

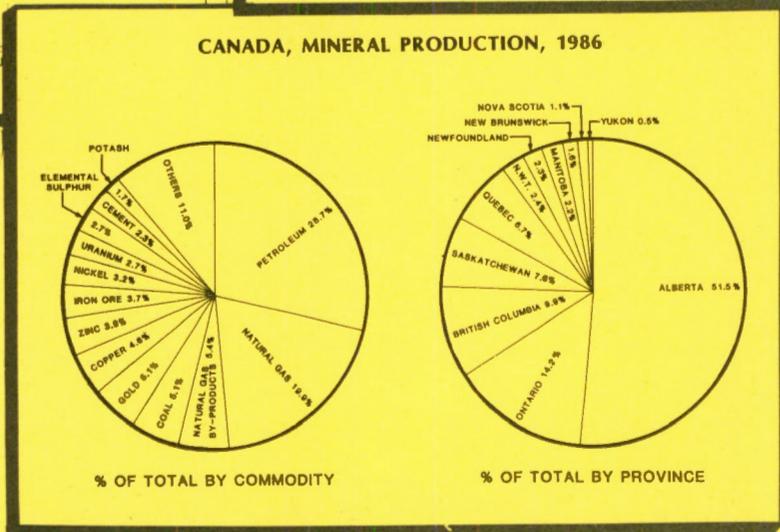
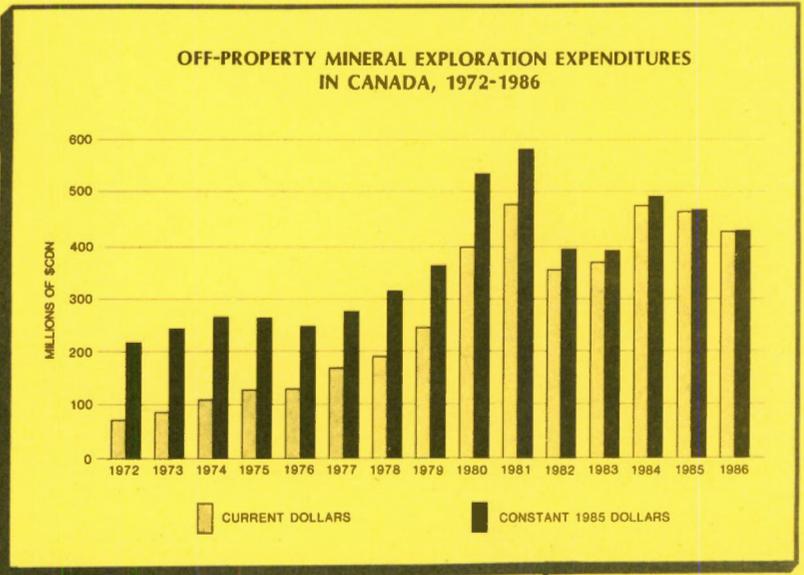
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# THE CANADIAN MINERAL INDUSTRY

## MONTHLY REPORT

JANUARY 1987

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# 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 JANUARY

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

### HIGHLIGHTS

- 1) Volume of output decreased in November, 1986 compared with October, 1986 for all leading minerals except iron ore and potash.
- 2) Volume of output of molybdenum increased 63.5 per cent in the first 11 months of 1986 compared with the same period of 1985.
- 3) The monthly average price of gold slipped below \$US 400 in November to \$397.5 compared with \$423.51 in October, 1986.
- 4) The price of lead increased in November compared with the previous month by almost 2 cents per pound.
- 5) Total shipments of asbestos in 1986 were 640 000 t valued at \$300.6 million compared to 750 190 t valued at \$298.6 million in 1985.
- 6) Shipments of Canadian uranium from ore processing facilities were estimated at 10 977 tU, valued at \$Cdn 924 million in 1986 compared to 10 441 tU valued at \$Cdn 1,002 million in 1985.

### ECONOMIC TRENDS

Table 1 compares the volume of output of Canada's leading minerals in October and November of 1985 and 1986 as well as totals for the first 11 months of 1985 and 1986. Volume of output was up significantly for almost all minerals in November, 1986 compared with November, 1985, but down for all except iron ore and potash compared with October, 1986. In the first 11 months of 1986 compared with the same period of 1985, volume increased for gold (22.1 per cent), molybdenum (63.5 per cent), nickel (13.7 per cent), uranium (10.2 per cent) and gypsum (11.7 per cent).

Tables 3 to 9 show historical data on the mineral production of Canada by commodity, by type of mineral and by province. The percentage contribution of leading minerals to the total value of production is shown in Table 7. Crude oil, which contributed 41.2 per cent in 1985, dropped to 28.7 per cent of the total in 1986.

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

	1985			1986			Percentage Changes			
	October	November	Total 11 months	October	November	Total 11 months	1st 11 months			
							November 1986 November 1985	November 1986 October 1986	1986 1985	
<b>Metals</b>										
Copper		67.5	65.4	650.6 <sup>r</sup>	67.7 <sup>r</sup>	66.4	679.0	+1.5	-1.9	+4.4
Gold	kg	7 199.8	7 530.6 <sup>r</sup>	78 136.6 <sup>r</sup>	9 249.7 <sup>r</sup>	8 434.6	95 428.8	+12.0	-8.8	+22.1
Iron ore		3 447.8	3 608.5	36 706.0	3 651.4	4 006.8	33 775.0	+11.0	+9.7	-8.0
Lead		26.1	17.7	262.9 <sup>r</sup>	28.7	25.2	266.0	+42.4	-12.2	+1.2
Molybdenum	t	854.8	779.2	6 692.8 <sup>r</sup>	1 005.0 <sup>r</sup>	927.5	10 941.6	+19.0	-7.7	+63.5
Nickel		14.4	11.9	138.1	19.8	15.0	157.0	+26.0	-24.2	+13.7
Silver	t	120.4	84.3	1 113.3 <sup>r</sup>	93.3 <sup>r</sup>	82.0	1 003.5	-2.7	-12.1	-9.9
Uranium <sup>1</sup>	t	1 306.4	849.4	9 373.1 <sup>r</sup>	1 408.5	1 039.2	10 331.6	+22.3	-26.2	+10.2
Zinc		101.8	63.2	964.6 <sup>r</sup>	81.1 <sup>r</sup>	70.0	968.3	+10.8	-13.7	-0.4
<b>Nonmetals</b>										
Asbestos		70.6	55.8	681.4	63.0	61.8	600.2	+10.8	-1.9	-11.9
Clay products	\$000	16,678.3	11,686.0 <sup>r</sup>	133,242.9 <sup>r</sup>	20,054.8	14,417.9	166,939.0	+23.4	-28.0	+25.3
Gypsum		890.4	845.6	7 751.0	978.2	789.7	8 660.1	-6.6	-19.3	+11.7
Potash K <sub>2</sub> O		548.5	436.5	5 992.9	477.8	501.0	6 060.6	+14.8	+4.8	+1.1
Cement		1 094.8	791.0	9 012.5	1 207.5 <sup>r</sup>	845.4	9 649.7	+6.9	-30.0	+7.1
Lime		206.3	195.1	2 079.5 <sup>r</sup>	199.5	181.9	2 053.5	-6.8	-8.8	-1.3
Salt		1 076.1	1 115.9	8 898.7 <sup>r</sup>	943.2	881.7	8 993.2	-21.0	-6.5	+1.1
<b>Fuels</b>										
Coal		5 403.0	5 118.8 <sup>r</sup>	55 995.8	5 210.6	..	..	..	..	..
Natural gas	million m <sup>3</sup>	7 862.0	9 194.0 <sup>r</sup>	86 104.0	7 515.0	..	..	..	..	..
Crude oil and equivalent	'000 m <sup>3</sup>	7 804.0	7 847.0 <sup>r</sup>	83 201.0	8 030.0	..	..	..	..	..

<sup>1</sup> Tonnes uranium (1 tonne U = 1.2999 short tons U<sub>3</sub>O<sub>8</sub>).

<sup>r</sup> Revised; .. Not available.

TABLE 2. CANADA, SELECTED MONTHLY METAL PRICES - 1986

	October	November
<b>Copper</b>		
Electrolytic, U.S. producer fob refinery, cents (U.S.)	62.064	61.456
Electrolytic, Comex, 1st pos. plus 5¢, cents (Cdn.)	89.114	88.613
Electrolytic, Standard, LME cash, cents (U.S.)	58.268	57.708
<b>Lead</b>		
New York, cents (U.S.)	25.688	27.500
Montreal, cents (Cdn.)	35.000	36.000
LME cash, cents (U.S.)	19.692	21.451
<b>Silver</b>		
New York, cents (U.S.) per troy oz.	566.696	559.556
Toronto, cents (Cdn.) per troy oz.	813.782	801.400
LME cash, cents (U.S.) per troy oz.	561.673	556.567
<b>Zinc</b>		
St. Louis, H.G., cents (U.S.)	45.976	45.765
Montreal, Electrolytic, cents (Cdn.)	66.500	67.375
LME cash, cents (U.S.)	38.585	35.101
<b>Tin</b>		
New York, Straits, cents (U.S.)	267.795	287.611
Metals Week, composite, cents (U.S.)	353.873	384.224
<b>Gold</b>		
Oz., \$US (London, p.m.)	423.509	397.550
Average, \$US (Sharps Pixley)	423.686	397.266
High, \$US (Sharps Pixley)	438.100	410.750
Low, \$US (Sharps Pixley)	401.000	380.500
<b>Mercury</b>		
\$US per flask	196.591	215.111
<b>Nickel</b>		
Cents (Cdn.)	444.259	443.537
Cents (U.S.)	320.000	320.000
LME cash, \$US	1.653	1.652
<b>Antimony</b>		
Domestic refined in alloy, cents (U.S.)	200.000	200.000
<b>Platinum</b>		
New York, refined, \$US	600.000	600.000
<b>Cadmium</b>		
New York, producers, \$US	1.350	1.350
<b>Aluminum</b>		
LME cash, cents (Cdn.)	73.171	71.157
LME cash, cents (U.S.)	52.705	51.338
<b>Cobalt</b>		
Shot/cathode/250 kg., \$US	11.300	11.300
U.S. spot cathode, \$US	5.850	5.200
<b>Tungsten</b>		
LMB ore, low, \$US/MTU	31.750	30.500
GSA domestic, \$US/STU	32.000	32.000
<b>Molybdenum</b>		
N.W. dealer oxide, \$US	3.161	3.111
<b>Uranium</b>		
Nuexco, \$US U <sub>3</sub> O <sub>8</sub>	17.000	17.000

Average U.S. Exchange Rate for October = 1.38830909, November = 1.38605263

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TABLE 3. MINERAL PRODUCTION OF CANADA, 1985 AND 1986, AND AVERAGE 1982-86

	Unit of Measure	1985		1986 <sup>P</sup>		Average 1982-86	
		(Quantity)	(\$000)	(Quantity)	(\$000)	(Quantity)	(\$000)
<b>Metals</b>							
Antimony	t	1 075	6,476	3 900	23,910	1 275	7,633
Bismuth	t	201	3,943	260	2,425	214	2,131
Cadmium	t	1 717	6,245	1 421	5,434	1 420	5,368
Calcium	t	..	(1)	..	(1)	516	5,119
Cesium, pollucite, rubidium	t	..	(1)	..	(1)	117	263
Cobalt	t	2 067	71,960	2 486	56,242	1 872	50,327
Columbium (Cb <sub>2</sub> O <sub>5</sub> )	t	..	(1)	..	(1)	2 695	18,041
Copper	000 t	739	1,466,932	768	1,567,988	699	1,392,019
Gold	kg	87 562	1,219,653	104 655	1,715,392	82 997	1,280,772
Ilmenite	t	..	(1)	..	(1)	431 687	11,949
Indium	kg	..	(1)	..	(1)	2 779	308
Iron ore	000 t	39 502	1,462,254	36 096	1,254,758	36 338	1,334,127
Iron remelt	000 t	..	(1)	..	(1)	529 666	123,852
Lead	000 t	268	154,845	303	204,427	284	187,999
Lithium, lepidolite, spodumene	t	..	(1)	..	(1)	195	836
Magnesium	t	..	(1)	..	(1)	7 769	32,034
Molybdenum	t	7 852	74,359	12 914	113,942	10 420	100,538
Nickel	000 t	170	1,217,388	181	1,075,467	148	968,278
Platinum group	kg	10 534	(1)	8 793	(1)	8 753	116,110
Rhenium	kg	..	(1)	..	(1)	830	498
Selenium	t	361	7,869	334	5,742	329	6,097
Silver	t	1 197	333,839	1 219	310,102	1 251	413,147
Strontium	t	..	(1)	..	(1)	87	2,311
Tantalum (Ta <sub>2</sub> O <sub>5</sub> )	t	39	3,045	39	2,124	28	2,482
Tellurium	t	19	645	16	547	18	560
Tin	t	120	1,893	..	(1)	618	6,332
Tungsten (WO <sub>3</sub> )	t	4 031	(1)	1 786	(1)	2 834	28,997
Uranium (U)	t	10 441	1,002,127	10 977	923,838	9 595	879,268
Yttrium (Y <sub>2</sub> O <sub>3</sub> )	t	..	(1)	..	(1)	..	(1)
Zinc	000 t	1 049	1,315,791	1 055	1,304,107	1 022	1,254,349
<b>Total metals</b>			<b>8,709,411</b>		<b>8,944,159</b>		<b>8,231,963</b>
<b>Nonmetals</b>							
Arsenious trioxide	t	..	(1)	..	(1)	2 928	870
Asbestos	000 t	750	298,596	640	300,586	784	346,909
Barite	000 t	71	5,503	37	4,635	48	4,991
Bentonite	000 t	..	(1)	..	(1)	64	3,207
Diatomite	t	..	(1)	..	(1)	2 465	155
Gemstone	t	--	823	1	2,114	--	1,020
Graphite	t	..	(1)	..	(1)	719	536
Gypsum	000 t	8 447	75,076	8 542	80,163	7 652	64,631
Magnesitic dolomite and brucite	000 t	136	20,266	144	19,165	101	12,723
Marl	000 t	..	(1)	..	(1)	10	154
Mica	000 t	..	(1)	..	(1)	11	3,742
Nepheline syenite	000 t	467	17,898	485	20,413	509	18,326
Peat	000 t	643	63,772	587	74,502	558	57,528
Perlite	t	..	(1)	..	(1)	900	100
Potash (K <sub>2</sub> O)	000 t	6 661	629,546	6 969	579,022	6 552	670,476
Pumice	t	-	-	-	-	408	10
Pyrite, pyrrhotite	t	-	-	-	-	1 827	44
Quartz	000 t	2 669	42,536	2 437	42,834	2 354	39,309
Salt	000 t	10 085	215,362	11 088	241,611	9 608	199,655
Serpentine	t	..	(1)	..	(1)	3 842	491
Soapstone, talc and pyrophyllite	000 t	127	13,352	125	15,746	109	10,663
Sodium antimonate	t	..	(1)	-	-	906	459
Sodium sulphate	000 t	366	33,871	371	33,413	425	39,017
Sulphur in smelter gas	000 t	822	86,342	760	66,983	746	60,175
Sulphur, elemental	000 t	8 102	1,026,202	6 868	927,083	7 380	711,943
Titanium dioxide	000 t	..	(1)	..	(1)	604	171,506
<b>Total nonmetals</b>			<b>2,737,374</b>		<b>2,668,790</b>		<b>2,418,640</b>
<b>Fuels</b>							
Coal	000 t	60 436	1,845,130	57 800	1,716,000	52 647	1,590,835
Natural gas	million m <sup>3</sup>	84 344	8,047,705	76 365	6,743,835	77 436	7,414,410
Natural gas by-products	million m <sup>3</sup>	19 682	2,809,781	18 906	1,825,439	18 941	2,493,637
Petroleum, crude	000 m <sup>3</sup>	85 564	18,417,806	84 964	9,719,155	81 350	14,844,427
<b>Total fuels</b>			<b>31,120,422</b>		<b>20,004,429</b>		<b>26,343,309</b>
<b>Structural materials</b>							
Clay products	000 \$	..	138,246	..	180,353	..	136,743
Cement	000 t	10 192	788,357	10 058	790,846	9 157	727,801
Lime	000 t	2 212	182,377	2 346	206,400	2 203	169,036
Sand and gravel	000 t	256 183	609,638	242 548	596,603	236 434	585,315
Stone	000 t	86 632	406,601	91 200	426,306	77 264	360,826
<b>Total structural materials</b>			<b>2,125,219</b>		<b>2,200,508</b>		<b>1,979,722</b>
<b>Other minerals<sup>1</sup></b>			<b>41,114</b>		<b>36,511</b>		
<b>Total all minerals</b>			<b>44,733,540</b>		<b>33,854,397</b>		<b>38,973,634</b>

Notes: (1) Other minerals include those commodities for which the value of production is confidential.  
P Preliminary; .. Not available; - Nil; -- Too small to be expressed.

TABLE 4. CANADA, VALUE OF MINERAL PRODUCTION, PER CAPITA VALUE OF MINERAL PRODUCTION, AND POPULATION, 1957-86

	Metallics	Industrial Minerals	Fuels (\$ million)	Other Minerals <sup>1</sup>	Total	Per Capita Value of Mineral Production (\$)	Population of Canada (000)
1957	1,159	466	565		2,190	131.87	16,610
1958	1,130	460	511		2,101	122.99	17,080
1959	1,371	503	535		2,409	137.79	17,483
1960	1,407	520	566		2,493	139.48	17,870
1961	1,387	542	674		2,603	142.72	18,238
1962	1,496	574	811		2,881	155.05	18,583
1963	1,510	632	885		3,027	159.91	18,931
1964	1,702	690	973		3,365	174.45	19,291
1965	1,908	761	1,046		3,715	189.11	19,644
1966	1,985	844	1,152		3,981	198.88	20,015
1967	2,285	861	1,235		4,381	214.99	20,378
1968	2,493	886	1,343		4,722	228.10	20,701
1969	2,378	891	1,465		4,734	225.42	21,001
1970	3,073	931	1,718		5,722	268.68	21,297
1971	2,940	1,008	2,015		5,963	276.46	21,568
1972	2,956	1,085	2,367		6,408	293.92	21,802
1973	3,850	1,293	3,227		8,370	379.69	22,043
1974	4,821	1,731	5,202		11,754	525.55	22,364
1975	4,796	1,898	6,653		13,347	588.05	22,697
1976	5,315	2,269	8,109		15,693	682.51	22,993
1977	5,988	2,612	9,873		18,473	794.26	23,258
1978	5,682	2,986	11,578	73	20,319	865.51	23,476
1979	7,924	3,514	14,617	81	26,135	1,104.11	23,671
1980	9,666	4,201	17,944	115	31,926	1,333.79	23,936
1981	8,753	4,486	19,012	136	32,420	1,331.85	24,342
1982	6,874	3,709	23,038	215	33,837	1,373.59	24,634
1983	7,398	3,741	27,154	245	38,539	1,548.62	24,886
1984	8,670	4,318	30,399	401	43,789	1,742.91	25,124
1985	8,709	4,863	31,120	41	44,734	1,763.95	25,360
1986P	8,944	4,869	20,004	37	33,854	1,322.90	25,591

<sup>1</sup> Other minerals include arsenious trioxide, bentonite, cesium, diatomite, marl, perlite, serpentine, tin, tungsten and yttrium for which the value of production is confidential.  
P Preliminary.

TABLE 5. CANADA, VALUE OF MINERAL PRODUCTION BY PROVINCES, TERRITORIES AND MINERAL CLASSES, 1986P

	Metals		Industrial minerals		Fuels		Other minerals <sup>1</sup>		Total	
	(\$000)	(% of total)	(\$000)	(% of total)	(\$000)	(% of total)	(\$000)	(% of total)	(\$000)	(% of total)
Alberta	410	x	1,185,281	24.3	16,276,734	81.4	306	0.8	17,462,731	51.6
Ontario	3,543,038	39.6	1,170,991	24.0	81,212	0.4	1,954	5.4	4,797,195	14.2
British Columbia	1,284,193	14.4	369,866	7.6	1,710,501	8.6	1,038	2.8	3,365,598	9.9
Saskatchewan	459,491	5.1	607,003	12.5	1,504,552	7.5	1,763	4.8	2,572,809	7.6
Quebec	1,253,553	14.0	1,022,197	21.0	-	-	-	-	2,275,750	6.7
Northwest Territories	630,546	7.0	13,065	0.3	133,601	0.7	12,628	34.6	789,840	2.3
Newfoundland	710,747	7.9	53,422	1.1	-	-	-	-	764,169	2.3
Manitoba	541,220	6.1	121,491	2.5	94,601	0.5	1,041	2.9	758,353	2.2
New Brunswick	346,245	3.9	153,056	3.1	26,728	0.1	17	x	526,046	1.6
Nova Scotia	-	-	162,409	3.3	176,500	0.9	17,764	48.7	356,673	1.1
Yukon	174,716	2.0	8,817	0.2	-	-	-	-	183,533	0.5
Prince Edward Island	-	-	1,700	x	-	-	-	-	1,700	x
Total	8,944,159	100.0	4,869,298	100.0	20,004,429	100.0	36,511	100.0	33,854,397	100.0

<sup>1</sup> Other minerals include arsenious trioxide, bentonite, cesium, diatomite, marl, perlite, serpentine, tin, tungsten and yttrium for which the value of production is confidential.

P Preliminary; - Nil; x Too small to be expressed.

TABLE 6. PRODUCTION OF LEADING MINERALS, BY PROVINCES AND TERRITORIES, 1986P

	Unit of measure	Nfld.	P.E.I.	Nova Scotia	New Brunswick	Quebec	Ontario
Petroleum, crude	000 m <sup>3</sup>	-	-	-	x	-	134
	\$000	-	-	-	13	-	15,410
Natural gas	million m <sup>3</sup>	-	-	-	1	-	504
	\$000	-	-	-	15	-	65,802
Natural gas byproducts	000 m <sup>3</sup>	-	-	-	-	-	-
	\$000	-	-	-	-	-	-
Coal	000 t	-	-	2 880	480	-	-
	\$000	-	-	176,500	26,700	-	-
Gold	kg	-	-	-	107	29 464	46 720
	\$000	-	-	-	1,757	482,944	765,781
Copper	000 t	-	-	-	7	67	289
	\$000	-	-	-	14,427	136,840	590,456
Zinc	000 t	7	-	-	166	42	304
	\$000	8,264	-	-	205,308	51,912	375,187
Iron ore	000 t	19 465	-	-	-	13 200	3 367
	\$000	702,483	-	-	-	..	..
Nickel	000 t	-	-	-	-	-	137
	\$000	-	-	-	-	-	815,858
Sulphur, elemental	000 t	-	-	-	-	-	x
	\$000	-	-	-	-	-	42
Uranium (U)	000 t	-	-	-	-	-	4
	\$000	-	-	-	-	-	476,462
Cement	000 t	..	-	..	..	3 231	3 965
	\$000	9,300	-	20,449	8,406	200,700	282,189
Sand and gravel	000 t	2 700	475	8 325	8 200	26 023	77 200
	\$000	13,345	1,700	25,150	..	..	203,500
Potash (K <sub>2</sub> O)	000 t	-	-	-	..	-	-
	\$000	-	-	-	..	-	-
Stone	000 t	529	-	4 203	2 030	32 918	41 883
	\$000	2,612	-	22,504	11,074	153,024	189,892
Silver	t	-	-	-	201	50	437
	\$000	-	-	-	51,031	12,643	111,218
Asbestos	000 t	45	-	-	-	515	-
	\$000	18,000	-	-	-	232,986	-
Salt	000 t	-	-	..	..	..	6 708
	\$000	-	-	..	..	..	145,104
Lime	000 t	-	-	-	..	..	1 633
	\$000	-	-	-	..	..	140,421
Lead	000 t	-	-	-	76	-	7
	\$000	-	-	-	51,454	-	4,407
Clay products	\$000	1,480	-	7,730	3,350	31,783	110,410
Molybdenum	t	-	-	-	-	400	-
	\$000	-	-	-	-	3,529	-
Total leading minerals	\$000	755,484	1,700	252,333 <sup>1</sup>	373,535 <sup>1</sup>	1,306,361 <sup>1</sup>	4,292,139 <sup>1</sup>
Total all minerals	\$000	764,169	1,700	356,673	526,046	2,275,750	4,797,195
Leading minerals as per cent of all minerals		98.9	100.0	70.7	71.0	57.4	89.5

<sup>1</sup> Value of salt, sand and gravel, lime, potash or iron ore is excluded.

P Preliminary; - Nil; .. Not available; x Less than 1 unit.

Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	N.W.T.	Total Canada
825	11 544	68 970	2 004	-	1 487	84 964
94,601	1,269,785	7,970,208	257,620	-	111,518	9,719,155
-	2 113	67 029	6 444	-	273	76 365
-	118,334	6,106,362	431,239	-	22,083	6,743,835
-	176	18 295	435	-	-	18 906
-	16,433	1,762,164	46,842	-	-	1,825,439
-	8 270	25 020	21 150	-	-	57 800
-	100,000	438,000	974,800	-	-	1,716,000
2 187	15	25	8 737	4 020	13 380	104 655
35,851	245	410	143,208	65,890	219,306	1,715,392
69	3	-	332	x	x	768
141,389	7,051	-	677,783	41	1	1,567,988
58	3	-	138	55	284	1 055
71,369	3,972	-	170,181	67,438	350,476	1,304,107
-	-	-	64	-	-	36 096
-	-	-	3,442	-	-	1,254,758
44	-	-	-	-	-	181
259,609	-	-	-	-	-	1,075,467
1	7	6 565	295	-	-	6 868
191	770	874,186	51,895	-	-	927,083
-	7	-	-	-	-	11
-	447,376	-	-	-	-	923,838
431	..	934	1 013	-	-	10 058
46,104	20,007	124,951	78,740	-	-	790,846
12 200	10 675	48 400	41 900	3 450	3 000	242 548
35,100	26,050	108,000	106,600	8,700	4,775	596,603
-	..	-	-	-	-	6 969
-	..	-	-	-	-	579,022
3 466	-	196	5 725	-	250	91 200
13,100	-	2,925	30,275	-	900	426,306
34	3	-	405	66	23	1 219
8,707	671	-	103,093	16,897	5,842	310,102
-	-	-	80	-	-	640
-	-	-	49,600	-	-	300,586
-	442	1 391	-	-	-	11 088
-	25,397	22,203	-	-	-	241,611
..	-	191	126	-	-	2 364
5,417	-	21,437	9,954	-	-	206,400
x	-	-	103	36	81	304
334	-	-	69,514	24,436	54,282	204,427
2,480	4,060	10,160	8,900	-	-	180,353
-	-	-	12 514	-	-	12 914
-	-	-	110,413	-	-	113,943
714,252	2,040,151 <sup>1</sup>	17,441,006	3,324,099	183,402	769,183	32,723,261
758,353	2,572,809	17,462,731	3,365,598	183,533	789,840	33,854,397
94.2	79.3	99.9	98.8	99.9	97.3	96.7

TABLE 7. CANADA, PERCENTAGE CONTRIBUTION OF LEADING MINERALS TO TOTAL VALUE OF MINERAL PRODUCTION, 1980-86

	1980	1981	1982	1983	1984	1985	1986P
Oil, crude	28.4	29.2	36.0	41.8	40.6	41.2	28.7
Natural gas	19.3	19.8	21.5	18.4	18.1	18.0	19.9
Natural gas byproduct	5.7	6.5	6.8	7.0	6.5	6.3	5.4
Coal	2.9	3.3	3.8	3.4	4.1	4.1	5.1
Gold	3.7	2.8	2.9	3.2	2.9	2.7	5.1
Copper	5.8	4.7	3.5	3.5	3.1	3.3	4.6
Zinc	2.7	3.4	3.1	2.9	3.4	2.9	3.9
Iron ore	5.3	5.4	3.6	3.3	3.4	3.3	3.7
Nickel	4.7	3.8	1.8	2.0	2.7	2.7	3.2
Sulphur, elemental	1.4	2.0	1.7	1.1	1.4	2.3	2.7
Uranium (U)	2.2	2.5	2.5	1.7	2.1	2.2	2.7
Cement	1.8	2.1	2.0	1.6	1.6	1.8	2.3
Sand and gravel	1.6	1.6	1.6	1.6	1.2	1.4	1.8
Potash (K <sub>2</sub> O)	3.2	3.1	1.9	1.7	2.0	1.4	1.7
Stone	1.1	1.0	0.8	0.8	0.9	0.9	1.3
Silver	2.6	1.4	1.2	1.4	1.1	0.7	0.9
Asbestos	1.9	1.7	1.1	1.0	0.9	0.7	0.9
Salt	0.4	0.4	0.5	0.4	0.5	0.5	0.7
Lime	0.4	0.5	0.4	0.4	0.4	0.4	0.6
Lead	0.9	0.8	0.6	0.4	0.4	0.3	0.6
Clay products	0.3	0.4	0.3	0.3	0.3	0.3	0.5
Molybdenum	0.9	0.9	0.5	0.2	0.2	0.2	0.3
Other minerals	2.8	2.7	1.9	1.9	2.2	2.4	3.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

P Preliminary.

TABLE 8. CANADA, VALUE OF MINERAL PRODUCTION BY PROVINCES AND TERRITORIES, 1980-86

	1980	1981	1982	1983	1984	1985	1986P
	(\$ million)						
Alberta	16,379	17,559	20,913	24,103	26,429	27,030	17,463
Ontario	4,640	4,160	3,148	3,687	4,531	4,630	4,797
British Columbia	2,795	2,822	2,769	2,902	3,346	3,541	3,366
Saskatchewan	2,315	2,293	2,313	2,843	3,758	3,797	2,573
Quebec	2,467	2,420	2,065	2,039	2,167	2,243	2,275
Northwest Territories	425	447	503	595	777	865	790
Newfoundland	1,036	1,030	647	807	979	870	764
Manitoba	803	642	530	733	812	862	758
New Brunswick	373	531	493	506	613	508	526
Nova Scotia	247	269	281	260	304	325	356
Yukon	361	236	169	63	70	60	184
Prince Edward Island	2	2	2	1	2	2	2
Total	31,842	32,410	33,831	38,539	43,789	44,734	33,854

P Preliminary.

TABLE 9. CANADA, PERCENTAGE CONTRIBUTION OF PROVINCES AND TERRITORIES TO TOTAL VALUE OF MINERAL PRODUCTION, 1980-86

	1980	1981	1982	1983	1984	1985	1986P
Alberta	51.4	54.2	61.8	62.5	60.4	60.4	51.6
Ontario	14.6	12.8	9.3	9.6	10.4	10.4	14.2
British Columbia	8.8	8.7	8.2	7.5	7.6	7.9	9.9
Saskatchewan	7.2	7.0	6.8	7.4	8.6	8.5	7.6
Quebec	7.7	7.5	6.1	5.3	5.0	5.0	6.7
Northwest Territories	1.3	1.4	1.5	1.5	1.8	1.9	2.3
Newfoundland	3.3	3.2	1.9	2.1	2.2	1.9	2.3
Manitoba	2.5	2.0	1.6	1.9	1.9	1.9	2.2
New Brunswick	1.2	1.6	1.5	1.3	1.4	1.1	1.6
Nova Scotia	0.8	0.8	0.8	0.7	0.7	0.7	1.1
Yukon	1.1	0.7	0.5	0.2	0.2	0.1	0.5
Prince Edward Island	0.01	0.01	0.01	x	x	x	x
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

P Preliminary; x Too small to be expressed.

## EMPLOYMENT TRENDS

Tables A, B and C provide updated information on employment in the mineral industry, by occupation and by province.

TABLE A  
Canada, Employment by Mineral Industry<sup>1</sup>

	September 1983	September 1984	September 1985	July 1986	August 1986	September 1986
	('000 persons)					
Metal mines	53.3	50.5	47.5	47.3	45.5	45.7
Nonmetal mines	13.8	12.1	13.2	12.2	11.5	11.3
Coal mines	10.4	10.2	11.5	10.2	9.8	9.6
Total mines	77.5	72.8	72.2	69.7	66.8	66.6
Primary metal industries <sup>2</sup>	105.7	107.4	103.6	102.0	101.3	99.1

Source: Statistics Canada 72-002: Employment, Earnings and Hours.

<sup>1</sup> Includes salaried and hourly paid employees in all provinces and territories. <sup>2</sup> Includes iron and steel mills; steel pipe and tube mills; iron foundries; smelting and refining; aluminum rolling, casting and extruding.

TABLE B  
Canada, Unemployment Rate by Occupation<sup>1</sup>

	September 1983	September 1984	September 1985	July 1986	August 1986	September 1986
Unemployed as per cent of labour force						
Mining and quarry- ing occupations	11.5	10.9	10.1	15.0	15.0	13.7
All occupations	10.4	10.9	9.3	9.3	9.0	8.8

Source: Statistics Canada 71-001: The Labour Force.

<sup>1</sup> Unemployment in the Yukon and Northwest Territories is not included.

TABLE C

Canada, Employment by Province, September 1986

	Metal Mines	Nonmetal Mines ( '000 employees)	Mines, Quarries Oil Wells
Newfoundland	..	..	2.6
Nova Scotia	..	..	5.1
New Brunswick <sup>1</sup>	..	..	3.1
Quebec	9.6	3.4	16.5
Ontario <sup>2</sup>	19.2	1.6	28.6
Manitoba <sup>3</sup>	3.3	..	4.0
Saskatchewan	..	3.6	7.4
Alberta	..	..	60.4
British Columbia	6.4	..	12.4
Yukon <sup>4</sup>	..	..	..
Northwest Territories	..	..	..
Total Canada	45.7	11.3	143.2

Source: Statistics Canada 72-002: Employment, Earnings and Hours.

<sup>1</sup> New Brunswick Department of Natural Resources reports 2,227 employees working in metal mines, 703 in nonmetal mines and 3,185 in total metals, nonmetals and coal mines. <sup>2</sup> The Ontario Mines Accident Prevention Association reports 25,125 employees in metal mines and 1,188 in nonmetal mines in Ontario. <sup>3</sup> Manitoba Department of Energy and Mines reports 4,086 employees in metal mines, smelters and refineries. <sup>4</sup> The Mining Administration Division of Indian and Northern Affairs reports 730 employees in metal mines in the Yukon.

.. Not available.

## INDUSTRIAL MINERALS AND PRODUCTS

### Asbestos

Shipments of asbestos (chrysotile) in 1986 were moderately lower for several reasons including a mine closure, foreign exchange shortages in the developing countries, uncertainties regarding future regulations, and adverse publicity associated with past exposure to asbestos dust in the workplace. Total shipments in 1986 were 640 000 t valued at \$300.6 million compared to 750 190 t valued at \$298.6 million in 1985, according to preliminary and revised figures.

Exports amounted to 561 000 t valued at \$292 million during the first 9 months of 1986, compared to 554 000 t valued at \$343 million during the same period in 1985.

Weak demand and prices are expected to remain a problem. Partial consolidation of mining and milling operations in Quebec, however, should lower production costs allowing companies to sell more competitively.

Canadian mine production during this decade is forecast to continue at today's depressed level, or to fall even lower depending on the extent of restrictive regulations abroad.

## MINERAL FUELS AND PRODUCTS

### Uranium

Uranium production in Canada in 1986 was an estimated 11 720 tonnes (t) of uranium (U), of which almost 60 per cent came from Saskatchewan. Canada continues to account for roughly 30 per cent of western world uranium supplies, producing annually more uranium than its two largest competitors, South Africa and Australia, combined. Canada's position as the world's leading producer and exporter can be maintained for many years to come.

In 1986, shipments of Canadian uranium from ore processing facilities were estimated at 10 977 tU, valued at \$Cdn 924 million; final 1985 shipments were 10 441 tU, valued at \$Cdn 1,002 million.

Canada's uranium producers played an active role in 1986 in the international uranium market, with 30 new export contracts approved. Some 122 000 tU has been approved under export contracts since 1974, of which 62 000 tU is scheduled for future delivery. Forward domestic commitments exceed 73 000 tU.

In December 1986, the government of British Columbia announced that it will allow the 7-year provincial moratorium on uranium exploration and mining to expire as planned on February 28, 1987. The moratorium reportedly dampened the search for other minerals sometimes found in association with uranium.

### NEW PUBLICATIONS

The following publications were published by Energy, Mines and Resources Canada and copies can be obtained from:

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#### Market Profiles for Industrial Minerals in Canada's Manufacturing Sectors:

The Refractories Industry - MRI 86/4  
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