc	25	14 080	31 013	523 140	213 808	1 551 212	4 156 511	2 391 491	18 979	736 910	2 391 483
Gold	51	7 598	16 612	299 136	82 271	421 584	1 815 583	1 311 727	9 757	388 846	1 307 237
Uranium	5	4 393	9 172	185 314	51 401	158 321	1 109 774	900 053	5 289	228 190	898 262
Iron	7	4 319	9 362	171 108	170 958	374 037	1 331 045	786 050	6 039	246 047	787 184
Silver-lead-zinc	14	3 169	7 072	124 145	65 689	591 815	1 225 927	568 423	4 372	181 320	561 993
Miscellaneous metal mines ³	6	770	1 656	24 276	10 874	42 373	138 522	85 275	1 060	35 415	84 629
Total	108	34 329	74 887	1 327 119	595 001	3 139 342	9 777 362	6 043 019	45 496	1 816 728	6 030 788
Industrials											
Potash	11	3 050	6 599	103 935	98 264	100 334	774 445	575 846	4 094	148 503	578 933
Stone	127	2 244	5 167	69 719	32 926	106 601	458 409	318 882	2 911	91 830	331 308
Sand and gravel	138	1 597	3 679	49 436	27 063	86 967	375 192	261 162	2 827	92 044	306 504
Miscellaneous nonmetals ⁴	53	2 001	4 502	66 476	31 495	55 357	357 094	270 242	2 790	96 084	267 860
Asbestos	4	2 185	4 511	69 797	33 248	62 506	238 775	143 021	2 858	97 928	147 621
Peat	59	1 255	2 809	24 472	5 319	22 512	113 865	86 034	1 510	31 518	93 548
Gypsum	10	657	1 549	17 790	6 434	19 695	86 511	60 383	929	27 698	67 175
Total	402	12 989	28 816	401 625	234 749	453 972	2 404 291	1 715 570	17 919	585 605	1 792 949
Fuels											
Coal	28	8 458	17 242	350 972	109 014	303 112	1 547 994	1 135 868	10 406	448 055	1 136 383
Oil, crude and natural gas	738	8 563	17 220	352 981	295 041	973 723	16 922 699	15 653 935	33 691	1 596 005	15 843 719
Total	766	17 021	34 462	703 953	404 055	1 276 835	18 470 693	16 789 803	44 097	2 044 060	16 980 102
Total mineral industry	1 276	64 339	138 165	2 432 697	1 233 805	4 870 149	30 652 346	24 548 392	107 512	4 446 393	24 803 839

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry. ² Total activity includes sales and head offices.

³ Includes molybdenum. ⁴ Includes salt.

Note: Totals may not add due to rounding

TABLE 5. CANADA, PRINCIPAL STATISTICS OF THE MINERAL INDUSTRY¹ BY REGION, 1987

	Mines, Quarries and Oil Well Activity										
	Production and Related Workers				Costs				Total Activity ²		
	Establishments	Employees	Person-hours Paid	Wages	Fuel and Electricity	Materials and Supplies	Value of Production	Value Added	Employees	Salaries and Wages	Value Added
(number)	(number)	(000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(number)	(\$000)	(\$000)	
Atlantic Provinces ³	98	7 605	15 973	247 599	125 248	514 748	1 430 293	790 297	9 827	335 890	793 091
Quebec	187	10 143	22 122	366 103	179 563	618 844	2 075 294	1 276 887	13 919	522 481	1 284 944
Ontario	164	17 676	39 352	655 299	217 992	1 270 706	4 461 985	2 973 287	24 157	928 336	3 029 158
Prairie Provinces	609	17 157	35 220	655 422	466 664	1 420 593	18 533 898	16 646 641	44 371	1 970 651	16 802 623
British Columbia ⁴	179	9 830	20 807	417 483	187 182	769 092	3 096 038	2 139 764	12 229	545 190	2 150 333
Yukon and Northwest Territories ⁵	39	1 928	4 692	90 792	57 155	276 168	1 054 840	721 516	3 009	143 845	743 691
Canada	1 276	64 339	138 166	2 432 698	1 233 804	4 870 151	30 652 348	24 548 392	107 512	4 446 393	24 803 840

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry. ² Total activity includes sales and head offices.

³ Includes eastern Canada offshore. ⁴ Includes western Canada offshore. ⁵ Includes Arctic Islands and offshore.

Note: Totals may not add due to rounding.

TABLE 6. CANADA, PRINCIPAL STATISTICS OF THE MINERAL INDUSTRY¹, 1981-87

Mines, Quarries and Oil Well Activity											
Production and Related Workers				Costs				Total Activity ²			
Establishments	Employees	Person-hours Paid	Wages	Fuel and Electricity	Materials and Supplies	Value of Production	Value Added	Employees	Salaries and Wages	Value Added	
(number)	(number)	(000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(number)	(\$000)	(\$000)	
1981	1 361	81 136	167 307	2 053 760	888 554	4 266 637	28 204 485	23 049 295	129 251	3 439 945	23 091 447
1982	1 247	74 178	141 070	2 008 439	956 296	3 768 771	29 101 618	24 376 549	123 486	3 648 004	24 427 308
1983	1 407	66 629	131 406	1 963 773	1 022 417	3 756 625	32 771 401	27 992 357	113 831	3 687 911	28 012 167
1984	1 381	69 650	140 567	2 295 256	1 204 008	4 290 972	37 976 019	32 481 039	115 790	4 106 049	32 545 525
1985	1 386	67 308	140 780	2 357 868	1 264 619	4 442 358	38 127 807	34 420 830	117 161	4 413 258	32 495 098
1986	1 508	64 355	135 042	2 367 488	1 240 373	4 649 768	27 778 340	21 888 200	111 461	4 493 254	22 216 741
1987	1 276	64 339	138 166	2 432 698	1 233 804	4 870 151	30 652 348	24 548 392	107 512	4 446 393	24 803 840

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry. ² Includes sales and head offices.

TABLE 7. CANADA, CONSUMPTION OF FUEL AND ELECTRICITY IN THE MINERAL INDUSTRY¹, 1987

	Unit	Metals	Industrials ²	Fuels	Total
Coal	000 t	284	-	-	284
	\$000	19 782	-	-	19 782
Gasoline	000 litres	19 692	17 279	9 786	46 757
	\$000	7 950	7 091	3 203	18 244
Fuel oil, kerosene, diesel oil	000 litres	742 294	265 111	219 219	1 226 624
	\$000	167 441	73 692	53 258	294 391
Liquefied petroleum gas	000 litres	92 071	10 918	16 541	119 530
	\$000	15 993	2 243	2 327	20 563
Natural gas	000 m ³	225 789	537 854	73	763 716
	\$000	28 000	54 847	8 315	91 162
Other fuels ³	\$000	10 766	-	-	10 766
Total value of fuels	\$000	249 932	137 873	67 103	454 908
Electricity purchased	million kWh	12 128	2 237	7 822	22 187
	\$000	345 068	96 876	336 952	778 896
Total value of fuels and electricity purchased, all reporting companies	\$000	595 000	234 749	404 055	1 233 804

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry. ² Includes structural materials. ³ Includes wood, manufactured gas, steam purchased and other miscellaneous fuels.

- Nil.

Note: Totals may not add due to rounding.

TABLE 8. CANADA, COST OF FUEL AND ELECTRICITY USED IN THE MINING INDUSTRY¹, 1981-87

	Unit	1981	1982	1983	1984	1985	1986	1987
Metals								
Fuel	\$000	293 979	275 205	270 098	331 231	337 445	276 894	249 932
Electricity purchased	million kWh	10 494	9 891	9 659	11 672	11 504	12 066	12 128
	\$000	209 316	232 137	238 458	272 932	281 373	320 828	345 068
Total cost of fuel and electricity	\$000	503 295	507 342	508 556	604 163	618 818	597 722	595 000
Industrials²								
Fuel	\$000	142 169	143 393	157 872	169 486	165 665	153 442	137 873
Electricity purchased	million kWh	2 100	1 782	1 928	2 120	2 122	2 107	2 237
	\$000	56 297	57 567	64 052	76 884	82 114	86 571	96 876
Total cost of fuel and electricity	\$000	198 466	200 960	221 924	246 370	247 779	240 013	234 749
Fuels								
Fuel	\$000	46 991	70 484	68 800	89 237	101 049	73 426	67 103
Electricity purchased	million kWh	3 740	5 780	4 958	5 840	6 569	7 183	7 822
	\$000	139 802	176 911	223 136	264 233	296 973	329 208	336 952
Total cost of fuel and electricity	\$000	186 793	247 395	291 936	353 470	398 022	402 634	404 055
Total mining industry								
Fuel	\$000	483 139	489 082	496 770	589 954	604 159	503 762	454 908
Electricity purchased	million kWh	16 334	17 453	16 545	19 632	20 195	21 356	22 187
	\$000	405 415	466 615	525 646	614 049	660 460	736 607	778 896
Total cost of fuel and electricity	\$000	888 554	955 697	1 022 416	1 204 003	1 264 619	1 240 369	1 233 804

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry. ² Includes structural materials.

TABLE 9. CANADA, EMPLOYMENT, SALARIES AND WAGES IN THE MINING INDUSTRY¹, 1981-87

	Unit	1981	1982	1983	1984	1985	1986	1987
Metals								
Production and related workers	Number	49 586	44 261	37 270	39 181	36 618	34 941	34 329
Salaries and wages	\$000	1 265 547	1 180 485	1 110 308	1 296 157	1 288 990	1 308 956	1 327 119
Annual average salary and wage	\$	25 522	26 671	29 791	33 081	35 201	37 462	38 659
Administrative and office workers	Number	19 126	17 242	14 924	13 502	12 054	11 546	11 167
Salaries and wages	\$000	585 120	585 249	533 517	518 644	487 398	489 402	489 609
Annual average salary and wage	\$	30 593	33 943	35 749	38 412	40 435	42 387	43 844
Total metals								
Employees	Number	68 712	61 503	52 194	52 683	48 672	46 487	45 496
Salaries and wages	\$000	1 850 667	1 765 734	1 643 825	1 814 801	1 776 388	1 798 358	1 816 728
Annual average salary and wage	\$	26 934	28 710	31 495	34 448	36 497	38 685	39 932
Industrials								
Production and related workers	Number	15 666	12 848	12 768	13 008	12 535	12 376	12 989
Salaries and wages	\$000	352 302	309 736	329 201	356 828	354 460	361 039	401 626
Annual average salary and wage	\$	22 488	24 108	25 783	27 431	28 278	29 173	30 920
Administrative and office workers	Number	4 908	4 323	3 805	4 250	4 380	4 887	4 930
Salaries and wages	\$000	128 852	129 116	115 378	138 012	148 090	169 237	183 979
Annual average salary and wage	\$	26 253	29 867	30 323	32 473	33 811	34 630	37 318
Total industrials								
Employees	Number	20 574	17 171	16 573	17 258	16 915	17 263	17 919
Salaries and wages	\$000	481 154	438 852	444 579	494 840	502 550	530 276	585 605
Annual average salary and wage	\$	23 387	25 558	26 825	28 673	29 710	30 717	32 681
Fuels								
Production and related workers	Number	15 884	17 069	16 591	17 461	18 155	17 038	17 021
Salaries and wages	\$000	435 911	518 217	524 264	642 271	714 418	697 494	703 953
Annual average salary and wage	\$	27 443	30 360	31 599	36 783	39 351	40 938	41 358
Administrative and office workers	Number	24 081	27 743	28 473	28 388	33 419	30 673	27 076
Salaries and wages	\$000	672 213	925 201	1 075 245	1 154 137	1 419 903	1 467 126	1 340 107
Annual average salary and wage	\$	27 915	33 349	37 764	40 656	42 488	47 831	49 494
Total fuels								
Employees	Number	39 965	44 812	45 064	45 849	51 574	47 711	44 097
Salaries and wages	\$000	1 108 124	1 443 418	1 599 509	1 796 408	2 134 321	2 164 620	2 044 060
Annual average salary and wage	\$	27 727	32 211	35 494	39 181	41 384	45 369	46 354
Total mining								
Production and related workers	Number	81 136	74 178	66 629	69 650	67 308	64 355	64 339
Salaries and wages	\$000	2 053 760	2 008 438	1 963 773	2 295 256	2 357 868	2 367 489	2 432 698
Annual average salary and wage	\$	25 313	27 076	29 473	32 954	35 031	36 788	37 811
Administrative and office workers	Number	48 115	49 308	47 202	46 140	49 853	47 106	43 173
Salaries and wages	\$000	1 386 185	1 639 566	1 724 140	1 810 793	2 055 391	2 125 765	2 013 695
Annual average salary and wage	\$	28 810	33 252	36 527	39 246	41 229	45 127	46 642
Total mining								
Employees	Number	129 251	123 486	113 831	115 790	117 161	111 461	107 512
Salaries and wages	\$000	3 439 945	3 648 004	3 687 913	4 106 049	4 413 259	4 493 254	4 446 393
Annual average salary and wage	\$	26 614	29 542	32 398	35 461	37 668	40 312	41 357

¹ Cement manufacturing, lime manufacturing, clay and clay products (domestic clays) are included in the mineral manufacturing industry.
Note: Totals may not add due to rounding.

TABLE 10. CANADA, NUMBER OF WAGE EARNERS EMPLOYED IN THE MINING INDUSTRY (SURFACE, UNDERGROUND AND MILL), 1981-87

	1981	1982	1983	1984	1985	1986	1987
Metals							
Surface	14 043	12 133	9 970	9 724	10 093	9 674	9 557
Underground	19 784	18 673	15 861	16 668	14 798	13 982	13 747
Mill	15 759	13 455	11 439	12 789	11 727	11 285	11 025
Total	49 586	44 261	37 270	39 181	36 618	34 941	34 329
Industrials							
Surface	6 015	4 833	4 951	4 948	4 921	5 396	5 771
Underground	2 606	2 055	2 192	2 487	2 337	2 112	2 234
Mill	7 045	5 960	5 625	5 573	5 277	4 868	4 984
Total	15 666	12 848	12 768	13 008	12 535	12 376	12 989
Fuels							
Surface	11 429	13 283	12 190	14 392	15 101	14 165 ^e	14 063 ^e
Underground	2 926	3 226	2 896	1 818	1 626	1 602 ^e	1 655 ^e
Mill	1 529	560	1 505	1 251	1 428	1 271	1 304 ^e
Total	15 884	17 069	16 591	17 461	18 155	17 038	17 022
Total Mining Industry							
Surface	31 487	30 249	27 111	29 064	30 115	29 235	29 391
Underground	25 316	23 954	20 949	20 973	18 761	17 696	17 636
Mill	24 333	19 975	18 569	19 613	18 432	17 424	17 313
Total	81 136	74 178	66 629	69 650	67 308	64 355	64 340

^e Estimate.

Note: Totals may not add due to rounding.

TABLE 11. CANADA, MINE AND MILL WORKERS BY SEX, 1987

	Mine Workers							
	Underground		Surface		Mill Workers		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
Metallic minerals								
Nickel-copper-zinc ¹	6 301	18	4 284	100	3 620	117	13 845	235
Gold	4 064	10	1 228	79	2 143	74	7 435	163
Iron ore	96	1	1 083	8	3 050	81	4 229	90
Uranium	1 886	15	1 658	32	728	74	4 272	121
Silver-lead-zinc	1 234	4	648	48	1 206	29	3 088	81
Miscellaneous metal mines ²	118	-	387	2	252	11	757	13
Total	13 699	48	9 288	269	10 639	386	33 626	703
Industrial minerals								
Asbestos	136	-	769	9	1 236	35	2 141	44
Potash	1 442	14	87	2	1 470	35	2 999	51
Miscellaneous nonmetals ³	479	-	383	1	1 108	30	1 970	31
Stone	5	-	2 014	13	210	2	2 229	15
Peat	-	-	591	23	619	22	1 210	45
Sand and gravel	-	-	1 436	27	134	-	1 570	27
Gypsum	158	-	416	-	83	-	657	0
Total	2 220	14	5 696	75	4 860	124	12 776	213
Fuels								
Coal	1 655 ^e	-	5 434 ^e	66 ^e	1 284 ^e	20 ^e	8 373	86
Mining total	17 574	62	20 418	410	16 783	530	54 775	1 002

¹ Includes copper-zinc and nickel-copper mines. ² Includes molybdenum mines. ³ Includes quartz mines and salt mines.
 - Nil; ^e Estimate.

TABLE 12. CANADA, LABOUR COSTS FOR METAL MINES IN RELATION TO TONNES MINED, 1985-87

Type of Metal Mine	Number of Wage Earners	Total Wages	Average Annual Wage	Tonnage of Ore Mined	Average Annual Tonnes Mined per Wage Earner	Wage Cost per Tonne Mined
		(\$000)	(\$)	(kilotonnes)		(\$)
1985						
Uranium	4 024	158 110	39 292	7 183	1 785	22.01
Gold	4 507	162 094	35 965	11 997	2 662	13.51
Silver-lead-zinc	1 982	73 202	36 933	9 970	5 030	7.34
Miscellaneous metals ¹	532	18 412	34 609	4 068	7 647	4.53
Nickel-copper-zinc ²	12 335	415 630	33 695	117 169	9 499	3.55
Iron ore	1 511	58 147	38 482	94 588	62 600	0.61
Total	24 891	885 595	35 579	244 975	9 842	3.62
1986						
Uranium	3 796	161 248	42 478	6 933	1 826	23.26
Gold	4 620	181 873	39 366	14 072	3 046	12.92
Silver-lead-zinc	1 801	68 971	38 296	12 084	6 710	5.71
Miscellaneous metals ¹	546	19 674	36 033	8 360	15 311	2.35
Nickel-copper-zinc ²	11 585	416 818	35 979	126 658	10 933	3.29
Iron ore	1 308	51 760	39 572	88 231	67 455	0.59
Total	23 656	900 344	38 060	256 338	10 836	3.51
1987						
Uranium	3 591	152 184	42 379	6 383	1 778	23.84
Gold	5 381	218 960	40 691	15 326	2 848	14.29
Silver-lead-zinc	1 934	76 664	39 640	15 147	7 832	5.06
Miscellaneous metals ¹	507	15 970	31 499	11 787	23 248	1.35
Nickel-copper-zinc ²	10 703	397 886	37 175	130 452	12 188	3.05
Iron ore	1 188	48 729	41 018	87 077	73 297	0.56
Total	23 304	910 393	39 066	266 172	11 422	3.42

¹ Includes molybdenum mines. ² Includes copper-zinc and nickel-copper mines.

TABLE 13. CANADA, PERSON-HOURS PAID FOR PRODUCTION AND RELATED WORKERS, AND TONNES OF ORE MINED AND ROCK QUARRIED IN METAL MINES AND OTHER MINERAL OPERATIONS, 1981-87

	Unit	1981	1982	1983	1984	1985	1986	1987
Metal mines¹								
Ore mined	million t	301.5	238.4	219.0	246.4	245.0	256.3	266.2
Person-hours paid ²	million	100.6	80.4	71.8	78.2	77.1	73.6	74.9
Person-hours paid per tonne mined	number	0.33	0.34	0.33	0.32	0.31	0.29	0.28
Tonnes mined per person-hour paid	t	3.00	2.97	3.05	3.15	3.18	3.48	3.55
Other mineral operations³								
Ore mined and rock quarried	million t	110.5	93.2	101.6	132.3	138.2	127.4	135.3
Person-hours paid ²	million	38.6	34.8	32.2	34.0	31.3	28.9	29.9
Person-hours paid per tonne mined	number	0.35	0.37	0.32	0.26	0.23	0.23	0.22
Tonnes mined per person-hour paid	t	2.86	2.68	3.16	3.89	4.42	4.41	4.53

¹ Excludes placer mining. ² Person-hours paid for production and related workers only. ³ Includes asbestos, potash, gypsum and coal.

TABLE 14. CANADA, AVERAGE WEEKLY WAGES AND HOURS WORKED (INCLUDING OVERTIME) FOR HOURLY-RATED EMPLOYEES IN MINING, MANUFACTURING AND CONSTRUCTION INDUSTRIES, 1982-88

	1982	1983 ¹	1984	1985	1986	1987	1988
Mining							
Average hours per week	39.6	38.8	39.3	39.6	39.7	40.0	40.7
Average weekly wage (\$)	551.68	552.79	664.56	697.90	711.05	726.40	771.17
Metals							
Average hours per week	39.0	38.3	38.8	39.1	39.6	39.6	39.9
Average weekly wage (\$)	535.92	565.64	610.77	639.89	657.62	678.84	775.78
Mineral fuels							
Average hours per week	42.1	39.7	40.6	40.8	40.9	41.6	42.1
Average weekly wage (\$)	631.91	627.26	672.95	716.79	711.40	729.26	895.20
Nonmetals							
Average hours per week	37.2	37.7	38.7	39.2	39.6	39.7	39.7
Average weekly wage (\$)	479.44	503.58	536.20	554.88	581.84	595.98	655.89
Manufacturing							
Average hours per week	37.7	38.4	38.5	38.8	38.8	38.8	38.8
Average weekly wage (\$)	384.79	504.76	465.66	488.17	504.04	519.54	544.76
Construction							
Average hours per week	38.1	36.9	37.4	37.8	37.9	38.4	38.5
Average weekly wage (\$)	564.33	512.26	491.24	505.07	510.40	539.37	562.69

¹ Ten-month average: new time series.

TABLE 15. CANADA, AVERAGE WEEKLY WAGES (INCLUDING OVERTIME) OF HOURLY-RATED EMPLOYEES IN THE MINING INDUSTRY, IN CURRENT AND 1981 DOLLARS, 1982-88

	1982	1983	1984 ¹	1985	1986	1987	1988
Current dollars							
All mining	551.68	552.79	664.56	697.90	711.05	726.40	771.17
Metals	535.92	565.64	610.77	639.89	657.62	678.84	775.78
Mineral fuels	631.91	627.26	672.95	716.79	711.40	729.26	895.20
Coal	567.44	564.18	653.42	697.30	718.82	729.54	791.90
Industrial minerals	479.44	503.58	536.20	554.88	581.84	595.98	655.89
1981 dollars (CPI)							
All mining	497.90	471.66	543.39	548.66	537.05	525.62	536.28
Metals	483.68	482.59	499.40	503.06	496.69	491.20	539.49
Mineral fuels	570.32	534.23	550.25	563.51	537.31	527.68	622.53
Coal	507.33	481.38	534.28	548.19	542.92	527.89	550.70
Industrial minerals	432.71	430.68	438.43	436.23	439.46	431.24	456.11

¹ Ten-month average: new time series.
CPI Consumer Price Index - all items.

TABLE 16. GENERAL EXPLORATION AND CAPITAL EXPENDITURES BY MINING AND EXPLORATION COMPANIES, BY PROVINCE, 1988 and 1989¹

Province	Capital Expenditures	General Exploration
	(\$ millions)	
Newfoundland		
1988	134.2	36.3
1989 Forecast	86.3	36.2
1989 Revised Forecast	92.2	..
Prince Edward Island		
1988	-	-
1989 Forecast	-	-
1989 Revised Forecast	-	-
Nova Scotia		
1988	79.7	52.8
1989 Forecast	93.6	37.4
1989 Revised Forecast	78.0	..
New Brunswick		
1988	70.6	19.7
1989 Forecast	105.9	20.0
1989 Revised Forecast	116.3	..
Quebec		
1988	355.1	336.7
1989 Forecast	308.2	195.2
1989 Revised Forecast	406.7	..
Ontario		
1988	819.7	304.4
1989 Forecast	700.2	219.6
1989 Revised Forecast	669.2	..
Manitoba		
1988	131.9	23.5
1989 Forecast	121.5	38.1
1989 Revised Forecast	125.3	..
Saskatchewan		
1988	205.8	73.4
1989 Forecast	219.0	72.1
1989 Revised Forecast	196.1	..
Alberta		
1988	57.1	5.9
1989 Forecast	37.4	7.7
1989 Revised Forecast	36.7	..
British Columbia		
1988	550.2	180.2
1989 Forecast	536.1	147.5
1989 Revised Forecast	564.2	..
Yukon		
1988	37.9	28.3
1989 Forecast	31.6	19.0
1989 Revised Forecast	32.1	..
Northwest Territories		
1988	101.9	46.7
1989 Forecast	140.1	39.3
1989 Revised Forecast	139.1	..
CANADA		
1988	2 543.7	1 107.9
1989 Forecast	2 380.0	832.2
1989 Revised Forecast	2 455.7	..

Source: Statistics Canada, Capital Expenditures Section.

¹ Preliminary actual 1988, intentions 1989, revised intentions 1989.

.. Not available; - Nil or zero.

TABLE 17. GENERAL EXPLORATION AND CAPITAL EXPENDITURES BY MINING AND EXPLORATION COMPANIES, CANADA, BY INDUSTRY GROUP, 1988 AND 1989¹

	Capital Expenditures	General Exploration
(\$ millions)		
Gold		
1988	1 000.2	135.7
1989 Forecast	737.4	66.7
1989 Revised Forecast	727.2	..
Uranium		
1988	127.5	33.3
1989 Forecast	142.5	41.3
1989 Revised Forecast	124.5	..
Iron		
1988	98.8	0.7
1989 Forecast	110.0	x
1989 Revised Forecast	108.0	..
Copper-gold-silver		
1988	342.7	10.2
1989 Forecast	263.1	12.1
1989 Revised Forecast	294.6	..
Silver-lead-zinc		
1988	114.4	22.2
1989 Forecast	156.1	24.0
1989 Revised Forecast	212.2	..
Other Metal		
1988	209.7	7.0
1989 Forecast	293.9	x
1989 Revised Forecast	306.5	..
Total Metal Mines		
1988	1 893.4	209.0
1989 Forecast	1 703.2	151.7
1989 Revised Forecast	1 772.9	..
Coal		
1988	320.5	11.7
1989 Forecast	354.3	9.9
1989 Revised Forecast	316.5	..
Asbestos		
1988	39.0	-
1989 Forecast	44.8	-
1989 Revised Forecast	37.4	-
Other Nonmetal Mines		
1988	283.7	4.3
1989 Forecast	256.7	3.1
1989 Revised Forecast	307.9	..
Total Nonmetal Mines		
1988	643.3	16.0
1989 Forecast	655.9	13.0
1989 Revised Forecast	661.8	..
Metal and Nonmetal Exploration Companies		
1988	7.0	882.9
1989 Forecast	21.1	667.5
1989 Revised Forecast	21.1	..
TOTAL MINING		
1988	2 543.7	1 107.9
1989 Forecast	2 380.0	832.2
1989 Revised Forecast	2 455.7	..

Source: Statistics Canada, Capital Expenditures Section.

¹ Preliminary actual 1988, intentions 1989, revised intentions 1989.

.. Not available; - Nil or zero; x Confidential.

METALLIC MINERALS AND PRODUCTS

Nonferrous and Precious Metals Prices

NONFERROUS AND PRECIOUS METALS PRICES¹

	1980s Extremes				July ² 1989		
	Low		High		Low	High	Average
	(US\$/lb.)		(US\$/lb.)		(US\$/lb.)		
Aluminum	0.41	03/06/82	1.95	13/06/88	0.75	0.83	0.80
Copper	0.56	18/10/84	1.68	08/12/88	1.08	1.19	1.13
Lead	0.15	18/03/86	0.35	20/05/87	0.30	0.32	0.31
Nickel	1.42	26/11/82	10.84	28/03/88	5.28	5.96	5.55
Zinc	0.25	31/10/85	0.97	02/03/89	0.73	0.79	0.76
	(US\$/troy oz.)		(US\$/troy oz.)		(US\$/troy oz.)		
Gold	285.00	26/02/85	502.75	14/12/87	368.80	384.30	375.70
Silver	4.86	20/05/86	10.92	27/04/87	5.18	5.36	5.24

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. ² As of July 27, 1989.

INDUSTRIAL MINERALS AND PRODUCTS

Potash

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Canadian exports of potash to the United States in 1988 were 6 157 648 t KCl, valued at \$679 million. Early this year it was forecast that consumption of potash in the United States this spring would be about 10% higher and that consequently Canadian exports would increase considerably. This improvement was predicated on a much larger forecast for acreage under cultivation following the drought of 1988. However, very poor weather conditions, combined with the effect of nutrient carry over in the soils resulted in poor spring sales averaging between 5% and 7% less than last year.

Offshore exports totalled 6 394 000 t KCl in 1988. Exports this year are also slightly below last years record levels.

Prices continue to be sustained at a relatively strong level, as producers attempt to adjust production to demand. This year it will be necessary to continue with the practice of seasonal closure of potash mines for routine maintenance, extended maintenance, vacations and occasionally one to three weeks of regular lay-offs.

Company planned shutdowns are as follows:

International Minerals & Chemical Corporation (Canada) Limited	February 19-25; March 24 - April 2 June 12 - July 3 and August 6-18
Cominco Ltd.	Starting July 23, five to six weeks
Central Canada Potash (Noranda)	July 9 - August 20
Potash Company of America (Saskatchewan)	June 28 - August 3
Potash Company of America (New Brunswick)	August 12-26
Denison-Potocan Potash Company	July - two weeks
Potash Corporation of Saskatchewan	
- Cory	July 1-29
- Rocanville	July 1 - August 19
- Allan	July 1 - August 19
- Lanigan	July 7 - August 25
Kalium Chemicals	Will reduce production in June

These closures will coincide with lower summer sales and are likely to reduce total inventories from about 1.8 Mt K₂O to about 1.6 Mt K₂O. Additional Christmas week closures may still be necessary in 1989.

It is not certain yet whether the turmoil in China is likely to lower potash exports to that country in 1989 which normally account for 20% of Canpotex Limited sales.

SPECIAL ITEM

CAPITAL INVESTMENT INTENTIONS — 1989 REVISED

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Intended investment expenditures on new fixed assets for 1989 are now estimated to be \$136.9 billion for the Canadian economy overall, compared to a total of \$123.2 billion estimated for 1988. The revised spending estimates for 1989 are \$3.6 billion higher than the earlier estimates released in March and are based on a Statistics Canada survey conducted in the second quarter of this year.

The revised estimates indicate that the Canadian economy will see capital spending increase by 11.1% over 1988. This incorporates increased spending of 8.5% on construction and 15.7% on machinery and equipment. Within the business sector of the economy, total capital spending intentions are forecast to amount to \$82.7 billion, an increase of \$9.9 billion over last year.

Mining sector investment (excluding oil and gas) is now forecast to be approximately \$2.5 billion, an increase of \$76 million over the earlier estimate this year. This increase is comprised of an additional \$70 million in metal mining and \$6 million in nonmetal mining. The preliminary and revised estimates for 1989 are presented by province and by industry group in Tables 16 and 17 that appear elsewhere in this publication.

