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The Canadian Mineral Industry Monthly Report

October, 1976



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

Minerals

Minéraux

PREFACE

This report is prepared in the Mineral Development 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.

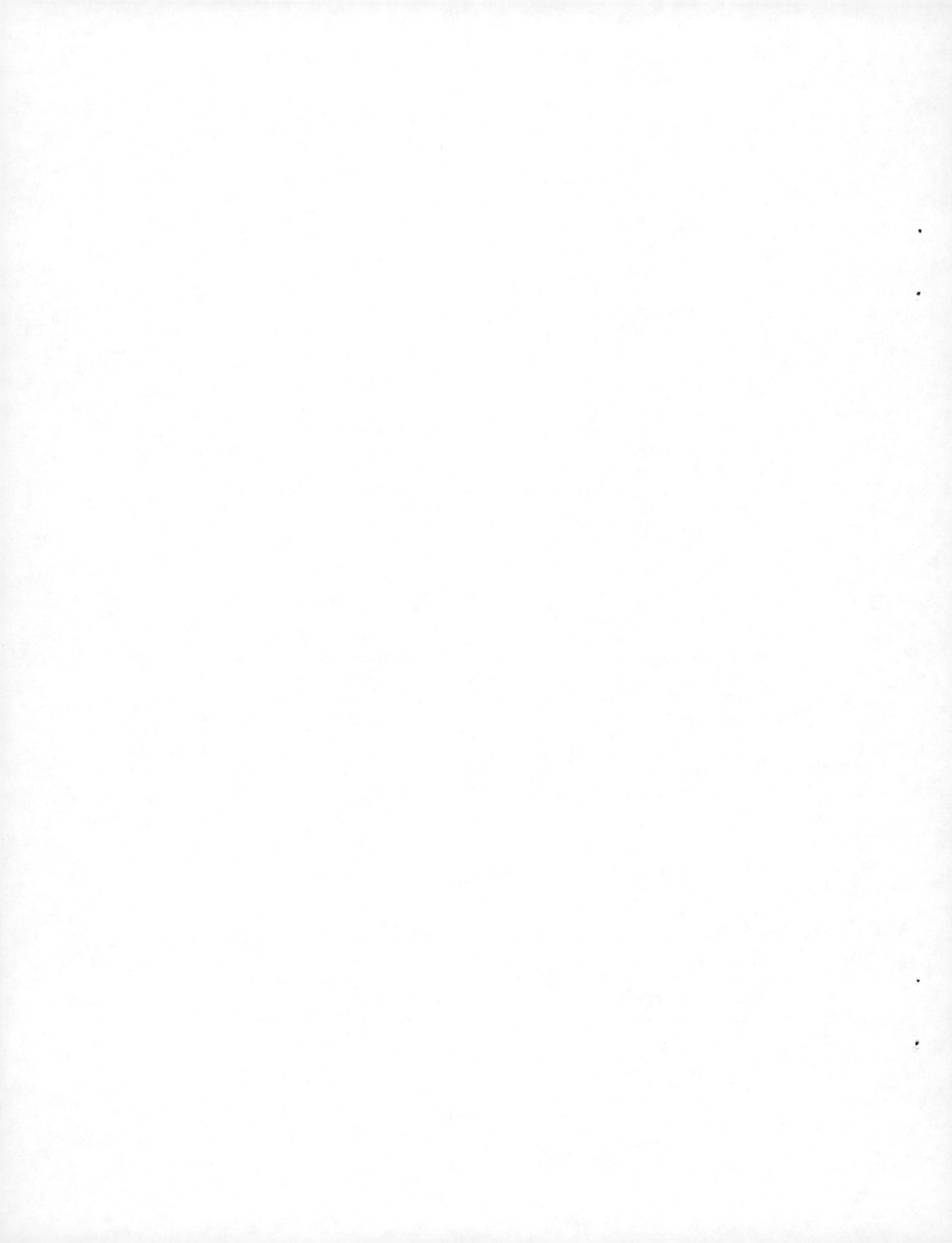
Ce rapport a été rédigé par le Secteur de l'Exploitation Minérale du Ministère de l'Énergie, des Mines et des Ressources. Bien que nous ayons eu recours à de nombreuses sources pour vous fournir les meilleurs renseignements possibles, cet exposé n'a pour objet que de passer en revue les développements 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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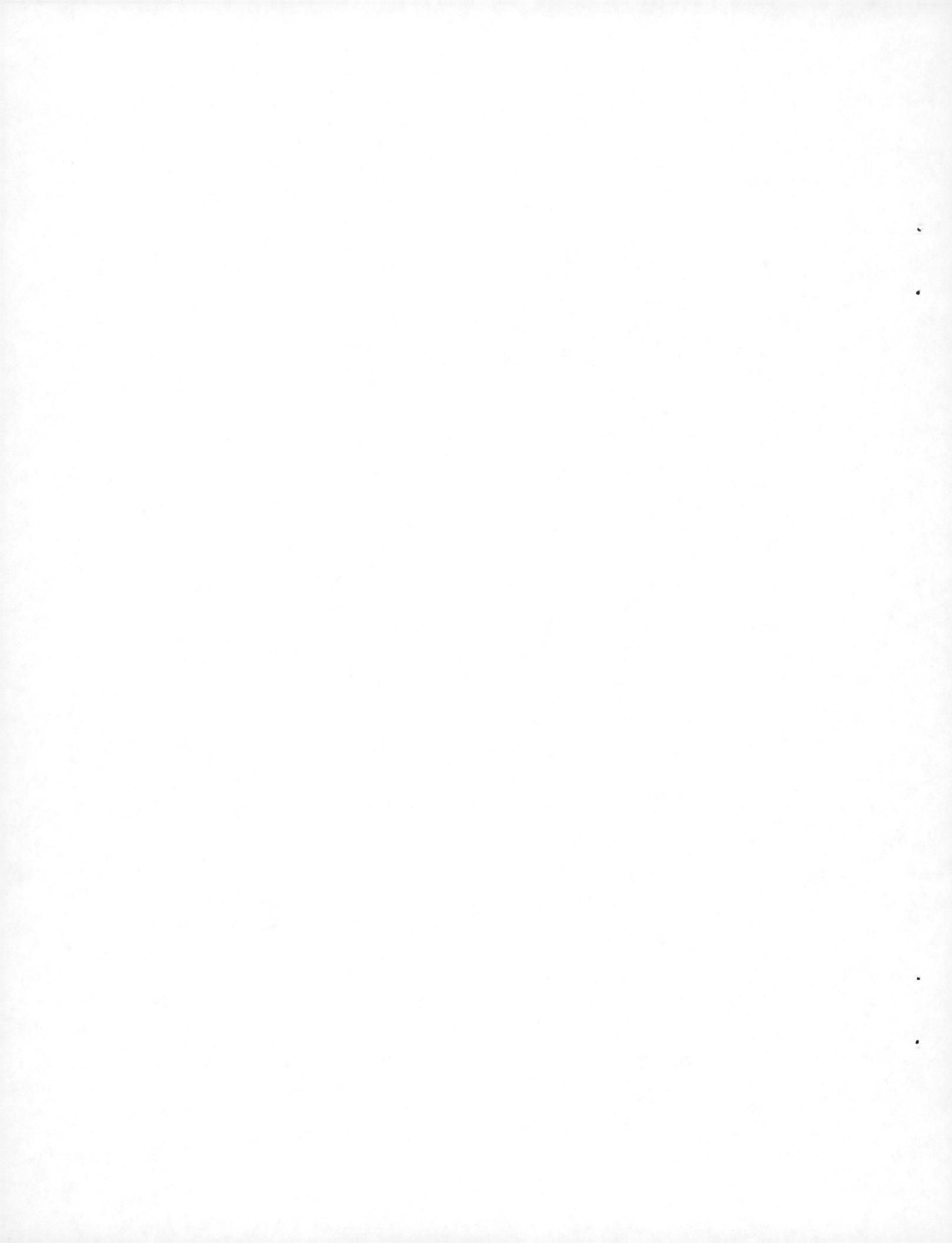
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THE CANADIAN MINERAL INDUSTRY FOR OCTOBER

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

SUMMARY

1. Canada's unadjusted index of real domestic product was 120.5 in August 1976, an increase of 1.5 per cent from July.
2. The August index for Mines, Quarries and Oil Wells was 106.4, an increase of 3.9 per cent from the previous month.
3. A new regulation governing the Disposition of Certain Crown Minerals and the Rehabilitation of Commercial Quarries was issued in Manitoba and becomes effective January 1, 1977.
4. The Aluminum Company of America and the Jamaican Government will cooperate in a joint bauxite venture called Jamalco.
5. The United States announced a set of new goals for its strategic stockpile of raw materials; the objective for copper is 1.2 million tonnes.
6. The International Monetary Fund announced that the fifth gold auction will be held on December 8, 1976.
7. The strike at the Faro mine, Yukon Territory, is now in its thirteenth week with little hope of a settlement in sight.
8. The Hanna Mining Company is seeking partners in Japan to help bring its Colombian garnierite deposit into production.
9. New objectives for stockpiling silver and mercury were announced by the United States Federal Preparedness Agency on October 1.
10. On October 12, after a five-month lockout, plant and office workers at all four Sidbec-Dosco Limited steel plants in Ontario and Quebec returned to work.
11. Asbestos Corporation Limited announced that it will reactivate open pit operations at the King-Beaver mine in Thetford Mines, Quebec.

12. The Steel Company of Canada, Limited has purchased a 25 per cent interest in the coal licences of the Elk River project in southeastern British Columbia.
13. The Federal Government has decided to lower the present level of oil exports to the United States, starting November 1, in anticipation of increased deliveries of domestic oil to Montreal refineries.
14. Westinghouse Electric Corporation of Pittsburgh has filed suit against 29 uranium producers in the United States, Canada and other countries.

ECONOMIC TRENDS

Table 1 shows unadjusted indexes of real domestic product (RDP) for Canada. The overall RDP index was 120.5 in August, an increase of 1.5 per cent from July.

The RDP index for mines, quarries and oil wells was 106.4, an increase of 3.9 per cent from July. The August index for metal mining was 108.3, up by 6.0 per cent from the previous month. Of the main subcomponents of metal mining, gold mines and iron mines showed an increase of 5.2 per cent and 37.2 per cent respectively, while the miscellaneous metal mines group declined by 4.4 per cent. Although the August index for mineral fuels increased by only 1.8 per cent, coal mines increased by 31.2 per cent to 171.1. Non-metal mines showed an increase of 3.0 per cent from July, while asbestos mines increased by 29.1 per cent.

Table 2 compares Canadian production of 19 major minerals for July and August of 1975 and 1976. Production increased for thirteen of these; lead production decreased in August by 43.9 per cent from July.

Tables 3 and 4 show exploration, development, capital and repair expenditures for mining and exploration companies for 1974 and 1975. Table 3 presents these expenditures by region, whereas Table 4 compares the data by type of mining.

Table 1

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

Industry or Industry Group	1975			1976			Percentage Changes			
	July	Aug	Average	July	Aug	Average	July 1976	Aug 1976	Aug 1976	1st 8 Months 1976 1975
			1st 8 Months			1st 8 Months	July 1975	July 1975	July 1976	
Real Domestic Product	113.9	114.4	114.6	118.7	120.5	120.3	4.2	5.3	1.5	5.0
Primary Industries										
Agriculture	23.2	19.4	51.3	21.3	18.2	51.1	-8.2	-6.2	-14.6	-0.5
Forestry	114.1	117.0	100.5	116.0	123.6	97.0	1.7	5.6	6.6	-3.5
Fishing and Trapping	151.2	115.6	75.0	226.5	138.4	104.3	49.8	19.7	-38.9	39.1
Mines, Quarries and Oil Wells	105.6	105.7	108.8	102.4	106.4	108.3	-3.0	0.7	3.9	-0.5
Metal Mines	98.5	99.6	103.3	102.2	108.3	107.6	3.8	8.7	6.0	4.2
Placer and Gold Quartz Mines	67.5	66.4	70.1	67.6	71.1	73.4	0.1	7.1	5.2	4.6
Iron Mines	101.4	126.4	108.0	130.1	178.5	135.5	28.3	41.2	37.2	25.5
Other Metal Mines	99.3	94.5	103.7	97.0	92.7	102.3	-2.3	-1.9	-4.4	-1.3
Mineral Fuels	119.3	118.2	118.0	102.8	104.6	110.0	-13.8	-11.5	1.8	-6.8
Coal Mines	197.3	186.2	202.8	130.4	171.1	183.4	-33.9	-8.1	31.2	-9.6
Crude Petroleum and Natural Gas	112.9	112.6	111.0	100.5	99.1	104.0	-11.0	-12.0	-1.4	-6.3
Nonmetal Mines	73.4	74.0	99.7	94.2	97.0	107.7	28.3	31.1	3.0	8.0
Asbestos Mines	48.6	55.6	61.5	79.6	102.8	94.5	63.8	84.9	29.1	53.5
Secondary Industries										
Manufacturing	106.8	110.3	112.7	110.6	118.3	118.5	3.6	7.3	7.0	5.1
Nondurable Manufacturing	106.0	112.5	111.6	113.1	119.3	116.4	6.7	6.0	5.5	4.3
Petroleum and Coal Products Industries	126.2	127.3	124.0	130.4	126.2	126.3	3.3	-0.9	-3.2	1.9
Durable Manufacturing	107.7	108.1	113.8	108.0	117.3	120.7	0.3	8.5	8.6	6.0
Primary Metal Industries	100.2	89.2	107.9	89.6	97.4	105.5	-10.6	9.2	8.7	-2.2
Iron and Steel Mills	110.2	88.4	113.3	103.4	117.2	115.5	-6.2	32.6	13.3	1.9
Steel Pipe and Tube Mills	144.2	103.2	144.4	76.8	97.1	117.1	-46.7	-5.9	26.4	-19.0
Iron Foundries	62.0	77.2	96.4	76.3	80.4	103.3	23.1	4.1	5.4	7.1
Smelting and Refining	87.1	86.5	98.9	67.8	66.6	87.5	-22.2	-23.0	-1.8	-11.5
Nonmetallic Mineral Products Industries	128.6	130.3	113.6	126.3	133.6	116.9	-1.8	2.5	5.8	2.9
Cement Manufacturers	147.2	137.5	112.6	146.7	149.4	116.2	-0.3	8.7	1.8	3.1
Ready-mix Concrete Manufacturers	132.7	139.7	104.3	135.7	152.9	111.9	2.3	9.4	12.7	7.3
Construction Industry	125.1	134.2	105.5	139.1	144.7	120.6	11.2	7.8	4.0	14.3
Transportation, Storage, Communication	128.1	126.7	124.0	135.3	135.9	128.4	5.6	7.3	0.4	3.6
Electric Power, Gas and Water Utilities	106.2	102.1	128.0	112.7	108.9	136.1	6.1	6.7	-3.4	6.3
Trade	124.3	120.0	120.1	129.4	128.4	127.7	4.1	7.0	-0.8	6.3
Finance, Insurance, Real Estate Community, Business and Personal Service	123.8	123.4	121.7	128.4	128.4	126.8	3.7	4.1	0.0	4.3
Public Administration and Defence	112.8	113.4	117.6	117.1	116.9	122.2	3.8	3.1	-0.2	3.9
	125.6	124.3	118.8	129.0	128.3	122.9	2.7	3.2	-0.5	3.5

TABLE 2

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

	1975			1976			Percentage Changes			
	July	August	Total 1st 8 months	July	August	Total 1st 8 months	August 76	August 76	1st 8	
							August 75	July 76	months 1976 1975	
Metals										
Copper	66.6	58.1	481.7	52.8	59.6	471.6	+2.6	+12.9	-2.1	
Gold	4 433.1	3 932.5	33 357.2	3 955.6	4 204.3	34 385.3	+6.9	+6.3	+3.1	
Iron ore	3 891.9	4 388.9 ^r	28 241.6	6 593.9	7 324.3	36 040.4	+66.9	+11.1	+27.6	
Lead	15.2	28.8	202.9	16.4	9.2	156.4	-68.1	-43.9	-22.9	
Molybdenum	1 176.7	1 063.3	8 056.1	981.2	1 045.3	9 284.5	-1.7	+6.5	+15.3	
Nickel	15.9	18.3	169.3	17.5	17.6	159.3	-3.8	+0.6	-5.9	
Silver	106.5	127.2 ^r	820.5	82.8	94.5	852.4	-25.7	+14.1	+3.9	
Uranium (1)	202.5	240.9	2 336.5	371.5	424.3	2 881.8	+76.1	+14.2	+23.3	
Zinc	84.3	79.5 ^r	695.9	90.6	81.6	678.9	+2.6	-9.9	-2.4	
Nonmetals										
Asbestos	64.1	70.8	627.8	105.3	126.3	982.9	+78.4	+19.9	+56.6	
Gypsum	523.4	548.7	3 610.6	699.1	598.0	3 478.2	+9.0	-14.5	-3.7	
Potash K ₂ O	215.1	289.7	3 187.8	393.0	449.6	3 378.4	+55.2	+14.4	+6.0	
Salt	297.1	275.3	3 524.9	407.9	392.0	3 699.3	+42.4	-3.9	+4.9	
Cement	1 142.7	1 011.9	6 342.4	1 031.2	1 123.6	6 426.6	+11.0	+9.0	+1.3	
Clay products	7,082.9	7,786.2	43,667.1	9,000.4	9,407.4	55,780.9	+20.8	+4.5	+27.7	
Lime	122.0	112.8	1 042.8	154.2	149.1	1 173.9	+32.2	-3.3	+12.6	
Fuels										
Coal	2 017.4	2 062.5	16 380.5	1 577.9 ^r	1 914.1	15 587.0	-7.2	+21.3	-4.8	
Natural gas	7 006 636.4	5 714 349.9 ^r	57 861 433.7	6 480 339.4 ^r	6 647 323.9	58 128 999.6	-1.0	+2.6	+0.5	
Crude oil and equivalent	8 012.6	8 094.9 ^r	6 031.7	6 843.5 ^r	6 675.6	54 473.3	-17.5	-2.5	-9.3	

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

TABLE 3
Canada, Exploration, Development and Capital and Repair Expenditures by Mining and Exploration Companies⁽¹⁾ - by Province 1974-75

Year	Capital Construction				Capital machinery and equipment	Repair construction	Repair machinery and equipment	Total capital and repair	Outside or general exploration ⁽²⁾	Land and mining rights	
	On-property exploration ⁽²⁾	On-property development ⁽²⁾	Structures	Sub-total							
(millions of dollars)											
Atlantic Provinces ⁽³⁾	1974	1.7	19.7	26.8	48.2	29.9	16.7	96.9	191.7	10.1	(5)
	1975	2.0	26.0	36.7	64.7	36.0	5.5	116.3	222.5	13.2	0.5
Quebec	1974	6.3	59.4	126.6	192.3	68.5	10.6	138.5	409.9	21.4	2.6
	1975	4.5	72.8	163.8	241.1	101.4	11.9	142.4	496.8	25.2	(5)
Ontario	1974	7.1	73.2	44.6	124.9	70.9	17.3	122.7	335.8	19.6	3.1
	1975	8.3	98.6	52.3	159.2	84.6	25.3	141.0	410.1	22.8	(5)
Manitoba	1974	(4)	(4)	(4)	15.7	7.8	2.7	26.7	52.9	6.9	0.1
	1975	(4)	(4)	(4)	20.7	13.9	1.8	37.8	74.2	5.9	-
Saskatchewan	1974	(4)	(4)	(4)	30.3	23.4	7.0	33.5	94.2	6.3	0.1
	1975	(4)	(4)	(4)	22.4	71.6	11.3	38.4	143.7	9.7	0.3
Alberta	1974	(4)	(4)	(4)	18.7	20.7	0.4	9.2	49.0	4.1	1.2
	1975	(4)	(4)	(4)	18.2	33.6	2.3	15.2	69.3	3.6	0.3
British Columbia	1974	3.8	37.9	31.3	73.0	54.1	12.8	106.7	246.6	22.5	1.0
	1975	4.7	30.8	19.6	55.1	62.0	10.8	124.3	252.2	24.5	2.2
Yukon and Northwest Territories	1974	2.2	13.0	7.3	22.5	8.3	4.3	16.2	51.3	19.9	(5)
	1975	2.8	11.4	15.2	29.4	22.9	7.9	24.9	85.1	23.9	0.4
CANADA	1974	25.2	228.6	271.8	525.6	283.6	71.8	550.4	1431.4	110.8	20.2
	1975	26.1	274.9	309.8	610.8	426.0	76.8	640.3	1753.9	128.8	11.3

(1) Excluding the petroleum and natural gas industry, smelting and refining; (2) Including only field expenditures on physical work and surveys; (3) The Atlantic Provinces have been grouped because of the confidentiality clause of the Statistics Act; (4) The breakdown of capital construction for the Prairie Provinces is not shown because of the need to retain confidentiality but is included in the Canada totals; (5) Some data for land and mining rights are not shown because of the confidentiality clause of the Statistics Act, but are included in the Canada total.

1974 figures are final; 1975 preliminary final.

- Nil.

TABLE 4

Canada, Exploration, Development and Capital and Repair Expenditures by Mining and Exploration Companies¹ by Type of Mining 1974-75

	Year	Capital Construction		Structures	Sub-total	Capital	Repair	Repair	Total	Outside	Land and mining rights
		On-property (2) exploration	On-property (2) development			machinery and equipment		machinery and equipment	capital and repair	or general exploration (2)	
(millions of dollars)											
Metals - total	1974	20.0	172.2	213.5	405.7	156.6	58.7	383.3	1,004.3	18.8	(6)
	1975	21.6	217.6	256.7	495.9	214.2	52.8	456.5	1,219.4	21.7	(6)
Gold	1974	1.9	19.4	3.2	24.5	5.9	1.2	8.5	40.1	1.9	0.3
	1975	1.7	17.5	1.4	20.6	5.3	0.8	10.9	37.6	1.6	-
Copper-gold-silver	1974	5.0	51.0	41.7	97.7	66.7	14.7	108.7	287.8	3.3	(6)
	1975	6.5	54.2	47.9	108.6	51.8	10.3	125.1	295.8	5.2	0.7
Silver-lead-zinc	1974	3.2	17.8	17.9	38.9	13.8	5.6	19.3	77.6	3.8	(6)
	1975	4.1	25.0	26.3	55.4	29.3	7.2	23.7	115.6	3.5	-
Iron mines	1974	(3)	(3)	(3)	159.0	40.7	21.5	171.9	393.1	1.8	0.1
	1975	(3)	(3)	(3)	225.3	84.8	9.8	201.4	521.3	1.5	-
Other metals ⁽⁴⁾	1974	(5)	(5)	(5)	85.6	29.5	15.7	74.9	205.7	8.0	-
	1975	(5)	(5)	(5)	86.0	43.0	24.7	95.4	249.1	9.9	(6)
Nonmetals - total	1974	2.5	55.6	57.9	116.0	125.7	13.1	167.0	421.8	2.9	(6)
	1975	3.0	56.5	53.0	112.5	209.8	23.8	183.5	529.6	7.9	(6)
Asbestos	1974	0.4	27.4	17.6	45.4	28.9	2.4	50.7	127.4	0.2	(6)
	1975	0.5	28.9	13.0	42.4	19.3	4.1	46.0	111.8	0.1	(6)
Miscellaneous mining ⁽⁷⁾	1974	2.1	28.2	40.3	70.6	96.8	10.7	116.3	294.4	2.7	5.1
	1975	2.5	27.6	40.0	70.1	190.5	19.7	137.5	417.8	7.8	0.2
Metal and nonmetal exploration	1974	2.7	0.8	0.4	3.9	1.3	-	0.1	5.3	89.1	4.9
	1975	1.5	0.8	0.1	2.4	2.0	0.2	0.3	4.9	99.2	3.2
Mining - total	1974	25.2	228.6	271.8	525.6	283.6	71.8	550.4	1,431.4	110.8	20.2
	1975	26.1	274.9	309.8	610.8	426.0	76.8	640.3	1,753.9	128.8	11.3

- (1) Excluding the petroleum and natural gas industry, smelting and refining. (2) Including only field expenditures on physical work and surveys.
 (3) Some data for iron mines are not shown due to the confidentiality clause of the Statistics Act, but are included in total metals. (4) Other metals include nickel-copper mines, silver-cobalt mines, uranium mines and all other metal mines. (5) These data for other metal mines are not shown due to the confidentiality clause of the Statistics Act, but are included in total metals. (6) Some data for land and mining rights are not shown because of the confidentiality clause of the Statistics Act, but are included in total mining. (7) Miscellaneous mining includes coal mines, gypsum mines, salt mines, potash mines, quarrying, sand and gravel and other non-metal mines.

1974 figures are final; 1975 preliminary final.

- Nil.

TAXATION AND LEGISLATION AFFECTING MINING AND ALLIED INDUSTRIES IN CANADA

Federal

Incentives to Energy Conservation

The Federal Government's energy strategy and support programs were outlined by the Honourable Alastair Gillespie, Minister of Energy, Mines and Resources, in a speech at the Energy Conference for Manufacturing Executives held in Toronto on October 21. The Minister indicated that the Government's overall objective was for self-reliance within ten years. This was to be facilitated through such strategies as: pricing, fuel substitution, conservation, ownership, increased fossil fuel exploration, improved resource information flow, emergency preparedness, new delivery systems and a greater emphasis on energy research and development projects.

Mr. Gillespie also referred to a number of specific programs which have been introduced by the Government in support of these strategies. These included the May 1976 Budget provisions for an early write-off on energy-efficient equipment and a new sales and excise tax exemption for items designed to conserve energy or to develop renewable forms of energy. In addition, the Program for Advancement of Industrial Technology (PAIT) and the Productivity Enhancement Program (PEP) administered by the Department of Industry, Trade and Commerce provide assistance on a grant basis of up to 50 per cent of the cost of projects which are designed to improve energy efficiency and which meet other program criteria.

The Minister also mentioned that he was aware of and sympathetic to industry's concern that the Anti-Inflation program does not make provision for a credit or relief on excess revenue for energy conservation expenditures. Thus, after having made strong representation to the Anti-Inflation Board, he had been assured that the Board is prepared to give special consideration to cases in which firms undertake significant investments to generally improve energy use and productivity.

Provincial

Manitoba

A new regulation governing the Disposition of Certain Crown Minerals and the Rehabilitation of Commercial Quarries has just been issued under the *Mines Act*, and will become effective January 1, 1977. The new regulation, MR 226/76, repeals MR 327/44 Governing the Disposal of Quarrying Claims and M160-R2M Respecting Leases for Harvesting Peat Moss and Humidified Bog Vegetation. Appendix A of the regulation details work commitments and reports of work; Appendix B specifies requirements for rehabilitation, and Schedule C establishes minimum annual production levels.

The regulation defines "quarry minerals" as those minerals which are obtained by quarrying; i.e., shale, kaolin, bentonite, gypsum, clay, sand, gravel, peat, salt, coal, and any rock or stone used for purposes other than as a source of metal, asbestos, potash, oil or natural gas. Whereas quarrying was formerly undertaken by means of staking a claim, the new regulation requires the successful application for an Exploration Permit and either a Casual Permit or a Lease.

Application for an Exploration Permit must be accompanied by a fee of \$10; a cash deposit of the greater of \$1,000 or \$10 per acre; the legal land description if in surveyed territory, or a plan or map showing the location if in unsurveyed territory; the location and description of any prominent feature and any structures, roads, etc.; and a plan of exploration for the term of the permit. If rehabilitation is required, the applicant must submit an additional cash deposit not greater than twice the aforementioned cash deposit, together with a detailed plan of rehabilitation. Under certain conditions, cash deposits may be refundable. The permit area must be rectangular and its length must not exceed four times its width. The term of the Permit shall be five years, subject to work commitments of \$5, \$10, \$15, \$20 and \$25 per acre for the first, second, third, fourth and fifth year respectively. A cash payment may be made in lieu of work, refundable when and if the work is completed. Before commencement of production, the permit holder must apply for a Casual Permit or a Lease.

Application for a Casual Permit must be accompanied by a fee of \$5. The Permit specifies the quantity of the mineral that may be extracted, and sets the expiry date. The royalty, stated on the Permit, is established in Schedule A of the regulation, and ranges from 5 cents per ton for common stone to 50 cents per ton for bentonite, coal, dimension stone and salt. All material removed is subject to a charge of 5 cents per cubic yard in lieu of rehabilitation.

Application for a Lease must be accompanied by a fee of \$10; the legal land description or plan as required for an Exploration Permit, and evidence that the required work has been done, or that payment in lieu has been made. The area under lease may not exceed 160 acres for any quarry mineral with the exception of peat, for which total acreage is limited to 640 acres. The term of a Lease shall be ten years, renewable for further terms of ten years each, provided there is production in any year during the preceding term of the Lease. The rental is \$2 per acre, payable annually in advance provided there is production, and \$30 per acre if the Lease is not under production. An estimated royalty payment may be made with the annual rental. When production exceeds the requirement specified in Schedule C, up to ten Leases may be grouped for determining the annual rental.

To gain access to Crown minerals, it may be necessary to apply for a surface permit or surface lease under the *Crown Lands Act*.

With the exception of peat quarries or any quarry being operated under a Casual Permit, every owner of a commercial quarry is required to rehabilitate that quarry.

A rehabilitation plan is required prior to commencement of new operations on a quarry under this regulation, or upon conversion of an existing operation to the new specifications. The plan must be submitted accompanied by a fee of \$5 and a cash deposit of \$5,000. This cash deposit shall not exceed \$50,000 for the owner of several quarries.

METALLIC MINERALS AND PRODUCTS

Aluminum

At the end of September, the United States Council on Wage and Price Stability released a report of its findings on price behaviour in the aluminum industry. Particular attention was focussed on the economic downturn of 1974-1975, when the industry's production declined by 26 per cent, but prices of primary ingot remained relatively unchanged, with little or no discounting. According to this report, concentration in the United States aluminum industry is high and the major firms are pursuing a non-collusive but parallel pricing policy.

The Aluminum Company of America (Alcoa) and the government of Jamaica have reached a 40-year agreement on ownership of Alcoa's Jamaican bauxite operations and an eight-year understanding on bauxite levies. The Jamaican government will purchase all of Alcoa's mining and non-operating land and 6 per cent of the company's mining and refining assets. The joint venture, to be called Jamalco, has been assured a 40-year supply of bauxite. The agreement will reduce Jamaica's 8 per cent bauxite levy to 7-1/2 per cent for an eight-year period retroactive to January 1, 1976. In addition, Alcoa will withdraw its case against Jamaica before the International Centre for the Settlement of Investment Disputes.

Three of Alcan Aluminum Limited's Canadian smelters were still not producing at the end of the month because of strikes which started June 3. These smelters at Jonquière, Alma and Beauharnois, all in Quebec, have a combined annual capacity of approximately 553,400 tonnes. Mediation efforts to achieve a settlement in the dispute had been discontinued, but have now resumed. The Shawinigan, Quebec and Kitimat, British Columbia smelters, however, are still operating at a combined capacity of 353,800 tonnes.

Copper

Copper prices declined substantially during October, as the cash price of copper wirebars on the London Metal Exchange (LME) declined from 64.2 (U.S.) cents a pound at the end of September to 55.7 (U.S.) cents a pound by October 26. Faced with this free market price situation, producers in North America were forced to reduce their prices. By the end of October, Canadian producers were quoting U.S. selling prices of 70 (U.S) cents a pound for cathode and 70.625 (U.S.) cents a pound for wirebars, whereas Canadian market prices were reduced to 68.625 cents a pound for cathode and 69.25 cents a pound for wirebars.

Visible stocks of refined copper continued to increase during October. LME stocks increased from 559,950 tonnes on October 1, to 572,800 tonnes on October 22. New York Commodity Exchange stocks increased from 149,000 tonnes on October 1, to 156,650 tonnes on October 22.

The Intergovernmental Expert Group formed at the United Nations Conference on Trade and Development Preparatory Meeting on Copper will meet on November 1, 1976. Canada is a member of the "nucleus" of this Group, and shares responsibility for implementing the work program and for making recommendations to the reconvened Preparatory Meeting by March 1977. A special report on the September Preparatory Meeting can be found in the Special Item section of this report.

The United States Government has announced a set of new goals for its strategic stockpile of raw materials which, if approved by Congress, will involve substantial additions to present holdings of copper. As of August 31, 1976 stockpile holdings of copper were zero, but the new goal is 1.2 million tonnes. Purchasing could begin in 1977 or 1978.

Union Minière Explorations and Mining Corporation Limited (UMEX) began operations at its new Thierry copper deposit in the Pickle Lake area of Ontario in mid-August and commercial operating levels were reached by mid-September. Concentrates are to be shipped by road and rail to Noranda, Quebec for smelting. Refining will be carried out at Noranda Mines Limited's Montreal refinery.

Teck Corporation Limited announced a copper-nickel discovery located 35 miles northwest of Timmins, Ontario. The deposit was discovered by airborne geophysical methods, and subsequent diamond drilling has indicated significant nickel and copper mineralization. Further drilling will be carried out to provide additional information on the size and grade of the deposit.

Most Canadian copper mines recorded substantial improvements in earnings in the first six months of 1976 compared with the same period of 1975. This results from higher average copper prices and, in the case of British Columbia producers, a more moderate taxation system.

Lornex Mining Corporation Ltd. increased its average daily milling rate to 41,330 tonnes in the first six months of 1976, compared to an average of 32,502 tonnes during 1975. Copper production rose 24 per cent in the same period compared to the first half of 1975. Inventories of copper in concentrate were reduced to 25.1 million pounds by June 30, 1976 compared to 33.6 million pounds at the end of 1975. The increase in production and shipments results from a 1975 agreement with its concentrate purchasers, which allows Lornex to ship part of its production to a United States smelter. Previously the entire production from the mine was shipped to Japan.

According to Statistics Canada, production of primary copper in Canada for the first seven months of 1976 amounted to 412,043 tonnes compared to 423,612 tonnes in the same period of 1975.

Gold

The response was strong to the fourth gold auction held by the International Monetary Fund (IMF) in Washington, D.C. on October 27, 1976. A total of 779,200 ounces of gold was sold at bid prices ranging from \$116.80 (U.S.) to \$119.05 (U.S.) an ounce. The successful bids averaged \$117.71 (U.S.) an ounce compared with averages of \$109.40 (U.S.) \$122.05 (U.S.) and \$126.50 (U.S.) at the third, second and first auctions, respectively. The average auction bid price was a few cents below the \$117.85 (U.S.) afternoon fixing price on the London Gold Market on October 27. Market reaction to the auction was favourable and the afternoon fixing gold price on the London Market rose to \$122.75 (U.S.) an ounce on October 28. Bids were received for 4,214,400 ounces of gold, an increase from 3,622,400 ounces bid at the third auction and 2,114,000 ounces at the second. Gold sales were awarded to sixteen bidders: The Bank for International Settlements, the Bank of Nova Scotia, the Bank of Oman Ltd., major gold bullion dealers and some banks in the United States, Germany and Switzerland.

The IMF has announced that the fifth gold auction will be held on December 8, 1976.

The gold price for the month of October varied from a low of \$113.65 (U.S.) an ounce on October 11 to a high of \$123.50 (U.S.) an ounce on October 28, and the closing price on the London Market for October was \$123.15 (U.S.). The monthly average of the afternoon fixing gold price on the London Market for October was \$116.14 (U.S.) (\$112.98 Cdn) an ounce compared with \$114.14 (U.S.) (\$111.28 Cdn) an ounce in September.

Canadian gold producers have sponsored the formation of "The Gold Institute/l'Institute de l'Or" which is to be patterned after The Silver Institute, a United States organization that has been successful in promoting the interests of the silver industry. The Institute will share administrative offices with The Silver Institute in Washington, D.C. but their financial office will be located in Toronto, Ontario. Membership presently includes all Canadian lode gold mines and some of the major companies who produce gold as a byproduct. The objective is to make the Institute international with representation from other gold-producing countries, and to encourage membership by fabricators and other groups having an interest in the gold industry. Initially, it will be financed by an assessment based on the number of ounces of gold produced by member companies.

The objectives of the organization are to: encourage the development and use of gold and gold products; help develop markets for gold and its products; foster research and development related to the present and prospective uses of gold; spread knowledge and understanding of the use of gold; develop methods for improving the welfare of the gold industry; and collect and publish statistics and other information about production, distribution, marketing, consumption and the uses of gold and gold products.

Efforts by representatives of producers, users, research scientists, educators, mercantilists and government agencies has led to the formation of the International Precious Metals Institute (IPMI). IPMI is chartered in the State of New York as a non-profit organization to encourage the exchange of information and technology, to publish data and statistics, to conduct educational meetings and to promote the efficient use of precious metals.

Lead and Zinc

The strike at the Faro, Yukon Territory, mine of Cyprus Anvil Mining Corporation is now in its thirteenth week with little hope of a settlement in sight. It now appears likely that the Chigirishima lead smelter owned by the Toho Zinc Co. Ltd. in Japan will be forced to close sometime in November. The smelter and refinery complex has an annual capacity of 66,000 tonnes, but present inventory levels are low and Toho relies on Cyprus concentrates for 60 to 80 per cent of its feed. Toho Zinc has been trying to obtain supplies elsewhere in the Pacific Rim area but with little success as apparently only small amounts of concentrates are available for purchase on a spot basis in Australia, the Philippines and South Korea.

A new 25-year agreement (replacing an expired 50-year agreement) has been reached between ASARCO Incorporated and The Price Mining, Company covering the joint venture mining operations at Buchans, Newfoundland. Price has a 51 per cent interest and assumes management of all exploration; ASARCO has a 49 per cent interest and continues management of mining operations. The Buchans mine has been in production since 1928 and ore reserves are sufficient to support the existing operation through 1979. Exploration has indicated two lead-zinc deposits at Tulks Pond and Skidder Brook, Newfoundland, and economic feasibility studies will be completed by the end of this year. Information on the size and grade of these deposits is not yet available.

A process to recover lead, gold and silver from lead residue produced in zinc smelting operations has been developed by Mitsubishi Metal Corporation and Electrolytic Zinc Company of Australasia Ltd. The two companies have applied for patents initially in Japan, Belgium and Australia with the ultimate goal of marketing the technology to zinc smelters around the world. The Australian company, which produces about 36,000 tonnes of lead residues annually at its Risdon electrolytic zinc plant in Tasmania, now plans to build a facility based on the new technology at the zinc plant site. The residues have been sold in the past to lead companies in the United States.

The United States Federal Preparedness Agency announced new strategic goals for the stockpile administered by the General Services Administration. Both lead and zinc would have to be purchased in order to meet the proposed requirements. The proposal for restructuring the stockpile has been approved by the President and one major policy change is that future stockpiling will be based on the first three years of an emergency of indefinite duration (the present stockpile levels were being downgraded to a one-year preparedness level). It is doubtful that purchases of metal could begin until sometime in fiscal year 1977, and it is more likely that purchases will not actually begin until fiscal year 1978 as the plan awaits congressional approval and budgetary allocations for purchasing. The new levels for lead and zinc and the present holdings are as follows:

	<u>New Goals</u>	<u>Present Holdings</u>
	(tonnes)	
Lead	865,000	601,160
Zinc	1,131,000	374,830

Zinc prices in North America declined during the month as all producers rescinded the increases announced last August. The new producer prices are:

	U.S. (¢/lb.)	CAN. (¢/lb.)
Prime Western	37.0	36.25
Special High Grade	37.5	36.75

The price of virgin delivered lead increased during the month in North America. Canadian producers instituted a 1.25 cent a pound increase early in October, raising the price to 25.5 cents a pound. A split price of 25.5 to 26 cents a pound (up from 24.5-26.0 cents) is still in effect in the United States. Only ASARCO Incorporated is quoting at the lower price. The London Metal Exchange (LME) quote for lead remained steady during the month but the declining pound sterling value resulted in some erosion in the price upon conversion to Canadian currency. The LME quote opened the month at £283.5 a tonne (20.8 cents a pound Cdn.) and increased to £285 (19.7 cents a pound Cdn.) on October 28. Stocks of lead on the LME declined 200 tonnes during the month to 64,300 tonnes, while zinc stocks increased 7,900 tonnes to a level of 112,950 tonnes as of October 22.

Nickel

In September, all nickel producers announced increases of about 9.5 per cent in their published prices for nickel products. Most increases become effective in December. With producers' stocks continuing to increase, there have been reports of discounting for some time, particularly in Class II products such as oxide sinter and ferronickel. These discounts are said to range up to 7.5 cents a pound from current prices. Amax Inc., which raised the quoted price of its nickel briquettes to \$2.41 a pound effective December 1, announced that it is seeking contract buyers for its 1977 production. Amax is offering its briquettes at \$2.26 a pound for the first six months of next year and at 10 cents a pound below the producer cathode price for the second half of 1977.

The Hanna Mining Company has asked six Japanese stainless steel producers to join with it in bringing into production its Colombian Cerro Matosa garnierite deposit. Hanna plans to have the project in production in 1980 with an annual capacity of 20,500 tonnes of nickel contained in ferronickel. In its first 25 years of operation, the Company will be mining an orebody containing 18 million tonnes of ore averaging about 2.7 per cent nickel.

On October 1, the Federal Preparedness Agency (FPA) announced new goals for the United States' strategic and critical stockpile. One of the key elements in establishing the goals is that the stockpile be large enough to sustain a three-year supply in an emergency. If the FPA's recommendations are adopted, the stockpile objective for nickel would be increased from zero to 185,369 tonnes.

Silver and Mercury

On October 1, the United States Federal Preparedness Agency (FPA) announced revised objectives for many materials contained in the nation's strategic and critical stockpiles. The new goals are based on three key elements: that the overall stockpile be enlarged from the 1973 proposal for a one-year supply to a level which would sustain a three-year supply in an emergency; that essential civilian requirements be provided for; and that for each year used in planning, stockpile needs be estimated separately for defense and civilian requirements. The new requirements provide for increases or decreases in the objectives for some commodities while those for other materials remain unchanged. The objective for silver was reduced from 21,663,000 troy ounces to zero. The stockpile now contains 139,500,000 ounces, all of which is surplus to the new (zero) objective. For mercury, the objective was raised from 42,700 to 54,004 flasks (76 pounds each). Since the strategic stockpile now contains 199,964 flasks of mercury, the new surplus will be 145,960 flasks. However, none of the surplus silver or mercury may be disposed of without congressional approval. Legislation is now being drafted by the United States Administration concerning the method of disposal of the surplus silver and mercury contained in the strategic stockpile. It should be noted that the mercury contained in the strategic stockpile is exclusive of other excess mercury (amounting to 1,775 flasks) currently held by the United States Atomic Energy Commission (USAEC). Sale of specific quantities of the USAEC mercury does not require congressional authorization and portions of these stocks are periodically offered for disposal by the United States General Services Administration (GSA). Although GSA made several offerings in 1976 from USAEC stocks, no sales were effected.

Steel

On October 12, after a five-month lockout, plant and office workers at all four Sidbec-Dosco steel plants in Quebec and Ontario returned to work. Negotiations on a new contract began in January 1976 but, by May, had degenerated to the point where the Company decided on a lockout for security reasons. The Company claimed that productivity at the steel plants had declined by as much as 25 per cent in the fortnight prior to the lockout. Financial repercussions have yet to be fully assessed, but it is believed that Sidbec's 1976 loss will exceed the \$19 million loss registered in 1975. In addition, the lockout has prevented essential winterization work from being completed on the newly constructed

650,000 tonne-a-year Midrex direct reduction plant at Contrecoeur, Quebec, thereby delaying the expected fall start-up until May, 1977.

Start-up has been rescheduled to mid-1979 on The Steel Company of Canada, (Stelco) Limited's new greenfield steel development at Nanticoke, Lake Erie, and capital requirements for the modified Phase I program are now estimated at \$1.2 billion. The initial development of 1.1 million tonnes of annual ingot capacity will exclude any rolling mills, and ingots will be transported by rail or truck to Hamilton for rolling into a variety of finished steel products. Stelco continues to experience operating problems with the SL-RN direct reduction kiln at the Griffith Mine, Bruce Lake, Ontario. The kiln operated successfully in July and August, but was shut down in September for design modifications and removal of kiln accretions. In addition, depressed scrap prices render the economics of sponge iron production distinctly unappealing at the present time. According to Stelco officials, operations may resume at the end of November.

The Canadian steel industry is still presenting a mixed picture for 1976. Market demand for flat-rolled products is responding buoyantly to a mild economic upturn; however, the demand for long-products (structurals, rods, bars, etc.) remains depressed, largely due to a low level of activity in the construction industry. Dominion Foundries and Steel, Limited (Dofasco), which produces mainly flat-rolled steel products, has experienced an excellent year in response to burgeoning demand by the automobile industry. On the other hand, The Algoma Steel Corporation, Limited, which produces significant tonnages of structural steel and related products, has been struggling under the adverse market conditions pervasive in the Canadian construction industry. Stelco, which produces the largest range of steel products in Canada, has had a mixed year, as the demand for flat-rolled products has more than compensated for depressed markets for long-products. The activity of most regional steel producers has remained at a low level. In general, 1976 Canadian steel shipments are expected to remain at the comparatively low level of 1975.

On October 19, Arthur G. McKee and Company of Canada Ltd. met in Toronto with representatives from Canadian steel companies and government agencies to present recommendations on the use of the Fior process to produce briquettes for use in electric arc furnaces. Fior is a direct reduction process based on the use of iron ore fines and a gaseous hydrocarbon. The concept of Fior briquettes as an alternative supply of high quality iron units has generated significant interest among regional electric steel producers in Canada, as the process would reduce dependence on scrap, which has been periodically in limited supply and high-priced. McKee's initial market survey among regional steel producers in Canada has indicated a total Canadian demand for 1.8 million tonnes of Fior briquettes. The McKee proposal is to build two plants: one in western Canada to supply 850,000 tonnes of briquettes, and one in eastern Canada to supply 925,000 tonnes. The potential participants would assume an equity investment proportional to their product consumption. McKee is now in the process of soliciting participation in a detailed feasibility study on the concept, the cost of which would be borne equally by the participants.

Technical problems have resulted in the temporary suspension of activities at the largest blast furnace in the United Kingdom at the Llanwern works of the British Steel Corporation (BSC). Over the course of the three-week shutdown, forfeited semis production necessitated a temporary import of semis from other countries of the European Economic Community (EEC). It is now almost certain that BSC's steel production in 1976 will fall below 23 million tonnes, a level commonly regarded as the company's breakeven point.

World demand for steel, which was beginning to show positive signs of improving in mid-year, is now of much concern especially in the United States and the EEC. Demand for steel at the end of the third quarter was falling rapidly and the order books for the fourth quarter show a pronounced continuation of the downward trend. In the United States, the demand for steel was especially strong in the second quarter due largely to a modest boom in consumer spending on cars and appliances. This spending has since declined and the capital goods market remains depressed. Whereas the U.S. steel industry was operating at 90 per cent of production capacity in May, this has declined to just over 80 per cent in October. The situation in the EEC is even more gloomy and the very slow mid-summer upturn has recently been dramatically reversed. Emergency plans are currently being drawn up in Brussels by the EEC to combat the effects of renewed recession. These plans include a scheme for controlled reduced production, monitored by the High Commission, and measures to reduce European imports of steel (mainly from Japan). The reduction of Japanese imports into the EEC could have serious repercussions on the steel industry in Canada and the United States, where the bulk of Japanese shipments would probably be diverted.

Titane

La compagnie Inco Limited entreprendra au cours de l'hiver prochain des travaux de géophysique sur un gisement de magnétite titanifère situé dans le comté de Terrebonne à environ 45 milles au nord-est de Montréal. En effet, un arrangement a été conclu entre la Laurentian Titanium Mines Ltd. qui détient les droits miniers sur ce gisement, et Inco Limited selon lequel Inco s'engage à investir un certain montant en travaux d'exploration et, éventuellement, devenir propriétaire de ce gisement advenant des résultats intéressants. Selon le président de la Laurentian Titanium Mines, M. Salamis, la dernière estimation des réserves de ce gisement indiquait 112,500,000 tonnes de magnétite titanifère à moins de 200 pieds de profondeur et 14,500,000 tonnes d'ilménite à moins de 225 pieds de profondeur. La magnétite titanifère pourrait être concentrée jusqu'à 68.3 pour cent en fer et ensuite boulettée. La teneur de minerai d'ilménite est de 20 pour cent en TiO_2 et 27.6 pour cent en fer.

La compagnie Fer et Titane de Québec, inc., (Q.I.T.) doit faire face actuellement à une situation fort peu intéressante. Alors que la demande pour la Sorelslag est très élevée, la compagnie voit ses réserves de Sorelmétal augmenter sans cesse. En effet, à l'heure actuelle la demande pour la scorie de titane est supérieure à la production tandis que les inventaires en fonte ont atteint un niveau record depuis le début de la production en 1948. La compagnie entrevoit, comme solution possible à cette situation, un ralentissement de la production afin d'écouler une partie des réserves de Sorelmétal.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

The final report of the Beaudry Study Committee on health and environmental aspects of the asbestos industry in Quebec is to be released in the National Assembly on October 29. The Committee, headed by Judge Beaudry, was created on June 18, 1975 and holds the same powers and privileges as a Commission of Inquiry. It is anticipated that recommendations will be far-reaching, as the Committee has the mandate to advise the government on the regulation of allowable asbestos levels in the workplace.

Asbestos Corporation Limited (ACL) announced that it will reactivate open-pit operations at the King-Beaver mine in Thetford Mines, Quebec. Both open-pit and underground operations at this mine will provide mill feed to the Normandie mill when open-pit mining is phased out at the Normandie mine in September, 1977. Production problems have plagued ACL operations since the King-Beaver mill burned in December 1974. Presently, only underground ore is being transported to and treated at the company's two British Canadian mills which are maintaining almost continuous operation.

MINERAL FUELS AND PRODUCTS

Coal

The Steel Company of Canada, Limited (Stelco) has purchased a 25 per cent interest in the coal licences of the Elk River project in southeastern British Columbia. Stelco made the purchase from Scurry-Rainbow Oil Limited, which retains a 10 per cent interest. The remaining coal interests are held by Home Oil Company Limited (15 per cent) and Elco Mining Limited, a consortium of six European steel companies (50 per cent).

Kaiser Resources Ltd. has announced that a trial shipment of 20,000 tonnes of coking coal will be made to Brazil in the latter part of the year. Although Japan is the main market for Kaiser coal, Kaiser has been diversifying its markets and now has contracts with steelmakers in South Korea and Mexico.

In late October Kaiser Steel Corporation sold 3,500,000 shares of its holding of Kaiser Resources to Canadian buyers. As a result of this transaction, public ownership of Kaiser Resources is now 41 per cent (mostly Canadian-held), while Kaiser Steel retains 32 per cent and Japanese interests hold 27 per cent.

The Cape Breton Development Corporation (Devco) is now operating its new coal preparation plant at Grand Lake, New Sydney, Nova Scotia. The first shipment of coal will be sent out to the Steel Company of Canada (Stelco) by the end of the month. Devco has a five-year contract with Stelco in addition to contracts with several European buyers.

Petroleum and Natural Gas

In anticipation of increased deliveries of domestic oil to Montreal refineries, the Federal Government has decided to lower maximum oil export levels from the current 430,000 barrels per day (b/d) to 400,000 b/d effective November 1, 1976. The National Energy Board (NEB) estimates a further reduction in the export limit to 385,000 b/d during December 1976, in compliance with the target set by Ottawa late last year when 1976 export levels were first forecast. The NEB has also decided to re-impose the heavy oil export quota on all but Lloydminster blended crude oil in an attempt to maintain export sales of this commodity during the off-season. For November 1976, the quota was set at 25,000 b/d. Traditional buyers of the heavy oils will be able to obtain their full allotment of Canadian oils only if they take the quota quantity. They cannot substitute light or medium crudes for the heavy oil covered by the quota.

NEB hearings on oil supply and requirements commenced in Calgary on October 19. Twenty submissions were made by various interested parties, including the Canadian Petroleum Association, major oil companies, smaller independents and government agencies such as the British Columbia Energy Commission and the Alberta Energy Resources Conservation Board. Federal participation in the hearings commenced in Ottawa on October 26.

During the first 9 months of 1976, a total of 4,100 wells were drilled in Canada compared to 2,912 wells completed over the same period in 1975. The 1976 total includes 3,760 wells drilled in Alberta, where drilling activity is expected to reach an all-time high.

As oil exploration in the Mackenzie Delta/Beaufort Sea region has not met with much success, the Beaufort-Delta Oil Project Limited study group will be phased out by the end of the year. The group was formed in 1974 by five oil and pipeline companies to study the engineering, environmental and financial aspects of a crude oil pipeline which would connect the Mackenzie delta with existing pipeline systems in Alberta. A *pro forma* application for a pipeline will be completed by the group by the end of the year, and could be presented to the NEB and other regulatory agencies if sufficient oil reserves are found at some future date. Data covering the environmental, social, engineering, financial and other related issues will be compiled into reports and retained for future use.

Dome Petroleum Limited has closed down its operations in the Beaufort Sea for the winter. Only the Tingmiark K-91 well was drilled beyond surface casing and the potential gas well has been partly cased, plugged and suspended. As planned, the other two wells, Kopanoar M-13 and Nektoralik K-59, have been suspended after surface casings were set. Dome expects each of its three drillships to complete one or two holes in the 1977 season.

Uranium

Agnew Lake Mines Limited, a subsidiary of Kerr Addison Mines Limited, has borrowed 600,000 pounds of uranium oxide (U_3O_8) from an unnamed supplier and has an option to borrow up to a further 1.4 million pounds by the end of 1977. The 600,000 pounds of U_3O_8 have been delivered to a South Korean utility. Agnew Lake is also reported to have contracts to supply 1.75 million pounds of U_3O_8 to the Swedish Nuclear Fuel Supply Company between 1977 and 1981, and 1.1 pounds of U_3O_8 to a group of four New England utilities over a similar period.

Westinghouse Electric Corporation of Pittsburgh has filed suit against 29 uranium producers in the United States, Canada and other countries. Charges by Westinghouse include: fixing prices, rigging of bids, withholding of uranium from the market, and a producer boycott against Westinghouse. Increased uranium prices have caused Westinghouse to terminate supply contracts with about 27 utilities, a measure which resulted in the utilities' earlier suit against Westinghouse.

Ranchers Exploration and Development Corporation of New Mexico has begun a project which, if successful, will allow the economic recovery of uranium oxide (U_3O_8) from low-grade (0.05 per cent) mill tailings. The initial project is near Naturita, Colorado where Ranchers hopes to recover about 300,000 pounds of U_3O_8 .

Wyoming Mineral Corp., a subsidiary of Westinghouse, has begun construction of a full-scale *in situ* uranium leaching plant at its Irigaray property in northeastern Wyoming. Capacity of the plant when in full operation is expected to be 500,000 pounds of U_3O_8 per year, with first production beginning in 1978.

In a recent policy statement, President Ford asked for restraint on the spread of uranium enrichment and fuel reprocessing technologies pending a complete examination of economic, environmental protection and safety issues, and safeguards against terrorist activity. Such an examination would further delay the advent of plutonium and uranium recycling in nuclear power plants.

URENCO, the European centrifuge uranium enrichment company, has commissioned the first cascade of its 200,000 separative work-unit per year plant at Capenhurst, England. British Nuclear Fuels Limited operates the plant which should be fully commissioned by 1979.

A lower increase in demand for electricity than predicted has led the European Economic Community to lower its installed nuclear capacity forecast by at least 25 per cent. It is now estimated that installed nuclear capacity in 1985 will be about 125 gigawatts (GWe), down from the 160-200 GWe estimate made in 1974. There is some feeling that even this latest estimate is somewhat optimistic.

Operators of nuclear facilities in Canada will now have to carry \$75 million in no-fault liability insurance under the terms of the recently legislated Nuclear Liability Act.

Problems in design and mechanical weakness in parts of the production line have caused a slowdown at the Rossing uranium mine and mill operation in Southwest Africa. It is now expected that the 5,000 tonne-per-year capacity will not be reached until 1978.

South Africa and Southwest Africa expect to achieve a combined annual production of 11,000 tonnes of yellowcake by 1978, with possible expansion to 16,000 tonnes per year by 1985. A joint survey by South Africa's Geological Survey and Atomic Energy Board is being carried out on several target areas.

SPECIAL ITEM

United Nations Conference on Trade and Development (UNCTAD)
Preparatory Meeting on Copper
Geneva, September 27-October 1, 1976

The Preparatory Meeting on Copper was convened by the Secretary-General of UNCTAD as a result of Resolution 93(IV) of the UNCTAD Conference held in Nairobi in May, 1976. This Conference had adopted the "Integrated Programme for Commodities", which had set out procedures and a timetable for studying agreed objectives and a range of international measures. These were to be assessed in relation to a commodity coverage which would take into account the interests of developing countries in 18 specified commodities, including copper, and in relation to a decision to hold preparatory meetings and a negotiating conference on a common fund no later than March 1977.

The Consultation on Copper held in March 1976 between copper-consuming and copper-producing countries also contributed to initiating the Preparatory Meeting on Copper. (See the special report Item in "The Canadian Mineral Industry Monthly Report", March 1976 issue). The March Consultation agreed to set up a working sub-group, to collect and assess copper industry data and studies, and to study practical arrangements for the setting up of a permanent intergovernmental body on copper. The Preparatory Meeting on Copper was held before this working sub-group had been convened.

Canada attended both the March Consultation and the Nairobi UNCTAD Conference, and was again represented at the Preparatory Meeting on Copper.

A joint statement by copper-exporting countries (including Canada) was presented to the Preparatory Meeting and became the basis for the "Agreed Conclusions" document prepared in the plenary sessions which followed.

The Preparatory Meeting quickly became polarized on the issue of a proposed permanent body on copper. The proposal was widely favoured by the major copper-consuming and producing countries, including Canada, but was vigorously opposed by the "Group of 77" countries led by Peru, Indonesia, Mexico and Saudi Arabia. These countries wished to move quickly towards an international commodity agreement on copper, preferably under the Integrated Program.

It was accepted, however, that an Intergovernmental Expert Group should be convened, which would be open to participation by any country represented at the Preparatory Meeting. The "nucleus" of this

Group, though, would be comprised of representation from each of: the 14 copper-exporting countries, the 14 copper-consuming countries, the European Economic Community and the Secretariat of the Intergovernmental Council of Copper Exporting Countries. (Canada was one of the copper-exporting countries chosen to form part of the nucleus.) These members would share the responsibility for the implementation of the Group's work program. The terms of reference of the Intergovernmental Expert Group are as follows:

- a) To examine appropriate measures and techniques required to achieve the objectives of the integrated program;
- b) To determine financial requirements resulting from the measures and techniques examined;
- c) To make the necessary examination of the situation in the copper market and initiate the collection and analysis of relevant information and statistical data;
- d) To consider the interim measures which may appear to be necessary; and
- e) To make appropriate recommendations to the next Preparatory Meeting on Copper, not later than March 1977.

The question of the establishment of a permanent body on copper was not satisfactorily resolved, nor was the question of the relationship of any such body to UNCTAD. The issue of interim measures was pursued strongly by some exporter countries, and the trend in copper prices since the Preparatory Meeting has probably added urgency to their position and made it a likely topic for further discussion at future meetings.

The time available for the Intergovernmental Expert Group to do its work is very limited and it is expected that working sessions will be held in Geneva at the beginning of November, and during February and March of 1977.

NEW PUBLICATIONS

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

Preprints, *Canadian Minerals Yearbook, 1975*:
Iron Ore; Molybdenum; Rhenium; Silicon, Ferro-
silicon, Silicon Carbide and Fused Alumina;
Sodium Sulphate.

Singe copies of preprints are available from Publishing Center, Department of Supply and Services, Ottawa, for 50 cents a copy.

