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The Canadian Mineral Industry Monthly Report

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POUR LA CONSULTATION SUR PLACE~~

July, 1978



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

Minerals

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 an expression of official Government of Canada views.

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

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THE CANADIAN MINERAL INDUSTRY FOR JULY

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

HIGHLIGHTS

1. Canada's unadjusted index of Real Domestic Product was 134.1 in May, 1978, a decrease of 0.1 per cent from April.
2. The May index of Mines, Quarries and Oil Wells was 98.9 a decrease of 1.0 per cent from April.
3. Alcan Canada Products Limited announced a *force majeure* on rolled and extruded products July 26, 1978.
4. The price of gold on the London Gold Market reached an all-time high of \$201.30 (U.S.) in July.
5. Steel Alberta Ltd. acquired two iron ore properties located near Butte, Montana.
6. The Quebec Asbestos Mining Association has commissioned a study to evaluate asbestos-related research and assess opportunities and limitations of their realization in Quebec.
7. The International Lead and Zinc Study Group convened an extraordinary plenary session in Vienna the week of July 3, 1978.
8. The Fourth Preparatory Meeting on Copper was held in Geneva from July 17 to July 21, 1978.

ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product in terms of 1971 = 100. The overall RDP index in May was 134.1, a decrease of 0.1 per cent from April 1978.

The May RDP index for mines, quarries and oil wells was 98.9, down 1.0 per cent from 99.9 in April. The metal mines index decreased by 3.6 per cent over the month, due in part to a decrease of 11.7 per cent for placer and gold quartz mines. The index for non-metal mines decreased 3.5 per cent while asbestos mines increased 5.5 per cent during the month.

The May index for primary metal mines was down 1.8 per cent from that of April with steel pipe and tube mills and iron foundries recording a decrease of 22.6 per cent and 15.5 per cent respectively.

Table 2 compares volume of production in nineteen major Canadian minerals. Output increased significantly in May compared with April for copper (9.6 per cent), lead (11.2 per cent), uranium (40.6 per cent), cement (59.0 per cent) and clay products (25.9 per cent). Output decreased significantly for nickel (14.6 per cent), silver (19.8 per cent) and zinc (22.9 per cent).

Table 3 shows the percentage of total capital and repair expenditures by Canadian controlled establishments for selected industry groups.

TABLE 1

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

Industry or Industry Group	1977			1973			Percentage Changes			
	Apr	May	Average 1st 5 Months	Apr	May	Average 1st 5 Months	Apr 1978	May 1978	May 1978	1st 5
							Apr 1977	May 1977	Apr 1978	Months 1978 1977
Real Domestic Product	129.3	130.4	125.4	134.3	134.1	129.0	3.9	2.8	-0.1	2.8
Primary Industries										
Agriculture	146.8	128.8	74.5	156.3	141.4	83.1	6.5	9.8	-9.5	11.5
Forestry	100.3	90.2	109.1	101.1	97.5	108.8	0.8	8.1	-3.6	-0.3
Fishing and Trapping	44.8	66.5	42.6	58.8	111.0	55.8	31.3	66.9	88.8	30.9
Mines, Quarries and Oil Wells	109.8	118.2	114.3	99.9	98.9	104.3	-9.0	-16.3	-1.0	-3.7
Metal Mines	104.1	119.7	109.9	86.7	83.6	93.0	-16.7	-30.2	-3.6	-15.4
Placer and Gold Quartz Mines	77.7	71.9	77.4	77.0	68.0	71.9	-0.9	-5.4	-11.7	-7.2
Iron Mines	132.7	140.6	123.3	24.3	23.8	66.2	-81.7	-83.1	-2.1	-46.3
Other Metal Mines	98.3	116.9	103.2	102.6	99.1	100.7	4.4	-15.2	-3.4	-7.0
Mineral Fuels	108.9	110.6	114.9	103.0	102.3	109.1	-5.4	-7.5	-0.7	-5.0
Coal Mines	212.3	215.2	222.7	224.0	210.4	211.5	5.5	-2.2	-6.1	-5.0
Crude Petroleum and Natural Gas	100.4	102.0	106.0	93.1	93.5	100.8	-7.3	-8.3	0.4	-5.0
Nonmetal Mines	129.7	130.9	131.5	125.8	121.4	122.4	-3.0	-7.3	-3.5	-7.0
Asbestos Mines	108.0	104.3	108.6	85.3	90.0	87.2	-21.0	-13.7	5.5	-19.7
Secondary Industries										
Manufacturing	127.4	125.6	124.0	136.5	132.6	129.6	7.1	5.6	-2.9	4.6
Nondurable Manufacturing	124.5	122.0	120.7	133.3	129.0	127.9	7.1	5.7	-3.2	5.9
Petroleum and Coal Products Industries	120.6	130.7	133.1	115.5	116.4	126.5	-4.2	-10.9	0.8	-5.0
Durable Manufacturing	130.3	129.2	127.2	139.7	136.1	131.3	7.2	5.3	-2.6	3.3
Primary Metal Industries	116.8	118.6	117.0	129.8	127.5	126.8	11.1	7.5	-1.8	8.3
Iron and Steel Mills	124.8	126.0	124.3	140.9	142.1	137.5	12.9	12.8	0.9	10.6
Steel Pipe and Tube Mills	113.2	109.7	117.0	162.1	125.5	140.3	43.2	14.4	-22.6	20.0
Iron Foundries	126.4	120.5	128.0	132.0	111.6	127.4	4.4	-7.4	-15.5	-0.5
Smelting and Refining	102.5	107.4	102.8	109.5	109.5	108.7	6.8	2.0	0.0	5.8
Nonmetallic Mineral Products Industries	125.4	147.8	115.6	132.0	141.5	117.7	5.3	-4.3	7.2	1.8
Cement Manufacturers	107.9	154.4	95.2	113.0	145.4	93.6	4.7	-5.8	28.7	-1.6
Ready-mix Concrete Manufacturers	119.9	165.4	97.1	102.8	141.2	88.3	-14.3	-14.6	37.4	-9.0
Construction Industry	107.2	118.1	105.4	105.9	114.0	100.9	-1.2	-3.5	7.6	-4.3
Transportation, Storage, Communication	135.8	138.5	132.9	140.8	142.1	137.0	3.7	2.6	0.9	3.1
Electric Power, Gas and Water Utilities	144.5	131.6	157.5	157.0	138.9	172.1	8.7	5.5	-11.5	9.3
Trade	134.5	140.4	127.5	140.2	146.0	131.0	4.2	4.0	4.1	2.7
Finance, Insurance, Real Estate	140.7	143.4	140.7	146.2	147.0	146.1	3.9	2.5	0.5	3.8
Community, Business and Personal Service	130.0	130.1	129.4	133.9	134.0	133.3	3.0	3.0	0.1	3.0
Public Administration and Defence	122.0	124.1	122.8	123.6	126.9	123.6	1.3	2.3	2.7	0.7

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

	1977			1978			Percentage Changes			
	April	May	Total 5 months	April	May	Total 5 months	May 78	May 78	1st 5 months	
							May 77	April 78	1978 1977	
Metals										
Copper		50.3	79.8	338.0	61.5	67.4	315.6	- 15.5	+ 9.6	- 6.6
Gold	kg	4 219.5	5 064.1	22 516.1	4 606.4	4 277.3	21 545.3	- 15.5	- 7.1	- 4.3
Iron ore		3 648.4	5 615.2	14 130.8	1 844.4	1 645.7	7 898.3	- 70.7	-10.8	-44.1
Lead		31.2	24.5	117.6	20.5	22.8	124.4	- 6.9	+11.2	+ 5.8
Molybdenum	t	1 403.6	1 310.1	6 463.6	1 200.1	-1 084.5	5 573.4	- 17.2	- 9.6	-13.8
Nickel		19.8 ^r	19.6	101.3	17.1	14.6	81.4	- 25.5	-14.6	-19.6
Silver (1)	t	119.5	118.6	591.4	118.1	94.7	539.4	- 20.2	-19.8	- 8.8
Uranium	t	320.2	518.4	1 928.8	755.2	1 061.5	3 249.1	+104.8	+40.6	+68.5
Zinc		108.4	83.3	425.0	89.8	69.2	391.8	- 16.9	-22.9	- 7.8
Nonmetals										
Asbestos		122.6	117.7	601.3	96.3	105.2	510.0	- 10.6	+ 9.2	-15.2
Gypsum		569.7	644.3	2 274.0	634.1	662.1	2 507.0	+ 2.8	+ 4.4	+10.3
Potash K ₂ O		606.7	473.6	2 482.8	520.7	541.2	2 678.4	+ 14.3	+ 3.9	+ 7.9
Salt		394.0	312.8	2 471.0	428.0	486.1	2 657.5	+ 55.4	+13.6	+ 7.6
Cement		724.1	1 040.3	3 108.6	648.5	1 031.3	2 982.7	- 0.9	+59.0	- 4.1
Clay products	\$000	7,793.6	9,920.5	32,731.8	8,272.5	10,413.8	29,626.5	+ 5.0	+25.9	- 9.5
Lime		146.8	165.1	742.4	168.6	178.4	801.5	+ 8.1	+ 5.8	+ 8.0
Fuels										
Coal		2 342.4	2 504.0	12 733.4	2 397.2	2 477.0	12 584.6	- 1.1	+ 3.3	- 1.2
Natural gas	000 m ³	7 618 450.3	7 501 473.4	39 560 055.2	7 336 867.5 ^r	6 959 573.8	38 950 450.1	- 7.2	- 5.1	- 1.5
Crude oil and equivalent	000 m ³	6 315.0	6 805.6	34 038.1	5 772.8 ^r	6 232.0	32 048.3	- 8.4	+ 8.0	- 5.9

(1) Tonnes uranium (1 tonne U = 1.299 9 short tons U₃O₈)
^r Revised.

TABLE 3

Percentage of Total Capital and Repair Expenditures by Canadian Controlled* Establishments in Selected Industry Groups

	Capital			Repair			Capital and Repair		
	1976 ¹	1977 ²	1978 ³	1976 ¹	1977 ²	1978 ³	1976 ¹	1977 ²	1978 ³
Primary metal industries	80.2	85.4	89.0	86.7	87.7	88.2	83.6	86.5	88.7
Metal fabricating industries	69.5	59.5	44.8	63.7	64.8	64.8	67.3	61.6	52.2
Non-metallic mineral products industries	41.2	29.0	37.7	38.3	36.2	34.9	40.0	31.6	36.4
Petroleum and coal products industries	N.A.	5.1	7.6	5.8	4.7	5.1	N.A.	5.0	6.6
Total manufacturing industries ⁴	54.9	50.5	51.4	54.3	53.6	53.7	54.7	51.5	52.2

* For a definition of canadian controlled establishments, see Statistics Canada, *Domestic and Foreign Control of Manufacturing Establishments in Canada* (Catalogue 31-401); *Industrial Organization and Concentration in Manufacturing, Mining and Logging Industries* (Catalogue 31-402).

¹ Actual; ² Preliminary actual; ³ Intentions; ⁴ Includes non-mineral as well as mineral manufacturing industries.

N.A. Not available for publication.

TAXATION AND LEGISLATION AFFECTING
MINING AND ALLIED INDUSTRIES IN CANADA

Provincial

Alberta

Under the *Mines and Minerals Act*, the Coal Royalty Regulations (A.R. 193/76) are amended by replacing Schedule A which details the monthly royalty formula. The new Schedule A restates the existing formula and applies it specifically to named mine sites.

British Columbia

The Mineral Act Clarification Act, Bill No. 25, is intended to make it clear that rent has been payable for mineral claims each year since January 1, 1974.

Under the *Petroleum and Natural Gas Act*, 1965, regulation 238/78 amends the Drilling and Production regulation 628/76 by converting all measurements to metric.

Prince Edward Island

As indicated last month, the new *Mineral Resources Act* was introduced in the General Assembly and received first reading on June 28 as Bill No. 18.

Newfoundland

The *Quarry Materials Act*, 1976, is amended by Bill 79. The definition of "beach" has been clarified and the definition of "quarry material" has been expanded to include topsoil, clay and marl. New sections require that royalty be paid on unlawfully removed quarry material, and would permit some material to be removed for sampling, assaying and testing.

Saskatchewan

The Petroleum and Natural Gas Regulations, 1969 are again amended by SR 208/78 by revising section 57 (definitions); section 58 (constants in royalty formula); a new section 62 requires the operator to remit royalty; and sections 63 and 63A (application for incremental oil) are revised.

A new regulation *The Oil and Gas Incentive Regulations*, 1978 has been established under the *Mineral Resources Act* as SR 209/78.

METALLIC MINERALS AND PRODUCTS

Aluminum

On July 26, 1978 Alcan Canada Products Limited announced that due to legal strike action at its Kingston plant, Kingston, Ontario, it was necessary to invoke *force majeure* on the sale of rolled and extruded products from that plant.

In July three United States aluminum companies increased their price of aluminum ingot U.S. 3.00 cents a pound to U.S. 56 cents a pound. In May 1978, Kaiser Aluminum & Chemical Corporation, the third largest producer in the United States, raised its price of primary aluminum ingot U.S. 4.00 cents a pound to U.S. 57 cents a pound. The other major world producers have maintained their price at U.S. 53 cents per pound.

Construction has started on a 800 000 tonne per year alumina plant in the Shannon River estuary in the Republic of Ireland. Cost of the project has been estimated at over \$500 million and it is expected to be in operation by 1982. Auginish Alumina Ltd., the company formed to operate the plant is a joint venture in which Alcan Ireland Limited has a 40 per cent interest; Billiton Aluminum Ireland Limited a 35 per cent interest and Anaconda Ireland Co. a 25 per cent interest.

Copper

During July, the press carried a number of articles on rumours of Export Development Corporation (EDC) plans to finance the Cerro Colorado copper project in Panama. EDC is a commercially self-sustaining federally-owned enterprise that facilitates and develops Canada's export trade by providing insurance, guarantees, loans and other financial facilities. EDC denies that a financing agreement has yet been signed with Panama but has acknowledged that it is under consideration. Texasgulf Inc. recently completed a feasibility study on the large Panamanian copper deposit and this company has an option to acquire 20 per cent equity in the planned facility which will include an open pit mine and a smelter. A production rate of 27 million metric tonnes of ore and 187 000 tonnes of blister copper per year is envisaged, with production starting in 1984. The deposit contains 1.4 billion tonnes of 0.78 per cent copper and minor values of silver, gold and molybdenum. Texasgulf estimates the project costs at \$900 million in 1977 U.S. dollars.

Statistics Canada reports the production of primary copper during the first five months of 1978 at 315 635 tonnes, down 6.6 per cent from the first five months of 1977. Refined copper production in the first five months of 1978 was up 17 per cent at 223 475 tonnes while producers' domestic shipments of refined copper were also up from the previous year by 16 per cent at 105 386 tonnes.

Copper prices on commodity exchanges drifted upwards during July on the basis of an additional small drop in London Metal Exchange (LME) warehouse stocks. The LME cash wirebar opened in July at U.S. 57.9 cents per pound and ended the month at U.S. 62.2 cents. Confusion reigned in North American producer pricing as U.S. producers continued their price war. Several U.S. producers at the beginning of July lowered the price of delivered cathode to U.S. 62.5 - 63.0 cents per pound. Others soon followed while Kennecott Copper Corporation and Cities Service Canada Ltd. continued to base their copper price on the previous day COMEX quotation. By mid-month, five different producer copper prices were available in the U.S.A. However, as the month progressed and copper prices on the exchanges strengthened, most producers increased their posted prices to U.S. 65.0 cents, which prevailed at month-end. Meanwhile, Anaconda Copper and Brass Co. has announced that as of August 1, it will adopt a COMEX based producer price, bringing to three the number of U.S. producers that have adopted a COMEX price basis. The Canadian producer price reflected the price changes in the U.S. market by declining Cdn. 2 cents per pound for cathode, to 71 cents early in July and increasing to Cdn 73 cents per pound at month-end.

The UNCTAD Fourth Preparatory Meeting on Copper in Geneva, July 17-21 failed to achieve any progress towards establishing a consultative body on copper. While the purpose of the meeting was to complete negotiations on a draft charter for the proposed body; Peru, with the support of most developing producer countries, managed to bring the negotiations to a standstill by rejecting the draft charter and introducing a new proposal. The Peruvian proposal would have a Committee on Copper of specified duration set up within UNCTAD. Canada along with several other producer countries and the principal consumer countries oppose both a close association of the proposed consultative body with UNCTAD, and a restrictive time-frame for its duration.

Gold

The price of gold increased sharply towards the end of the month and reached an all-time high of \$201.30 (U.S.) an ounce of gold on the London Gold Market on July 28, 1978. The previous high of \$197.50 (U.S.) was recorded on December 30, 1974 caused by expectations that there would be a strong demand by the United States public when they could officially hold gold on and after December 31, 1974. The price of gold was comparatively stable until July 20, 1978 and varied in a price range of \$182.75 (U.S.) an ounce to \$186.70 (U.S.) an ounce. The uncertainty in the world's economic future and the

instability of the world's currencies, especially the U.S. dollar were largely responsible for the price increase. The monthly average gold price for July 1978 of the afternoon fixings on the London Gold Market was \$188.73 (U.S.) (\$212.22 Cdn.) an ounce of gold compared with \$183.75 (U.S.) (\$206.10 Cdn.) an ounce in June.

The Canadian government has authorized the Royal Canadian Mint to strike 200,000 commemorative \$100.00 gold coins in 1978. The coins will contain 15.551 grams (0.5 ounces) of gold and sell for \$150 per coin. The government has under consideration the minting of a one ounce gold bullion coin.

At the annual meetings of Dickenson Mines Limited and Robin Red Lake Mines Limited held on June 30, 1978 shareholders of each company approved the amalgamation of the two companies. The name of the amalgamated corporation will be Dickenson Mines Limited. The shares of Dickenson will be exchanged on a one-for-one basis and those of Robin at one share of the amalgamated corporation for 2½ shares of Robin.

The amalgamation will affect the corporate structure but not the physical operation of the two mines. The Robin ore structure is an extension of that occurring on the Dickenson property. The Robin Red Lake ore is being mined through extensions of the underground workings of Dickenson onto Robin ground and is treated in the Dickenson mill.

A contract has been awarded for the deepening of Dickenson's internal shaft by 183 metres, from the 1 475 metre level to the 1 658 metre level.

The International Monetary Fund (IMF) held its twenty-third gold auction on July 5, 1978 under the bid price method and awarded 470,000 fine ounces of gold to successful bidders at prices ranging from \$183.97 (U.S.) an ounce to \$185.01 (U.S.) an ounce and averaging \$184.14 (U.S.) an ounce. The average price at the twenty-second gold auction was \$183.09 (U.S.) an ounce. The afternoon fixing price on the London Gold Market on July 5 was \$184.20 (U.S.) an ounce. Competitive bidding was light and bids were received for only 797,200 ounces of gold. Awards were made to nineteen successful bidders, mainly European and American banks and bullion dealers. Over 83 per cent of the bids were in the price range of \$183.00 (U.S.) to \$184.99 (U.S.) an ounce.

In addition 20,800 ounces of gold were awarded to the member countries of Cyprus and Mauritania who submitted non-competitive bids. The awards were made at the average auction price of \$184.14 (U.S.) an ounce of gold.

On July 18, the Treasury Department of the United States held its third gold auction and awarded 300,000 ounces of gold to nine successful bidders at prices ranging from \$185.05 (U.S.) an ounce to \$189 (U.S.) an ounce and averaging \$185.16 (U.S.) an ounce. The Bank of Oman and European banks and bullion dealers were awarded most of the gold. The afternoon fixing price on July 18 was \$184.85 (U.S.) an ounce, near the average bid price.

India held two gold auctions in July and sold a total of 2.97 tons of gold to successful bidders at prices ranging from 641 to 655 rupees per 10 grams. This is equivalent to \$241 (U.S.) to \$248 (U.S.) an ounce of gold. The gold auctions were designed to weaken the value of gold in the Bombay bullion market, but gold still remains high in this market, 670 to 690 rupees per 10 grams.

Iron and Steel

The Steel Company of Canada, Limited (Stelco) and the United Steelworkers of America, representing some 17,500 Stelco employees, reached agreement in late July on a new 3-year contract. The settlement was ratified by a majority of the workers who voted on July 31, 1978. The new contract will run from August 1, 1978 to July 31, 1981. The average wage rate will be increased by \$0.20 in the first year and \$0.10 in each of the remaining two years, over and above annual cost of living increases. On this basis it is estimated by union officials that the average hourly rate for Stelco workers will increase by about 27 per cent over the life of the contract. The contract also provides for improvements in pension plans, life insurance and health benefits as well as a greater role for the union in health and safety matters.

At Sault Ste. Marie, Ontario members of the United Steelworkers voted on July 31, 1978, to turn down a tentative agreement negotiated by the union and The Algoma Steel Corporation, Limited. The terms of the settlement were said to be basically the same as those agreed to by Stelco and the United Steelworkers representing Stelco employees. The strike affecting 7,700 workers, began August 1, 1978.

The previously announced merger of the specialty steel divisions of three of Sweden's largest steel companies has fallen through. Earlier in 1978 it was announced that AB Svenska Kullagerfabriken (SKF), Udderholms AB and Fagersta AB would receive \$330 million (U.S.) in government loans to assist in this restructuring. Apparently the companies wanted the government to take an equity position in the new firm and when this was refused the proposed merger was abandoned. The new company would have been one of the largest specialty steel companies in the world.

Iron Ore

Steel Alberta Ltd., owned equally by The Alberta Gas Trunk Line Company Limited and the provincial government-controlled Alberta Energy Company Ltd., paid \$1.7 million for two adjacent iron ore properties located some 100 kilometres south of Butte, Montana and 650 kilometres south of Calgary. The properties were previously owned by Carter Creek Holdings Corp. and by Mineral Services Inc., private

companies from Colorado. The iron ore deposit contains about 80 million tonnes of proven ore (magnetite) grading 25-28 per cent iron and a further 80 million tonnes probable.

While the acquisition has been touted as a building block for a steelmaking facility for Alberta, it is much too early to speculate on what may result. Initial plans call for a market survey in the U.S.A. and Canada for about 1 million tonnes of pellets annually. Presumably the survey will include the prospects of supplying iron ore pellets or sponge iron to Ipsco at Regina, in which Steel Alberta Ltd. inherited a 20.1 per cent interest from the Alberta government.

In early July workers at the Iron Ore Company of Canada accepted a contract offer and more than 3,500 of them returned to work. Later in July, workers at Wabush Mines and Sidbec-Normines Inc. accepted their company's offer. The return to work ended a strike by some 10,000 workers that had halted three-quarters of Canada's iron ore production for nearly four months.

Lead

Major developments in the lead industry during July focused attention on supply problems for both concentrate and metal. The AMAX-Homestake strike at the Boss, Missouri mine-mill-smelter complex continued into its second month with no solution in sight. Also in the United States, weak zinc and copper prices have forced Newmont Mining Corporation to close, as of September 30, their Idarado zinc-copper-lead mine in Duray, Idaho. The mine is being put on "indefinite care and maintenance status". In 1977, the production was about 6 000 tonnes of lead contained in concentrate.

In Europe, two recent developments will affect supply during the third quarter of the year. In Ireland, the Tynagh mine of Irish Base Metals Ltd. was closed by a strike on July 10. Irish Base Metals is a wholly-owned subsidiary of Northgate Explorations Limited of Canada. The dispute arose over the question of redundancy benefits to miners as the mine's ore reserves are near to exhaustion and closure was scheduled for mid-1979. The mine produces about 16 000 tonnes a year of lead and 12 000 tonnes of zinc in concentrates. With zinc concentrate markets extremely weak, the permanent closure of Tynagh being hastened by the work stoppage is a strong possibility. In Sweden, Boliden A.B. announced at month-end that lead metal production at its Ronnskar smelter and refinery was being halted in early August because of a shortage of concentrate feed both from their own mines and foreign suppliers. The stoppage at the 55 000 tonne-a-year smelter is indefinite pending the stocking of sufficient concentrates to allow for safe operation of the smelter.

Stocks on the London Metal Exchange (LME) dropped 4 625 tonnes during the month to 51 100 tonnes as of July 28. However, producer stocks in the United States increased 2 per cent in June to 29 970 tonnes. The producer price in the United States and Canada remained unchanged at 31 and 34.25 cents a pound in their respective currencies. The LME spot price increased 1.6 cents (U.S.) to 27.1 cents a pound at month-end. With the continued tightening of the supply pipeline in both Europe and North America, an upward price adjustment in August or September would not be unexpected.

Mercury

At its July 11, 1978 offering the United States General Services Administration (GSA) sold 1,000 flasks of 76 pounds each of mercury. Each month GSA offers a maximum of 1,000 flasks of mercury for sale from its surplus stocks. These stocks do not require Congressional authorization prior to being sold and are exclusive of the 191,304 flasks of mercury contained in the U.S. strategic stockpile, none of which may be disposed of without Congressional approval.

Nickel

Inco Limited reported its second quarter results during July and comparison with first quarter and year-ago levels is as follows:

	1977	1977	1978	1978
	Q-2	6-mos.	Q-2	6-mos.
Net sales (\$ millions*)	517	967	539	1,056
Net earnings (\$ millions*)	32.6	73.6	23	57.9
Ni-deliveries (000,000 lbs)	88	161	103	195

* United States currency.

Inventories of finished nickel products in 1978 declined 10 million pounds to 331 million pounds as of June 30. Nickel production during the first 6 months was down 17 per cent when compared with the similar 1977 period. Lower realized prices on nickel and copper products and currency adjustments were only partially offset by the increased volume of sales. The outlook for the second half of 1978 is a further reduction in inventories and continued weakness in nickel prices.

The contract between Inco and the United Steelworkers of America union expired July 10 but was extended one week by the Ontario government labour negotiator. This effectively removes any possibility of a strike prior to the end of August as Inco has shut down its Sudbury operations six weeks as of July 17. The company has offered to extend the existing contract for one year. Details of the union position are not available.

Prices of Class II nickel products were reduced in June by all major producers. Inco is reported by consumers to be quoting \$1.85 (U.S.) a pound for sinter 75. This quote when iron credits are allowed, is competitive with ferronickel levels of \$1.88 to \$1.91 as quoted by all other producers. This compares to a price of \$1.97 for sinter 75 in early June. The price of Class I nickel is still quoted at \$2.08 a pound.

The seven-week strike at Société Metallurgique Le Nickel in New Caledonia was settled on July 21. The workers accepted a plan to lay-off 350 workers, take a six per cent wage cut and take five days unpaid leave prior to August 1979. Management had kept the furnaces operating during the strike and the affect of the strike on production will not be ascertained until operations return to normal and an accounting can be undertaken.

One indicator of the level of demand for nickel for the rest of 1978 and early 1979 is the recent agreement between Japanese nickel smelters and ore suppliers in New Caledonia. The Japanese have agreed to buy 1.5 million tonnes of ore in fiscal 1978 (ending March 1979), down 33 per cent from 2.24 million tonnes in 1977. The agreed price in the July-September quarter was 10 per cent below the previous quarter's rate.

The Special Metals Stockpiling Association of Japan has borrowed over \$70 million (U.S.) from the Eximport Bank to finance the purchase of 9 000 tonnes of nickel and 17 000 tonnes of ferronickel for the country's nonferrous metals stockpiling program. The nickel will be held at various smelting plants in the country.

The London Metal Exchange is once again considering establishing a contract for trading in nickel, both for spot delivery and 3-month futures. A sub-committee has convened to consider a contract based on Class I products (cathode and briquettes) but no deadline has been set for finalizing the contract or commencing trade. Indications are that each contract would be for 6 tonnes, a quantity which some producers suggest would favour the movement of Eastern European metal into the west. The Russians currently market their metal in 1.5 to 3.0 tonne lots. Inco and other major producers tend to market their volume products in 5 tonne lots.

In Law of the Sea related matters, three governments are currently considering legislation on seabed mining. In the United States, the House of Representatives approved a bill to establish a licensing programme for U.S. companies which want to begin deep sea ocean mining. The licenses would be in effect until the United Nations Law of the Sea reaches agreement on mining. The United Kingdom government has given the go-ahead for the drafting of legislation to give legal protection for firms based in the U.K. The legislation will arise out of meetings between the Industry Department, Foreign Office, Institute of Geological Sciences and mining companies. The West German Bundestag also has a similar bill pending. It is also reported that companies in Belgium, France and the Netherlands are pointing to these developments and urging their governments to consider similar action.

Platinum

The dealer price of platinum followed the lead established by gold and increased sharply during the month. The opening nearby price for platinum for the month of July on the New York Mercantile Exchange as quoted in the Globe and Mail was \$240.50 (U.S.) an ounce. The price increased slightly to \$245.80 (U.S.) an ounce on July 19, and advanced sharply for the remainder of the month closing at \$268.60 (U.S.) an ounce. The producer price remained unchanged at \$240.00 (U.S.) an ounce.

Silver

Prism Resources Limited announced plans to begin diamond drilling at the end of July 1978 on its Kathleen Lake silver-lead-zinc joint venture in the Yukon Territory about 120 kilometres northeast of Mayo, Y.T. High grade values were encountered in four blast trenches which are about 1.8 metres wide, 0.5 to 1.8 metres deep and 1.8 to 4.5 metres long, spread over a distance of some 360 metres. Some trench assays ranged from about 1 500 to 3 500 grams of silver a tonne with good lead values and some zinc. These trench assays indicate the tenor of the mineralization but do not represent dimensions of what might be an important mineral deposit. Prism is the manager-operator of the property and holds a 25 per cent interest in the joint venture. Other partners include Asamera Oil Corporation Ltd., E & B Explorations Ltd. and Siebens Oil & Gas Ltd., all of Calgary, Alberta, and Chieftain Development Co. Ltd. of Edmonton, Alberta.

The Bunker Hill Company announced that it is updating the facilities connected with its Kellogg, Idaho lead smelter so as to produce more silver of higher quality. The company plans to bring into operation by November this year a new electrolytic silver refinery to replace the pyrometallurgical-process plant used by the company since construction of its lead smelter in 1917. The new \$750,000 refinery will increase the plant's refined silver capacity from 280 000 to 373 000 kilograms annually. Grade of silver currently produced is 99.95 per cent pure. The new refinery will produce 99.99 per cent pure silver suitable for use in the photographic industry, now the largest and fastest-growing sector of industrial silver use in the United States. Bunker Hill is a subsidiary of Gulf Resources & Chemical Corporation of Houston, Texas.

Zinc

In the United States, the House Ways and Means Committee approved a continuation of the duty suspensions on zinc ores and zinc waste until June 30, 1981. The House Trade Subcommittee's recommendation was for a permanent duty exemption; however, the full committee limited the exemption to three years.

The International Lead and Zinc Study Group convened an extraordinary plenary session in Vienna during the week of July 3, 1978, to assess the world situation for zinc in light of recent developments. Statistical forecasts for 1978 indicated only modest improvement from prior forecasts made in April but producers' reported metal stocks had declined sharply by about 200 000 tonnes since year-end 1977. Most delegations considered the session to be a success because, the Study Group, in its findings, attributed the modest improvement for zinc to those countries which had shown restraint, whereas it noted that other countries had not responded to the depressed international market conditions for zinc. Many hoped that the pressure of recognition would encourage other countries to exercise restraint and speed up the return to orderly markets. Canada played a decisive role at this session by providing the formula wherein the Study Group could deliver its findings to governments without the necessity for formal recommendations which had deadlocked the session until that time.

Apart from the United States, producers' zinc price remained unchanged during July. Outside North America, the price was \$550 (U.S.) a tonne and in Canada, the price was unchanged at \$749.56 a tonne. In the United States, a dual price emerged as some producers reduced the June increases from \$683.43 to \$672.40 (U.S.) a tonne. Prices on the London Metal Exchange increased during July from \$554.56 (U.S.) a tonne to \$593.15 (U.S.) a tonne.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

Q.A.M.A. Feasibility Study on Asbestos Research

The Quebec Asbestos Mining Association has commissioned a study to evaluate all asbestos-related research activities and to assess possible opportunities and limitations of their realization in Quebec. The four-month study will be undertaken by the Centre of Technological Development of Ecole Polytechnique in Montreal. Industry expects that the study will allow it to better evaluate initiatives concerning research proposals by the public or private sector and to identify areas where member companies may consider doing research in common.

Health & Environmental Developments

The Consumer Product Safety Commission in the U.S. is currently reviewing studies that may lead to additional recommendations limiting the use of asbestos-based products. General policy by this Commission is not to permit known carcinogens to be intentionally added to consumer products if they can be absorbed, inhaled or ingested. Thus far, bans have been effective only for a minor percentage of the total asbestos fibre market.

At a recent meeting on environmental health hazards sponsored by the New York Academy of Sciences, according to press reports, it was stated by Dr. I. Selikoff that there is no evidence that the general public in U.S. cities is exposed to health risks from asbestos. He also was reported as stating that, "It now appears that only an exposure to high levels of asbestos dust can lead to an increased risk of cancer" and that, "there is no evidence that without such exposure there is any risk to the general population in ambient air exposure at this time". Dr. I. Selikoff was one of the first to find a link between asbestos and lung cancer and is a scientist at the Mount Sinai School of Medicine.

Coal

Imperial Oil Limited of Toronto has applied for a mine development permit to supply coal for its proposed Cold Lake oil sands recovery plant. The application for a mine near Judy Creek, Alberta calls for initial output of approximately 2.5 million tons per year. Estimated cost of the mine is put at \$80 million with development work beginning in 1982 and mining in 1985 provided regulatory approval for the coal mine can be obtained in 1979.

Contracts were awarded for two 200-megawatt coal-fired boilers for a new generating station in Ontario. Babcock & Wilcox of Canada Ltd. received the \$40 million order for the new Atikokan plant in western Ontario. Construction of the plant is scheduled to begin in the early 1980s.

A Canadian based coal company Luscar Sterco Ltd. of Edmonton has recently won a 14-year contract to annually supply between 250,000 and 400,000 tons of thermal coal to a West German electric company. The Luscar Sterco Ltd. Coal Valley Mine - which was developed primarily to supply coal to Ontario Hydro - began production in 1978 and will ship its European bound coal through the Roberts Bank coal terminal in Vancouver.

The Drummond coal mine at Westville, N.S. which closed as a result of a rock fall on February 17 resumed production in early July. The February accident had blocked a ventilating shaft.

Petroleum and Natural Gas

Total Eastcan Exploration Ltd. Group has selected a location for its new exploratory test on the Labrador coast and expects to commence drilling during the last week of July. The new well will be known as Total Eastcan et al Skolp E-7 and the location is about 48 miles south of the well Eastcan et al Karlsefni A-13 drilled to a depth of 13,612 feet and abandoned in 1975. Eastcan will utilize the Pelerin drillship in this project.

In accordance with the federal-provincial agreement on crude oil pricing, the price of Canadian crude oil increased by \$1.00 per barrel to \$12.75 effective July 1, 1978. Prices to consumers of petroleum products will not be increased for 60 days at which time they are expected to average about 3.5 cents per gallon. It is anticipated that the wellhead price of natural gas will also increase on August 1, 1978. The price increase will likely be about 15 cents an mcf at the Toronto city gate.

The first shipments of synthetic crude oil to be produced at the Syncrude Canada Ltd. oil sands plant near Fort McMurray in northwestern Alberta is scheduled to arrive in Edmonton near the end of July. The plant will likely commence initial production by the end of the third week this month and the oil will be piped to Edmonton about a week after that. Syncrude's designed capacity of 129,000 b/d will be reached by 1982 and the plant is scheduled to produce 100,000 b/d by the end of this year.

TransCanada PipeLines Limited has applied to the National Energy Board to export up to 235 bcf of natural gas to four USA companies during a two year period commencing Nov. 1, 1978. TransCanada plans to export up to 99 bcf in the first year and 136 bcf in the second year, through Emerson, to Tennessee Gas Pipeline, Northern Natural Gas Company, Natural Gas Pipeline Company and Midwestern Gas Transmission Company.

No new facilities would be required in Canada or the USA and TransCanada said it has sufficient gas under contract to meet the export bid.

Uranium

Estimates of Canada's Uranium Resources Increased

This month Energy, Mines and Resources Minister Alastair Gillespie released the latest estimates of Canada's uranium resources, contained in the fourth annual report of the Uranium Resource Appraisal Group.

The report, entitled "1977 Assessment of Canada's Uranium Supply and Demand", estimates Canada's total mineable uranium resources, in the three resource categories used for the purpose of allocating domestic responsibility among Canadian producers, at 507 000 tonnes uranium, an increase of some 18 000 tonnes (5 per cent) over last year's assessment of 489 000 tonnes.

The estimates are subdivided using two price categories, up to \$110/kg U and from \$110 to \$160/kg U (Canadian dollars), as follows:

1977 Estimate of Canada's Mineable Uranium Resources

Tonnes U Contained in Mineable Ore

<u>Mineable at Uranium Prices</u>	<u>Measured</u>	<u>Indicated</u>	<u>Inferred</u>
Up to \$110/kg U	78 000 (79 000)*	94 000 (88 000)	243 000 (238 000)
\$110 to \$160/kg U	4 000 (4 000)	13 000 (11 000)	75 000 (69 000)
	82 000 (83 000)	107 000 (99 000)	318 000 (307 000)

* Figures in brackets are from the 1976 assessment using price categories of up to \$104/kg U and \$104 to \$156/kg U.

The lower-price category used in the 1977 assessment was based on the estimated uranium market price of \$110/kg U in September 1977, when compilation of the data for the report began. The higher price category spanned the \$110-\$160/kg U interval.

Twenty-one uranium-bearing areas were included in the 1977 assessment. Ontario accounts for 60 per cent of Canada's resources mineable at prices up to \$160/kg U in the measured category and for 69 per cent at 74 per cent in the indicated and inferred categories, respectively. Saskatchewan accounts for 36, 27 and 26 per cent of the totals in the same respective categories.

In 1975 the Geological Survey of Canada began the Uranium Reconnaissance Program. Its objective is to identify all geological areas in Canada which may contain uranium, so as to facilitate the discovery of deposits by industry and assessment of resources by government. The costs of work within provinces are shared between the federal and the respective provincial governments, while the federal government pays for the work within the Territories. A total of \$4.9 million was spent by the federal and provincial governments during 1977 on the uranium reconnaissance program and supporting research and development activities.

In late 1977 the Uranium Resource Appraisal Group sent questionnaires to more than 300 individuals or companies exploring for uranium in Canada. Responses were received from 119 companies or joint ventures which indicated that exploration expenditures in Canada were an estimated \$72 million in 1977, significantly more than the \$43 million reported for 1976.

In 1977 Canada had six uranium operations which produced concentrates containing 5 794 tonnes U. Canada's annual uranium production capability based on currently known resources is expected to grow from 6 400 tonnes in 1978 to 7 600 tonnes in 1980 and to 12 500 tonnes by 1984, a level that could be maintained for at least six years without benefit of further discoveries.

The Uranium Resource Appraisal Group's annual assessment is essential to the implementation of Canada's national uranium policy. The 1974 policy requires sufficient uranium be retained in Canada for the 30-year supply of nuclear fuels for existing, committed and planned reactors in Canada in a 10-year forward period.

SPECIAL ITEM

**FOURTH PREPARATORY MEETING ON COPPER
HELD IN GENEVA, JULY 17-21, 1978**

Summary

The 4th Preparatory meeting was characterized by a split between a group of developing copper exporting countries and other participating countries. The meeting failed to reach any agreement on the future course of the work on copper.

Proceedings of the meeting

The meeting was to have considered a proposed charter that was drafted during three sessions of a Working Group set up by the 3rd Preparatory Meeting on Copper and the establishment of an intergovernmental consumer-producer copper body if a satisfactory relationship with UNCTAD could be worked out.

At the opening plenary session a new document was tabled by Peru calling for the establishment by the Trade and Development Board of an UNCTAD Committee on Copper. This proposal effectively prevented discussion and work on the draft charter and in a following private meeting the Group of 77 consolidated a position to prevent setting up of a Copper body independent of UNCTAD.

Late in the week a second document aimed at resolving the deadlock on issues of the relationship of the proposed body with UNCTAD and its duration was tabled. This was followed by yet a third proposal suggesting the creation of an autonomous body or Special Committee on Copper supported by technical advisory department in UNCTAD, within the framework of UNCTAD.

Canada's position, throughout the proceedings, was to advocate the consensus reached at the Third Preparatory meeting on the best way to proceed. This was to follow the two-stage approach; first to set up an autonomous Standing Intergovernmental Copper Body (SICB) based on the draft charter prepared by the Working Group, and secondly to take further steps towards the establishment of an International Copper Arrangement if an acceptable basis for such arrangement could be found by the SICB. No substantive discussion took place on the draft charter which was to have been the basis for discussions at the meeting.

The final conclusion of the meeting was to refer all proposals to a fifth preparatory meeting for further consideration to be held later in 1978.

The result of the meeting was "an about face by certain countries"; not only a reversal of acceptance of the draft charter but a rejection of an autonomous copper body outside of UNCTAD.

The refusal of some delegates to acknowledge agreements reached at previous preparatory meetings could hold serious implications for the whole of the Integrated Program on Commodities as governments may begin to question the meaningfulness of their continued participation. At this point in time, the movement toward the establishment of a Standing Intergovernmental Copper Body is uncertain.

Canada's delegation of seven was lead by Mr. Dennis Browne, Office of General Relations (ITC); Mr. G. Ninacs, (EMR); Mr. Richard Annis, (External); Mr. M. Hart, (External - Officer of the Canadian Permanent Mission in Geneva) who was elected Vice-chairman cum Rapporteur; Ms. Marie-France Houde, (Finance); Mr. R.J. Hurley (ITC); and Mr. D.J. McIntyre, Senior Vice President, Copper Metal and Refinery By Products, Noranda Mines Limited.

**RECENT AMALGAMATIONS AND MERGERS
AS PUBLISHED IN THE GAZETTES**

Soaring Energy Ltd. amalgamated with Gold Bar Developments Ltd. into a new company under name of Gold Bar Developments Ltd. in April 1978. Source: Alberta gazette 29 April 1978.

Warnock Hersey International Limited, International Bronze Powders Limited, Toronto Iron Works Holdings Limited, TIW Industries Ltd., Wimco Steel Sales Co. Limited and C.E. MacPherson (1968) Limited amalgamated into a new company under the name of TIW Industries Ltd., - Les Industries TIW Ltee on 31 December 1977. Source: BC 18-5-1978.

Canadian Aero Service Limited amalgamated into Western Geophysical Company of Canada, Ltd. on 17 January 1978.

An amalgamation between Imperial Oil Limited, Compagnie Petroliere Imperiales Ltee, Imperial Oil Developments Limited, Imperial Oil Enterprises Ltd., Les Entreprises Petrolieres Imperiales Ltee and 83891 Canada Ltd. into a company under the name of Imperial Oil Limited - Compagnie Petroliere Imperiale Ltee on 1 May 1978. Source: Consumer and Corporate Affairs BULLETIN June 1978.

An amalgamation between Consolidated-Bathurst (DG) Limited and DomGlas Ltd. into a new company under the name of Domglas Inc. on 15 May 1978. Source: Consumer and Corporate Affairs BULLETIN June 1978.

NEW PUBLICATIONS

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

Preprints. Canadian Mineral Yearbook 1976. Cadmium; Iron and Steel; Molybdenum; Uranium; price 50¢ a copy.

The above publications are available from the Publishing Centre, Department of Supply and Services, Ottawa.

