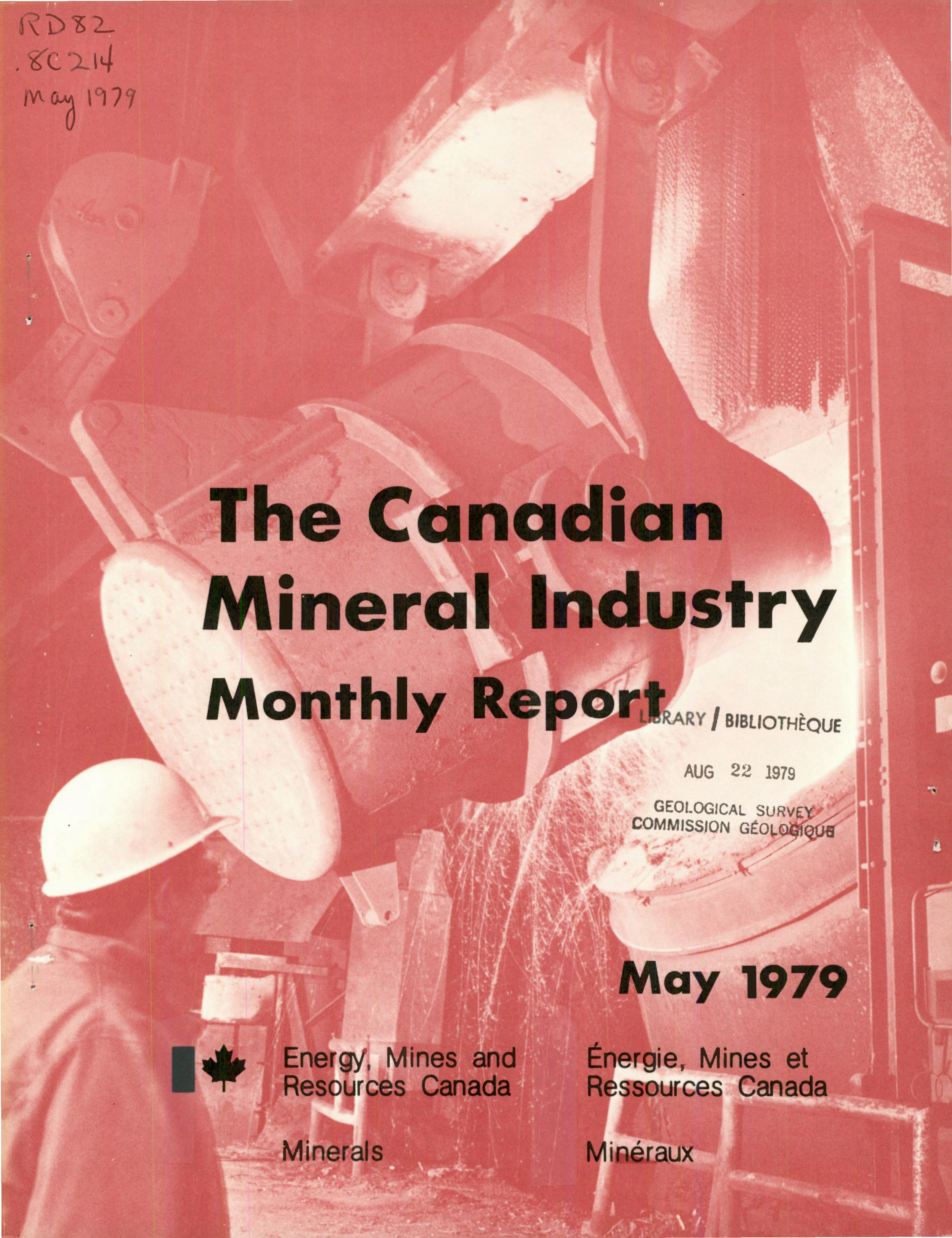

The Canadian Mineral Industry

Monthly Report

May 1979

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'Energie, 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 MAY

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

HIGHLIGHTS

1. Canada's unadjusted index of Real Domestic Product was 133.7 in March 1979, an increase of 0.5 per cent from February 1979.

2. The March index for mines, quarries and oil wells was 111.6, an increase of 0.7 per cent from the previous month.

3. Primary copper production as a result of work stoppages in the first three months of 1979 was only 142 366 tonnes compared with 185 101 tonnes in the first three months of 1978.

4. The 1,100 employees of Gaspe Copper Mines, Limited voted to end their seven month strike but no date was set for a return to work.

5. The gold price on the London Gold Market reached an all-time high of $277.15 (U.S.) an ounce at the morning fixing on May 31.

6. The International Monetary Fund announced that beginning in June the amount of gold offered for sale at each monthly auction will be reduced from 470 000 ounces to 440 000 ounces.

7. National Steel Corporation of Canada, Limited's Moose Mountain Mine at Capreol, Ontario was indefinitely closed May 10, 1979, affecting some 250 employees.

8. Along with other precious metals, the price of platinum increased sharply in May.

9. Consumer and Corporate Affairs Canada (Product Safety Branch) proposes to ban the use of several additional asbestos-based products.

10. The Ontario Environmental Assessment Board has released the report of its review of plans for the expansion of uranium mining activities in the Elliot Lake area.

Economic Trends

Table 1 shows Canada's unadjusted indexes of Real Domestic Product (RDP) in terms of 1971=100. The overall index in March 1979 was 133.7, an increase of 0.5 per cent over the previous month and a 4.5 per cent increase over March 1978.

The March index for mines, quarries and oil wells was 111.6, a 0.7 per cent increase over February. Other metal mines showed a 6.1 per cent increase over the previous month but a 23.9 per cent decline in comparison with March 1978. Asbestos mines moved from 91.1 in February to 110.3 in March, an increase of 21.1 per cent. Primary metal industries and nonmetallic mineral products industries showed decreases of 1.3 per cent and 6.5 per cent respectively over the month.

Table 2 compares volume of production in Canada's leading minerals. Substantial changes were recorded in March over that of February for iron ore (up 60.5 per cent), uranium (up 106.0 per cent), potash (up 43.4 per cent), cement (up 58.1 per cent) and salt (down 34.7 per cent). In comparison with March of the previous year iron ore showed an increase of 123.0 per cent while nickel decreased 63.8 per cent.

Table 3 compares sales and profits of corporations in the non-fuel mineral industry for 1977 and 1978. The total mineral industry showed a 12.2 per cent increase in sales and a 36.9 per cent increase in profits in 1978 over that of 1977. Profits in the primary metal industry showed the largest increase over the period of 59.6 per cent.

TABLE 1

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

Industry or Industry Group	1978 Feb	1978 Mar	1978 Average 1st 3 Months	1979 Feb	1979 Mar	1979 Average 1st 3 Months	Percentage Changes: Feb 1979 / Feb 1978	Percentage Changes: Mar 1979 / Mar 1978	Percentage Changes: Mar 1979 / Feb 1979	Percentage Changes: 1st 3 Months 1979 / 1978
Real Domestic Product	128.1	128.0	125.5	133.0	133.7	131.1	3.8	4.5	0.5	4.4
Primary Industries										
Agriculture	46.4	31.1	40.6	47.0	33.9	43.7	1.3	9.0	-27.9	7.7
Forestry	124.2	122.4	112.0	128.1	134.4	125.1	3.1	9.8	4.9	11.7
Fishing and Trapping	45.0	34.7	36.4	34.4	43.7	34.6	-23.6	25.9	27.0	-4.9
Mines, Quarries and Oil Wells	110.8	108.8	107.7	110.8	111.6	108.7	0.0	2.6	0.7	1.0
Metal Mines	102.8	99.4	98.5	85.0	87.0	83.7	-17.3	-12.5	2.4	-15.0
Placer and Gold Quartz Mines	74.9	70.1	71.4	67.0	60.7	64.2	-10.5	-13.4	-9.4	-10.1
Iron Mines	109.8	71.5	94.4	119.5	112.1	111.6	8.8	56.8	-6.2	18.3
Other Metal Mines	102.4	107.7	100.8	77.3	82.0	77.7	-24.5	-23.9	6.1	-22.9
Mineral Fuels	116.6	113.5	113.6	132.0	129.9	128.7	13.2	14.4	-1.6	13.3
Coal Mines	236.4	208.9	209.3	239.8	260.3	246.3	1.4	24.6	8.5	17.7
Crude Petroleum and Natural Gas	106.8	105.7	105.7	123.2	119.2	119.1	15.4	12.8	-3.2	12.6
Nonmetal Mines	122.1	125.8	121.6	132.6	138.8	130.6	8.6	10.3	4.7	7.4
Asbestos Mines	87.6	98.9	86.9	91.1	110.3	92.2	4.0	11.5	21.1	6.1
Secondary Industries										
Manufacturing	131.0	133.9	126.7	143.9	145.3	139.5	9.8	8.5	1.0	10.1
Nondurable Manufacturing	131.1	130.9	125.9	141.2	142.3	137.0	7.7	8.7	0.8	8.8
Petroleum and Coal Products Industries	136.6	127.9	133.5	137.4	144.5	142.5	0.6	13.0	5.2	6.8
Durable Manufacturing	131.0	136.9	127.6	146.5	148.4	142.0	11.8	8.4	1.3	11.3
Primary Metal Industries	129.5	132.7	126.2	134.4	132.6	131.4	3.8	-0.1	-1.3	4.1
Iron and Steel Mills	140.1	144.6	134.8	153.8	152.0	151.2	9.8	5.1	-1.2	12.1
Steel Pipe and Tube Mills	142.6	149.5	138.0	144.5	153.3	144.7	1.3	2.5	6.1	4.8
Iron Foundries	139.4	137.0	131.3	141.4	132.2	130.6	1.4	-3.5	-6.5	-0.6
Smelting and Refining	106.5	110.3	108.2	96.4	96.2	95.8	-9.5	-12.8	-0.2	-11.5
Nonmetallic Mineral Products Industries	109.2	112.2	104.6	136.2	127.4	125.3	24.7	13.5	-6.5	19.8
Cement Manufacturers	66.2	88.4	69.9	96.1	111.9	92.5	45.2	26.6	16.4	32.2
Ready-mix Concrete Manufacturers	71.2	75.5	65.9	86.1	63.0	71.0	20.9	-16.6	-26.8	7.7
Construction Industry	96.2	95.2	93.8	88.1	87.2	86.7	-8.4	-8.4	-1.0	-7.6
Transportation, Storage, Communication	135.1	137.0	134.1	140.3	145.0	140.8	3.8	5.8	3.3	5.0
Electric Power, Gas and Water Utilities	195.2	174.8	188.2	204.0	179.5	194.5	4.5	2.7	-12.0	3.4
Trade	126.8	128.3	122.9	130.6	135.9	128.1	3.0	5.9	4.1	4.3
Finance, Insurance, Real Estate	147.1	146.2	145.9	153.4	153.4	152.7	4.3	4.9	0.0	4.7
Community, Business and Personal Service	133.6	134.4	132.9	136.7	138.3	136.5	2.3	2.9	1.2	2.7
Public Administration and Defence	122.5	123.5	122.5	122.1	123.0	122.3	-0.3	-0.4	0.7	-0.2

TABLE 2

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

		1978			1979			Percentage Changes		
		February	March	Total 3 months	February	March	Total 3 months	March 79 / March 78	March 79 / February 79	1st 3 months 1979 / 1978
Metals										
Copper		63.5	65.4	185.1	44.7 r	53.2	142.4	- 18.6	+ 19.0	- 23.1
Gold	kg	4 081.0	4 476.4	12 661.6	3 888.0 r	4 380.3	12 318.9	- 2.2	+ 12.7	- 2.7
Iron ore		1 341.8	1 196.1	4 408.3	1 661.9 r	2 667.4	6 627.1	+123.0	+ 60.5	+ 50.3
Lead		27.2	32.2	81.1	26.6	29.2	81.3	- 9.3	+ 9.8	+ 0.3
Molybdenum	t	1 114.2	1 427.6 r	3 902.5	1 249.8	1 054.9	3 405.8	- 26.1	- 15.6	- 12.7
Nickel		13.6	19.9	49.6	5.8	7.2	19.3	- 63.8	+ 24.1	- 61.1
Silver	t	107.3	119.0	326.7	94.6 r	99.7	304.6	- 16.2	+ 5.4	- 6.8
Uranium (1)	t	489.5	476.7	1 432.4	296.1	609.9	1 384.3	+ 27.9	+106.0	- 3.4
Zinc		62.0	97.9	232.8	87.8	86.8	262.1	- 11.3	- 1.1	+ 12.6
Nonmetals										
Asbestos		97.3	123.1 r	307.0 r	109.3	123.2	341.0	+ 0.1	+ 12.7	+ 11.1
Gypsum		409.4	448.3	1 210.8	444.8	585.4	1 411.5	+ 30.6	+ 31.6	+ 16.6
Potash K_2O		491.4	621.6	1 616.5	427.9	613.7	1 581.1	- 1.3	+ 43.4	- 2.2
Salt		694.3	374.4	1 743.4	710.6	464.0	1 892.4	+ 23.9	- 34.7	+ 8.6
Cement		414.6	568.7	1 302.9	387.0	611.8	1 358.4	+ 7.6	+ 58.1	+ 4.3
Lime		147.9	163.3	454.5	..	..	..	..	..	..
Fuels										
Coal		2 634.1	2 585.6	7 710.4	2 513.7	2 724.0	8 116.9	+ 5.4	+ 8.4	+ 5.3
Natural gas	million m^3	7 720.2	7 985.4	24 610.0	8 378.0 r	8 223.2	26 049.0	+ 3.0	- 1.8	+ 5.9
Crude oil and equivalent	000 m^3	6 314.0	7 027.0 r	20 058.0 r	7 415.0 r	8 047.0	22 885.0	+ 14.5	+ 8.5	+ 14.1

(1) Tonnes uranium (1 tonne U = 1.299 9 short tons U_3O_8)
r Revised; .. Not available.

TABLE 3

Canada, Sales and Profits[1] of Corporations in the Nonfuel Mineral Industry

	Sales		Profits	
	1978[p]	1978/1977	1978[p]	1978/1977
	(millions of dollars)	(percentage change)	(millions of dollars)	(percentage change)
Metal mines	6,152	+ 7.5	1,080	+38.6
Other mining	2,166	+17.8	397	+25.2
Primary metal	8,762	+13.8	959	+59.6
Metal fabricating industries	9,248	+13.0	630	+32.4
Nonmetallic mineral products industries	4,347	+11.5	347	+ 8.4
Total mineral industry	30,675	+12.2	3,413	+36.9
Total all industries	334,394	+11.7	21,705	+21.4

[1] Profit reflects net income before income taxes, extraordinary items, and before recording transactions which can be altered at the discretion of corporate management.

[p] Preliminary.

TAXATION AND LEGISLATION AFFECTING THE MINERAL AND ALLIED INDUSTRIES IN CANADA

Provincial

British Columbia

The **Mineral Land Tax Assessment Regulation - 1979** has been established as B.C. Reg. 183/79 under the **Mineral Land Tax Act.** The new regulation introduces a new formula for determining the valuation factor for coal, eliminating the distinction between metallurgical and thermal coal. All other formulae are unchanged.

Manitoba

In the Budget Speech presented Tuesday, May 15, 1979, Manitoba's Finance Minister Donald Craik announced the government's intention to replace the current incremental royalty rates of 15 per cent and 35 per cent with a single rate of 18 per cent. This will reduce the maximum potential income taxation and resource charges facing the mining industry from over 73 per cent to about 56 per cent. The promised legislation will also include a major incentive for investment in new facilities or expansion and improvement of existing facilities, through an investment credit equal to 5 per cent of such new investment, provided that the credit does not reduce royalty rates otherwise payable by one-half.

To assist small quarry operators, the government proposes to end taxation of industrial metals under the **Mining Royalty and Tax Act.**

New Brunswick

An Act to Amend the **Mining Act** being Bill 38, has been introduced in the Legislature. The Bill proposes to increase the penalty imposed on an owner, agent or manager by section 77 of the Mining Act, from a minimum of $100, maximum $1,000 to a minimum $1,000, maximum $10,000, and on every other person from a minimum of $10, maximum $100 to a minimum $100, maximum $1,000.

REGIONAL PROFILE

Ontario

For many years Ontario's mineral production was by far the largest of any province. However, this position has been steadily eroded as the mineral industry has developed in other provinces and especially as energy minerals have become dominant in terms of value of output. In 1972, Ontario and Alberta each contributed about one quarter of total Canadian mineral production. In 1978 Ontario's mineral industry output was valued at $2.5 billion, but it represented only 13 per cent of Canada's total. This proportion was down sharply from the previous year, in part due to a labour strike at Sudbury. The dispute is reflected in the following table of mineral production in terms of reduced output of copper, down 34 per cent, and nickel, down 47 per cent from 1977.

These same labour problems also affect employee data in the second table. For example, total employment in mining in Ontario in August, prior to the strike, was about 30,000 persons, for the final three months of the year it averaged about 23,000 persons.

Two major concerns affecting the mineral industry in Ontario at the present time are the Inco Limited strike at Sudbury, and in the longer term, the lack of new mine development in the province.

In the case of the strike, a second agreement between the bargaining committee and the company was announced at month-end. This strike, which started September 15, 1978 has set a record for the number of man-days lost in a labour dispute in Canada, about 2.1 million to the end of May. The previous longest strike, of 1.8 million man-days, in the Quebec construction industry was in 1976.

The effect of this strike on the region and on the provincial mining industry will be great. It is estimated that lost wages in the Sudbury dispute, to the end of May, could amount to $80 million. Further, it is estimated that normally Inco Limited is responsible for in the order of 40 per cent of the value of metallic mineral output of the Province of Ontario, which amounted to nearly $2.5 billion in 1977.

No new mines have been brought on stream in Ontario for some years, and there is little development activity at the present time. Indicators of exploration activity, such as annual diamond drill footage and claims staked, have also been declining for some years. Aware of these trends, the provincial government has taken a number of initiatives to encourage exploration in the province. In April, as well as tax reductions to the industry, a proposal was included in the Ontario Budget to assist small, newly formed Canadian companies operating in a number of fields, including mining exploration and development. Under the **Small Business Development Corporations Act** the province will make grants of up to 30 per cent of their equity investment for certain purposes.

The Ontario government has also made allowance for the increasing cost and complexity of mineral exploration in terms of land acquisition. In recent years, Exploratory Licences of Occupation have been granted to a number of companies, the most recent being to Inco Limited. This agreement, involving about 100 square miles north of Sudbury, was reported in the press recently to be for a five-year period and to commit the company to half a million dollars of work a year. Other companies that have negotiated such licences with the province have included Kerr Addison Mines Limited, Hudbay Mining Ltd. and Prospection Limited. While Exploratory Licences of Occupation are keyed to large companies prepared to make considerable investments in sophisticated exploration programs, the Province also supports small companies and individual prospectors through the Mineral Exploration Assistance Program (MEAP). Up to $33,333.33 may be contributed to an exploration program under MEAP, and in the period 1971/72 to 1977/78 more than $2.5 million was paid out.

In conjunction with the federal Department of Regional Economic Expansion, the province is carrying out a geoscientific survey in the Kirkland Lake area. The project is aimed at increasing the knowledge of possible base-metal-bearing formations in the Kirkland Lake - Larder Lake gold belt. Its $2.3 million cost is split equally between DREE and Ontario. The same funding arrangement applies to a mapping and mineral deposit assessment study being carried out near Renfrew, in the Upper Ottawa Valley.

The total commitment for the minerals program under this sub-agreement is $491,000. A further sub-agreement, had been planned covering eastern Ontario, with total expenditures of $50 million, including a geoscientific program of $4 million. However, this agreement had not been signed before the federal election.

Production of Principal Minerals, 1978P

Commodity	Value	Change 1977-78	Proportion of Total Canada
	millions of dollars	per cent	
Nickel	490	-47.2	75.2
Uranium	341	-36.3	57.9
Copper	319	-34.2	29.6
Iron ore	295	2.4	25.7
Zinc	195	-18.5	24.7
Gold	157	26.1	41.9
Cement	156	10.3	32.4
Sand and gravel	132	7.6	35.2
Metals	1,989	-22.5	36.0
Nonmetals and structural materials	580	9.1	20.6
Fuels	26	34.6	0.2
Total, all minerals	2,595	-14.8	13.2

P Preliminary.

Socio-Economic Indicators

		Change Over Previous Year (per cent)	Proportion Compared with All Canada (per cent)
Population January 1, 1979	8,479,900	0.8	35.9
Labour Force February 1979	4,181,000	0.5	38.7
Persons Employed February 1979	3,872,000	0.6	39.3
Persons Unemployed February 1979	309,000	-4.3	32.4
Employment in Mining* December 1978	22,600	-23.9	18.7
Average Weekly Earnings** in Mining, December 1978	$358.73	5.3	91.5
Provincial Gross Domestic Product 1978	$90.8 billion	10.5	39.2

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

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

METALLIC MINERALS AND PRODUCTS

Aluminum

This year's strength in aluminum demand has persisted with reflected higher order and spot prices. On the LME at the beginning of the year spot aluminum was selling at £618/tonne. Currently the metal for immediate delivery is trading at £760/tonne. In the U.S., major producers rolled back March price increases to conform with anti-inflation guidelines. The revised timing of the U.S. anti-inflation guidelines is July 1.

Developments announced or planned will make Australia a major world producer of aluminum with smelting capacity increasing from a quarter of a million tonnes a year to about one million tonnes.

Planned aluminum production projects include the following:

- Alumax, Inc. to build a $500 million smelter near Newcastle.
- Comalco Limited proposing a $500 million smelter at Gladstone.
- Aluminum Company of America (Alcoa) planning a new smelter in Victoria for $350 million.
- Aluminum Company of Canada (Alcan) to embark on a $40 million expansion program at Kurri Kurri, doubling existing expansion plans.
- Alcoa to expand its existing Victorian plant at a cost of $85 million.
- Pechiney Ugine Kuhlmann Development, Inc. and Nabalco Pty. Ltd. conducting feasibility studies.

Additionally, Alcoa of Australia Ltd. now plans to build a 500 000 tonne/year alumina refinery at Wagerup, in Western Australia instead of 200 000 tonnes as originally proposed.

It has been agreed that Alcan will sell its 25 per cent shareholding in A/S Ardal og Sunndal Verk (ASV), for $70 million to the Norwegian state, giving the latter 100 per cent ownership of the organization. The agreement is expected to be finalized by July 1.

Hindustan Aluminum Corporation (Hindalcoa) will become a wholly Indian-owned enterprise. The Indian government has decided to allow Kaiser Aluminum & Chemical Corporation to sell its entire 27 per cent shareholdings in the company.

7500 Alcan workers, members of the Federation des Syndicates du Secteur d'Aluminum were legally positioned to strike on May 19. Union action was delayed to consider a company wage offer. Issues include wages and length of contract. (Alcan wants a three year contract whereas the union wants a two-year one). Side issues are work and sickness schedules and vacations. Negotiations which resumed on May 29 appeared to be progressing satisfactorily, however sources were hesitant to predict the outcome. A limited 48-hour walk-out which began midnight June 3 is now a full strike. Alcan's smelters at Arvida, Isle Maligne and Beauharnois and its Jonquiere chemical operations have been shut down.

The three smelters affected have a total capacity of 543 000 tonnes a year, about 60 per cent of Alcan's production capacity in Canada. Normal annual production of 83 000 tonnes at Shawinigan, Quebec and 268 000 tonnes at Kitimat, British Columbia is continuing.

Copper

During May, copper prices declined substantially. The cash price of copper wirebars on the London Metal Exchange fell from 95 (U.S.) cents a pound on May 1, to 82 cents (U.S.) a pound on May 31. The U.S. and Canadian producer prices for copper wirebars closed the month at 86 (U.S.) and 95 (Cdn.) cents a pound respectively.

LME warehouse stocks continued to decline. On Friday, May 25, they were down to 218 800 tonnes. Comex stocks on the same day were 90,188 short tons.

Labour problems emerged as the most serious immediate difficulty for the Canadian primary copper industry in the first half of 1979. While progress was made towards solving some of the ongoing strikes of long duration, other work stoppages began during May:

- The 1,100 employees of Gaspe Copper Mines, Limited voted to end their seven month strike but no date was set for a return to work.
- Inco union negotiators accepted a further offer by the company, but ratification by the members had not been obtained by month-end.
- Sherritt Gordon Mines Limited failed to reach agreement on a new labour contract and a strike began at the Fox and Ruttan mines in Manitoba on June 1.
- Primary copper production as a result of work stoppages in the first three months of 1979 was only 142 366 tonnes compared with 185 101 tonnes in the first three months of 1978.

Further evidence became available in May however of a trend towards higher copper production in Canada, once the current round of strikes has been resolved.

- Campbell Chibougamau Mines Ltd. stated that it is expanding the milling rate to 35 000 tonnes a month in the April-June quarter from 24 000 tonnes a month in the previous quarter.

- Bethlehem Copper Corporation is holding discussions with Valley Copper Mines Limited to review the possibility of a production decision for the Valley Copper mine.

The supply of copper from African countries continues to encounter problems. In May, Zaire informed its European customers of delays in deliveries. Most United Kingdom customers had not received their April shipments from Zaire until the end of May. By the end of 1979, according to Sozacom, the Zaire state metals trading company, Zaire's backlog of undelivered copper will be higher than the 50 000 tonnes outstanding in January 1978.

During May, the European Economic Commission (EEC) was asked to supply $106.5 million in financial aid to rehabilitate the Banguela Railway by the transport ministers of Angola, Zaire and Zambia.

Gold

The opening gold quote on the London Gold Market for May was $247.70 (U.S.) an ounce, near the low for the month of $245.90 (U.S.) an ounce on May 3. The gold price increased slightly during the first half of the month but made significant gains in the latter part of the month to reach an all-time high of $277.15 (U.S.) an ounce at the morning fixing on May 31. The closing price on the London Market was $274.60 (U.S.) an ounce. The uncertainty of the world economic situation, especially that pertaining to oil, was a major contributing factor to the price rise. The monthly average gold price for May 1979, of the afternoon fixing prices on the London Gold Market was $257.62 (U.S.) ($297.70 Cdn.) an ounce compared with $239.16 (U.S.) ($274.15 Cdn.) an ounce for April.

The International Monetary Fund (IMF) held its thirty-third gold auction on May 2, 1979 under the bid price method and awarded 470,000 fine troy ounces of gold to successful bidders at prices ranging from $245.86 (U.S.) a troy ounce to $247.01 (U.S.) an ounce and averaging $246.18 (U.S.) an ounce. The average price at the thirty-second auction held on April 4 was $239.21 (U.S.) an ounce. The afternoon fixing price on the London Gold Market on May 2 was $246.30 (U.S.) an ounce. Competitive bids were received from 1,514,800 ounces. Awards were made to 17 successful bidders out of a total of 20 bidders submitting competitive bids. The majority of successful bidders were European banks and bullion dealers or their affiliates but some awards were made to North American bullion dealers. Also, 20,000 ounces of gold were awarded to Uruguay on a noncompetitive bid.

The IMF announced that beginning in June the amount of gold offered for sale at each monthly auction will be reduced from 470,000 ounces to 440,000 ounces. Other conditions of the sales will remain unchanged.

On May 15, 1979 the Treasury Department of the United States held its thirteenth gold auction under the new sales program and awarded 750,000 troy ounces of gold to successful bidders at prices ranging from $224.26 (U.S.) to $255.47 (U.S.) and averaging $254.92 (U.S.) an ounce. The average price at the twelfth gold auction held on April 17 was $230.68 (U.S.) an ounce. The lower grade gold bar stock whose fine gold content was 89.9 to 91.7 per cent was offered at this auction. The afternoon fixing price on the London Gold Market on May 15 was $255.50 (U.S.). There was a strong interest in the gold auction and bids were received for a total of 2.4 million ounces of gold. Awards were made to six successful bidders out of a total of 18 bidders. Dresdner Bank AG of New York was by far the largest bidder being awarded 652,000 ounces, about 87 per cent of the total.

Iron and Steel

It was reported by Industry, Trade and Commerce Minister Rodrique Tremblay that the Quebec government is prepared to invest as much as $400 million to help Sidbec, the provincially-owned steel producer, to expand its operations. The Minister said he would attempt to negotiate a federal subsidy for Sidbec through the Department of Regional Economic Expansion.

Iron Ore

In spite of all the controversial news heard recently regarding the future of National Steel's Moose Mountain Mine at Capreol, Ontario, the mine was indefinitely closed May 10, 1979. Some 250 employees were affected by the closure.

Mercury

European mercury prices continued their upward trend in April and May, having risen from a level of about $173 to $183 a flask (76 pounds) in equivalent $U.S. at the beginning of January 1979 to $325 to $340 by the end of May. The $300 barrier was surpassed about mid-May. A combination of better demand, tighter supplies and major producing nations withholding supplies from the market in anticipation of still higher prices were the main reasons for the rise in prices. Added to these pressures was the continuing uncertainty over how well the Chinese producers will meet their contracted schedules in future months. The Metals Week New York mercury price, which remained steady in February at a range of about $200 (U.S.) to $210 (U.S.) a flask, began in March to climb steeply and reached a peak of $315 to $335 late in May.

On May 17 a meeting of the producer-oriented International Association of Mercury Producers (ASSIMER) was held at the Association's headquarters in Geneva, Switzerland. It was reported that delegates from four member countries, namely Spain, Italy, Yugoslavia and Algeria attended the meeting. Apparently the only two other member countries of the Association, namely Peru and Turkey, were not represented. There is little doubt that the meeting was called to appraise the mercury market in general but prices in particular. Press reports indicated that the producers agreed not to sell mercury below $350 a flask. However, a spokesman who attended the meeting said the $350 price level should be considered as a medium-term target and not as an immediate aim which should inhibit producers from selling at lower prices. The spokesman also stated that, if mercury prices reached $350 per flask in the next two months, the producers would meet again in Geneva in mid-July to reappraise the situation; otherwise they would not meet again before September.

At its April 10, 1979 offering of mercury the United States General Services Administration (GSA) sold 1,000 flasks. Associated Metals and Minerals Corporation of New York purchased 300 flasks at a price of $256.07 (U.S.) a flask and 400 flasks at $254.07 (U.S.). The remaining 300 flasks were sold to Northbrook Metals Incorporated of Northbrook, Illinois, at $252.70 (U.S.) per flask. At its May 8, 1979 offering GSA sold 1,000 flasks. The entire quantity was sold to Minemet Metals, Inc. a metal trading company in New York, at a price of $282.90 (U.S.) a flask. 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

On May 3, Société Métallurgique Le Nickel raised the prices of its nickel products 35 U.S. cents a pound. Other producers quickly followed suit. The new prices of the main classes of nickel products are: plating nickel, $2.90 (U.S.) a pound, melting nickel, $2.85 a pound, and charge nickel from $2.76 to $2.86 a pound depending on the product. On the London Metal Exchange, the new three month nickel futures contract opened the month at the equivalent of $3.10 (U.S.) a pound, rose to a high of $3.51 a pound on May 25 and closed the month at $3.25 a pound.

Twice during the month, tentative agreements were reached between Inco Metals Company and the bargaining committee of Local 6500 of the United Steelworkers of America representing Inco's employees at Sudbury who have been on strike since September 15, 1978. The first agreement, signed May 6, was rejected by the membership on May 12 by a vote of 5,463 to 4,058. The main points in that agreement were: retention of a grievance procedure in which the final stages are handled at one central office; settlement pay of $300 for workers when they return to work; a new long-term disability plan; increased vacation bonus; improved life insurance and sickness and accident benefits; improved pension plan allowing an employee to retire on full pension after 35 years service; continuation of a cost-of-living escalatory clause with the previous cost-of-living allowance incorporated in the base rate, and general wage increases of 51 cents an hour in the first year and 10 cents in the second and third years of the agreement. After this contract was rejected by the membership, the Union formulated a list of additional demands while the Company stated that negotiations could only be resumed within the framework of the negotiated package. Ontario government conciliators brought the parties together May 28 for exploratory talks and early on May 30 it was announced that the parties had initialled a new agreement containing some key improvements on the previous agreement. As reported by the union the main additional benefits in the new package include: full pension after 30 years service after June 1981; an additional 10 cents an hour wages in the first year of the contract; and further improvements in vacation pay. The new agreement is valued by the union at $4.07 an hour over three years compared with $3.50 for the first agreement. Union stewards by a margin of 83 to 75 voted May 31 to accept the agreement. Voting by the membership on the new agreement is on June 3.

Platinum

Along with other precious metals, the price of platinum increased sharply in May partly because of a continued strong industrial demand for the metal but also on speculative buying resulting from general uncertainty on the world economic situation. The opening nearby price for platinum on the New York Mercantile Exchange was $12.94 (U.S.) a gram ($402.40 (U.S.) an ounce), the low for the month. The price increased steadily until a high of $14.4 (U.S.) ($448.10 (U.S.) an ounce) was recorded on May 25. The price remained high at month end.

The Republic of South Africa producers raised the price of palladium to $3.541 (U.S.) a gram ($110 U.S.) an ounce in May.)

According to a news release Inco Limited has declared a "force majeure" on platinum. Supplies to its customers will be cut by 60 per cent. The company has no plans at present to declare "force majeure" on palladium supplies.

Silver

Spurred by heavy inflation hedge buying on world markets, good consumer business for physical supplies, declining secondary sources of the metal and restricted exports from India, silver prices advanced sharply in May with new all-time highs being established. Another factor contributing to the rise is increasing fuel prices amidst prospects of a recession in the United States and other major western industrial nations which is prompting speculators and investors to desert weaker paper currencies and turn to precious metals as a better store of value.

The New York silver price as quoted by Handy and Harman displayed a sharply increasing trend in May. The $8.00 (U.S.) a troy ounce barrier was broken May 4 when a price of $8.180 was obtained. The $8.50 barrier was broken May 22 when the quotation reached $8.584. A new all-time high of $8.768 was recorded on May 25 after which the price softened slightly.

The Canadian silver price, as quoted by The Northern Miner, has closely followed its United States counterpart, with the essential difference being the currency exchange rate. It also rose sharply in May. The $9.50 (Cdn.) a troy ounce barrier was broken May 7 when the quotation was $9.633. The $10.00 barrier was broken May 25 when a new all-time high of $10.164 was reached, and after which the price softened slightly.

On site work is gearing up at the Sam Goosly silver-copper-gold-antimony property of Equity Silver Mines Limited near Houston, British Columbia. Early in March, Placer Development Limited, that holds a 70 per cent interest in Equity Silver Mines Limited, announced the decision to bring the property into production at an estimated cost of $85 million. The remaining 30 per cent of Equity Silver is owned by Equity Mining Corporation, a private company. The access road to the mine was begun in December 1978 and completd in mid-April 1979.

ASARCO Incorporated of New York announced that if certain additional permits are granted by the U.S. state and federal agencies (involved) in time for site preparation to begin in mid-1979, its Troy silver-copper project could be completed by mid-1981. The project involves an $82.6-million silver-copper mine in northwestern Montana. The deposit is said to contain about 58 million tonnes of ore averaging 0.74 per cent copper and 52.8 grams of silver a tonne. When fully developed the Troy mine will have the capacity to produce annually 18 100 tonnes of copper concentrates and 130 600 kilograms (4.2 million troy ounces) of silver. The Troy property is about 37 kilometres south of Troy, Lincoln County, Montana.

According to press reports, Compania Minera San Jose Inc., an 80 per cent owned subsidiary of St. Joe Minerals Corporation of New York, will invest $80-million to develop a gold-silver-copper orebody in the Chilean Andes, some 500 kilometres northeast of Santiago. The deposit is known as the El Indio and is said to contain proven and probable ore reserves totalling 2.0 million tonnes averaging 253.7 grams of silver and 16.1 grams of gold a tonne and 2.25 per cent copper. A concentrator, a cyanide plant to produce silver-gold bullion, and a roaster will be constructed at the mine site and production is expected to begin in two years. In addition, a limited production of about 18 000 tonnes of ore suitable for direct sale to smelters will begin late in 1979. At the currently planned rate of production, the mine's life expectancy is about six years.

Tin

Sixth Tin Agreement

The current preparatory council meetings of the International Tin Council center on the drafting of a Sixth International Tin Agreement to replace the current pact when it expires in 1981.

Initial recommendations of member countries and of the secretariat include the following topics. Under consideration are:

> A plan to have an "evergreen" agreement to replace the five-year pacts.
>
> A plan to make consumer contributions to the buffer stock mandatory in such a way as not to lose members.
>
> Plans to deal with the problems that have arisen with respect to entry into force and ratification of the agreement, and,
>
> A plan to cover the complex question of possibly coordinating the new agreement with the newly approved Common Fund for commodity price stabilization.

Developments

The Thai Pioneer Enterprise is reported to have ordered a $9.2 million tin smelting plant from Lurgi Chemie and Huttentechnik, of West Germany. The operation is to begin in 18 months with an initial production rate of 3 000 tonnes of tin metal, gradually increasing to 3 200 tonnes after five years.

Foreign Trade Minister Li Chiang is reported to have stated that China's exports of tin metal, which declined to 3 309 tonnes last year from the 1975 peak of 3 018 tonnes, have ceased. The withdrawal of Chinese exports removed a significant element of uncertainty in the international supply/demand position.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

Consumer and Corporate Affairs Canada (Product Safety Branch) proposes to ban the use of several additional asbestos-based products accounting for a minor proportion of total asbestos end use. These products are: dry-wall joint cements or compounds; spackling compounds or similar products for use in construction or decoration; and simulated ash or embers for the fireplace. Specifically, the amendment to an item that already bans the use of asbestos-containing products used in modelling or sculpture, will propose banning the advertising, sale or importation into Canada of the aforementioned products. The present direct impact of this proposal on the asbestos industry is expected to be very minor. However, headlines referring to the proposal have tended to be ominous and may inadvertently contribute to the asbestos health scare.

According to a CCAC news release, the results of tests by National Health and Welfare (NHW) on hand-held hair dryers containing asbestos liners show that the very small amounts of asbestos released by the dryers are not greater than normal background levels found in city air. The release further stated, "both ministers expressed concern about public anxiety regarding health hazards which was generated by alarming and exaggerated statements based on little hard information".

A House subcommittee on labour standards began hearings on the asbestos industry in the United States. The subcommittee chairman stated that he would introduce legislation mandating asbestos substitutes where possible.

A Senate committee turned down a request to make Virginia the first state to ban asbestos cement (a/c) water pipes but agreed to study the idea during the coming year. Among the arguments used to oppose the bill was the fact that researchers have not proven a link between ingested asbestos and cancer. A/C pipes account for a major proportion of the total world demand for asbestos.

Unofficial reports indicate that at a recent Congress on Cancer in Denmark, the Office of Industrial Medicine advised that a total ban was to be issued on the use of asbestos in Denmark and "that discontinuation of use of asbestos would be effected over the coming five years and that there were now replacements for asbestos which it was hoped did not cause concern".

MINERAL FUELS AND PRODUCTS

Coal

In early May, Ontario officials announced a $6 million engineering and economic study of the Onakawana lignite coal deposits in northeastern Ontario. The initial 24-month program would be jointly financed by Ontario Hydro and Onakawana Development Limited, and would enable completion of a preliminary analysis of the project. The program will be directed towards: exploratory drilling and bulk sampling; the preparation of an environmental assessment; consideration of financial and contractual arrangements; and investigation of contract options. While this process evaluates the lignite reserves in light of Ontario's energy demand and supply situation, Onakawana Development Limited will proceed with its own study of the industrial and commercial market prospects for this coal.

Earlier in the year, McIntyre Mines Limited announced the signing of a new two-year coal contract. The new agreement with Japanese steel mills provided for the sale of 800,000 long tons of coal per year, beginning April 1, 1979 at a price of $59.05 (U.S.) per long ton. In addition to Japanese markets, McIntyre Mines sold coal to Brazilian, Korean and Canadian consumers in 1978.

In early May, a government sponsored French coal mission visited Canada. Discussions were held with Canadian federal and provincial government officials and with coal industry representatives in western and eastern Canada. The mission considered the opportunities for joint mining ventures in western Canada and for the sale of French mining equipment. Initial joint venture projects would look towards exporting production to third parties although Canadian exports to France in the 1980s are also a possibility.

Crude Oil and Natural Gas

TransCanada PipeLines Limited (TCPL) has recently announced the details on their multi-mode "Gas East Project." The purpose of this project is to supply Quebec and the four Atlantic provinces with domestic gas-supply energy. The capital investment will be in excess of $1.5 billion (current dollars) excluding the cost of distribution facilities. TCPL proposes to extend their gas pipeline east of Montreal to Quebec City, thus supplying the Eastern Townships with domestic natural gas. The main line to Quebec City would be reversible and sized to accept Arctic LNG. TCPL proposes to supply the Atlantic provinces with propane through special arrangements with Dome Petroleum Limited.

In Canada's High Arctic, west of Lougheed Island, Panarctic Oils Ltd. has made a significant gas find. It has been estimated to contain at least 3 trillion cubic feet of natural gas, but confirmation wells are required to establish reserves. The discovery well, Whitefish H-63, found gas in two zones. The gas flow was tested at 8.1 million cubic feet per day. An industry spokesman believes that this will bring the Arctic's total gas reserves to somewhere between 15 and 20 tcf, enough to justify a large diameter pipeline.

In the Northwest Territories, at Norman Wells, Imperial Oil Limited has done further drilling and believes that field may contain around 600 million barrels in-place of oil, or approximately 10 per cent of Canada's remaining crude oil reserves. Current daily production from the field is 3,000 barrels which could be increased to 25,000 barrels by waterflooding.

On the east coast near Sable Island, Petro-Canada has announced a natural gas discovery from the Venture D-23 well. The discovery is announced to contain about 1 tcf of gas, bringing with earlier found reserves the total to 3 tcf and enough for commercial development to proceed.

The following is a summary of proposed petroleum transportation projects in Canada:

(a) Trans Mountain Pipe Line Company Ltd. (crude oil) - from Low Point, Washington to Edmonton, Alberta - capacity 500,000 bbl/day - cost approximately $600 million;

(b) Skagway Oil Pipeline (crude oil) - from Skagway, Alaska to Keg River, Alberta - capacity 530,000 bbl/day - cost approximately $1 billion;

(c) Alaska Highway Gas Pipeline (natural gas) - from Prudhoe Bay, Alaska to southern Alberta and British Columbia - capacity 3 to 4 bcf/day - cost approximately $12 billion;

(d) Polar Gas (natural gas) - from Melville Island (NWT) to Longlac, Ontario via Mackenzie Delta - capacity 3 bcf/day - cost approximately $8 billion;

(e) Q & M Pipe Lines Ltd. (natural gas) - from Montreal to Quebec and Halifax, Nova Scotia - capacity 250 MMcf/day - cost approximately $950 million;

(f) Arctic Island LNG Project (LNG) - from Melville Island, NWT to terminal in Maritimes or Quebec via tankers - capacity 250 MMcf/day - cost approximately $1.5 billion.

Uranium

Cenex Limited has made its initial delivery of uranium to the Public Service Electric and Gas Co. of New Jersey from its new mining operation near Uranium City, Saskatchewan. Milling is being done under a toll arrangement at Eldorado Nuclear Limited's mill in the area. Since early April, Cenex has shipped 12 700 tonnes of ore to Eldorado's mill, some 8 800 tonnes of which have been treated. Ore will continue to be delivered at a rate of about 1 800 tonnes per week.

Canadian Occidental Petroleum Ltd., and Inco Metals Company are continuing with a drilling program to evaluate their uranium discovery, 11 kilometres northwest of Rabbit Lake, Saskatchewan. Further to the drilling results announced in April, two additional drill holes have reportedly yielded intersections of 10 metres at 23 per cent U, and 5.2 metres at 10 per cent U, respectively.

Asamera Oil Corporation Ltd. is also continuing with its drilling program in an area east of Midwest Lake, Saskatchewan, to evaluate two discoveries made last fall known as the "Dawn Lake" and "Hole No. 11" areas. Drilling in the Dawn Lake area has encountered uranium mineralization in 26 of 59 holes over a strike length of 550 metres; the zone varies up to 70 metres wide and 22 metres thick, with grades as high as 4.3 per cent U. In the Hole No. 11 area, mineralization has been encountered in 31 of 65 holes over a strike length of 450 metres; the zone varies up to 60 metres wide with grades as high as 14.5 per cent U.

Asamera has also identified two new areas where drilling has encountered uranium mineralization. The first is located 8 000 metres north-northeast of the Dawn Lake and Hole No. 11 areas, while the second is located 6 000 metres southwest of these areas. The mineralization occurs at depths of 92 and 177 metres, respectively.

The Ontario Environmental Assessment Board has released the report of its review of plans for the expansion of uranium mining activities in the Elliot Lake area. The report concludes that "the technology exists to carry out the expansion in an environmentally acceptable manner in the short term. This applies to all areas including mining, milling, waste management, air and water environments and radioactivity emissions." With respect to the long term effects of the expansion, however, the Board expressed concern because "present day knowledge is, to a large extent, limited." It is evident, according to the Board, "that considerable effort and time is required before solutions to the long-term aspects of waste management can be found."

NEW PUBLICATIONS

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

Preprints, **Canadian Minerals Yearbook,** 1977, Petroleum; Silver; Titanium and Titanium Dioxide; price 50¢ a copy.

MR 183: Comecon's Mineral Development Potential and its Implications for Canada, by N.M. Switucha.
Price $3.00, other countries $3.60.

MR 185: Canadian Reserves of Copper, Nickel, Lead, Zinc, Molybdenum, Silver and Gold, as of January 1, 1978, by D.A. Cranstone and R.T. Whillans.
Price $2.00, other countries $2.40.

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

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