# The Canadian Mineral Industry Monthly Report

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GEOLOGICAL SURVEY

# October 1980

Energy, Mines and Resources Canada

Minerals

ot, 1980

Énergie, Mines et Ressources Canada

Minéraux

#### 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 expression of official an Government of Canada views.

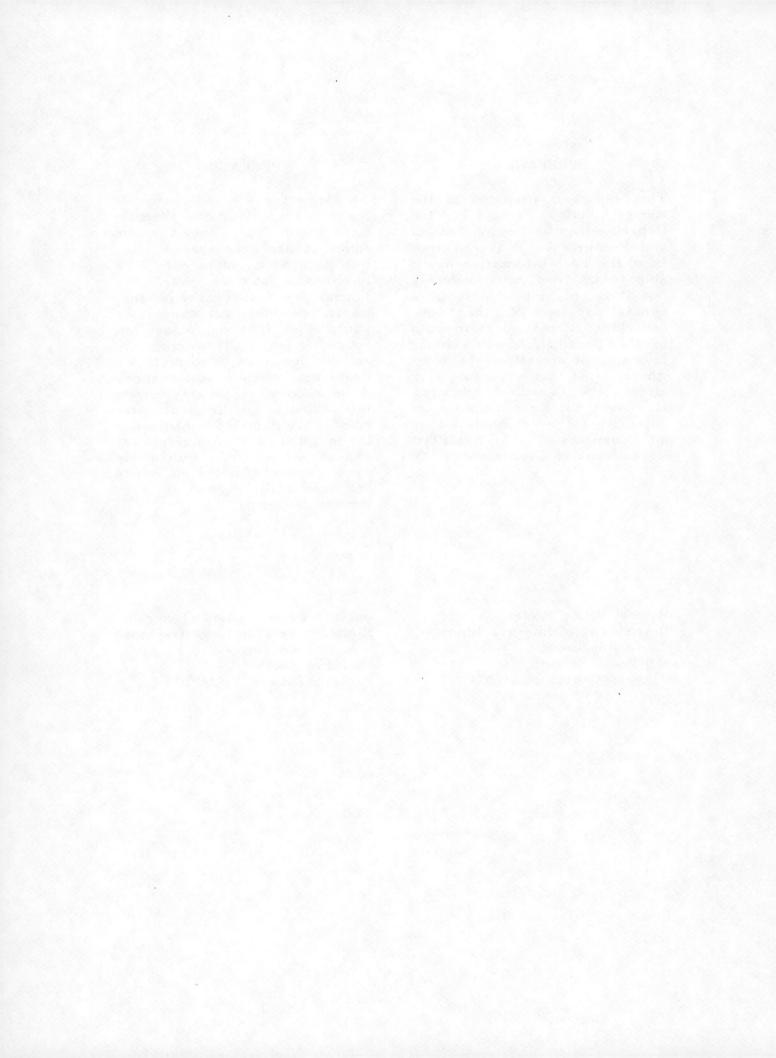
# PRÉFACE

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 avons eu recours à de nombreuses sources pour vous fournir les meilleurs renseignements possibles, cet exposé n'a pour objet que de passer en les développements revue 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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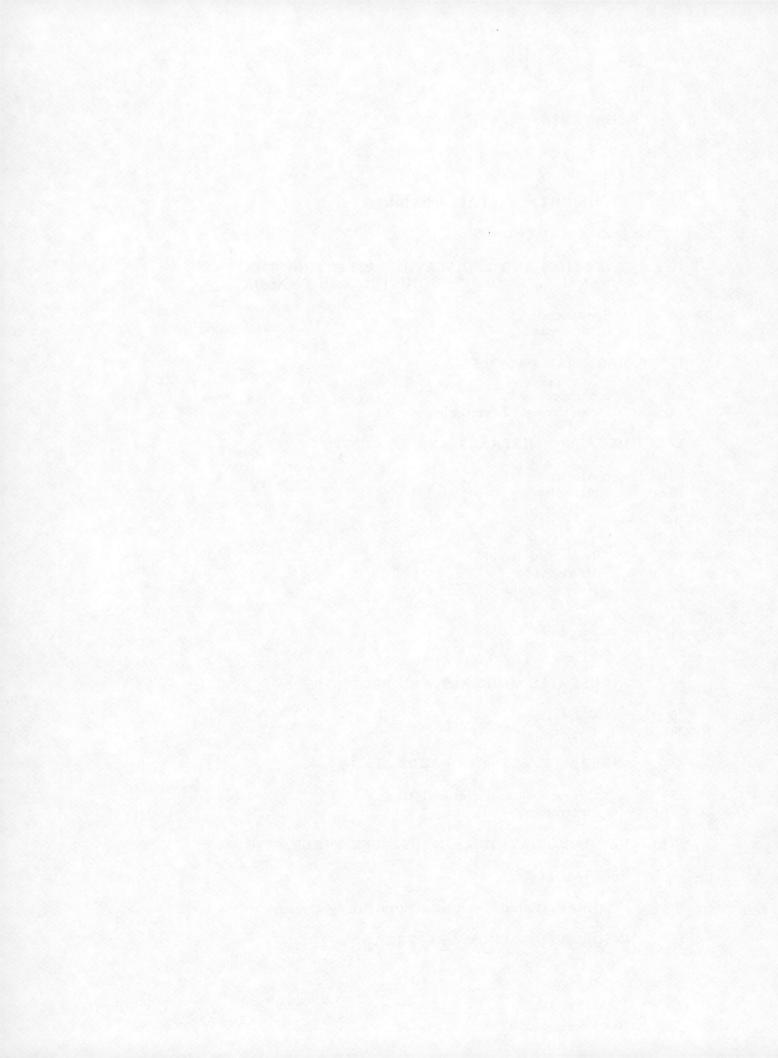
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#### THE CANADIAN MINERAL INDUSTRY FOR OCTOBER

# L'INDUSTRIE MINÉRALE DU CANADA - OCTOBRE

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

# HIGHLIGHTS

- Canada's unadjusted index of Real Domestic Product was 135.3 in August, up 2 per cent from the previous month.
- 2. The index for Mines, Quarries and Oil Wells increased slightly from 112.6 in July to 113.7 in August.
- 3. In Bolivia, an Antimony Producers Committee has announced that it will work towards the formation of an International Antimony Council to influence world output and marketing of that commodity.
- 4. Cominco Ltd. has agreed to purchase shares of Bethlehem Copper Corporation, raising their interest in that company from 39.25 per cent to a controlling 65 per cent.
- 5. The U.S. copper strike had not been completely settled by the end of October, with ASARCO Incorporated, Anaconda Copper Corporation and Cities Service Company still out.

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

# FAITS SAILLANTS

- L'indice non désaisonnalisé du produit intérieur réel du Canada était de 135,3 en août, soit une augmentation de 2 % par rapport au mois précédent.
- En août, l'indice des mines, carrières et puits de pétrole s'est accru légèrement à 113,7 comparativement 112,6 qu'il était en juillet.
- 3. En Bolivie, un Comité de producteurs d'antimoine a annoncé qu'il travaillera à la formation d'un Conseil international de l'antimoine qui aura pour but d'influencer la production et la commercialisation de ce métal.
- 4. La Cominco Ltée a convenu d'acheter des actions de la Bethlehem Copper Corporation afin d'accroître sa participation dans cette société de 39,25 % à 65 % ce qui lui en donnera le contrôle.
- 5. La grève dans le secteur du cuivre aux États-Unis n'était pas complètement terminée à la fin d'octobre. Le travail n'avait pas encore repris à l'ASARCO Incorporated, à l'Anaconda Copper Corporation et à la Cities Service Company.

- 6. Pamour Porcupine Mines, Limited has announced that it will reopen the underground workings of the former Holinger Mines Limited near Timmins at a cost of \$15 million.
- 7. Third-quarter nickel sales, reflecting the widening recession, were down significantly from 1979 levels.
- The Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario released its timetable for written submissions, public meetings and public hearings.
- 9. An agreement has recently been reached between Dome Petroleum Limited of Calgary and a consortium of five Japanese companies concerning the sale of liquified natural gas (LNG) to Japan from Western Canada.

- 6. Les Mines Pamour Porcupine, Limitée a annoncé qu'elle reprenait l'extraction souterraine aux anciennes installations de la Holinger Mines Limited, près de Timmins, au coût de 15 millions de dollars.
- 7. Les ventes de nickel au cours du troisième trimestre ont baissé de façon significative comparativement aux niveaux de 1979, ce qui est une conséquence de la récession grandissante.
- 8. La Royal Commission on Matters of Health and Safety Arising from the use of Asbestos in Ontario (Commission royale d'enquête en matière de santé et de sécurité touchant l'utilisation de l'amiante en Ontario) a publié son calendrier en ce qui regarde les présentations écrites et les séances et audiences publiques.
- 9. Une entente est intervenue récemment entre la Dome Petroleum Limited de Calgary et un groupe de cinq sociétés japonaises concernant la vente de gaz natural liquéfié canadien au Japon.

#### ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product in terms of 1971=100. The overall index for August was 135.3, up 2 per cent from 132.7 in July. Mines, Quarries and Oil Wells recorded a modest increase of 1 per cent over the month influenced partly by placer and gold quartz mines and iron mines which showed significant decreases of 11.8 and 13.2 per cent respectively. Asbestos mines recorded the greatest increase over the month moving from 81.2 in July to 96.9 in August.

The mineral manufacturing industries showed a much stronger performance during August than did the mining industries. Primary metal industries increased 11.5 per cent with iron and steel mills, steel pipe and tube mills, iron foundries and smelting and refining up 12.3 per cent, 31.4 per cent, 18.9 per cent and 5.3 per cent respectively.

Table 2 compares volume of production for nineteen major minerals. Significant changes were recorded in August compared with July for gold (down 15.8 per cent), lead (down 42.9 per cent), molybdenum (up 48.5 per cent), zinc (down 34.7 per cent) and asbestos (up 62.2 per cent).

Tables 3 and 4 show Capital and Repair Expenditures from 1978-80 for mines, quarries and oil wells, by region and type of mining. 1979 preliminary figures indicate a total spending of \$6,792.0 million by the mining industry, up from \$5,241.8 million in 1978. The prairie region accounted for the largest portion of that amount at \$4,024.3 million. Expenditures on petroleum and natural gas totalled \$4,524.6 million in 1979 and intentions for 1980 amount to \$6,386.3 million.

Table 5 compares the number of strikes and lockouts in the mining and mineral manufacturing industries for 1978 and 1979. Table 6 records this information for all major sectors of the Canadian economy showing a total of 1,050 strikes or lockouts in 1979 compared with 1,058 the previous year involving some 462,504 workers.

		1979			1980				-	Changes	
		A	verage 1st 8		A	verage 1st 8	July 1980	Aug	1980	Aug 1980	lst 8 Months
Industry or Industry Group	July	Aug	Months	July	Aug	Months	July 1979	Aug	1979	July 1980	1979
Real Domestic Product			135.3				-0.5		0.4	2.0	0.3
Primary Industries											
Agriculture	41.9	41.4	56.2	65.4	66.1	. 74.4	56.1	5	9.7	1.1	12.4
Forestry	112.0	137.6	117.2	102.6	107.8	103.7	-8.4	-2	1.7	5.1	-11.6
Fishing and Trapping Mines, Quarries and Oil Wells	253.1	256.9	147.3	267.3	185.2	129.4	5.6	-2	7.9	-30.7	-12.1
Mines, Ouarries and Oil Wells	116.5	118.7	113.6	112.6	113.7	118.0	-3.3		4.2	1.0	3.9
Metal Mines	91.1	104.0	85.6	85.3	85.1	94.7	-12.2	-1	8.6	-0.2	10.6
Placer and Gold Quartz Mines	52.0	58.5		55.7	49.1	. 54.0	7.1	-1	6.2	-11.8	-5.9
Iron Mines	150.3	136.5	116.7	107.5	93.3	103.9	-28.5	-3	1.6	-13.2	-10.9
Other Metal Mines Mineral Fuels	86.1	98.9	79.2	81.2	84.8	94.3	-5.7	-1	4.3	4.4	19.1
Mineral Fuels	123.1	117.1	125.3	121.1	120.7	122.6	-1.6		3.1	-0.3	-2.2
Coal Mines	246.1	218.4	241.3	276.2	289.8	255.1	12.2		2.7	4.9	5.7
Crude Petroleum and Natural											
Gas	113.0	108.8	115.8	108.4	106.9	111.8	-4.1	-	1.7	-1.4	-3.5
Nonmetal Mines	105.6	118.0	127.4	115.9	122.9	133.2	9.8		4.2	6.0	4.5
		96.9		81.2	96.9	89.1	-6.7		0.0	19.3	-4.6
Secondary Industries											
	118.2	125.4	132.6	113.0	121.0	129.0	-4.4	-	3.5	7.1	-2.7
		132.8				2 131.8	-1.2	-	2.7	7.9	-0.4
Petroleum and Coal Products											
Industries	136.0	150.3	141.1	149.5	147.3	3 143.4	9.9	-	2.0	-1.5	1.6
Durable Manufacturing Primary Metal Industries	115.4	118.2	132.9			126.3	-7.9		4.4	6.3	-5.0
Primary Metal Industries	103.4	108.3	122.9	100.5		125.5	-2.8		3.5	11.5	2.1
Iron and Steel Mills	132.5	131.3	143.5	107.6		3 141.0	-18.8		8.0	12.3	-1.8
Steel Pipe and Tube Mills						118.2	-20.7		0.5	31.4	-1.4
Iron Foundries			121.6	61.4			-29.7		7.0	18.9	-20.3
Smelting and Refining	59.9			105.0			75.3				27.8
Nonmetallic Mineral Products	33.53										
Industries	133.6	134.6	118.0	116.6	121.4	108.6	-12.7	-	9.8	4.1	-8.0
Cement Manufacturers		194.0			166.9		-12.8		4.0	-2.5	-8.4
Ready-mix Concrete Manu-	190.2	194.00	133.3	*****	100.0		12.0			2	0.1
facturers	130 4	155.2	101.7	130.1	138.2	94.3	-6.7	-1	1.0	6.2	-7.2
Construction Industry			119.8				-12.7		0.7	4.5	-7.9
Transportation, Storage, Com-	143.5	7-11-1	119:0	123.0	134.0	110.5		-		1.5	
munication, storage, com-	162 3	164 5	155.5	166.0	167.0	160.4	2.3		1.5	0.6	3.2
Electric Power, Gas and Water	102.0	TOAST	13303	10700	20100	1.00.1	~				
Utilities	141 7	145.9	168.5	143.0	146.1	170.4	0.9		0.1	2.2	1.1
Trade		144.8		137.4		136.5	-4.1		1.9	3.3	-2.4
Finance, Insurance, Real Estate						159.1	3.9		3.4	-0.2	4.6
Community, Business and Personal Service			136.3						3.2	-0.3	2.8
Public Administration and De-											
fence	136.1	134.5	129.6	136.0	134.	7 129.1	-0.1		0.1	-1.0	-0.4

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

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October 1980

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10	DI	1	~

		1979				1980		Percentage Changes			
			2717			2700				1st 8 month	
		July	August	Total 8 months	July	August	Total 8 months	August 80 August 79	August 80 July 80	<u>1980</u> 1979	
etals											
Copper		55.3	71.0	391.1	56.2	56.9	482.9	-19.9	+1.2	+23.5	
Gold	kg	3 932.8	3 919.5	32 014.2	4 293.2	3 615.5	32 207.0	-7.8	-15.8	+0.6	
Iron ore		7 552.3	6 879.0	39 996.2	5 727.3	5 230.5	32 585.9	-24.0	-8.7	-18.5	
Lead		8.1	25.8	201.0	28.7	16.4	177.4	-36.4	-42.9	-11.7	
Molybdenum	t	1 126.9	974.4r	8 023.3r	847.2	1 258.1	8 371.3	+29.1	+48.5	+4.3	
Nickel		11.7	14.2	72.7	11.7	13.9	126.5	-2.1	+18.8	+74.0	
Silver	t	89.5	99.8	765.1	86.6	77.5	753.6	-22.3	-10.5	-1.5	
Uraniuml	E	579.2	387.4	3 969.8	396.1	382.2	3 957.8	-1.3	-3.5	-0.3	
Zinc		80.4	106.1	764.9	67.8	44.3	548.3	-58.2	-34.7	-28.3	
onmetals											
Asbestos		96.8	143.6	956.1	83.7	135.8	820.9	-5.4	+62.2	-14.1	
Clay products	\$000				10 495.8	10 703.8	69 162.9		+2.0		
Gypsum		726.4	867.0	5 085.3	661.7	525.6	4 661.4	-39.4	-20.6	-8.3	
Potash K20		594.5	579.9	4 689.6	626.3	642.5	4 662.4	+10.8	+2.6	-0.6	
		1 000 0	1 256.1	7 069.7	1 101.9	1 149.5	6 480.0	-8.5	+4.3	-8.3	
Cement		1 282.3			1 101.9	1 149.5	1 357.0		+0.1		
Lime		447.0	485.2	4 227.1	643.4	466.4	4 459.5	-3.9	-27.5	+5.5	
Salt		447.0	483.2	4 227.1	043.4	400.4	4 439.3	-3.9	-27.3	+3.5	
els											
Coal		2 595.5	2 567.1	21 613.5	3 143.6	3 006.7	23 398.7	+17.1	-4.4	+8.3	
Natural gas Crude oil and	million m <sup>3</sup>	6 957.7	6 693.4	62 362.7	6 032.7 <sup>r</sup>	6 039.3	57 088.4	-9.8	+0.1	-8.5	
equivalent	000 m <sup>3</sup>	7 945.3	7 626.8r	61 565.7r	7 735.8 <sup>r</sup>	7 547.8	60 361.6	-1.0	-2.4	-2.0	

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

1 Tonnes uranium (1 tonne U = 1.299 9 short tons U308). r Ravised; .. Not available.

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TU	D	11	2	

		Con	struction		inery and uipment		Total
			(million	s of dol	lars)		
Atlantic Region	1978		124.6		172.4		297.0
	1979		271.9		203.5		475.4
	1980		427.4		219.6		647.0
Ouebec	1978		150.0		228.0		378.0
	1979		185.6		299.7		485.3
	1980		274.2		325.4		599.6
Ontario	1978		221.2		259.4		480.6
	1979		318.6		288.1		606.7
	1980		413.2		374.0		787.2
Prairie Region	1978	2	430.5		707.7	3	138.2
	1979	3	189.0		835.3	4	024.3
	1980	4	590.1	1	023.9	5	614.0
British Columbia	1978		407.6		227.0		634.6
	1979		541.9		282.9		824.8
	1980		807.6		486.6	1	294.2
Northwest Territories	1978		243.3		70.1		313.4
and Yukon	1979		227.7		147.8		375.5
	1980		307.6		158.2		465.8
Canada	1978	3	577.2	1	664.6	5	241.8
	1979	4	734.7	2	057.3		792.0
	1980	6	820.1	2	587.7	9	407.8

Canada, Capital and Repair Expenditures Mining, Quarrying and Oil Wells, 1978-80<sup>1</sup>

1 1978 Actual, 1979 Preliminary actual, 1980 Revised Intentions.

		al Expendit			ir Expend			1 and Repai	
	1978	1979	1980	1978	1979	1980	1978	1979	1980
				(milli	ons of do	ollars)			
Metal mines									
Gold	36.7	47.0	122.1	17.8	19.3	21.4	54.5	66.3	143.5
Iron	103.6	148.8	186.5	213.7	284.5	298.0	317.3	433.3	484.5
Copper-gold-silver	131.2	202.6	391.9	156.1	164.5	178.6	287.3	367.1	570.5
Silver-lead-zinc	62.3	88.2	152.6	38.6	42.6	45.2	100.9	130.8	197.8
Other metal mines	242.8	385.9	568.3	115.1	109.6	127.5	357.9	495.5	695.8
Total metal mines	576.6	872.5	1 421.4	541.3	620.5	670.7	1 117.9	1 493.0	2 092.1
Nonmetal mines									
Asbestos	103.0	105.0	108.3	94.1	100.2	109.5	197.1	205.2	217.8
Other nonmetal mines <sup>2</sup>	320.9	321.7	434.4	213.2	247.5	277.2	534.1	569.2	711.6
Total nonmetal mines	423.9	426.7	542.7	307.3	347.7	386.7	731.2	774.4	929.4
Mineral fuels									
Petroleum and gas	2 902.9	3 973.4	5 822.3	489.8	551.2	564.0	3 392.7	4 524.6	6 386.3
Total mining industry	3 903.4	5 272.6	7 786.4	1 338.4	1 519.4	1 621.4	5 241.8	6 792.0	9 407.8

Canada, Capital and Repair Expenditures - Mining, Quarrying and Oil Wells, 1978-801

TABLE 4

<sup>1</sup> 1978 Actual, 1979 Preliminary actual, 1980 Revised Intentions; <sup>2</sup> Includes coal mines, gypsum, salt, potash and miscellaneous nonmetal mines and quarrying.

- 7 -

			1978						1979P			
	Strikes and lockouts		rkers			on in -days	Strikes and lockouts		rkers			on in -days
Mines	39	31	147	1	699	460	40	28	396	1	586	360
Metal	16	23	711	1	521	540	17	18	861	1	506	980
Mineral fuels	10	3	983		39	640	8	7	717		55	010
Nonmetals	12	3	443		137	550	10	1	645		22	980
Quarries	1		10			730	5		173		1	390
Mineral manufacturing	59	21	108		310	130	73	25	080	1	126	900
Primary metals	24	17	838		215	400	30	17	929		924	150
Nonmetallic mineral products	31	2	480		92	020	41	5	875		185	870
Petroleum and coal products	4		790		2	710	2	1	276		16	880

Canada, Number of Strikes and Lockouts by Mining and Mineral Manufacturing Industries, 1978-79

TABLE 5

P Preliminary.

- 00 -

			1978							1979P			
	Strikes and lockouts		rkers olved			on in -days		kes and kouts		rkers			on in -days
Agriculture	1		4			20		1		12			10
Forestry	19	5	446		67	810		11	2	632		110	940
Fishing and trapping	1		600		1	200		-		-			-
Mines	39	31	147	1	699	460		40	28	396	1	586	360
Manufacturing	459	117	548	2	527	980		511	149	656	3	129	460
Construction	108	63	105	1	232	610		48	10	839		88	290
Transportation and utilities	126	74	332		945	480		129	79	933	1	181	580
Frade	91	10	618		245	950		78	16	442		247	410
Finance, insurance and real estate	16		924		7	520		18	2	164		38	110
Service	143	33	824		407	650		139	64	855		760	600
Public administration	55	64	140		257	140		74	58	845		642	740
Various industries	-		-			-		1	48	730		48	730
All industries	1 058	401	688	7	392	820	1	050	462	504	7	834	230

Canada, Number of Strikes and Lockouts by Industries, 1978-79

TABLE 6

P Preliminary; - Nil.

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

Provincial

# Alberta

The Crude Oil Par Price, Select Price and Royalty Factor Regulation, AR 267/79, under the **Mines and Minerals Act**, is again amended by AR 256/80, to raise the par price of crude oil from \$94.77 per cubic metre to \$107.36 per cubic metre for the month of August, 1980 and subsequent months. And the royalty factor for the month of August, 1980 and subsequent months is reduced to:

- (i) 1.4518 with respect to crude oil other than new oil, and
- (ii) 0.6268 with respect to new oil.

# **REGIONAL PROFILES**

# Yukon Territory

The significance of the mining industry to the territory is demonstrated in the 1979 statistics for the industry, which places value of mineral production in the Yukon at \$12,000 per person. Expressed another way, about one-third of the total value of goods and services produced in the Yukon is derived from mining. Exploration expenditures are expected to exceed \$32 million in 1980, a 20 per cent increase over the 1979 record exploration program of \$27 million.

Commodity	Value	Change From 1978	Proportion of Canada
	(\$000's)	(per c	ent)
Zinc	114,593	54.7	10.3
Lead	107,928	67.8	26.0
Silver	50,314	76.7	11.1
Copper	18,053	9.6	1.2
Gold	8,675	1.8	1.6
Metals	299,564	56.1	3.7
Total all minerals	299,564	36.9	1.1

# Principal Mineral Production, 1979P

P Preliminary.

	Amount	Change From 1979	Proportion of Canada
		(per c	ent)
Population, March	25,062	0.7	0.1
Labour Force, March	11,220	-7.2	0.1
Employment, March	9,647	1.5	0.1
Unemployment, March	1,573	-39.2	0.2
Employment in Mining, March	1,141	1.3	0.8
Average Weekly Earnings in Mining and Milling, May	\$572.05	11.4	121

Economic Indicators, 1980

#### Mine Developments

Cyprus Anvil Mining Corporation is proceeding with its \$170 million (1980\$) expenditure program which will ensure the continuation of their operation to the late 1990s. The Vangorda and Grum deposits will be brought onstream, with Vangorda to be mined first, beginning in 1984. Mill modifications, transportation facilities and power installations will all be constructed.

A \$10.6 million, 28 month, exploration program on the Tom lead-zinc-silver deposit was started in July. Part of the program involves developing a decline which may be used for haulage should the property be put into production. A preliminary feasibility study completed in April 1980 indicated a production rate of 1.6 million tonnes per year.

Canada Tungsten Mining Corporation Limited will have their feasibility study on the Mactung property in the MacMillan Pass area completed by early next year. A \$120 million, 910 tonne per day operation is under consideration and if all goes as expected the property could be in operation by 1984. Reserves are sufficient to keep the mine operating for 85 years at this production rate. The mine opening is regarded as "only a matter of time" by company officials, with the mine opening being planned to coincide with favourable world demand. Construction of a 91 tonne per day mill has started in British Columbia just across the border from Carcross. This mill will service a refurbished Venus mine in the Yukon Territory. Production from the mine with average grades of 8 grams per tonne of gold and 218 grams per tonne of silver is expected in June 1981.

Metallurgical testing will be done this winter by Amax Minerals Exploration on bulk samples from a one kilometre long decline at the Logjam tungsten-molybdenum deposit of Logtung Resources Ltd. Reserves of 179 million tons grading 0.13 per cent tungsten and 0.052 per cent molybdenum are reported.

# Labour Problems

The Elsa mine of United Keno Hill Mines Limited has been closed by a strike since mid-September.

# **REGIONAL PROFILES**

# Northwest Territories

The Northwest Territories is entering a period of relatively high mining development. There are several deposits, led by the Polaris zinc-lead deposit, which are currently under development and for which production can be expected in the next couple of years. Gold exploration activity, particularly in the region immediately to the north of Yellowknife has been increasing at a healthy pace and further mines are expected.

Commodity	Value	Change From 1978	Proportion of Canada
	(\$000 <sup>1</sup> s)	(per c	
Zinc	206,985	43.8	18.7
Lead	72,437	27.3	17.5
Gold	58,471	27.7	10.8
Tungsten*	53,069	28.3	100.0
Silver	30,591	28.2	6.8
Cadmium*	1,502	28.6	14.3
Copper	633	21.9	0.1
Natural Gas	37,301	15.0	0.8
Crude Petroleum	5,682	-9.3	0.1
Metals	423,688	35.2	5.3
Fuels	42,983	11.1	0.3
Total	466,671	32.5	1.8

# Principal Mineral Production, 1979P

\* Figures from Northwest Territories Chamber of Mines.

# Economic Indicators, 1980

Completence of service	Amount	Change From 1978/79	Proportion of Canada	
		(per cent)		
Population, December 1979	46,063	-0.7	0.2	
Labour Force, 1979 est.	16,150	-7.2	0.2	
Employment, 1979 est.	14,000	16.7	0.1	
Unemployment, 1979 est.	2,140	-60.4	0.7	
Employment in Mining, May 1980	1,950	7.0	1.4	
Average Weekly Earnings in Mining and Milling, May 1980	\$487.22	13.4	104	

#### Mine Developments

Underground development is proceeding on the high-grade gold property of Cullaton Lake Gold Mines Ltd. in the southern District of Keewatin. The target date for bringing the property into production, providing regulatory approval is granted, is September 1981. Work is on schedule and tonnage and grade are reported to being substantial as development proceeds.

IU International Corporation announced in September its plans to spend \$115 million to bring the Contwoyto Lake gold property into production. The rate of production will be 910 tonnes per day and is expected to begin in about two years. Based on the ore currently indicated, the mine life would be about seven years, however, the orebody is open below the 650 foot level to which the ore reserves have currently been defined.

The Cantung mine located in the Mackenzie Mountains a few kilometres from the Yukon border has been given a temporary reprieve on the October 1 deadline for compiling with the NWT Water Board regulations. The mine, owned by Canada Tungsten Mining Corporation Limited had been given two years to install a new waste filtration system but was not able to meet the deadline. The problem lies in the disposal of copper and cyanide-laden waste. The Camlaren mine of Discovery Mines Limited is now in production under a lease-royalty arrangement with Noranda Mines Limited and Pamour-Porcupine Mines, Limited.

Cima Resources Limited is considering the construction in 1981 of a 250 tonne per day portable mill at its Mt. Hundere leadzinc-silver deposit located 53 kilometres north of Watson Lake. Production could start in 1982.

# **Exploration** Activity

Exploration is again high this year, and the number of claims recorded shows a significant increase on 1979. This is borne out in the following statistics obtained from the Government of Northwest Territories, Statistics Quarterly, Volume 2, No. 2.

	To June		
	1980	1979	% Change
Claims Recorded	322	192	67.7
Mackenzie	119	84	41.7
Arctic and Hudson Bay	178	105	69.5
Nahanni	25	3	733.3
Prospector Licences	122	241	-49.4
Company	26	55	-52.7
Individuals	96	186	-48.4

# Labour Settlements

Members of the Canadian Association of Smelter and Allied workers have ended their lengthy strike at Giant Yellowknife Mines Limited with the ratification of a 27-month contract retroactive to April 1, 1980.

# METALLIC MINERALS AND PRODUCTS

#### Aluminum

Jamaica's alumina exports increased 14.4 per cent in the first nine months of 1980 over that of 1979. The amount of alumina exported was 1 764 721 tonnes. In the same period, bauxite exports decreased by 9 per cent to 4.4 million tonnes. This decrease was due, in part, to damage inflicted to Reynolds Metal Company's installations by Hurricane Allen.

During the first year of production, the Trombetas bauxite project in Brazil's Amazon region has exported 1 898 000 tonnes of bauxite. These shipments went mainly to Canada, the United States, Spain and Norway. The Financial Times reported that the price was \$22 a tonne until July and \$25 a tonne thereafter. Negotiations are currently underway to increase the price in the order of \$2 to \$3 a tonne.

Alcan Aluminium Limited and the union representing 1,850 workers at Kitimat, British Columbia, have reached an agreement in their contract. The new 30-month contract will give the workers a 15 per cent across-the-board wage increase in the first year, 12 per cent in the second year and 7.5 per cent in the remaining six months. A cost of living clause also covers the final 12 months of the contract and a signing bonus of \$150 is also included.

Alcan Canada Products Limited of Toronto has opened its first aluminum recycling plant at Guelph. The plant will produce molten and ingot metal for the casting and automotive industries as well as aluminum granules for use in the explosives industry.

According to Reuters News Agency, studies are being done in Bahrain to increase aluminum production in the Gulf States from 270 000 tonnes to close to one million tonnes by 1995. Plans include building an alumina refinery with a capacity of one to two million tonnes, up to five aluminum smelters and a rolling mill with a capacity of 40 000 tonnes a year of sheet and strip.

Gove Alumina Ltd. an Australian producer, has negotiated financing to fund its participation in the Tomago Aluminum Project near Newcastle, New South Wales. The project's first stage of 110 000 tonnes of aluminum a year is expected to be complete in 1983 with full production of double the first stage by about 1986.

# Antimony

Consolidated Murchison Limited, operator of the world's largest antimony mine which is located in northern Transvaal, Republic of South Africa, announced that it was to cut its milling rate by 33 per cent from 45 000 tonnes per month to 30 000 tonnes. Demand for the metal has declined as a result of the current worldwide recession. The company expects sales in 1981 to remain at a low level.

The New York dealer price for antimony for the month of September averaged \$1.49 (U.S.) per pound.

In Bolivia, an Antimony Producers Committee has announced that it will work toward the formation of an International Antimony Council to influence world output and marketing of antimony. Leading producers are Bolivia, People's Republic of China, Republic of South Africa and the U.S.S.R., with Canada a distant fifth.

#### Copper

Copper prices for wirebar on the London Metal Exchange (LME) ranged from 89.3 cents (U.S.) to 99.7 cents (U.S.) a pound during October and closed at 92.7 cents on October 31. The low price was recorded October 3 and the high October 23. The Canadian producer price for wirebar ranged from \$1.12125 a pound to \$1.17625 a pound, with the price \$1.115625 on October 31. At month end, copper stocks in COMEX and LME warehouses were 162 517 tonnes and 124 500 tonnes respectively (total 287 017 tonnes), compared with 168 035 tonnes and 125 250 tonnes (total 293 235 tonnes) at the end of September.

On October 29 it was announced that Cominco Ltd. has agreed to purchase 1,627,000 shares of Bethlehem Copper Corporation from Gulf Resources & Chemical Corporation of Houston, Texas, for \$37.50 a share, a premium of about 50 per cent above the market price. This purchase raises Cominco's interests in Bethlehem Copper from 39.25 per cent to a controlling 65 per cent. A Cominco subsidiary, Valley Copper Mines Limited (81.35 per cent owned by Cominco and 5 per cent by Bethlehem), shares ownership with Bethlehem of the very large Lake Zone copper deposit in the Highland Valley area of British Columbia (Valley Copper owns 80 per cent and Bethlehem 20 per cent of the deposit). Cominco also offered to purchase the 22.84 per cent interest in Bethlehem that is held by Newmont Mining Corporation but Newmont has indicated that it wants to stay in the Valley Copper project. Canadian securities laws require that the same \$37.50 a share offer be made to all other shareholders of Bethlehem. Cominco attempted to gain control of Bethlehem in 1977. In April of that year Cominco purchased 12.4 per cent of Bethlehem's shares on the open market, then made a formal \$18 a share bid for control in July 1977. This attempt was thwarted when Gulf Resources purchased its block of 1,627,000 shares at \$21 a share in a counter offer.

Subsequent to the closure of its copper smelter at Anaconda, Montana and its copper refinery at Great Falls, Montana owing to pollution control regulations, the Anaconda Copper Company is reported to have reached basic agreement with seven Japanese smelters for the sale or custom smelting of some 390 000 tonnes of copper concentrates annually. This amount is reported to account for 80 per cent of Anaconda's annual U.S. copper mine production, and will make Anaconda one of the largest suppliers of concentrates to the Japanese copper smelters.

The U.S. copper strike had not been completely settled by the end of October, with ASARCO Incorporated, Anaconda Copper Company and Cities Service Company still struck. Negotiations for ASARCO and its 3,600 striking copper workers were scheduled to meet on November 5 for the first time since October 9 when talks had broken off. At month end, unionmanagement talks were still in progress in the cases of Cities Service and the Anaconda Copper Company. Operations have resumed at the eight other U.S. copper producers where strikes have been settled.

#### Gold

The monthly average for October 1980, of the afternoon fixing gold prices on the London Gold Market was \$661.15 (U.S.) (\$772.88 Cdn.) per ounce of gold compared with \$673.63 (U.S.) (\$784.51 Cdn.) for September 1980. The price weakened somewhat during October, reaching a low of \$628.00 (U.S.) per ounce at the morning fixing of October 24. For the remainder of the month, the market appeared to lack direction, with small gains offsetting small losses.

Giant Yellowknife Mines Limited and the Canadian Association of Smelter and Allied Workers announced ratification of a 27 month contract retroactive to April 1, 1980, thus ending the strike that has shut down the Giant Mine at Yellowknife for the past three months. Pamour Porcupine Mines, Limited has announced that it will reopen the underground workings of the former Hollinger Mines Limited near Timmins at a cost of \$15 million. Production of 300 000 tonnes a year at a grade of 0.12 oz/ton is anticipated. The reopening, which will take place over the next 24 months, will add 250 jobs to the Pamour payroll.

Texasgulf Inc. is preparing a feasibility study to be ready in early 1981 on the Owl Creek gold property, two miles from the Texasgulf concentrator. Inco Limited is entitled to a 40 per cent interest in the development and production of Owl Creek if a production decision is made. Texasgulf has reported finding a second deposit, Hoyle Pond, just west of the concentrator under the tailings pond. No tonnage/grade estimates for Hoyle Pond have yet been released.

# Iron Ore

The Iron Ore Company of Canada announced in October that it will reduce production of iron ore concentrate by 7 per cent (300,000 long tons) in the fourth quarter. No layoffs will be involved although it is estimated that the workforce in various departments will be reduced by 55 through attrition.

The Brazilian Minister of Mines and Energy announced that the Brazilian Government has formally given its approval for the development of the Carajas iron ore deposit. The development will involve an investment of \$2.5 billion to produce 35 million tonnes of iron ore annually. Companhia Vale Do Rio Doce (CVRD), the state-owned mining company, is to provide 40 per cent of the financing and the remainder will come from national banks and foreign loans. Japanese steel companies are currently negotiating long-term contracts for the Carajas ore. A tentative delivery schedule is for 10 million tonnes of ore per year beginning in 1985 rising to 13 million tonnes in 1987.

#### Iron and Steel

On September 30, 1980 President Carter announced a program to aid the domestic steel industry which included the reintroduction of the trigger price mechanism (TPM) for a period from three to five years beginning with the fourth quarter of 1980. The price levels of the TPM are approximately 12 per cent higher than those for the first quarter of 1980. The TPM was designed early in 1978 as a substitute for major antidumping petitions by the domestic steel industry and to provide a "fast track" government investigation of steel imported at price levels below the trigger price. The United States Steel Corporation filed antidumping complaints against 16 producers in seven European countries shortly after the U.S. Treasury Department announced that the trigger prices for the second quarter of 1980 would not be increased from the levels of the first quarter of 1980. The government suspended the TPM indicating that they did not have the resources to investigate the antidumping complaints and operate the TPM at the same time.

The modified TPM allows for further analysis of the import situation if the domestic industry is operating at below 87 per cent capability utilization, imports increase to over 13.7 per cent of apparent domestic consumption, and there appears to be a **surge** in imports of one or more specific products from one or more specific countries. Appropriate action will be taken if it appears that TPM is being evaded. If imports exceed 15.2 per cent of apparent consumption and the Department of Commerce assesses that unfair competition is occurring as the result of dumping or subsidization the Commerce Department will initiate countervailing or dumping duties on a specific country or on a product line basis. In the above situation the TPM would not be suspended.

If at the end of three years the Secretary of Commerce finds that the domestic steel industry's modernization program is moving at an inadequate pace the TPM will be terminated. The administration has proposed changes in the tax depreciation schedule and a stretch out of the time frame to meet air pollution standards in an effort to accelerate capital formation, needed by the steel companies for modernization of existing facilities.

At the end of the five year period the domestic industry is expected to have completed its modernization program at which time the TPM is to be suspended.

United States Steel Corporation withdrew their antidumping complaints when the government announced the revitalization program.

Up until the suspension of the TPM in March of this year steel imported from Canada entered at prices below the trigger price because four Canadian producers had demonstrated to U.S. officials during preclearance investigations that steel was being sold at prices above the cost of production. All Canadian exporters have up to 130 days to obtain preclearance if they intend to export into the United States at prices below the new trigger prices.

Agreement was finally reached on October 31 at the EEC Commission to impose mandatory crude steel production quotas (according to Article 58 of the Treaty of Rome) until June 1981. Since July 1980, the EEC has unsuccessfully attempted to have the production and delivery of steel by EEC steel producers voluntarily curtailed. The steel companies continued to overproduce although member states were in agreement that the situation was very serious. New orders were 14, 21 and 31 per cent lower in 1980 as compared to 1979 for the months of June, July and August respectively, and prices had dropped 15 per cent from January to July. Exports to the United States market declined due to antidumping investigations while at the same time Japan and other lower cost producers increased their market share at the expense of EEC producers in other markets.

The quotas for the third quarter of 1980 impose production cuts of from 13 to 20 per cent in the output of semifinished steel as compared to the same period in 1979. The following products are exempted from quotas: tin plate, rails, large diameter pipe, steel castings, specialty steel containing more than 5 per cent alloy (but, stainless steel is under quota) and small steel companies producing less than 6 000 tonnes per quarter. There were no minimum prices set and no import quotas although the EEC expects that understandings can be reached with foreign suppliers to hold imports at an acceptable level.

#### Manganese

The Second Preparatory Meeting on Manganese convened by the Secretariat of the United Nations Trade and Development Board was held in Geneva during the last week of October. The meeting was attended by some twenty manganese ore exporting and importing countries. As a result of the meeting an International Group of Experts is to be established to study the problems of manganese trade. The Group of Experts is to meet sometime early in 1981 followed by a Third Preparatory Meeting within six months.

#### Molybdenum

Duval Corporation and Kennecott Corporation raised their molybdenum price on October 8 and October 13 respectively, bringing their prices in line with those of other major producers, Climax Molybdenum Company, Placer Development Limited, and Noranda Mines Limited. Duval's new export prices (in U.S. dollars; old prices are quoted in brackets) are: \$10.20 (\$9.75) per lb for canned oxide; \$11.52 (\$10.92) for ferromolybdenum, and \$10.33 (\$9.87) for briquettes. Kennecott does not publish export prices. Both companies araised their U.S. canned oxide prices by 70 cents per lb to \$9.70. Expansion of Lornex Mining Corporation Ltd.'s mining and milling complex at Highland Valley, British Columbia, is proceeding as planned. As part of the expansion, a third semi-autogenous mill line and a new crusher will be added. The new mill line, being slightly larger, will increase mill capacity by about 68 per cent to a range of between 67 000 and 72 600 tonnes of ore a day, depending upon the hardness of the ore. The project, costing approximately \$160 million, is scheduled for completion in mid-1981. Along with the expansion Lornex is installing a molybdenum leaching plant which uses a process that is under license from Brenda Mines Ltd. The Brenda leaching process is capable of removing copper impurities in the molybdenum concentrate from the current 0.9 per cent down to 0.1 per cent to produce a high quality product.

# Nickel

Third-quarter nickel sales, reflecting the widening recession, were down significantly from 1979 levels. Inco Limited announced nickel deliveries of 65 million pounds in the quarter compared to 81 million pounds a year ago. Falconbridge Nickel Mines Limited reported sales of 10.4 million pounds in the latest quarter versus 13.6 million pounds last year. Falconbridge also announced that due to the drop in sales, the three-month shutdown of the Falconbridge Dominicana C por A. facility would be extended a further two months. This will place the shutdown in effect until the end of 1980.

While nickel prices have increased from last year, the reduction in sales, as well as increased costs and expenses have resulted in lower third quarter earnings. Inco reported 42 cents per common share versus 67 cents last year and Falconbridge showed \$1.45 per common share versus \$4.51 in 1979. For Inco this was in spite of the fact that losses attributable to the Guatemalan and Indonesian operations were reduced for the third quarter to \$12 million this year from \$20 million last year.

Inco has announced that the government of Guatemala is considering certain tax changes which, if implemented, would have a significant effect on Inco operations in the country. Two of the most critical of the contemplated changes are an export tax on nickel and the elimination of the right to carry forward losses to offset taxable income in future years. Discussions are reported to have been started between Inco and the Guatemalan government on these issues. In face of the need to maintain an adequate balance between production and deliveries, Inco has announced 1981 vacation shutdowns for its nickel operations in Canada. At Sudbury and Shebandowan the mining and processing operations will have a four-week shutdown beginning on July 6. The Port Colborne operations will start a four-week shutdown on July 20, and the Manitoba operations will have a three-week shutdown starting July 13.

Inco chairman C.F. Baird announced that supply can be expected to be slightly above demand for 1980 and 1981, but inventories should peak in a year's time. Stronger demand is then anticipated to reduce the current inventory build-up.

#### Silver

The silver price was relatively stable during the month of October. The opening price as quoted by Handy & Harman of New York was \$21.39 (U.S.) per ounce. The silver price remained near this level, reaching a monthly high of \$21.80 (U.S.) an ounce on October 9. The price declined slightly until towards the end of the month when favourable news concerning the possible release of the United States hostages in Iran caused a more rapid price decline. The silver price closed for the month of \$18.90 (U.S.), near the low for the month.

The monthly average Handy & Harman silver price for October 1980 was \$20.18 (U.S.) per ounce of silver compared with \$20.14 for September. The average silver price in Canadian dollars (Handy & Harman) for the month of October was \$756.04 per kilogram (\$23.52 per ounce) compared with \$754.56 per kilogram (\$23.47 per ounce) for September.

# Tin

The United States General Services Administration (GSA) announced in October that it will change its method of marketing surplus stockpiled tin to a daily, fixed price offering and will no longer hold its bi-weekly competitive bid sales after November 18. Offerings will be limited to 10,000 long tons per year and the program could begin on November 24. The change reflects the fact that, in nine 500-ton bi-weekly offerings since July, only a single bid for five tons of tin had been accepted; all other bids were too far below the prevailing market price. GSA tin is restricted to consumption in the U.S. Successful sales could further depress market conditions, although GSA has shown its intention to act so as to minimize market disruption.

The U.S. Congress has authorized the release of up to 5,000 long tons of GSA tin, as a voluntary U.S. contribution to the International Tin Agreement Buffer Stock. Agreement was reached in October on terms of an initial 1,500-ton contribution. The buffer stock has held no tin since January 1977 and since the current tin price is now below the "must sell" level, the buffer stock manager would be required to sell the tin only to constrain price increases.

The Fifth International Tin Agreement is scheduled to expire in mid-1981 and negotiations on a Sixth Agreement are scheduled to resume on December 1. Inability to reach consensus on a new agreement at the first negotiating session last spring was attributed to "radical" U.S. demands regarding buffer stock size and its financing, and that export controls by producers be prohibited. There is some indication now that the U.S. is prepared to show more flexibility in its demands at the December session.

#### Zinc

In September, Canadian producers and Canadian Electrolytic Zinc Limited of Australia raised their base price for zinc in markets outside North America from \$780 (U.S.) to \$845 (U.S.) a tonne. European producers, stating they did not believe the increase to \$845 to be realistic, did not follow suit. In October, Cominco Ltd. reduced its base price for zinc sold in Europe to \$825 a tonne and other producers immediately followed Cominco's lead. This has now become the standard price for zinc sold outside North America.

On October 24, Texasgulf Metals Company, a division of Texasgulf Inc., announced higher zinc prices in the United States and Canada. Texasgulf was immediately followed by other producers. The new prices in the United States in U.S. funds (and in Canada in Canadian funds) are 39.25 (45.5) cents a pound for high grade and special high grade, 39.75 (46.0) cents for prime western and continuous line zinc with controlled lead and 40 (46.25) cents a pound for continuous line zinc with aluminum added.

# INDUSTRIAL MINERALS AND PRODUCTS

#### Asbestos

Asbestos Corporation Limited (ACL) announced it will close its Thetford Mines asbestos mining operation for five weeks from December 21, 1980 to January 26, 1981. Lay-offs will total 180 for a period "not expected to exceed six months". The company will also reduce its work week from six to five days.

The ACL layoffs follow similar cutbacks made in June and July by Carey Canada Inc. of East Broughton, when 100 of 425 employees were laid off and also in September by Johns-Manville Canada Inc. of Asbestos when 150 were laid off. An ACL spokesman attributes the weak demand for asbestos to the U.S. recession, high interest rates that delayed the start of projects using asbestos and a shortage of foreign currency in less developed countries.

The Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario, created in April 1980 by Ontario's Ministry of Labour, released its timetable for written submissions, public meetings and public hearings. The first public meeting was held this month and another is planned in December. Public hearings and written submissions will follow and are scheduled until June 1981. The Commission will deal with issues such as: Health Effects of Asbestos, Worker Exposure to Asbestos in the Workplace and In-plant Control, Asbestos in Public Buildings, Other Asbestos Exposure, Institutional and Policy Issues including review of laws and regulations in Ontario and elsewhere, Measurement Problems and Workmen's Compensation Practices.

#### Barite

Barite of Canada Limited will market barite recovered from tailings at the Buchans mine in Newfoundland. Separate agreements were completed with Abitibi-Price Inc. of Toronto and ASARCO Incorporated of New York which own 51 per cent and 49 per cent of the mine respectively. It is expected that production in the range of 10 000 to 20 000 tpy will commence in mid-1981 to supply the Newfoundland offshore requirements for barite.

#### MINERAL FUELS AND PRODUCTS

# Crude Oil and Natural Gas

An agreement has recently been reached between Dome Petroleum Limited of Calgary and a consortium of five Japanese companies concerning the sale of liquified natural gas (LNG) to Japan from western Canada. The five Japanese companies: Nissho-Iwai Corp.; Chubu Electric Power Co.; Kyushu Electric Power Co.; Osaka Gas Co., and Toho Gas Co. will begin receiving the LNG commencing in 1985 for a 20-year term totalling 2.6 million tonnes.

The gas is expected to come from British Columbia but any shortfall will be filled by Alberta. There are five locations, in British Columbia, being studied for the construction of a liquefaction plant. All deliveries are to be arranged through the British Columbia Petroleum Corporation (BCPC), but final approval for the sale must be received from the National Energy Board and the provincial governments of British Columbia and Alberta.

Should this project receive the required "go-ahead", the shipbuilding industry in Canada will receive orders for two of the four ships required. A firm to construct the ships has not yet been decided upon, but there are a number of candidates being considered. The cost of the project will be \$2.8 billion, with one-half being spent on the two ships.

#### Uranium

Asamera Oil Corporation Ltd. announced the discovery of a fourth mineralized zone at its Dawn Lake uranium project located in northern Saskatchewan between Gulf Minerals Canada Limited's Rabbit Lake mine and Esso Minerals Canada's Midwest Lake property. Mineralization of the new 11A zone has been traced for 655 metres along strike, generally in association with the basement contact at a depth of 100 metres. Radiometric assays indicate grades from 0.23 to 6.15 per cent U. As operator in the Keefe Lake-Henday Lake joint venture, Asamera holds a 25 per cent interest, while Saskatchewan Mining Development Corporation holds 50.75 per cent; five other companies share the balance. Commonwealth Edison Company of Chicago, through its wholly owned subsidiary Edison Development Canada Inc., has purchased Urangesellschaft Canada Limited's 40 per cent interest in the Kitts/Michelin uranium project in Labrador for a reported \$10.1 million (U.S.); the remaining 60 per cent is held by Brinco Limited through its subsidiary Brinex Limited. Control of Brinco will change when Olympia and York Developments Ltd. of Toronto receives federal government approval to acquire 50.1 per cent of the issued voting shares, thereby increasing Canadian ownership of Brinco from 28 to 73 per cent.

Mexico's state uranium company, URAMEX, is developing plans to extract byproduct uranium from phosphate produced at San Juan de la Costa on the east coast of the Baja peninsula. Although uranium output has not been disclosed, 750 000 tonnes/ year of phosphate concentrates are expected by 1981, with production expanding to more than 5 million tonnes/year by 1985.

A recently released survey by the U.S. Department of Energy indicates that average contract prices for 1980 deliveries of uranium increased slightly during the first half of 1980 from \$9.77/ kg U (25.40/1b U<sub>3</sub>O<sub>8</sub>) to \$10.00/kg U (26.00/1b U<sub>3</sub>O<sub>8</sub>). These deliveries include commitments made over the last several years and thus involve older, lower priced contracts as well as recent, higher priced contracts. Reported prices for 35 per cent of these 1980-1985 delivery commitments average under \$9.62/kg U (25.00/1b U<sub>3</sub>O<sub>8</sub>).

#### NEW PUBLICATIONS

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

# 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 octobre.

Revues annuelles de l'industrie minérale du Canada, 1978: l'indexe; les argiles et les produits d'argiles; le charbon et le coke; l'uranium; réserves canadiennes de produits minéraux sélectionnés. Prix \$1 l'exemplaire.

Annual Reviews of the Canadian Mineral Industry, 1979: Calcium; Cesium; Potash; Sodium Sulphate. Price \$1.00.

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, Approvisionnements et Services Canada, Ottawa.

# SPECIAL ITEM

# International Lead and Zinc Study Group

The twenty-fifth session of the International Lead and Zinc Study Group was convened in Geneva during the period October 20-24, 1980 under the chairmanship of Mr. S.H. Rochester of Canada. The session was preceded by a meeting of the Study Group's Statistical Committee to review the levels of world production and consumption for lead and zinc in 1980 and 1981. Generally speaking, the results of this world review, project world supply-demand conditions this year and next that are very favourable for Canada's lead and zinc mining industry.

#### Lead

In 1980, lead mine production is expected to reach 2.6 million tonnes, a marginal increase over 1979. Metal consumption is expected to be 240 000 tonnes lower at 3.9 million tonnes. Metal production, including secondary lead, is estimated at 4.2 million tonnes, some 94 000 tonnes below the 1979 level. Net exports of both concentrates and metal to socialist countries continue at a high level and as a result producer and consumer stocks remain at a relatively low level.

In 1981, lead mine production is forecast to rise by about 3 per cent, metal production by 6 per cent and consumption by 4 per cent. When trade with socialist countries is taken into account an increase in stocks of some 200 000 tonnes is forecast. However, continued tight supply of secondary material would make the forecast metal production for 1981 difficult to achieve.

#### Zinc

In 1980, western world zinc mine production is expected to be 4.61 million tonnes almost unchanged from 1979. Metal production is expected to be 4.47 million tonnes, a decline of 5 per cent from 1979. Metal consumption is forecast at 4.52 million tonnes some 250 000 tonnes lower than in 1979. After allowing for exports of concentrates and metal to socialist countries metal supplies are expected to decrease by about 50 000 tonnes.

The forecasts for 1981 show zinc mine production rising to 4.9 million tonnes, zinc metal production to 4.8 million tonnes and consumption to 4.7 million tonnes. The forecasts for 1981, after allowing for little change in net exports to socialist countries, show supply and demand of zinc metal to be in close balance. However, as concentrte stocks have been drawn down to very low levels the forecast for metal production may be difficult to achieve if mine production does not reach the level forecast.

# **Other Matters**

Mr. S.H. Rochester (ITC) was re-elected Chairman of the Study Group for the coming year and Mr. M.J. Gauvin (EMR) was elected chairman of the Production Sub-Committee. Mr. G. Nash (ITC) led the fourteen member Canadian Delegation which included industry representatives from Noranda Mines Limited, Cominco Ltd., Texasgulf Metals Co., Cyprus Anvil Mining Corporation and Hudson Bay Mining and Smelting Co., Limited as well as Mr. M.J. Gauvin (EMR), Mr. R.G. Bodie (ITC) and Mr. R.J. Jones (ITC).

# INFORMATION FROM THE TRC

Provident Resources Ltd. has amalgamated with Merrill Inc. and Francana Oil & Gas Ltd. into Francana Oil & Gas Ltd. on July 1, 1980.

United Siscoe Mines Limited changed its name to United Siscoe Mines Inc. - Les Mines United Siscoe Inc. on July 11, 1980.

Canadian Pacific Investments Limited changed its name to Canadian Pacific Enterprises Limited - Les Entreprises Canadien Pacifique Limitée on May 5, 1980.

The Steel Company of Canada, Limited changed its name to Stelco Inc. on June 27, 1980.

Hawker Siddeley Canada Ltd. changed its name to Hawker Siddeley Canada Inc. on July 1, 1980.

ESB Canada Limited is now Exide Canada Inc. since June 27, 1980.

Cassiar Asbestos Corporation Limited is now Cassiar Resources Limited since August 1, 1980.

Enheat Limited is now Enheat Inc. since June 9, 1980.

Campbell Chibougamau Mines Ltd. is now Campbell Resources Inc. - Les Ressources Campbell Inc. since September 1980.

Chromasco Limited now has a French version - Chromasco Limitée since July 23, 1980.

Rio Algom Limited also has a French version - Rio Algom Limitée since May 28, 1980.

Dresser Industries Canada, Ltd. now has a French version - Dresser Canada, Inc. since July 23, 1980.

