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The Canadian Mineral Industry Monthly Report

July 1980



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

Minerals

Minéraux

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PREFACE

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

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PRÉFACE

Ce rapport a été rédigé par le Secteur de la Politique Minérale du Ministère de l'Énergie, des Mines et des Ressources. Bien que nous ayons eu recours à de nombreuses sources pour vous fournir les meilleurs renseignements possibles, cet exposé n'a pour objet que de passer en revue les développements actuels les plus importants de l'industrie minière canadienne, de même que les progrès accomplis ailleurs qui peuvent intéresser l'industrie canadienne. On ne doit pas considérer cet exposé comme une source de renseignements précis ou comme l'expression des vues du Gouvernement canadien.

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THE CANADIAN MINERAL INDUSTRY FOR JULY

L'INDUSTRIE MINÉRALE DU CANADA - JUILLET

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

Ceci constitue un résumé d'événements survenus dans l'industrie minérale du Canada, selon les renseignements disponibles en juillet.

HIGHLIGHTS

1. Canada's unadjusted index of Real Domestic Product was 139.9 in May 1980, a slight increase of 0.3 per cent from the previous month.
2. The May index for Mines, Quarries and Oil Wells was 119.5 down slightly from 119.6 in April.
3. Alcan Smelters and Chemicals Limited, announced that it will spend \$25 million to modify and upgrade facilities at its alumina refinery in Jonquiere, Quebec.
4. Approximately 3,000 of an estimated 110,000 workers employed by the thirteen primary aluminum companies have been laid off work in the United States.
5. Some 40,000 workers in the U.S. copper industry, members of the United Steelworkers Union, walked off their jobs at midnight June 30.

FAITS SAILLANTS

1. L'indice non désaisonnalisé du produit intérieur réel du Canada était de 139,9 en mai 1980, soit une légère augmentation de 0,3 % par rapport au mois précédent.
2. En mai, l'indice des mines, carrières et puits de pétrole était de 119,5, soit une légère diminution par rapport au niveau de 119,6 enregistré en avril.
3. La Société d'Électrolyse et de Chimie Alcan Limitée a annoncé qu'elle dépensera 25 millions de dollars dans des projets de modification et de modernisation des installations de son usine d'alumine de Jonquière (Québec).
4. Aux États-Unis, les treize sociétés d'aluminium de première fusion qui comptent quelque 110,000 employés en ont mis à pied environ 3,000.
5. Quelque 40,000 travailleurs de l'industrie américaine du cuivre, membres de la United Steelworkers Union, ont débrayé à minuit, le 30 juin.

6. The first North American electricity-generating station fired by peat could be built in northeastern New Brunswick if a recommendation of a federal-provincial study is accepted.
7. A potential new \$400 million thermal coal mine received regulatory approval from the Alberta Energy Resources Conservation Board in July.
6. La première centrale électrique nord-américaine à être alimentée à partir de tourbe pourrait être construite dans le nord-est du Nouveau-Brunswick si la recommandation qui a été faite lors d'une étude fédérale-provinciale est acceptée.
7. En juillet, l'Alberta Energy Resources Conservation Board a approuvé la mise en valeur d'une nouvelle mine de charbon à usage thermique dont les coûts sont évalués à 400 millions de dollars.

ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product in terms of 1971 = 100. The overall RDP index for May was 139.9, an increase of 0.3 per cent from the previous month. The index for Mines, Quarries and Oil Wells showed a slight decline of 0.1 per cent over the month moving from 119.6 in April to 119.5 in May. In the mining sector Placer and Gold Quartz Mines showed the sharpest decline during May of 9.1 per cent while iron mines recorded the greatest increase of 7.2 per cent.

In the manufacturing sector, primary metal industries decreased 7.1 per cent and all component parts showed declines over the month. In the nonmetallic mineral products industries, cement manufacturers and ready-mix concrete manufacturers showed substantial increases of 35.4 per cent and 47.1 per cent respectively.

Table 2 compares volume of production in 19 major Canadian minerals. Output increased significantly in May compared with April for iron ore (26.5 per cent); lead (53.0 per cent); and cement (49.1 per cent).

Tables 3 and 4 show the consumption of fuel and electricity in the mining and mineral manufacturing industries for 1977, while Tables 5 and 6 show the cost by type of mining and manufacturing for 1977 as well as selected historical values.

Table 7 records capital expenditures in the petroleum, natural gas and allied industries from 1969-1980. Total forecast expenditures for 1980 are \$6 680.8 million compared with a preliminary figure of \$4 903.0 million in 1979.

TABLE 1

Canada, Indexes of Real Domestic Product, by Industries Unadjusted (1971=100)

Industry or Industry Group	1979			1980			Percentage Changes			1st 5 Months 1980 1979
	Apr	May	Average 1st 5 Months	Apr	May	Average 1st 5 Months	Apr 1980	May 1980	May 1980	
							Apr 1979	May 1979	Apr 1980	
Real Domestic Product	138.0	139.8	134.5	139.5	139.9	135.9	1.1	0.1	0.3	1.0
Primary Industries										
Agriculture	155.2	137.6	86.6	157.4	153.2	89.0	1.4	11.3	-2.7	2.8
Forestry	109.6	95.3	111.9	99.0	76.8	106.3	-9.7	-19.4	-22.4	-5.0
Fishing and Trapping	76.3	220.1	90.3	80.7	193.6	82.4	5.8	-12.0	139.9	-8.7
Mines, Quarries and Oil Wells	112.7	112.5	111.4	119.6	119.5	118.6	6.1	6.2	-0.1	6.5
Metal Mines	78.3	83.5	79.6	100.8	98.6	96.6	28.7	18.1	-2.2	21.3
Placer and Gold Quartz Mines	64.5	56.5	58.8	57.3	52.1	54.4	-11.2	-7.8	-9.1	-7.6
Iron Mines	109.2	119.0	103.4	107.5	115.2	100.0	-1.6	-3.2	7.2	-3.2
Other Metal Mines	71.3	76.0	74.7	101.2	96.8	97.8	41.9	27.4	-4.3	30.9
Mineral Fuels	129.9	123.0	127.3	120.3	120.6	123.3	-7.4	-2.0	0.2	-3.2
Coal Mines	250.0	268.4	241.5	278.9	268.1	235.2	11.6	-0.1	-3.9	-2.6
Crude Petroleum and Natural Gas	120.1	111.1	118.0	107.3	108.5	114.1	-10.7	-2.3	1.1	-3.3
Nonmetal Mines	134.5	127.5	129.8	137.9	133.7	136.2	2.5	4.9	-3.0	4.9
Asbestos Mines	97.1	92.7	91.1	80.1	82.0	86.8	-17.5	-11.5	2.4	-4.7
Secondary Industries										
Manufacturing	135.2	137.3	134.6	134.3	131.2	132.6	-0.7	-4.4	-2.3	-1.5
Nondurable Manufacturing	134.0	134.5	132.2	135.5	133.8	133.4	1.1	-0.5	-1.3	0.9
Petroleum and Coal Products Industries	133.9	129.5	139.4	124.9	126.6	139.8	-6.7	-2.2	1.4	0.3
Durable Manufacturing	136.4	140.1	137.0	133.1	128.6	131.7	-2.4	-8.2	-3.4	-3.9
Primary Metal Industries	128.9	131.7	130.1	134.3	124.8	133.0	4.2	-5.2	-7.1	2.2
Iron and Steel Mills	143.2	150.2	147.5	153.8	137.4	151.5	7.4	-8.5	-10.7	2.7
Steel Pipe and Tube Mills	105.9	115.9	118.2	118.6	107.9	122.4	12.0	-6.9	-9.0	3.5
Iron Foundries	139.9	127.9	134.6	118.6	98.8	107.3	-15.2	-22.8	-16.7	-20.3
Smelting and Refining	101.0	99.9	97.8	112.9	111.1	111.7	11.8	11.2	-1.6	14.2
Nonmetallic Mineral Products Industries	114.8	127.3	105.2	105.6	118.0	101.1	-8.0	-7.3	11.7	-3.9
Cement Manufacturers	128.3	154.9	106.2	111.5	151.0	101.8	-13.1	-2.5	35.4	-4.1
Ready-mix Concrete Manufacturers	84.0	125.1	72.5	83.5	122.8	73.9	-0.6	-1.8	47.1	2.0
Construction Industry	108.2	120.9	105.6	102.9	111.9	101.0	-4.9	-7.4	8.7	-4.4
Transportation, Storage, Communication	155.0	156.7	150.7	158.8	161.6	156.3	2.5	3.1	1.8	3.7
Electric Power, Gas and Water Utilities	167.5	151.9	183.1	168.6	152.2	187.1	0.7	0.2	-9.7	2.2
Trade	142.9	149.1	135.0	139.5	144.3	132.9	-2.4	-3.2	3.4	-1.5
Finance, Insurance, Real Estate Community, Business and Personal Service	150.2	151.6	150.5	157.8	158.1	158.1	5.1	4.3	0.2	5.0
Public Administration and Defence	137.8	138.1	137.7	142.6	142.8	141.0	3.5	3.4	0.1	2.4
	126.2	129.5	126.7	125.8	128.7	125.9	-0.3	-0.6	2.3	-0.6

TABLE 2

Canada, Production of Leading Minerals
('000 tonnes except where noted)

	1979			1980			Percentage Changes			
	April	May	Total 5 months	April	May	Total 5 months	May 80	May 80	1st 5 months	
							May 79	April 80	1980 1979	
Metals										
Copper		38.7	45.2	226.3	63.5	58.2	303.8	+28.8	-8.3	+34.2
Gold	kg	4 180.5	4 025.4	20 524.8	4 228.3 ^r	4 166.8	20 210.3	+3.5	-1.5	-1.5
Iron ore		4 900.9	6 578.1	18 106.0	4 274.7	5 408.0	16 184.1	-17.8	+26.5	-10.6
Lead		28.8	27.8	135.9	21.7	33.2	118.8	+19.4	+53.0	-12.6
Molybdenum	t	847.1	868.4 ^r	5 121.4 ^r	1 175.4	1 247.3	5 263.8	+43.6	+6.1	+2.8
Nickel		8.4	8.1	35.9	17.1	18.7	84.4	+130.9	+9.4	+135.1
Silver	t	85.6	99.4	490.5	95.9	107.0	502.7	+7.6	+11.6	+2.5
Uranium ¹	t	507.2	497.4	2 440.8	618.7	533.5	2 652.5	+7.3	-13.8	+8.7
Zinc		90.0	132.6	484.6	83.8	76.5	378.9	-42.3	-8.7	-21.8
Nonmetals										
Asbestos		115.9	120.0	576.9	94.6 ^r	89.3	476.2	-25.6	-5.6	-17.5
Clay products	\$000	..	..	..	9 178.1 ^r	10 760.0	38 260.4	..	+17.2	..
Gypsum		568.7	708.9	2 689.1	701.8	645.9	2 901.1	-8.9	-8.0	+7.9
Potash K ₂ O		680.9	577.2	2 839.1	665.2	450.6	2 775.7	-21.9	-32.3	-2.2
Cement		699.6	1 132.4	3 190.4	719.0	1 072.1	3 148.9	-5.3	+49.1	-1.3
Lime		..	..	..	173.5 ^r	178.1	854.5	..	+2.7	..
Salt		428.6	450.8	2 771.8	555.4	493.3	2 778.2	+9.4	-11.2	+0.2
Fuels										
Coal		2 656.8	2 923.6	13 697.3	3 095.5 ^r	2 907.6	14 186.6	-0.5	-6.1	+3.6
Natural gas	million m ³	8 058.6	7 545.0 ^r	41 801.0 ^r	7 062.9 ^r	6 883.3	39 604.4	-8.8	-2.5	-5.3
Crude oil and equivalent	000 m ³	7 826.2	7 566.3 ^r	38 303.1 ^r	7 027.1 ^r	7 475.3	37 533.7	-1.2	+6.4	-2.0

¹ Tonnes uranium (1 tonne U = 1.299 9 short tons U₃O₈).^r Revised; .. Not available.

TABLE 3

Canada, Consumption of Fuel and Electricity in the Mining Industry¹, 1977

	Unit	Metals	Nonmetals	Fuels	Total
Coal and coke	000 t	126	12	-	138
	\$'000	2 831	159	-	2 990
Gasoline	000 litres	27 486	30 582	6 633	64 701
	\$'000	4 819	5 249	955	11 023
Fuel oil, kerosene, diesel oil	000 litres	1 353 525	373 565	83 738	1 810 826
	\$'000	115 024	41 044	9 621	165 691
Liquefied petroleum gas	000 litres	91 713	4 746	1 777	98 236
	\$'000	8 406	655	153	9 214
Natural gas	000 m ³	321 538	724 147	98 005	1 143 690
	\$'000	17 431	25 839	4 388	47 657
Other fuels ²	\$'000	67	-	-	67
Total value of fuels	\$'000	148 578	72 946	15 117	236 642
Electricity purchased	million kwh	11 713	2 457	2 791	16 961
	\$'000	135 014	29 510	72 035	236 559
Total value of fuels and electricity purchased, all reporting companies	\$'000	283 592	102 456	87 152	473 201

¹ Cement and lime manufacturing and manufacturers of clay products (domestic clays) are included in mineral manufacturing.

² Includes wood, manufactured gas, steam purchased and other miscellaneous fuels.

- Nil.

Note: Totals may not add due to rounding.

TABLE 4

Canada, Consumption of Fuel and Electricity in the Mineral Manufacturing Industries, 1977

	Unit	Primary Metal Industries	Nonmetallic Mineral Products Industries	Petroleum and Coal Products Industries	Total
Coal and coke	000 t	325	485	-	810
	\$'000	26 640	16 423	-	43 063
Gasoline	000 litres	16 989	54 639	3 446	75 074
	\$'000	2 710	8 985	584	12 279
Fuel oil, kerosene, diesel oil	000 litres	1 460 554	837 685	30 022	2 328 261
	\$'000	103 023	66 038	2 621	171 682
Liquefied petroleum gas	000 litres	35 123	21 244	141	56 508
	\$'000	3 530	2 291	15	5 836
Natural gas	000 m ³	2 296 581	1 631 843	809 720	4 738 144
	\$'000	135 021	86 630	36 016	257 667
Other fuels	\$'000	8 248	1 585	2 948	12 781
Total value of fuels	\$'000	279 172	181 952	42 184	503 308
Electricity purchased	million kwh	15 352	4 190	3 205	22 747
	\$'000	183 574	65 553	46 050	295 177
Total value of fuels and electricity purchased, all reporting companies	\$'000	462 746	247 505	88 234	798 485

- Nil.

TABLE 5

Canada, Cost of Fuel and Electricity Used in the Mining Industry, 1970, 1975-77

	Unit	1970	1975	1976	1977
Metals					
Fuel	\$'000	33 370	107 808	128 637	148 578
Electricity purchased	million kwh	7 995	10 259	11 326	11 713
	\$'000	52 257	85 063	107 318	135 014
Total cost of fuel and electricity	\$'000	85 627	192 871	235 955	283 592
Nonmetals					
Fuel	\$'000	20 029	46 561	62 453	72 946
Electricity purchased	million kwh	1 468	1 763	1 959	2 457
	\$'000	13 980	20 049	23 401	29 510
Total cost of fuel and electricity	\$'000	34 009	66 610	85 854	102 456
Fuels					
Fuels	\$'000	2 072	11 352	12 115	15 117
Electricity purchased	million kwh	1 540	2 539	2 770	2 791
	\$'000	23 320	48 663	68 075	72 035
Total cost of fuel and electricity	\$'000	25 392	60 015	80 090	87 152
Total mining industry					
Fuel	\$'000	55 470	165 721	203 105	236 642
Electricity purchased	million kwh	11 003	14 560	16 055	16 961
	\$'000	90 558	153 775	198 794	236 559
Total cost of fuel and electricity	\$'000	146 028	319 496	401 899	473 201

TABLE 6

Canada, Cost of Fuel and Electricity Used in the
Mineral Manufacturing Industries, 1970, 1975-77

	Unit	1970	1975	1976	1977
Primary metals					
Fuel	\$'000	83 034	187 846	224 928	279 172
Electricity purchased	million kwh	14 539	16 544	16 497	15 352
	\$'000	87 656	129 750	151 011	183 574
Total cost of fuel and electricity	\$'000	170 690	317 596	375 939	462 746
Nonmetallic mineral products					
Fuel	\$'000	49 451	133 016	162 312	181 952
Electricity purchased	million kwh	3 270	3 723	4 137	4 190
	\$'000	24 507	41 258	52 113	65 553
Total cost of fuel and electricity	\$'000	73 958	174 274	214 425	247 505
Petroleum and coal products					
Fuel	\$'000	4 749	21 758	30 474	42 184
Electricity purchased	million kwh	2 171	2 904	3 010	3 205
	\$'000	14 430	28 028	34 988	46 050
Total cost of fuel and electricity	\$'000	19 179	49 786	65 462	88 234
Total mineral manufacturing industries					
Fuel	\$'000	137 234	342 620	417 714	503 308
Electricity purchased	million kwh	19 980	23 171	23 644	22 747
	\$'000	126 593	199 036	238 112	295 177
Total cost of fuel and electricity	\$'000	263 827	541 656	655 826	798 485

TABLE 7

Canada, Capital Expenditures in the Petroleum, Natural Gas and Allied Industries,¹ 1969-1980

	Petroleum and natural gas extraction ²	Transportation including rail, water and pipelines	Marketing (chiefly outlets of oil companies)	Natural gas distribution	Petroleum and coal products industries	Natural gas processing plants	Total capital expenditures
	(\$ million)						
1969	438.1	220.6	103.6	117.0	129.8	103.8	1 112.9
1970	449.3	246.5	100.0	100.4	231.1	189.5	1 316.8
1971	489.6	352.0	99.2	115.2	231.4	251.1	1 538.5
1972	690.2	440.9	111.8	141.7	243.8	130.3	1 758.7
1973	864.8	390.9	128.0	146.3	318.8	70.3	1 919.1
1974	1 087.8	262.4	144.7	191.7	429.5	138.4	2 254.5
1975	1 427.2	361.9	152.8	192.7	450.4	147.5	2 732.5
1976	1 998.8	337.3	164.9	182.3	344.2	163.3	3 190.8
1977	2 290.0	374.9	135.5	213.0	366.6	155.5	3 535.5
1978	2 684.1	312.4	145.6	246.6	315.1	218.8	3 922.6
1979 ^p	3 742.5	264.3	137.7	250.0	277.6	230.9	4 903.0
1980 ^f	5 060.3	459.3	171.4	286.6	356.9	346.3	6 680.8

¹ The petroleum and natural gas industries in this table include all companies engaged in whole or in part in oil and gas activities. ² Includes capital expenditures by oil and gas drilling contractors. Does not include expenditures for geological and geophysical operations.

^p Preliminary; ^f Forecast.

**TAXATION AND LEGISLATION AFFECTING THE
MINERAL AND ALLIED INDUSTRIES IN CANADA**

Provincial

Alberta

The **Interest Rate Regulation**, AR355/78 under the **Mines and Minerals Act**, is amended by AR173/80 to reduce the rate of interest to 14.75 per cent for the month of June, 1980, and subsequent months.

British Columbia

The **Mineral Resource Tax Act** is amended by Bill 41. Section 6 is completely rewritten in order to substitute a formula for the 8 per cent processing allowance; and Section 16 is completely rewritten to revise due dates for instalments, etc.

Manitoba

The **Mines Act** is amended by Bill 109 to change the name of The Mining Board to the Mineral and Surface Rights Board, and to make other consequential changes.

Quebec

Under the **Mining Duties Act**, by OC1772-80 the rate of interest on deficiencies of payment is set out at 15 per cent.

REGIONAL PROFILES

Manitoba

Despite the general economic decline, mineral-related activities have retained much of the buoyancy that had returned to the industry in 1979. Extensive exploration plans were put into effect, and several new mines were on the horizon.

Production of Principal Minerals, 1979 (Preliminary)

Commodity	Value (\$'000)	Change From 1978 (per cent)	Proportion compared with all Canada
Nickel	221,918	38.1	26.9
Copper	139,288	40.6	9.2
Crude Petroleum	48,005	4.5	0.6
Zinc	44,604	2.0	4.0
Cement	38,712	12.1	5.3
Sand and Gravel	30,000	7.2	6.7
Cobalt	14,814	69.8	18.0
Gold	14,357	37.5	2.6
Silver	10,221	79.3	2.3
Stone	9,920	15.0	2.9
Metals	446,840	35.4	5.6
Structural Materials	83,337	9.0	4.8
Fuels	48,005	4.5	0.3
Non-metals	7,256	0.1	0.4
Total	585,438	27.4	2.2

Exploration

Early in 1980, Energy and Mines Minister Donald Craik stated that he expected industry to spend about \$17.5 million on mineral exploration during the year, a more than 20 per cent increase over 1979. Base metals, particularly in the principal mining areas, will continue to be stressed, followed by uranium in the northwestern part of the province and a renewed interest in gold. Staking activity in 1979, sharply higher than in 1978, also reflects the resumption of interest in Manitoba mineral resources.

Economic Indicators

		Amount	Change Over Previous Year	Proportion compared with all Canada
				(per cent)
Population ¹				
January 1, 1980	'000	1,026.2	-0.5	4.3
Labour Force (unadj.) ¹				
March, 1980	'000	475	0.6	4.2
Employment (unadj.) ¹				
March, 1980	'000	443	0.2	4.3
Unemployment (unadj.) ¹				
March, 1980	'000	31	3.3	3.2
Employed in Mining ²				
January 1980	'000	5.3	6.0	4.3
Average Weekly Wages ²				
Mining and Milling				
January 1980	\$	408.76	8.1	90.3
GPP				
(1978 Preliminary)	\$000,000	9,300	9.4	4.0

¹ Canadian Statistical Review, April 1980, No. 11-003E.

² Employment, Earnings and Hours, February 1980, 72-002.

Totals may not add due to rounding.

In April, the provincial government signed a letter of intent permitting International Minerals & Chemical Corporation (Canada) Limited to carry out a one-year \$2 million exploration and feasibility program on the potash deposits just east of the Saskatchewan border. A decision to mine would entail an investment of as much as \$500 million and create 500 jobs. The provincial government would retain a 25 per cent partnership right in any development.

In June, the government approved a potash exploration permit for Amax Minerals Exploration, a division of Amax of Canada Limited, for the area west of Russell and immediately north of the area that International Minerals will explore. In contrast to this latter area, which had previously been explored, the Amax area is comparatively unknown.

Earlier in the year, Esso Minerals Canada agreed to carry out exploration on the uranium-molybdenite property of a Manitoba company, Mid-North Uranium Limited in the northwest corner of the province. By spending \$5 million over five years, it will earn a 60 per cent interest in the property. By July, Esso had completed the first stage of the agreement, which called for a payment of \$20,000 and a work commitment of \$200,000, and was beginning the second stage. The results of the first stage had not been announced. Energy and Mines minister Craik has indicated Manitoba's intention to continue to encourage development of its uranium resources. So far, results have been only mildly encouraging.

Development

In April, Hudson Bay Mining and Smelting Co., Limited announced that it will spend \$28 million in a joint venture with Granges Exploration AB and Manitoba Mineral Resources Ltd. to develop a copper-zinc orebody about five miles northeast of Flin Flon. Proven reserves are reported to be 2.7 million tonnes grading 3 per cent copper and 4.5 per cent zinc, plus some gold and silver. Under the terms of a memorandum of intent, Hudson Bay would earn an interest of 44 per cent in the venture. It would operate the mine and treat the ore in its concentrator at Flin Flon.

Mid-North Uranium has signed option agreements that will lead to a 50 per cent interest in more than 5,000 acres in the Bissett-Long Lake gold area in the eastern part of the province. Included in the area are a number of former gold mines. A feasibility study is being carried out on the former Ogama-Rockland Mine.

Inco Limited announced that one of two major projects to reduce sulphur dioxide emissions, a \$9-million commercial-scale test of a new process for smelting nickel concentrates, will be carried out at the Thompson smelter.

Newfoundland

Exploration Activity

Estimates of expenditures on mineral exploration in Newfoundland in 1979 indicate an increase of about 20 per cent from the previous year, to about \$11 million. About 60 companies were active in the province. The number of claims staked declined, however, to 6,255 from the previous year's record level of 8,876.

Camflo Mines Limited started exploratory drilling for potash near Fishell Bay on the west coast of the Island where low grade deposits were discovered in 1968. Pronto Explorations Limited is to explore in the same area.

Economic Indicators

			Change Over Previous Year	Proportion compared with all Canada (per cent)
Population, January 1, 1980	'000	577.4	0.8	2.4
Labour Force March, 1980	'000	198	2.6	1.8
Employment March, 1980	'000	167	8.4	1.6
Unemployment March, 1980	'000	31	-20.5	3.2
Employed in Mining ¹ January 1980	'000	5.4	-3.6	3.9
Average Weekly Wages ² Mining and Milling January 1980	\$	430.60	4.5	95.4
GPP (1978 Preliminary)	\$000,000	2,988	5.0	1.3

¹ Mines, Quarries and Oil Wells, including milling, SIC 050-099. Data for firms of 20 or more employees only.

² Earnings of All Employees, in firms of 20 or more employees.

Westfield Minerals Limited, which has been exploring in the Deer Lake area in a search for the source of very high grade uranium-bearing boulders is entering a joint venture with Shell Canada Resources Limited. The exploration effort will be increased as Shell has committed to spend \$1.1 million this year.

Mining Developments

The Board of Assessment set up by the Newfoundland government to investigate the environmental impact of mining the Kitts-Michelin uranium deposits in Labrador published its findings in April. The Board concluded that "... Brinex Limited should not be permitted to mine and mill uranium ore until it satisfies the government that it can and will safely and permanently dispose of the waste materials." This, the Board concluded, the company had not done; the Board also noted that the company admitted that the technology to do so was not available. As a result the Government of Newfoundland announced May 29, 1980 that the proposal was deferred.

Production of Principal Minerals, 1979 (Preliminary)

Commodity	Value (\$'000)	Change From 1978 (per cent)	Proportion compared with all Canada
Iron ore	949,449	68.3	50.3
Zinc	49,075	34.2	4.4
Asbestos	41,019	123.2	6.4
Copper	18,415	-2.9	1.2
Cement	8,180	43.9	1.1
Sand and Gravel	7,950	6.7	1.9
Lead	7,692	6.6	1.9
Gypsum	5,085	2.9	11.9
Silver	4,318	32.9	1.0
Metals	1,033,565	62.9	12.9
Non-metals	47,645	92.7	2.6
Fuels	-	-	-
Structural Materials	18,942	19.2	1.1
Total	1,100,152	63.0	6.8

Provincial Government Activity

An agreement between the Government of Newfoundland and British Newfoundland Exploration Limited (now Brinex Limited), signed in 1957, giving the company exclusive exploration rights in Labrador, expired March 13, 1980. More than 8 000 square kilometers of ground were covered by the agreement. Some land was retained by the company after March 13, under development licences, but most of the ground became available for staking.

Activity under the \$12 million Canada-Newfoundland Minerals Sub-Agreement 1976-1981 has been restricted by very poor weather in Labrador and Insular Newfoundland. The geological mapping program, in particular, has been affected.

METALLIC MINERALS AND PRODUCTS

Aluminum

Alcan Smelters and Chemicals Limited, announced that it will spend \$25 million to modify and upgrade the bauxite processing installations at its Vaudreuil alumina refinery in Jonquiere, Quebec. Completion is expected by the spring of 1982.

Alcan Aluminium Limited reported that Alcan Canada Products Limited will build a new aluminum rod mill in Richmond, British Columbia, adjacent to the company's Vancouver Works. The new mill will replace and double the existing production capacity of 15 000 tonnes annually.

According to the press, the federal justice department will file a civil suit against the Aluminum Company of Canada, Limited to force the company to increase the water flow rate through the Kemano 1 dam into the Nechako river immediately. This suit was initiated at the order of the Ministry of Fisheries because of the concern that the water in the river will be insufficient and too warm for the salmon to spawn this season.

Alcoa of Australia Ltd., was forced to shut down operations of its Pinjarra alumina refinery early in July because of a strike of about 200 members of five Metalwork Unions for a 35 hour work week. This dispute was still not settled by the end of July. Pinjarra produces 6 600 tonnes of alumina a week.

In the United States, approximately 3,000 of an estimated 110,000 workers employed by the thirteen primary aluminum companies have been laid off work. Most of the layoffs are in the fabrication and semifabrication areas which supply the auto and home construction industries, both of which are in a depressed state. The smelters are operating at 93 per cent of capacity and the consensus of the aluminum producers is that second half shipments will be below those of the first half of 1980 and of the comparable period in 1979.

Copper

Copper prices on the London Metal Exchange (LME) ranged from 94.9 cents (U.S.) to 103.4 cents (U.S.) a pound during July. The low price was recorded on July 2 and the high on July 24. The price

subsequently dropped, being 96.0 cents (U.S.) a pound on July 31. The Canadian producer price for wirebars, \$1.09 a pound at the beginning of July, rose to \$1.26 a pound on July 23, but was cut to \$1.20 a pound on July 30.

At month end, copper stocks in COMEX and LME warehouses stood at 164 861 tonnes and 110 225 tonnes respectively, compared with 151 774 tonnes and 110 000 tonnes at the end of June.

Some 40,000 workers in the U.S. copper industry, members of the United Steelworkers Union, walked off their jobs at midnight on June 30, when the union and the companies were unable to agree on a new 3-year contract, halting production at the operations of the major U.S. copper producers. The eight producers involved are Kennecott Copper Corporation, Phelps Dodge Corporation, Magma Copper Company, Cities Service Company, The Anaconda Company, ASARCO Incorporated, Inspiration Consolidated Copper Company and AMAX Inc. In addition, workers struck the Copper Range Company at midnight July 31. In total, some 85 per cent of U.S. copper production capacity has been idled by the strikes. The producers had shipped July and August copper orders to their customers prior to the strike, and most producers still hold substantial copper inventories.

ASARCO Incorporated has asked the union to resume negotiations beginning August 20; otherwise there have been no moves by either side to reopen negotiations. On July 31, ASARCO set a 100 per cent force majeure on its shipments of refined copper, to become effective September 1.

Workers are reported to be seeking pay raises of between 37 and 43 per cent over the life of the three year contract, similar to increases recently negotiated by U.S. aluminum and steel workers. With copper stocks increasing in recent months, and the U.S. economy in a recession, rapid settlement of the strike does not seem likely.

Valley Copper Mines Limited and Bethlehem Copper Corporation have commenced joint studies to produce the initial design and capital and operating cost estimates for a mine in their jointly owned Lake Zone orebody in the Highland Valley area of British Columbia. Current plans are for an open pit mine to produce about 102 000 tonnes of ore per day, of which about 77 000 tonnes would be treated in a concentrator to be built by Valley Copper and about 25 000 tonnes would be handled at an expanded Bethlehem Copper concentrator. An analysis completed in October 1979 based on a production rate of 50 000 to 54 500 tonnes per day had indicated that better returns on the project could be expected at a higher production rate. Other studies by Valley Copper have indicated that the deposit is competitive with existing western world copper producers. The project could begin to produce about two and a half years after a production decision is made. The proposed mine would be the largest single copper mine in Canada.

Gold

The monthly average for July, 1980 of the afternoon fixing gold prices on the London Gold Market was \$644.71 (U.S.) (\$742.64 Cdn.) per ounce of gold, compared with an average price of \$600.72 (U.S.) (\$691.73 Cdn.) for June, 1980.

Gold prices opened the month on a rising note, reaching a high of \$688.75 (U.S.) per ounce at the morning fixing of July 8. Prices moved downward on speculative selling, breaking through \$650 (U.S.) per ounce on July 14 and reaching the month's low of \$606 (U.S.) per ounce on the afternoon of July 18. Some price recovery marked the second half of July, with prices moving erratically in a range between \$610 (U.S.) and \$650 (U.S.) per ounce.

Sales of the South African krugerrand fell in June to 228,354 from 231,484 in May and 415,298 in June 1979. Although the volume of krugerrand sales has declined about 50 per cent relative to the same period in 1979, the actual value of sales is 5.3 per cent higher because of the considerable increase in the price of gold. With gold selling above \$500 (U.S.) per pound for most of the year, the price of the one-ounce krugerrand has moved beyond the reach of many small investors. Sales of the Canadian one-ounce Maple Leaf are sluggish for the same reason.

Early in July the U.S. government began marketing the first two gold medallions of its series featuring notable American personalities in the arts. The half-ounce medallion commemorates singer Marian Anderson and the one-ounce medallion commemorates painter Grant Wood.

Credit Suisse estimates that industrial demand for gold this year will fall to 755 tonnes from 992 tonnes in 1979, with jewellery demand expected to fall to 550 tonnes from 737 tonnes. Gold bought for investment and hoarding purposes will total about 140 tonnes, comparable to 1978 levels, but sharply down from 450 tonnes last year.

The Canadian government has sold 867,000 ounces of gold from its official gold reserves thus far this year. The latest sale was of 152,600 ounces at an average price of \$594.74 (U.S.) per ounce.

Production at Giant Yellowknife Mines Limited has been halted by a strike that began July 10.

Mercury

The General Services Administration (GSA) continues to offer 1,000 flasks of mercury at monthly sales. In July the GSA sold 1,000 flasks of mercury (76 pounds each; 34.473 kilograms) to Mine-met Metals, Inc. of New York at a price of \$393 (U.S.) per flask. The next GSA sale will be held on August 12, when 1,000 flasks of mercury stored in Oak Ridge, Tennessee will be offered for sale under a competitive, sealed-bid basis.

Silver

The silver market in July was comparatively quiet although the price did fluctuate considerably. The price movement was largely speculative reacting to political and economic situations and to price movements in the gold market. The opening price for the month as quoted by Handy & Harman of New York was \$16.70 (U.S.) per ounce, reaching a high of \$16.95 (U.S.) on July 7. The low for the month of \$15.15 (U.S.) was recorded on July 18. The price improved reaching a price of \$16.41 (U.S.) on July 20. At month end the price dropped sharply on a more optimistic outlook on the United States economy and strengthening of the U.S. dollar.

The monthly average silver price for July, 1980 as quoted by Handy & Harman of New York, was \$16.06 (U.S.) per ounce of silver compared with \$15.75 (U.S.) per ounce in June. The average silver price in Canadian dollars (Handy & Harman) for the month of July was \$593.98 per kilogram (\$18.48 per ounce) compared with \$581.80 per kilogram (\$18.05 per ounce) for June.

Canadaka Mines Limited has rescinded its decision to cease operations at its Cobalt silver property in the Cobalt district on July 4, 1980. The encountering of some high grade ore was partly responsible for this decision. Also the company received a favourable judgement from the Supreme Court of Canada concerning ownership of approximately a quarter million tons of old tailings from the Chambers-Ferland property. This material was milled in the early 1930 period, before the introduction of flotation, should contain appreciable amounts of silver, and should supply mill feed for well over a year. The company will continue to carry out an active exploration program.

Tin

The U.S. General Services Administration, which has received authorization to release 35 000 tonnes of the buffer stock (including up to 5 000 tonnes which may be transferred to the International Tin Council from its stockpile), began fortnightly auctions of 500 tonnes of tin at the beginning of July. All bids for the first two auctions were rejected as being too low but in the third, on July 29, a bid of \$7.66 (U.S.) per pound was accepted from a New Jersey firm for five tonnes of metal. Eleven other bids, ranging down to \$6.94 per pound, were rejected. Tin market prices which had continued to weaken through mid-July, showed some firming as a result of bid rejections and political developments in Bolivia.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

At Carey Canada Inc.'s mine near Thetford Mines, Quebec, there was a layoff of about 100 employees during June and July. The work week was reduced to five days from six and production was shut down for one week in June because customers have high inventories.

The U.S. Supreme Court, upholding an October 1978 judgement of the U.S. Court of Appeals in New Orleans, struck a blow to OSHA's cancer policy based on the idea that there is no safe level of exposure to a cancer-causing agent and that exposure must be reduced to as low a level as technically and economically possible. The decision (Industrial Union Dept. AFL-CIO vs. American Petroleum Institute) invalidated a workplace standard promulgated by the Secretary of Labour (OSHA) with respect to exposure to benzene, thereby establishing a precedent limiting OSHA ability to promulgate standards without first making a threshold finding of significant risk. The court noted that the purpose of such standards is to eliminate significant harm, not to provide absolute safety. It is uncertain if this ruling will influence OSHA's approach to lowering the present asbestos standard of 2 fibres/cc.

In the U.S. all firms using asbestos in the manufacture of about thirty categories of products must describe in detail how they use the mineral to the Consumer Product Safety Commission, for all manufactures since January 1, 1977.

Woodsreef Minerals Ltd. of Toronto plans to raise \$7.5 million through a major restructuring of the company that will enable its Australian-based asbestos producing subsidiary to strengthen its financial base. Restructuring will be in the form of one for ten common share consolidation, \$2.3 million of the \$7.5 million raised through a share offer would be used to reduce debt and about \$4 million would provide working capital for subsidiary Woodsreef Mines Limited of Australia. Under terms of the restructuring, the \$40 million owed by Woodsreef Mines would be settled upon payment of about \$7.5 million, plus fibre stocks on hand, the receivership under which its Barraba mine has operated since 1973 would be withdrawn, and Woodsreef Minerals would increase its interest in Woodsreef Mines to 73 from 58 per cent.

Peat

The first North American electricity-generating station fired by peat could be built in northeastern New Brunswick if a recommendation of a federal-provincial study is accepted. The study proposes that an experimental peat-fired steam-electric generating station be built at Shippegan, about 150 kilometres north of Moncton. In that area alone, there are enough peat bogs to support a 40-megawatt power station for 30 years, the study found.

MINERAL FUELS AND PRODUCTS

Coal

A potential new \$400 million thermal coal mine received regulatory approval from the Alberta Energy Resources Conservation Board in July. The Obed-Marsh project is 90 per cent owned by Union Oil Company of Canada Limited, Calgary and 10 per cent by Rescon Coal Holdings Ltd. of Edmonton. Dependent upon development of firm coal contracts, initial mine construction could begin in 1981 and production in 1983. Raw coal output could exceed 4 million tonnes annually. The mine is located near Hinton in west-central Alberta and has access to existing rail lines and social infrastructure. Marketing options in both Pacific Rim and European countries are under investigation.

Uranium

Uranium Canada, Limited (UCAN), administrator of the Government of Canada's general uranium stockpile, stated in its annual report that at the end of 1979, 4 500 tonnes of uranium (U) in concentrates were in storage at the Port Hope, Ontario, facility of Eldorado Nuclear Limited, and 1 070 tonnes U were on loan to Eldor Resources Limited and Ontario Hydro.

Electrolytic Zinc Company of Australasia Ltd. and Peko-Wallsend Operations Ltd., joint partners in the Ranger uranium project, Northern Territory, Australia, have signed contracts to supply 1 731 tonnes U to Indiana and Michigan Electric Power Company, a wholly-owned subsidiary of American Electric Power Company. Delivery over a nine-year period will commence in 1982 at a rate of 192 tonnes U per year.

Compagnie générale des matières nucléaires (COGEMA), a subsidiary of France's Commissariat à l'Energie Atomique, has reported the discovery of uranium deposits near Coutras, in northeastern Bordeaux. Estimated to contain 20 000 tonnes U, these deposits represent about 20 per cent of France's known uranium resources.

SPECIAL ITEM

**Production and Profitability of
Major Japanese Nonferrous Metal Producers**

According to a report in Japan Metal Journal, June 9, 1980, the seven major nonferrous metal producers in Japan enjoyed a highly profitable fiscal year 1979 (ending March 31, 1980), with some companies reporting record earnings. In fiscal 1978, four of the firms lost money on a pre-tax basis, while two lost money after taxes. Sales and earnings were as follows.

Company	Fiscal Year 1979 Sales			After Tax Profits (Loss)	
	Copper	Lead	Zinc	Fiscal 1978	Fiscal 1979
	(tonnes of metal)			(millions of yen)	
Nippon Mining	241 751	10 879	121 023	916	5,986
Mitsubishi Metal	275 093	49 334	114 425	(1,088)	2,045
Mitsui Mining and Smelting	153 608	38 628	205 515	(3,103)	3,109
Sumitomo Metal Mining	153 757	23 525	74 837	260	3,547
Dowa Mining	105 950	22 675	83 069	352	4,109
Furukawa Mining	86 801	-	-	638	687
Toho Zinc	-	59 013	132 752	42	1,660

Higher earnings were attributed to good demand and higher international prices for the major and byproduct (especially precious) metals, augmented by the weakened yen.

However, most smelters/refineries were hit with sharp increases in electric power prices in April, 1980, and this combined with anticipated price declines, high interest rates and the rising yen, is expected to significantly depress profits in fiscal year 1980.

NEW PUBLICATIONS

The following publications were prepared in the Mineral Policy Sector, Department of Energy, Mines and Resources and released for distribution in July:

NOUVELLES PUBLICATIONS

Les publications suivantes ont été préparées par le Secteur de la politique minérale du ministère de l'Énergie, des Mines et des Ressources et diffusées pour distribution au cours du mois de juillet.

Revue annuelle de l'industrie minérale du Canada, 1978:
le manganèse; le nickel; prix \$1 l'exemplaire.

The above publications are available from the Canadian Government Publishing Centre, Supply and Services Canada, Ottawa.

Les publications ci-dessus sont disponibles en s'adressant au: Centre d'édition du gouvernement du Canada, Approvisionnement et Services Canada, Ottawa.

