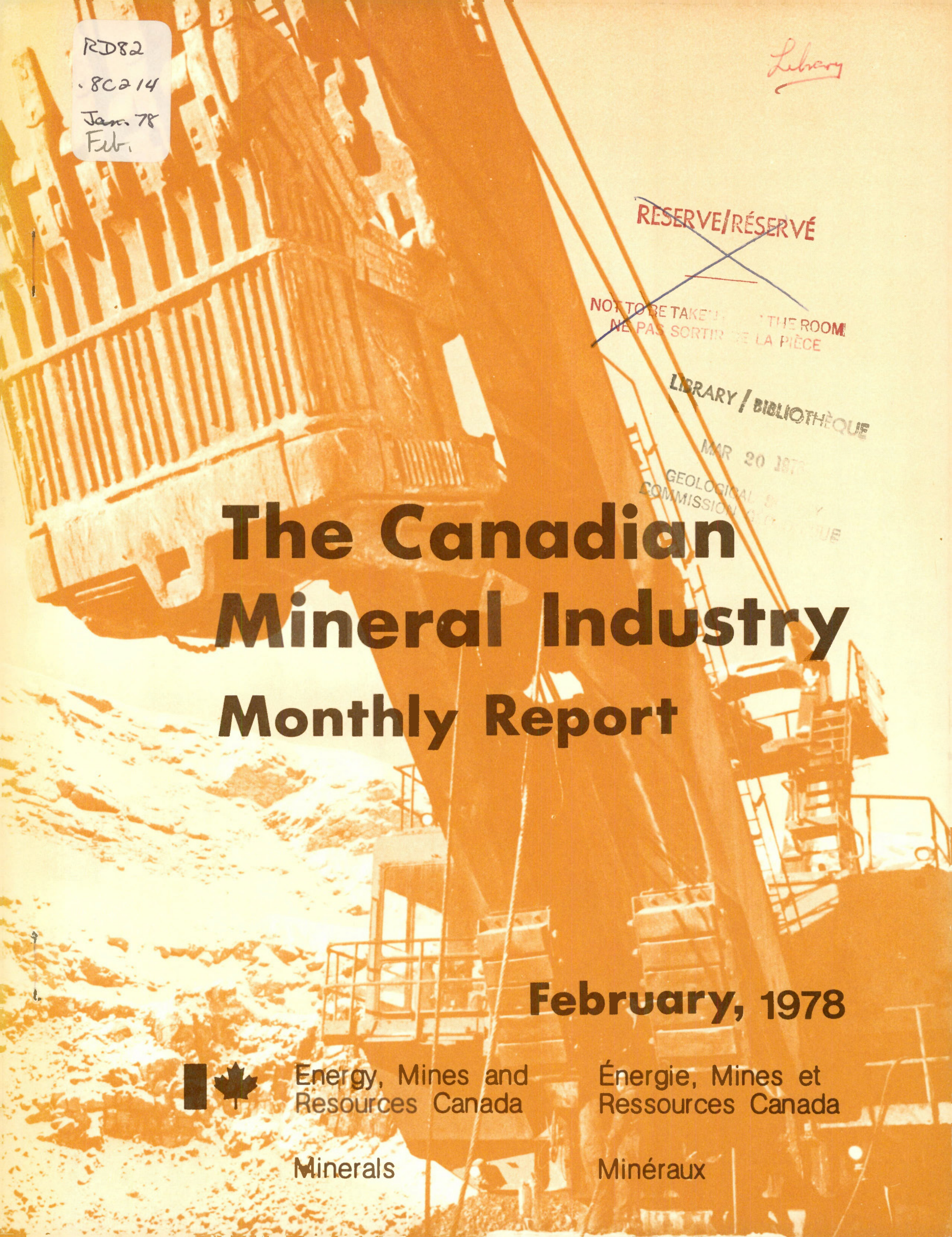

The Canadian Mineral Industry

Monthly Report

February, 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'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.

Mineral Policy Sector
Department of Energy, Mines and Resources
580 Booth Street
Ottawa, Canada K1A 0E4

Secteur de la Politique Minérale
Ministère de l'Energie, des Mines et des Ressources
580, rue Booth
Ottawa, Canada K1A 0E4

CONTENTS

THE CANADIAN MINERAL INDUSTRY FOR FEBRUARY

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

SUMMARY

1. Canada's unadjusted index of Real Domestic Product was 127.4 in December, a decrease of 2.3 per cent from November.

2. The December index of Mines, Quarries and Oil Wells was 115.9, a decrease of 2.1 per cent from the previous month.

3. The Third Preparatory Meeting on Copper under the UNCTAD Integrated Programme on Commodities was held in Geneva January 30 to February 5.

4. A limited and temporary suspension of the 30 per cent anti-dumping duties on imports of wide flange shapes from Britain, Japan, France, South Africa and Luxembourg was announced in February.

5. On February 23, the London Metal Exchange lead price plunged to £274.5 a tonne, the lowest spot price quote since 1976.

6. Bethlehem Copper Corporation has announced that it will begin recovering molybdenum as a byproduct at its British Columbia copper mining operations in 1978.

7. The Ad Hoc Intergovernmental Group of Experts on Tungsten held its final meeting February 20-24 in Geneva.

8. Zinc prices declined again in February.

9. Cassiar Asbestos Corporation Limited announced that it will close its Clinton Creek, Yukon Territories mine at the end of June 1978.

10. Westcoast Transmission Company Limited of Vancouver received approval from the National Energy Board to construct pipeline and gathering facilities in the Grizzly Valley area of British Columbia.

ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product (RDP). The overall RDP index in December was 127.4, a decrease of 2.3 per cent from November. For the period January to December, RDP increased in 1977 by 2.8 per cent over the year 1976.

The RDP index for mines, quarries and oil wells was 115.9, down 2.1 per cent from November. Iron mines showed a 13 per cent increase in December at 146.2 compared with 129.4 in November, but a decrease of 3.2 per cent for the year 1977 from its 1976 level. The index for other metal mines was up 6 per cent for the year. Mineral fuels also showed an increase for the year of 2.1 per cent. Non-metal mines were down 11.2 per cent in December over November but showed an increase of 10.3 per cent for the year 1977.

Table 2 compares volume of Canadian production for nineteen major minerals. Output fell substantially in December over that of November for copper (18.5 per cent), molybdenum (36.7 per cent), cement (46.9 per cent) and clay products (43.1 per cent in value terms). Notable increases were recorded in lead at 40.5 per cent and uranium at 48.6 per cent for the month. Annual increases in production were recorded in: lead, 12.6 per cent; zinc, 11.9 per cent; gypsum, 20.5 per cent and coal, 12.3 per cent.

Table 3 compares Canada's rail transportation of minerals in 1976 and 1977. The transport of total crude minerals increased 3.6 per cent in 1977 compared with 1976 while total fabricated minerals decreased by 0.5 per cent. Minerals accounted for 61.1 per cent of total freight carried by railways in 1977.

TABLE 1

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

Industry or Industry Group	1976 Nov	1976 Dec	1976 Average 12 Months	1977 Nov	1977 Dec	1977 Average 12 Months	Percentage Changes: Nov 1977 / Nov 1976	Dec 1977 / Dec 1976	Dec 1977 / Nov 1977	12 Months 1977 / 1976
Real Domestic Product	126.8	124.2	124.2	130.4	127.4	127.7	2.8	2.6	-2.3	2.8
Primary Industries										
Agriculture	35.2	29.4	100.4	51.3	40.1	96.4	45.7	36.4	-21.8	-4.0
Forestry	134.3	124.4	108.5	132.5	124.8	119.6	-1.3	0.3	-5.8	10.2
Fishing and Trapping	55.4	58.4	101.9	79.9	77.7	112.3	44.2	33.0	-2.8	10.2
Mines, Quarries and Oil Wells	116.7	114.1	110.4	118.4	115.9	114.1	1.5	1.6	-2.1	3.4
Metal Mines	110.0	102.9	108.3	112.0	107.9	112.2	1.8	4.9	-3.7	3.6
Placer and Gold Quartz Mines	79.9	79.2	74.6	75.1	70.6	73.5	-6.0	-10.9	-6.0	-1.5
Iron Mines	150.5	133.2	139.4	129.4	146.2	134.9	-14.0	9.8	13.0	-3.2
Other Metal Mines	101.5	96.6	102.3	109.5	100.2	108.4	7.9	3.7	-8.5	6.0
Mineral Fuels	119.7	127.1	111.8	123.5	128.9	114.1	3.2	1.4	4.4	2.1
Coal Mines	230.2	207.8	193.8	216.4	188.0	209.4	-6.0	-9.5	-13.1	8.1
Crude Petroleum and Natural Gas	110.6	120.5	105.1	115.9	124.1	106.4	4.8	3.0	7.1	1.2
Nonmetal Mines	138.8	128.5	118.1	134.9	119.8	130.3	-2.8	-6.8	-11.2	10.3
Asbestos Mines	113.8	107.1	104.9	108.2	85.5	108.5	-4.9	-20.2	-21.0	3.5
Secondary Industries										
Manufacturing	124.6	116.2	120.0	128.6	119.7	123.7	3.2	3.0	-6.9	3.1
Nondurable Manufacturing	120.7	114.6	117.3	123.5	117.6	120.9	2.3	2.6	-4.8	3.1
Petroleum and Coal Products Industries	133.6	137.2	127.1	137.7	137.0	132.3	3.1	-0.1	-0.5	4.1
Durable Manufacturing	128.4	117.8	122.7	133.8	121.8	126.5	4.2	3.4	-9.0	3.1
Primary Metal Industries	108.1	98.2	105.4	121.2	103.9	114.4	12.1	5.8	-14.3	8.5
Iron and Steel Mills	126.7	104.3	117.1	128.6	103.3	122.1	1.5	-1.0	-19.7	4.3
Steel Pipe and Tube Mills	135.5	120.3	121.2	118.7	106.8	122.4	-12.4	-11.2	-10.0	1.0
Iron Foundries	131.1	103.0	121.5	144.1	103.0	119.6	9.9	0.0	-28.5	-1.6
Smelting and Refining	70.5	81.7	80.9	106.8	101.2	100.9	51.5	23.9	-5.2	24.8
Nonmetallic Mineral Products Industries	136.0	101.8	121.3	143.1	109.8	128.9	5.2	7.9	-23.3	6.2
Cement Manufacturers	127.0	90.2	119.0	132.5	82.4	119.2	4.3	-8.6	-37.8	0.2
Ready-mix Concrete Manufacturers	136.9	67.2	114.9	126.8	63.9	119.4	-7.4	-4.9	-49.6	3.9
Construction Industry	122.8	103.5	116.6	116.8	96.9	113.6	-4.9	-6.4	-17.0	-2.5
Transportation, Storage, Communication	133.9	129.0	130.5	138.6	133.5	136.4	3.5	3.5	-3.7	4.5
Electric Power, Gas and Water Utilities	149.7	163.8	137.8	154.8	171.0	145.1	3.4	4.4	10.5	5.2
Trade	142.3	157.2	133.1	145.5	158.3	134.4	2.2	0.7	8.8	1.0
Finance, Insurance, Real Estate	131.3	131.9	128.2	136.6	137.2	134.6	4.0	4.0	0.4	5.0
Community, Business and Personal Service	132.6	129.2	127.6	136.9	133.6	132.4	3.2	3.4	-2.4	3.7
Public Administration and Defence	122.3	121.4	122.8	123.0	123.4	125.0	0.6	1.6	0.3	1.8

TABLE 2

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

		1976			1977			Percentage Changes		
		November	December	Total 12 months	November	December	Total 12 months	December 77 / December 76	December 77 / November 77	12 months 1977 / 1976
Metals										
Copper		59.3	61.1	730.9	65.5	53.4	781.6	-12.6	-18.5	+ 6.9
Gold	kg	4 595.7[r]	4 634.2	52 621.1	4 606.9	4 542.6	52 989.0	- 2.0	- 1.4	+ 0.7
Iron ore		4 613.8[r]	3 873.9	55 416.3	5 866.0[r]	5 053.2	54 431.1	+30.4	-13.9	- 1.8
Lead		29.0	28.9	256.3	22.7	31.9	288.6	+10.4	+40.5	+12.6
Molybdenum	t	1 442.3[r]	1 515.7	14 618.6	1 657.9	1 050.1	15 473.9	-30.7	-36.7	+ 5.9
Nickel		19.7	21.2	240.8	18.6	17.2	231.6	-18.9	- 7.5	- 3.8
Silver	t	95.4[r]	113.9	1 281.4	123.1	107.7	1 388.7	- 5.4	-12.5	+ 8.4
Uranium[(1)]	t	643.1[r]	550.7	5 626.6	455.1	676.4	6 090.0	+22.8	+48.6	+ 8.2
Zinc		99.0[r]	93.8	982.1	81.7	85.3	1 099.2	- 9.1	+ 4.4	+11.9
Nonmetals										
Asbestos		136.0	138.8	1 536.1	127.8	128.7	1 525.6	- 7.3	+ 0.7	- 0.7
Gypsum		544.0	612.1	6 002.2	564.4	641.9	7 230.0	+ 4.9	+13.7	+20.5
Potash K_2O		419.4	468.7	5 215.4	454.3	372.1	5 764.6	-20.6	-18.1	+10.5
Salt		647.0[r]	731.5	5 994.0	600.0	677.1	6 038.7	- 7.4	+12.9	+ 0.8
Cement		895.5	492.9	9 803.0	876.0	465.3	10 047.6	- 5.6	-46.9	+ 2.5
Clay products	$000	8,326.6	6,202.8	89,203.0	8,798.1	5,003.2	95,947.3	-19.3	-43.1	+ 7.6
Lime		149.1	139.0	1 762.8	158.3	149.1	1 835.0	7.3	- 5.8	+ 4.1
Fuels										
Coal		2 686.6	2 719.6	25 539.5	2 395.6	2 531.2	28 687.0	- 6.9	+ 5.7	+12.3
Natural gas	000 m^3	7 702 183.2	8 240 883.0	88 384 222.9	8 056 087.2[r]	8 740 590.4	90 852 517.8	+ 6.1	+ 8.5	+ 2.8
Crude oil and equivalent	000 m^3	7 084.5	8 399.5	83 594.6	7 551.3[r]	8 419.3	83 688.7	+ 0.2	+11.5	+ 0.1

(1) Tonnes uranium (1 tonne U = 1.299 9 short tons U_3O_8).
r Revised.

TABLE 3

Railway Transportation of Minerals

	1976	1977	Percentage Change
	(000 tonnes)		%
Crude minerals			
Alumina and bauxite	929	2 377	+155.9
Coal	17 441	18 893	+8.3
Copper ores and concentrates	2 004	2 199	+9.7
Copper-nickel ores and concentrates	6 692	6 407	-4.3
Gypsum	3 661	4 355	+19.0
Iron ore, concentrates and pellets	57 735	57 023	-1.2
Lead and zinc ores and concentrates	2 638	2 854	+8.2
Potash	7 895	8 747	+10.8
Sand, gravel and crushed stone	5 415	4 897	-9.6
Sulphur	3 587	4 641	+29.4
Other mine products	4 709	4 396	-6.7
Total crude minerals	112 706	116 789	+3.6
Fabricated minerals			
Cement	1 757	1 826	+3.9
Coke	717	758	+5.7
Iron and steel, primary and manufactured	3 150	3 079	-2.3
Nonferrous metals, primary & manufactured	1 627	1 536	-5.6
Oil, gas and related products	11 458	11 563	+0.9
Other fabricated minerals	3 127	2 964	-5.2
Total fabricated minerals	21 836	21 726	-0.5
Total crude and fabricated minerals	134 542	138 515	+3.0
Total revenue freight	217 847	226 748	+4.1
Crude and fabricated minerals as a % of total freight	61.8	61.1	

TAXATION AND LEGISLATION AFFECTING MINING AND ALLIED INDUSTRIES IN CANADA

Provincial

Alberta

Regulation 344/77 under the *Freehold Mineral Taxation Act* establishes the rate of tax on petroleum and natural gas rights at 16 mills on the dollar for the year 1977, unchanged from the year 1976.

Regulation 345/77 repeals and replaces the former exemption regulation. Both the petroleum and natural gas rights exemptions are increased from an assessed value of $50,000 to $100,000.

British Columbia

New *Mineral Act Regulations* made as BCR 587/77 under the Mineral Act, SBC 1977, chapter 54, have repealed and replaced the following regulations:

BCR 611/74 Locating Mineral Claims
BCR 40/75 Assessment Work
BCR 200/75 Fees
BCR 290/77 Reverted Crown-granted Mineral Claims

In the new regulation, Part A, clarifies a few points with regard to Locating Mineral Claims and 2-Post Claims.

Part B provides for a free miner to apply for a record of a reverted Crown-granted 2-post claim by paying a recording fee of $25 and making proper application. The $5 rental charged under BCR 290/77 no longer applies.

Part C regulates Exploration and Development - Assessment Work. This part is appreciably enlarged to provide more detailed requirements so that reports and maps will be acceptable for microfilming. Portable Assessment Credit Accounts are introduced.

Part D provides for the holder of a lease to apply for conversion to a mining lease. A fee of $50 must accompany the application.

Part E lists the fees applicable under the new act.

<u>Petroleum and Natural Gas Royalty Regulations</u>: BCR 599/77 have repealed and replaced the former royalty regulation as amended. There are some changes in the formulae for calculating royalty.

METALLIC MINERALS AND PRODUCTS

Aluminum

Alcan Aluminium Limited will sharply increase its capital spending to about $400 million this year from $235 million in 1977. The company said that $85 million will be spent this year on the construction of its 56 700 tonne a year smelter in La Baie, Quebec. The estimated cost of this smelter is $200 million. Site clearance and site preparation were completed in 1977.

Alcan has also finalized its agreement with Billiton B.V. and The Anaconda Company to build an 800 000 tonne a year aluminum plant in Ireland. The $500 million plant will be owned 40 per cent by Alcan, 35 per cent Billiton and 25 per cent Anaconda, and is scheduled to start production in 1982.

Chromium

Contract talks for delivery of chrome ore in 1978 are well behind those of previous years. The major consumers have large inventories of ore and in addition there are large stocks of ferrochrome overhanging the market. High grade chrome ore was offered in Europe for $100 (U.S.) a tonne, well below the $150 (U.S.) a tonne of the previous year, and in spite of the discounting it was reported that no sales had taken place. The U.S.S.R. has suspended shipments of high grade ore due to the depressed market and to declining high grade reserves. Etibank, Turkey's largest producer of chrome ore, is maintaining the previous year's price of $143 a tonne, however, regular customers have not made any purchases at this price. The sale of 44 per cent (Transvaal) ore for $54-$58 a tonne, down slightly from the last contract price of $55-$60 a tonne, indicates that prices may not fall as drastically as some consumers may hope.

Copper

Copper prices were steady during February. The London Metal Exchange (LME) cash price for electrolytic wirebars was equivalent to 54½ (U.S.) cents a pound at month-end. Producer prices for wirebars and cathode were unchanged throughout February at 69.875 and 69.125 cents a pound in Canada and 63.625 and 63.00 (U.S.) cents a pound in the United States. One United States producer, Kennecott Copper Corporation continued to quote prices 1½ cents a pound cheaper than other producers.

LME warehouse stocks of copper declined steadily during the month. On February 24 they were 622 425 tonnes, the lowest level reached since October 1977. Comex stocks on the other hand rose slightly; by February 24, they amounted to 166 385 tonnes.

The Quebec government has signed an agreement with Campbell Chibougamau Mines Ltd. which will help avert closure of the Cedar Bay and Henderson mines in the Chibougamau area of Quebec. Under the terms of the agreement, the company will receive up to $891 500 in loans from Quebec at a rate of 5 per cent, to be repaid when higher copper prices return. These funds will permit continued stope development and mine exploration. The company, in return for the loans will continue to operate its two mines and provide the Quebec government with a development plan for the Henderson mine by June 15, 1978.

The Granduc mine in northern British Columbia will close on June 30, 1978. The mine is jointly leased by Newmont Mining Corporation and ASARCO Incorporated. The mine has been operating at a loss and both companies had previously written off their assets at the mine. Granduc has been producing about 15 000 tonnes of copper a year during the past two years.

Bethlehem Copper Corporation will recommence mining the Iona orebody during the second half of 1978 and during 1979. This orebody contains, in addition to copper, 0.012 per cent molybdenum. Bethlehem intends to recover molybdenum from this ore and expects to produce concentrates containing about half a million kilograms of molybdenum annually.

According to Statistics Canada, Canadian production of primary copper in 1977 amounted to 781 578 tonnes compared with 730 930 tonnes in 1976. Refined copper production was 508 767 tonnes in 1977 and domestic shipments totalled 200 372 tonnes.

The Third Preparatory Meeting on Copper under the UNCTAD Integrated Programme on Commodities was held in Geneva, January 30 - February 3, 1978. This meeting is covered by a Special Item which appears later in this report.

A group of twelve United States copper producers filed a petition during February 1978, under section 201 of the Trade Act of 1974 with the U.S. International Trade Commission, "for temporary import relief from serious injury substantially caused and threatened by increased imports of refined copper". Canada exports about 80 000 tonnes of refined copper annually to the United States, with a value of about $120 million. The volume of these exports from Canada has not been rising in recent years, whereas exports from some developing countries have risen sharply in the last two to three years. Exports of copper concentrate and copper semifabricated products are not covered by the petition. The petition recommends the imposition of import quotas based on imports during the most recent representative period. Hearings are expected to begin in about three months time.

Although some CIPEC members met in London early in February to discuss an attempt to bring supply and demand into balance, no agreement was reached and no action was taken. Zambia and Zaire were the main proponents of production cuts.

Gold

The International Monetary Fund (IMF) held its eighteenth gold auction on February 1, 1978 under the common price method and awarded 524,800 troy ounces of fine gold to successful bidders at a common price of $175.00 (U.S.) an ounce. The price at which bids were submitted by successful bidders ranged from the common price of $175.00 (U.S.) to $181.25 (U.S.) an ounce of gold and averaged $176.35 (U.S.) an ounce. At the seventeenth gold auction 524,800 ounces of gold were awarded to successful bidders at the common price of $171.26 (U.S.) an ounce. The afternoon fixing price on the London Gold Market on February 1 was $176.40 (U.S.) an ounce of gold. The gold price remained near the auction price until about the middle of February when it moved upwards to over $180 (U.S.) an ounce. In all, 76 final bids were submitted at the eighteenth auction for a total of 598,400 ounces of gold, the lowest number of ounces bid at any auction, compared with 103 final bids for a total of 984,800 ounces of gold at the seventeenth auction. The seventeen successful bidders at the eighteenth auction were mostly European and North American banks and bullion dealers. All bidders were awarded gold. About 86 per cent of the bids submitted were in the price range of $175.00 - $177.99 (U.S.) an ounce of gold. The nineteenth auction will be held on March 1, 1978 in which 525,000 ounces of gold will be offered for sale under the bid price method, that is, successful bidders will be awarded gold at the actual price they bid.

The gold price continued its upward trend in February 1978 and reached the high for the month of $183.75 (U.S.) on the London Gold Market. The opening and closing gold prices for the month of February were $176.60 (U.S.) and $182.25 (U.S.) an ounce. The low for the month of $174.00 (U.S.) was recorded on February 9. The monthly average gold price for February 1978 of the afternoon fixing prices on the London Gold Market was $178.16 (U.S.), ($198.32 Cdn.) an ounce compared with $173.18 (U.S.) ($190.69 Cdn.) an ounce in January. The gold price in Canadian dollars advanced to over $200 (Cdn.) an ounce on February 17 and remained over $200 an ounce for the balance of the month.

Iron and Steel

The Minister of Finance, the Honourable Jean Chrétien, has announced a limited and temporary suspension of the 30 per cent anti-dumping duties that commenced September 29, 1977 on imports of wide flange shapes from Britain, Japan, France, South Africa and Luxembourg. This suspension, which will last until June 29, 1978, was in response to strong provincial representations regarding the adverse effect that steel fabricators were having in British Columbia, Yukon, Alberta and Newfoundland as a result of the imposition of these duties. The Algoma Steel Corporation, Limited of Sault Ste. Marie, Ontario is the only producer of wide flange shapes in Canada.

Notwithstanding the above noted relaxation of anti-dumping duties for wide flange shapes, the Minister of National Revenue, the Honourable Joseph Guay has announced that steps will be taken to increase surveillance of steel imported into Canada. The Government is concerned that as a result of protective measures taken around the world to limit imports of steel, particularly by the United States and the European Economic Community (EEC), exporting countries will divert steel to Canada and increase efforts to ship steel into Canadian markets at distressed prices. Specific measures mentioned by the Minister include monitoring of all steel products imported into Canada, establishment of a task force to analyze import data and relevant marketing information, use by the Deputy Minister of National Revenue, Customs and Excise, of his authority to initiate anti-dumping investigations without formal complaint and accelerated investigative procedures relative to possible dumping of steel products.

Sydney Steel Corporation (Sysco) of Sydney, Nova Scotia has reached agreement with Pohang Iron and Steel Company of South Korea for the sale of 60 000 tonnes of slabs to be shipped between April and September, 1978. An option for an additional 20 000 tonnes has also been granted. This sale will enable Sysco to operate its recently installed continuous castor at nearly full capacity for the life of the contract.

The National Energy Board has recommended that Foothills Pipelines (Yukon) Ltd. use a 56 inch diameter, 0.54 inch thickness, 1080 psi pipe in its section of the Alcan-Foothills pipeline. This line is to transport natural gas from Prudhoe Bay, Alaska to markets in the lower United States. It is estimated that this large diameter pipe will account for about 70 per cent of total pipe requirements in the 2,000 mile Canadian section. If this thin-walled pipe is used it means that it can be produced in Canada by The Steel Company of Canada, Limited (Stelco) with its pipe mill at Welland and Interprovincial Steel and Pipe Corporation Ltd. (Ipsco) of Regina. Stelco is presently completing an expansion of its plant and Ipsco is looking to expand its capacity in order to be able to produce larger quantities of large diameter arctic grade pipe.

In Japan, the Ministry of International Trade and Industry (MITI) is investigating the possibility of stockpiling semi-finished steel products such as slabs, blooms and billets in an effort to help the steel industry. Due to soft market conditions for finished steel products, Japan has recently been operating at about 65-70 per cent of its annual crude steelmaking capacity of some 140 million tonnes. In 1977, Japan produced 102.4 million tonnes of crude steel.

Lead

The lead price plunged on the London Metal Exchange (LME) to £274.5 a tonne (24.2 cents a pound U.S.) on February 23, the lowest spot price quote since December 1976. The price recovered slightly by month-end to £293.5 a tonne (25.7 cents U.S.). LME warehouse stocks declined 275 tonnes to a level of 68 025 tonnes on February 24. This was the first decrease in five months.

Although the lead supply situation seems to be loosening in Europe, metal supplies in North America remain tight as most producers are still behind on shipments to customers. Producer stocks of metal in the United States are very low and totalled 14 762 tonnes at the end of January, about one-quarter of their normal working levels.

Hindustan Zinc Co.'s new lead and zinc smelter at Visakhapatnam became fully operational during the month. The plant capacity is 10 000 tonnes a year of refined lead and 30 000 tonnes a year of refined zinc. The plant will not reach capacity until late in 1978 or early 1979.

Cominco Ltd. announced that the H.B. mine at Salmo, British Columbia would close in September of this year due to depleted ore reserves. Production from H.B. in 1977 totalled 1 975 tonnes of lead metal contained in concentrate and was treated at Cominco's Trail, B.C. smelter.

Mercury

At the end of December 1977 surplus stocks of mercury held by the United States Atomic Energy Commission (USAEC) amounted to only 55 flasks of 76 pounds each. In June 1969 these surplus USAEC stocks, which do not require Congressional authorization prior to being sold, amounted to 15,000 flasks, but between then and the end of 1977 a total of 14,945 flasks were sold. All of this surplus mercury was sold by General Services Administration (GSA). Between late 1969 and the end of 1971 sales were made by GSA at monthly offerings not exceeding 1,500 flasks. During the first half of 1972 no such sales were made, mainly because of the depressed condition of the mercury market at that time. From July 1972 to the end of 1977 sales were made at monthly offerings restricted to a maximum of 500 flasks. The surplus USAEC stocks 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.

GSA sold 500 flasks of mercury in January 1978 but the source of this material is not known.

On February 2, 1978, GSA announced that it would be offering for sale further quantities of mercury on the second Tuesday of each month. The maximum offering is 1,000 flasks per month. The first offering was made on February 14, at which time 200 flasks were sold. Information has not yet been made available concerning the source of such mercury but some of it could be stocks held by various U.S. governmental agencies. Press reports indicate that GSA now has a further 4,856 flasks of mercury available for sale at such monthly offerings.

Molybdenum

Bethlehem Copper Corporation has announced that it will begin recovering molybdenum as a byproduct at its British Columbia copper mining operations in 1978. The decision to construct a molybdenum recovery circuit was made when it was decided to bring the Iona orebody into production. The orebody, which will be mined beginning in the latter half of 1978, grades about 0.45 per cent copper and 0.0125 per cent molybdenum. The recovery circuit will have an annual production capacity of about 450 tonnes of molybdenum in concentrate when ore from the Iona orebody is being treated and a somewhat lower capacity when ore from other lower grade molybdenum orebodies is being treated.

Nickel

Western Mining Corporation Limited has announced a further cut in nickel production. Operations will be suspended at the Windarra project in Australia, 50 per cent owned by Western Mining and 50 per cent by Windarra Nickel Mines Pty. Ltd. Open pit operations at Windarra were suspended in February and all underground production will be suspended in June. The Windarra had been producing nickel at a rate of about 13 000 tonnes a year and its concentrates are sent to Western Mining's smelter at Kalgoorlie. Exploration and underground development will continue at Windarra and production will resume when nickel markets improve. About 250 employees will be laid off when production ceases. Western Mining will make nickel matte available to enable Windarra Nickel Mines to meet its contractual obligations to Sherritt Gordon Mines Limited.

Falconbridge Nickel Mines Limited announced it would no longer pursue the idea of a work sharing program for its employees following the union's rejection of the company's conditions for such a program. The program proposed by the union, would have given hourly-rated employees three weeks of work and one week of unemployment insurance benefits each month. It is reported that the union wanted the company to guarantee that there would be no further layoffs and to continue current non-monetary benefits, such as health care during the work-sharing period. The company and union could not agree with each other's proposals.

Platinum

A major platinum metals producer in the Republic of South Africa increased the producer price of platinum from $205 (U.S.) to $220 (U.S.) an ounce in February 1978 to bring the price more in line with the dealer price. The price of palladium was increased from $65 (U.S.) to $70 (U.S.) an ounce. According to reports a reduction of platinum sales by the U.S.S.R. and speculative buying because of pressure on the U.S. dollar were the contributing factors in the price increases.

Silver

Terra Mining and Exploration Limited expects its mine output of silver during the sixth-month period beginning February 1, 1978 to be some 37 300 kilograms. There should be little difficulty meeting this forecast provided the main production haulageway is advanced sufficiently to reach and develop the mine's Nos. 11 and 12 vein complex on the 410-metre level. Accordingly, silver output for the full year 1978 should be considerably in excess of the 33 100 kilograms produced in 1977 and possibly greater than the 59 130 kilograms produced in 1976.

Late in 1977, Equity Mining Corporation announced that major financing had been arranged to bring into production its Sam Goosly silver-gold-copper property 65 kilometres south of Smithers, British Columbia. Equity Mining had accepted a proposal by the Bank of Montreal and the Toronto Dominion Bank to lend approximately U.S. $44 million towards development of the project. Total cost of the project has been estimated at $60 million. The financing required over and above the bank loan was expected to be provided by Granby Mining Corporation of Vancouver and Boliden Aktiebolag of Stockholm, Sweden, two companies which had been participating in arrangements to bring the property into production. Planned production was to be at a rate of 4 170 tonnes of ore a day with silver expected to account for about 75 per cent of the value of production. At this planned rate of output the silver content of concentrates produced could, depending on grade of ore milled and silver recovery, amount to some 125 200 kilograms (3.9 million troy ounces) a year.

If financing arrangements had proceeded as planned, construction of the project could have begun early in 1978 and ore production late in 1979. Granby Mining was to be responsible for the design and construction of the facilities and Equity Mining was to manage the operation. However, at the end of February, Granby Mining announced that its agreement with Equity Mining to develop the property is not viable and the company is examining its alternatives concerning the project. It could be that plans to develop this property will be shelved for an indefinite period. Reserves of ore mineable by open pit methods at the property have been estimated at 39.5 million tonnes, grading 86.5 grams of silver and 0.81 gram of gold a tonne, and 0.33 per cent copper.

The New York silver price, as quoted by Handy & Harman, continued to fluctuate and, at the same time, displayed an upward trend during the first two months of 1978. The $5.00 (U.S.) a troy ounce barrier was broken on January 25 when a price of $5.025 was reached. A further high of $5.035 was obtained on February 21. In 1977, the Handy & Harman New York silver price averaged $4.623, with a low of $4.300 being recorded on January 11 and a high of $4.960 being attained on March 21. The last time, prior to January 25, 1978, that the Handy & Harman New York silver price exceeded $5.00 a troy ounce was on July 9, 1976 when it was quoted at $5.045.

Tungsten

The Ad Hoc Intergovernmental Group of Experts on Tungsten (IGET) held its final meeting in Geneva during the week of February 20-24 in conjunction with a meeting of the UNCTAD Committee on Tungsten. IGET, which was convened on instruction by the Trade and Development Board in 1977, was charged with examining and assessing proposals for the stabilization of the world tungsten market and was to present its findings and recommendations as to how best to stabilize the tungsten market to the Committee on Tungsten in February, 1978. The participants in IGET were unable to agree to a unified program and three different recommendations were presented to the Committee on Tungsten. The Committee adopted the report and decided to simply pass the recommendations on to the Trade and Development Board special session in April, 1978 for its consideration and action.

The findings and recommendations that the Committee on Tungsten will pass on to the Trade and Development Board are:

FINDINGS:

All experts agreed that -

(1) the high volatility of the tungsten market is detrimental to the interests of both producers and consumers;

(2) measures which are feasible and desirable should be undertaken for the stabilization of the tungsten market, with the cooperation of both producers and consumers;

A majority of consuming country experts found that -

(1) negotiation of an international commodity agreement for tungsten is not warranted at the present time, since the studies and analyses have not demonstrated the feasibility or desirability of market intervention measures, and

(2) establishment of a producer/consumer forum with the mandate to identify problems and propose appropriate solutions for consideration by governments, would further efforts for the stabilization of the tungsten market.

Most producing country experts and some consuming country experts found that -

(1) the creation of an independent producer/consumer consultative body intended to increase market transparency would not in itself achieve stabilization;

(2) an international arrangement with active decision-making powers and obligations is warranted, bearing in mind the characteristics of the production, consumption and trade of this commodity;

(3) until now, the only detailed propositions aimed at achieving stability in the tungsten market have been reflected in proposals considered in the Expert Group relating to an international commodity arrangement with appropriate legal, administrative and economic provisions, including pricing provisions.

The same consuming country experts,
in reaffirming their willingness to consider stabilization proposals for tungsten in the context of an international negotiation, found that, in the framework of the preparation of this negotiation, an Ad hoc structure in the Committee on Tungsten should work very quickly on new proposals for an adequate and acceptable price indicator for the world tungsten market.

The expert of a major producing country
found that in the light of the discussions in the Ad hoc Intergovernmental Group of Experts on Tungsten, it would be desirable to continue work towards the establishment of a new framework for international cooperation on tungsten. This framework should provide an appropriate legal instrument to improve the flow of information, on a suitably confidential basis, on tungsten production, consumption, trade, stocks and pricing. Such a framework could take the form of an international commodity agreement but would not at this stage include binding economic provisions since such provisions at this point are neither feasible nor negotiable. However, at a later state, on the basis of more adequate data to be developed within the context of such an agreement and if market conditions so warrant, appropriate economic provisions could be considered by governments for inclusion in the agreement.

RECOMMENDATIONS:

A majority of consuming country experts recommended that -
the Committee on Tungsten request the Trade and Development Board, by whose direction the Ad hoc Group was established, to appoint a group for the drafting of a charter for a producer/consumer forum for tungsten, such charter to be submitted to governments for review and approval within three months from the appointment of the drafting group.

Most producing country experts and some consuming country experts recommended that -
the second part of the seventeenth session of the Trade and Development Board, scheduled for April 4, 1978, request the Secretary-General of UNCTAD to convene a negotiating conference with the objective of formulating a mutually acceptable international commodity arrangement on tungsten.

The expert of a major producing country recommended that -
the Trade and Development Board request the Secretary-General of UNCTAD to convene a new group to prepare draft articles for a framework agreement for consideration by governments.

The countries identified as the majority of consuming countries are the United States, the United Kingdom, Sweden, Japan and the Federal Republic of Germany. Those identified as most producers and some consumers include Australia, Bolivia, People's Republic of China as the leading supporters amongst producers and four consumer countries - Belgium, France, the Netherlands and the U.S.S.R. The major exporting country is Canada.

Zinc

In Canada, Orchan Mines Limited announced a 30 per cent reduction in zinc-copper mine output for 1978 and the layoff of 75 employees which would take place in April. Cominco Ltd. announced that closure of the zinc-lead H.B. mine would occur in September 1978. The mine has 110 employees who will be offered relocation at other Cominco operations.

In South Africa, the O'okiep Copper Co. Ltd. deferred plans to develop the Gamsberg zinc-lead deposit scheduled for production in the early 1980s pending improved markets and prices for zinc.

Zinc prices declined internationally again prompted by a continuing deterioration of supply and demand for zinc metal in Europe. Effective February 20, 1978 the producer price for zinc outside North America dropped from $600 (U.S.) a tonne to $550 (U.S.) a tonne when Billiton B.V., AM&S Europe Ltd., Metallgesellschaft A.G., Preussag A.G. Metall, Norzinc A.S., Outokumpu Oyin and Electrolytic Zinc Company of Australasia Ltd. moved to the new price. This reduction caused zinc metal prices in North America to decline, such that, on February 23 and 24, producers in the United States dropped domestic prices from $672.40 a tonne to $639.33 a tonne, and producers in Canada dropped domestic prices from $716.50 a tonne to $683.43 a tonne. Quotations for zinc on the London Metal Exchange closed out the month at $469.08 (U.S.) a tonne.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

Cassiar Asbestos Corporation Limited announced that it will close its Clinton Creek, Y.T. mine due to the exhaustion of ore reserves at the end of June 1978. The mine came into full production in 1968 and to date has produced approximately 900 000 tonnes of asbestos fibre valued at $300 million.

Between 1972 and 1974 the company carried out an exploratory drilling program in an attempt to confirm and extend ore reserves. The program failed to confirm the presence of mineable reserves. An independent consultant reviewed company work and concluded that it was not to Cassiar's best interests to extend the life of the mine beyond 1978. The Department of Indian and Northern Affairs studied all earlier data and essentially agreed with the company's and the consultants' studies.

Training programs have been made available at Clinton Creek for more than a year through an agreement with the local union and Canada Manpower consultative services. The local president of the Canadian Mine Workers Union has praised the efforts of the company to make the closure as painless as possible.

The company's transport division will be completely disbanded because an independent transportation company will be hired to operate a proposed new asbestos fibre route through Stewart, British Columbia. Most of the fibre shipped from Clinton, as well as from Cassiar, British Columbia, is presently transported by truck to Whitehorse, Y.T., by rail to Skagway, Alaska, then by container ship to Vancouver prior to distribution to world markets.

Members of the newly formed Quebec Asbestos Board, headed by Dr. D. Perlstein, along with the vice-president of the Quebec Asbestos Mining Association, visited the Department of Energy, Mines and Resources to establish initial contact with this and other federal government departments. The meeting, also attended by officials from the Departments of Industry, Trade and Commerce and External Affairs, was in preparation for the Board's organization of activity that is expected to result in direct Quebec government involvement in the asbestos industry through the purchase of shares in Asbestos Corporation Limited and formation of a new company, Société Nationale de l'Amiante. Among subjects discussed were: world trends in asbestos production, consumption and trade, further processing opportunities and constraints, the present status of GATT negotiations, external policies and international relations and the extent that technical and/or financial cooperation is available through federal government assistance programs.

There has been no decision to date regarding the future of United Asbestos Inc., Matachewan, Ontario mine-mill complex held under receivership since March 1977. Presently, milling of diamond drill cores from a fall, 1977 drilling program, authorized by the company's trustee, is underway to confirm earlier established grades, recoveries and reserves. The results of this program may aid interested companies in arriving at a decision to participate in refinancing of the project. Earlier drilling of the North Zone indicated ore reserves of about 32 million tonnes averaging 9.65 per cent fibre mineable by open-pit to a depth of 400 feet.

MINERAL FUELS AND PRODUCTS

Coal

It was announced that pre-construction work is to begin this year on a new thermal power station near Lake Wabamun. Calgary Power Ltd. is to build its new Keephills Thermal Station near its existing Sundance generating station 60 kilometres west of Edmonton. The first 750 megawatt Keephills unit is expected to come on stream in 1982 after expansions at the existing Sundance station are completed. Coal for the new plant will come from the existing Highvale mine which provides coal for the Sundance station.

An application is currently before Alberta's Energy Resources Conservation Board (ERCB) for a new surface mine to meet the provinces future electricity needs. Forestburg Collieries Limited (a subsidiary of Luscar Ltd.) is applying for permission to develop a new mine to eventually replace production from its existing operations. If approved, the new mine would begin production in 1980 and continue producing at least until 2012. The new mine is estimated to have 50 million tonnes of recoverable coal reserves within 10 kilometres of the existing Battle River generating plant.

Talks were held between South Korean interests and Canadian coal industry representatives in February. Officials from the Electric Generating Authority of South Korea visited Canada to undertake a technical review of western Canadian thermal coal. Coal from the United States, Australia and Indonesia is also being considered for South Korea's requirements. While contract possibilities are still well in the future, the interest shown by this and other foreign concerns demonstrates the competitive nature of Canada's thermal coals.

Cardinal River Coals Ltd. is proposing to develop an extension to its existing coking coal surface operations south of Hinton, Alberta. An application is currently before the Alberta Energy Resources Conservation Board to open up a new mining area to replace reserves depleted by existing production. Cardinal River Coals Ltd. exports the majority of its coal to Japan although some coal is also marketed to South Korea under a 1977 agreement.

Work is progressing on schedule at the new Alberta Luscar Sterco Ltd. Coal Valley mine in preparation for coal shipments scheduled to begin this summer. The coal from this mine will form a major part of the almost 2.5 million tonnes which will soon be moving from British Columbia and Alberta to Ontario for generation of electricity at Nanticoke. Output from the Coal Valley mine will also be exported to foreign markets. At full production levels this $100 million mine will ship about 1.8 million tonnes of coal to Ontario Hydro and about 550 000 tonnes to export markets. The coal for Ontario Hydro will be transported by rail to Thunder Bay and then by lake freighter to Lake Erie.

British Columbia announced that it has lifted its moratorium on issuing new coal licences. The moratorium was originally imposed in 1972. Coal applications must conform to the 1974 Coal Act with regard to fees and rents and exploration development programs must comply with a number of environmental and reclamation requirements. The government is currently reviewing its Coal Act in anticipation of preparing amendments that will be introduced in the next session of the Legislature.

The Ontario Ministry of Natural Resources has granted a 21 year lease to mine lignite coal from its Onakawana coal deposits. Onakawana Development Ltd. has been granted a lease on 12,800 acres in the James Bay lowlands for five years. The lease will cost $1 per acre for the first 5 years and is subject to review at the end of each 5-year period. If these deposits were developed to supply electricity for Ontario, it is estimated that up to 1,200 jobs would be created in the construction phase.

The Foreign Investment Review Agency (F.I.R.A.) announced its approval of the acquisition of Crows Nest Industries Limited by Shell Canada Resources Limited. Crows Nest Industries owns substantial coal reserves in southeastern British Columbia. Shell Canada will spend $4 to $8 million in the next four years on further exploration of the Line Creek property. If the project goes ahead, it is estimated that developmental costs would be in the order of $100 million for an annual output of 1.4 million tonnes.

Two demonstration scale coal related projects at different ends of the country were included in the several coal and other energy projects reviewed by the Honourable Alastair Gillespie at the First Minister's Conference held in Ottawa in February. The Summerside and British Columbia Hydro and Power Authority (B.C. Hydro) demonstration scale plants will evaluate coal utilization techniques in relation to specific coal deposits and specific situations. The Summerside Demonstration project, at Canadian Forces Base Summerside, involves a fluid bed boiler fed with a coal/garbage mix. If the project proceeds, design work would begin in 1978-79. Estimated cost of this federally funded project is $6 million. The B.C. Hydro pressurized fluid bed demonstration scale plant proposed for Hat Creek would be of interest to several provincial utilities and private industries as well as to the Federal Government. Preliminary studies have been completed and construction costs are estimated at $100 million.

Petroleum and Natural Gas

Westcoast Transmission Company Limited of Vancouver received approval from the National Energy Board (NEB) for a $150 million project to construct pipeline and gathering facilities in the Grizzly Valley gas producing area of northeastern British Columbia. The pipeline will serve the Grizzly Valley and Monkman fields and a natural gas processing plant will be built at Chetwynd to feed gas into the existing lines to southwestern British Columbia and northwestern United States. The new facilities are expected to be in operation by the end of next year.

The federal government will allow Great Canadian Oil Sands Limited of Toronto to charge the world price for its synthetic oil production in Alberta if the company agrees to expand its existing facilities. The world price arrangement will be similar to that given the nearly completed Syncrude Canada Ltd. oil sands extraction plant. The new pricing arrangement is contingent on the company expanding its present output of 45,000 b/d by 15,000 to 20,000 b/d.

This month Chevron Standard Limited announced that its Nairb A-11-22 well had encountered 195 feet of gross pay in an isolated Nisku D2, Devonian reef build-up. On test, the well flowed up to 3,180 b/d of 41.3 gravity crude oil. The well is located in the West Pembina area, 90 miles west of Edmonton and 170 miles northwest of Calgary. Since the initial discovery, 11 more discoveries have been made in the same general area, all in isolated D2 pinnacle type reef structures. Ten of these were oil discoveries (5 by Chevron Standard) and the remaining two appear to be gas discoveries. No estimates have been given of the areal extent of the reefs or the ultimate limits of the potential producing trend. Nevertheless, the Nairb well is undoubtedly the most significant new oil discovery made in Alberta during the past 12 years and has initiated a major new cycle of oil exploration.

As requested by the Honourable Alastair Gillespie, Minister of the Department of Energy, Mines and Resources, the National Energy Board (NEB) will commence public hearings into crude oil supply and demand to 1995 in Calgary on May 24, 1978. The hearings will be continued in Vancouver, Ottawa, Quebec City and Halifax if warranted by the number of submissions. The purpose of the enquiry is to determine Canada's oil supply, the import dependency which might develop for British Columbia as well as eastern Canada, when new or expanded oil ports would be needed, and where they should be located. The hearing will investigate reserves and producibility of crude oil, domestic demand and import needs and the extent to which oil can be displaced by other alternatives.

Uranium

The Ontario Government has passed an Order-in-Council approving the purchase by Ontario Hydro of some 76 165 tonnes U from Denison Mines Limited and Preston Mines Limited over the period 1980 to 2011. The contracts are the largest sales made to date in the world's uranium industry and will provide Ontario Hydro with the bulk of its uranium requirements for its nuclear power development program at less than world prices over this period. Additional quantities will likely have to be bought after 1985. The required expansion of Denison's facilities and the rehabilitation of the Preston operation will provide more than 2,000 jobs in the Elliot Lake area by the mid-1980s.

Imperial Oil Limited has announced that a drilling program at Mid-West Lake, some 24 kilometres west of Rabbit Lake in northern Saskatchewan, has encountered uranium mineralization at depths of 200-300 metres in 8 out of 10 holes drilled. Although to date, few details are available about the find, it is interesting for a number of reasons, not the least of which is the fact that it is located some distance from the edge of the Athabasca sandstone.

A federal environmental assessment review panel has recommended to the Minister of the Environment that Eldorado Nuclear Limited not be granted permission to construct an integrated waste-disposal and refinery complex at its site near Port Granby, Ontario. The site is the company's preferred choice after a detailed study of 17 possible sites in the Province of Ontario. The panel has been reviewing Eldorado's proposal to build a 9 070 tonne U/year uranium hexafluoride refinery for a little over a year.

Sherritt Gordon Mines Limited will operate a pilot plant at its Fort Saskatchewan, Alberta refinery to test a new uranium and nickel recovery process which it has developed on behalf of Uranerz Exploration and Mining Limited. Application is currently being made to the Atomic Energy Control Board to operate the facility.

Urangesellschaft mbH of West Germany, is reportedly seeking approval to purchase up to 14 per cent interest in Western Mining Corporation Limited's Yeelirrie uranium deposit in Western Australia. Plans for equity participation in the project were first discussed in 1972 but rejected by the then Labour government. The new proposal apparently falls within Australia's current foreign investment guidelines since Western Mining is a wholly owned Australian company.

Peko-Wallsend Ltd. and Electrolytic Zinc Company of Australasia Ltd. have indicated that ore-grade uranium mineralization has been encountered in 8 out of 10 holes drilled within an area of 250 by 250 metres near the present Ranger deposits. Grades range from 1.15 to 6.54 kilograms U/tonne, across intersections varying from 4 to 28 metres, at depths of from 8 to 47 metres. The prospect is not yet delimited.

The Tennessee Valley Authority will pay Rio Algom Limited \$45.42 U.S. a lb U_3O_8 (\$118.09/kilogram U) in 1979 dollars for the first delivery of 385 tonnes U under Rio Algom's contract to deliver 6 540 tonnes U over the period 1979 to 1990. The price was set by an arbiter under arbitration provisions in the contract.

Portugal has established a State uranium company, Empressa Nacional del Uranio, S.A. (ENU), which will take over responsibilities for uranium production from the Junta de Energia Nuclear (JEN). ENU is reportedly seeking to sell portions of its uranium stockpile. Production of uranium in Portugal in 1977 was estimated at 85 tonnes U.

General Mining and Finance Corp. Ltd. of South Africa has recently announced that it will construct a 3.24 million tonne/year, \$69 million uranium processing plant to treat ores from its Stilfontein and Buffelsfontein gold mines. Some 80 per cent of the plant's uranium output from 1980 is reportedly under long-term contracts which provide for some \$57.5 million in advance payments.

SPECIAL ITEM

UNCTAD THIRD PREPARATORY MEETING ON COPPER
January 30 - February 3, 1978

The Third Preparatory Meeting on Copper under the UNCTAD Integrated Programme on Commodities (IPC) was held in Geneva, January 30-February 3, 1978.

Summary

The participants agreed to set up a standing intergovernmental body on copper to determine an acceptable basis for a commodity agreement on copper; to monitor the copper market, conduct consultations and information exchange; and to propose interim solutions to problems of the copper market.

If and when an acceptable basis is found for a commodity agreement, a Preparatory Meeting would be called. This meeting would then decide whether to convene a negotiating conference leading to a commodity agreement on copper.

Canada will participate in a working group which will define terms of reference, the organizational structure and financing of the copper body and report to governments before May 1978.

Proceedings of the meeting

The meeting received the report of the fifth session of the Intergovernmental Group of Experts on Copper (IEGC) held in November 1977, which reflected analysis and discussion of the Charles River Associates (CRA) report examining the feasibility of copper price stabilization using a buffer stock and supply restrictions. The report also reflected a limited consensus at the November IEGC meeting on the need to set up a copper consultative organization (CCO) composed of both consuming and producing countries.

Through an initiative by producing countries the meeting agreed to establish a CCO as the first stage of a two-stage process to deal with the problems of the world copper industry. The CCO would be called a "standing intergovernmental copper body" (SICB) and will have the following three principal tasks, to be undertaken simultaneously.

(a) Pursue the detailed examination and discussion of various possible stabilization schemes with a view to determining and elaborating a mutually acceptable basis for an international copper arrangement;

(b) Establish the capacity for and undertake the continued monitoring of the copper market and its trends, and conduct frequent and systematic consultation and exchange of information on developments in production, stocks, trade and consumption of all forms of copper;

(c) Discuss and propose for the consideration of governments interim and immediate actions related to factors such as imbalances between supply and demand, levels of world and national stocks and pricing practices.

With reference to (a), the body would report to a Preparatory Meeting on Copper convened for that purpose.

At the second stage, based on the conclusions reached under (a) above, it would be the responsibility of the Preparatory Meeting to make a decision on the convening of a negotiating conference in accordance with the procedure set out in Resolution 93 (IV).

It was agreed that the SICB would be absorbed into the institutional structure of any international copper arrangement emerging from that conference.

The meeting also agreed that the Secretary General of UNCTAD should be requested to convene a working group to elaborate terms of reference and on rules of procedure, organizational structure and financial requirements for the body. Canada agreed to participate in the working group. The report of this working group is to be circulated to governments in adequate time for its consideration during the Fourth Preparatory Meeting on Copper scheduled for May 1-5, 1978. The working group will be open to all members of UNCTAD.

This agreed two-stage process was made possible by a consensus between exporting countries which was reached early in the meeting. This was the first major break-through in two years of discussions on copper and resulted from major concessions by developing exporting countries, in particular Peru, Indonesia, Mexico, which had previously strongly resisted the establishment of a CCO before holding negotiations on an International Commodity Agreement (ICA) on Copper.

These countries also accepted in a separate exporters' meeting that the SICB should be adequately funded and have necessary facilities to carry out all of its three functions. This implies a separate and qualified staff and possibly a separate location from the UNCTAD Secretariat. They agreed that its link to UNCTAD was not to be a "structural link". No time limit was placed on the life of the new body. Mines Minister Sadli of Indonesia played an important part in producing the consensus among exporting countries.

Many exporting countries made very substantial concessions in agreeing to the exporter consensus. In fact, some countries appeared to have stretched their instructions to the greatest extent possible. The text produced was therefore virtually a final position to which the exporters could give way. The same degree of compromise was not forthcoming among importers who spent two days in a separate meeting discussing this text.

The United States, Japan and the European Community were reported to be especially reluctant to accept the wording describing the relationship of the SICB with the IPC because of their uncertainty over some of the legal implications. A deadlock almost developed as a result of this and the consensus among producers also began to crumble in the final hours of the meeting.

Canada played a key role in averting a complete breakdown by addressing an importers meeting on behalf of exporting countries at which compromise wording was finally agreed upon.

France introduced a paper attacking the conclusions contained in the CRA report, but this was not discussed during the meeting.

CIPEC also introduced a paper, on its proposed combined pricing system as a basis for interim price stabilization. Study and comments were requested for the next preparatory meeting. The question of interim action to improve copper prices was also addressed by Mr. A. McIntyre of the UNCTAD Secretariat who called for production cuts in his statement at the opening of the meeting. There was no subsequent discussion of production cuts during the meeting.

EMR was represented on the Canadian delegation by Dr. R.D. Hutchinson who was elected Vice-Chairman-cum-Rapporteur of the meeting, and by G.E. Wood.

SPECIAL ITEM

MINERAL POLICY SECTOR RESEARCH AGREEMENTS AWARDED 1978-79

The Sector's Research Agreements Program, in operation since 1971, endeavours to assist in the development of scientific competence and to take advantage of the capabilities of a variety of disciplines at Canadian universities.

The following listing of successful applicants for the 1978-79 program is intended to inform our public of the outside research related to the Sector's mission that is underway:

Title of Project	Applicant, Affiliation	Previous EMR Support	Funds Awarded 1978-79
Socioeconomic Consequences of Mine Closure: A Case Study of the Marmoraton Mining Company, Ontario	Dr. J. Day - University of Waterloo	$8,260	$4,280
A Study to Identify the True Constraints of the Potential for Further Processing Opportunities of Minerals in Canada	Dr. E. Harvey - Population Research Foundation	-	$15,720
Total Factor Productivity Cost Minimization, and Returns to Scale in a Mining Industry	Dr. J.D. May - Acadia University	-	$6,000
Nova Scotia Gypsum - A Preliminary Economic Assessment	Dr. S.M. Tugwell and Dr. J. Connor - Acadia University	-	$14,000

RECENT AMALGAMATIONS AND MERGERS PUBLISHED IN THE GAZETTES

Seagull Resources Ltd. was formed by the amalgamation of Sackville Oils & Minerals Ltd. and Invictus Petro Minerals Ltd. on December 22, 1977.
Source: Alberta gazette January 14, 1978.

Mohawk Oil Co. Ltd., Tidewater Holding Co. Ltd., Road Runner Gas & Oil Ltd., and Dominion Petroleum Distributors Ltd amalgamated to form a new company under name of Mohawk Oil Co. Ltd. on December 31, 1977.
Source: British Columbia gazette January 19, 1978.

Shell Investments Limited amalgamated with Shell Western Holdings Limited into a new company by the name of Shell Investments Limited.
Source: Ontario Gazette January 28, 1978.

Amalgamation of the following companies resulted in a new corporation under the name of Abbey Glen Property Corporation on December 28, 1977.

Abbey Glen Property Corporation
Home Smith International Limited
Home Smith Limited
Caledon Minerals Company Limited
Great Northern Trading Corporation Limited
Home Smith Properties Limited
The Galleria Development Limited
Glen Abbey Estates Limited
Home Smith (Etobicoke) Limited
Red Rock Investments Ltd.
Humbria Limited
Western Realty Projects (Ontario) Limited

The following companies amalgamated to form a new company under the name of Ocean Construction Supplies Limited on December 31, 1977.

Ocean Wharves Limited
Ocean Cement Trading Limited
Ocean Construction Supplies Limited
Champion & White Limited
Hillside Sand & Gravel Limited
McCleery & Weston Limited
Highland Sand and Gravel Company, Limited
Western Sand & Gravel Ltd.
Superior Construction Co. Ltd.
Cassidy Sand and Gravel Ltd.
Prince George Concrete Products Ltd.
Steelhead Holdings Limited
Kitimat Concrete Products (1961) Ltd.
Pacific Brick & Block Limited
Babcon Holdings Ltd.

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 February.

Preprints, *Canadian Minerals Yearbook, 1976.* Barite and Celestite; Bentonite; Copper; Natural Gas; Rhenium, price 50¢ a copy.

Operators List 2, January 1977, *Metallurgical Works in Canada, Primary Iron and Steel,* price $2.00.

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

MH/LT/so'm/pfn