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The Canadian Mineral Industry Monthly Report

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Resources Canada

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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.

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

PRÉFACE

Ce rapport a été rédigé par le Secteur de la Politique Minérale du Ministère de l'Énergie, des Mines et des Ressources. Bien que nous 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.

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

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THE CANADIAN MINERAL INDUSTRY FOR MARCH

L'INDUSTRIE MINÉRALE DU CANADA - MARS

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

Ceci constitue un résumé d'événements importants survenus dans l'industrie minière du Canada, selon les renseignements disponibles en mars.

HIGHLIGHTS

1. Canada's unadjusted index of Real Domestic Product was 129.7 in January 1980, a decrease of 4.5 per cent from the previous month.
2. The January index for Mines, Quarries and Oil Wells was 110.2, down 6.5 per cent from December 1979.
3. Copper prices dropped sharply in March, falling on the London Metal Exchange from \$1.26 (U.S.) a pound at the end of February to 89 cents (U.S.) on March 31.
4. The monthly average gold price for March 1980, of the afternoon fixing prices on the London Gold Market was \$553.58 (U.S.) (649.41 Cdn.) per ounce.
5. Noranda Mines Limited will develop its Goldstream copper-zinc deposit, 80 km north of Revelstoke, British Columbia for production at a cost of some \$62 million.

FAITS SAILLANTS

1. L'indice non désaisonné du produit intérieur réel du Canada a été de 129,7 en janvier 1980, soit une baisse de 4,5 % par rapport au mois précédent.
2. En janvier, l'indice des mines, carrières et puits de pétrole a diminué de 6,5 % par rapport à décembre 1979, pour passer à 110,2.
3. Le cours du cuivre a chuté de façon marquée en mars, passant de \$É.-U. 1,26 la livre, fin février, à la Bourse des métaux de Londres, (LME), à 89 cents (É.-U.) le 31 mars.
4. En mars 1980, le cours mensuel moyen de l'or, selon les fixings de l'après-midi sur le marché de l'or à Londres (LGM), a été de \$É.-U. 553,58 (\$Can. 649,41) l'once.
5. La société Noranda Mines Limited mettra en valeur son gisement de cuivre-zinc, "Goldstream", situé à 80 km au nord de Revelstoke (C.-B.), en vue de son exploitation au coût de quelque 62 millions de dollars.

6. It was recently announced that a 180 000 tonne primary aluminum smelter is to be built in Columbus County, North Carolina.
7. The federal, government has initiated a review of the decision made last spring to locate Eldorado Nuclear Limited's new uranium hexafluoride plant at a site in Hope Township, near Port Hope, Ontario.
6. Il a récemment été annoncé qu'une usine d'aluminium de première fusion, d'une capacité de 180 000 tonnes d'aluminium, sera construite dans le comté de Colombus, en Caroline du Nord.
7. Le gouvernement fédéral a décidé de reconsidérer sa décision, prise le printemps dernier, concernant l'emplacement de la nouvelle usine d'hexafluorure d'uranium de l'Eldorado Nucléaire Limitée dans le canton de Hope, près de Port Hope (Ont.).

ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product (RDP). The overall index in January 1980 was 129.7 a decrease of 4.5 per cent from December, 1979.

The RDP index for mines, quarries and oil wells decreased 6.5 per cent from 117.8 in December to 110.2 in January. Metal mines, mineral fuels and nonmetal mines all showed decreases over the month. Iron mines fell from 138.2 in December to 84.8 a decrease of 38.6 per cent.

The January index for primary metal industries showed a 13.6 per cent increase while nonmetallic mineral products industries decreased 17.1 per cent from 113.0 in December to 93.7 in January.

Table 2 compares volume of production in major Canadian minerals. Volume increased in only three minerals over January 1980: molybdenum (33.3 per cent), nickel, (16.0 per cent) and zinc (3.9 per cent). Substantial decreases were recorded in iron ore, (66.7 per cent); lead (34.2 per cent); asbestos (40.0 per cent) and cement (35.5 per cent).

Tables 3 and 4 show the value of Canada's nonfuel mineral exports and imports in 1978 and 1979 by level of fabrication. Total exports in 1979 reached \$11 061.3 million an increase of 21.9 per cent from 1978 while imports increased 63.4 per cent to \$5 632.9 million over the year.

Figures A and B show the percentage breakdown of mineral trade in 1979 by level of fabrication. Figures C and D reveal the trade surplus for 1978 and 1979.

The percentage breakdown of exports by destination for 1979 is revealed in Figure E while Figure F shows the breakdown of imports by origin.

TABLE 1

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

| Industry or Industry Group | Percentage Changes | | | | | |
|--|--------------------|-------|-------|-------|----------|----------|
| | 1978 | 1979 | 1979 | 1980 | Jan 1980 | Jan 1980 |
| | **** | **** | **** | **** | Jan 1979 | Dec 1979 |
| | Dec | Jan | Dec | Jan | Jan 1979 | Dec 1979 |
| Real Domestic Product | 134.4 | 127.9 | 135.8 | 129.7 | 1.4 | +4.5 |
| Primary Industries | | | | | | |
| Agriculture | 44.5 | 51.4 | 41.2 | 57.3 | 11.5 | 39.1 |
| Forestry | 143.1 | 106.8 | 131.8 | 103.9 | -2.7 | -21.2 |
| Fishing and Trapping | 80.0 | 28.5 | 75.3 | 37.3 | 30.9 | +50.5 |
| Mines, Quarries and Oil Wells | 110.3 | 103.4 | 117.8 | 110.2 | 6.6 | +6.5 |
| Metal Mines | 82.2 | 74.4 | 97.9 | 89.1 | 19.8 | +9.0 |
| Placer and Gold Quartz Mines | 71.8 | 58.4 | 59.6 | 56.0 | +4.1 | +6.0 |
| Iron Mines | 124.4 | 91.2 | 138.2 | 84.8 | -7.0 | -38.6 |
| Other Metal Mines | 72.3 | 71.0 | 89.8 | 91.8 | 29.3 | 2.2 |
| Mineral Fuels | 129.8 | 123.9 | 129.7 | 123.3 | +0.5 | +4.9 |
| Coal Mines | 236.8 | 233.2 | 215.5 | 176.8 | +24.2 | +18.0 |
| Crude Petroleum and Natural Gas | 121.0 | 115.0 | 122.7 | 118.9 | 3.4 | +3.1 |
| Nonmetal Mines | 126.9 | 118.9 | 134.4 | 124.7 | 4.9 | +7.2 |
| Asbestos Mines | 80.3 | 71.6 | 90.3 | 79.4 | 10.9 | +12.1 |
| Secondary Industries | | | | | | |
| Manufacturing | 129.4 | 126.0 | 126.1 | 124.6 | -1.1 | -1.2 |
| Nondurable Manufacturing | 127.9 | 124.0 | 126.4 | 126.0 | 1.6 | +0.3 |
| Petroleum and Coal Products Industries | 147.0 | 147.1 | 153.9 | 148.0 | 0.6 | -3.8 |
| Durable Manufacturing | 130.9 | 127.9 | 125.8 | 123.1 | -3.8 | -2.1 |
| Primary Metal Industries | 118.1 | 124.8 | 114.8 | 130.4 | 4.5 | 13.6 |
| Iron and Steel Mills | 131.2 | 145.8 | 125.0 | 151.7 | 4.0 | 21.4 |
| Steel Pipe and Tube Mills | 125.5 | 134.4 | 113.5 | 123.2 | -8.3 | 8.5 |
| Iron Foundries | 132.8 | 113.1 | 96.0 | 100.3 | -11.3 | 4.5 |
| Smelting and Refining | 93.4 | 95.1 | 104.8 | 110.5 | 16.2 | 5.4 |
| Nonmetallic Mineral Products Industries | 122.7 | 89.5 | 113.0 | 93.7 | 4.7 | -17.1 |
| Cement Manufacturers | 109.7 | 69.4 | 109.5 | 73.8 | 6.3 | +32.6 |
| Ready-mix Concrete Manufacturers | 66.4 | 39.3 | 63.0 | 47.4 | 20.6 | +24.8 |
| Construction Industry | 100.7 | 100.7 | 104.1 | 96.1 | +4.6 | +7.7 |
| Transportation, Storage, Communication | 146.2 | 141.8 | 150.6 | 146.6 | 3.4 | +2.7 |
| Electric Power, Gas and Water Utilities | 195.5 | 204.6 | 195.3 | 209.6 | 2.4 | 7.3 |
| Trade | 162.7 | 118.5 | 162.9 | 118.1 | +0.3 | +27.5 |
| Finance, Insurance, Real Estate | 153.4 | 151.4 | 157.7 | 157.7 | 4.2 | 0.0 |
| Community, Business and Personal Service | 134.4 | 135.3 | 139.6 | 140.0 | 3.5 | 0.3 |
| Public Administration and Defence | 124.8 | 124.6 | 122.4 | 122.5 | -1.7 | 0.1 |

TABLE 2

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

| | | 1978 December | 1979 January | 1979 December | 1980 January | Percentage Changes | |
|-----------------------------|------------------------|------------------|----------------------|------------------|----------------------|------------------------------|-------------------------------|
| | | | | | | January 1980 January 1979 | January 1980 December 1979 |
| Metals | | | | | | | |
| Copper | | 54.7 | 44.5 | 62.6 | 59.8 | +34.4 | -4.5 |
| Gold | kg | 4 550.5 | 4 050.7 ^r | 4 611.7 | 3 937.6 ^r | -2.8 | -14.6 |
| Iron ore | | 4 906.0 | 2 297.8 | 5 035.2 | 1 676.8 | -27.0 | -66.7 |
| Lead | | 30.9 | 25.5 | 28.4 | 18.7 | -26.7 | -34.2 |
| Molybdenum | t | 1 040.3 | 1 101.1 | 739.2 | 985.2 | -10.5 | +33.3 |
| Nickel | | 6.5 | 6.3 | 13.1 | 15.2 | +141.3 | +16.0 |
| Silver | t | 116.1 | 110.3 | 102.4 | 97.7 | -11.4 | -4.6 |
| Uranium ¹ | t | 1 028.4 | 478.3 | 988.2 | 615.8 | +28.8 | -37.7 |
| Zinc | | 88.0 | 87.4 | 71.6 | 74.4 | -14.9 | +3.9 |
| Nonmetals | | | | | | | |
| Asbestos | | 129.3 | 108.4 | 152.5 | 91.5 | -15.6 | -40.0 |
| Gypsum | | 601.2 | 381.3 | 687.5 | 522.9 | +37.1 | -23.9 |
| Potash K ₂ O | | 548.3 | 539.5 | 555.9 | 529.4 | -1.9 | -4.8 |
| Salt | | 750.2 | 717.8 | 804.0 | 592.6 | -17.4 | -26.3 |
| Cement | | 569.6 | 359.5 | 591.0 | 381.5 | +6.1 | -35.5 |
| Lime | | 174.2 | .. | .. | .. | .. | .. |
| Fuels | | | | | | | |
| Coal | | 2 883.8 | 2 879.2 | 2 803.3 | 2 563.6 | -11.0 | -8.6 |
| Natural gas | million m ³ | 9 059.5 | 9 446.6 | 9 163.9 | 8 870.5 | -6.1 | -3.2 |
| Crude oil and equivalent | 000 m ³ | 8 036.0 | 7 422.7 | 8 167.4 | 7 904.1 | +6.5 | -3.2 |

¹ Tonnes uranium (1 tonne U = 1.299 9 short tons U₃O₈).^r Revised; .. Not available.

TABLE 3

Canada's Nonfuel Mineral Exports

| | 1978 (millions of dollars) | 1979 | Per cent change |
|----------------------------------|-------------------------------|----------|-----------------|
| Crude | | | |
| Ferrous | 782.8 | 1 354.1 | +73.0 |
| Nonferrous | 829.4 | 1 280.5 | +54.4 |
| Industrial | 1 415.3 | 1 766.0 | +24.8 |
| Total | 3 027.5 | 4 400.6 | +45.4 |
| Smelted and Refined | | | |
| Ferrous | 216.8 | 150.2 | -30.7 |
| Nonferrous | 3 410.5 | 3 864.3 | +13.3 |
| Total | 3 627.3 | 4 014.5 | +10.7 |
| Semi-Manufactured | | | |
| Ferrous | 1 241.2 | 1 486.6 | +20.0 |
| Nonferrous | 410.7 | 488.1 | +18.8 |
| Industrial | 536.7 | 671.5 | +25.1 |
| Total | 2 188.6 | 2 646.2 | +20.9 |
| Total mineral trade ¹ | 8 843.4 | 11 061.3 | +21.9 |

¹ Excluding scrap.

TABLE 4

Canada's Nonfuel Mineral Imports

| | 1978 (millions of dollars) | 1979 | Per cent change |
|----------------------------------|-------------------------------|---------|-----------------|
| Crude | | | |
| Ferrous | 167.6 | 227.4 | +35.7 |
| Nonferrous | 151.1 | 314.7 | +108.3 |
| Industrial | 228.1 | 283.0 | +24.1 |
| Total | 546.8 | 825.1 | +50.9 |
| Smelted and Refined | | | |
| Ferrous | 102.6 | 186.6 | +81.9 |
| Nonferrous | 691.5 | 1 667.7 | +141.2 |
| Total | 794.1 | 1 854.3 | +133.5 |
| Semi-Manufactured | | | |
| Ferrous | 1 016.5 | 1 501.8 | +47.7 |
| Nonferrous | 389.1 | 601.8 | +54.7 |
| Industrial | 699.9 | 849.9 | +21.4 |
| Total | 2 105.5 | 2 953.5 | +40.3 |
| Total mineral trade ¹ | 3 446.4 | 5 632.9 | +63.4 |

¹ Excluding scrap.

FIGURES A AND B

Canada's Nonfuel Mineral Trade, 1979

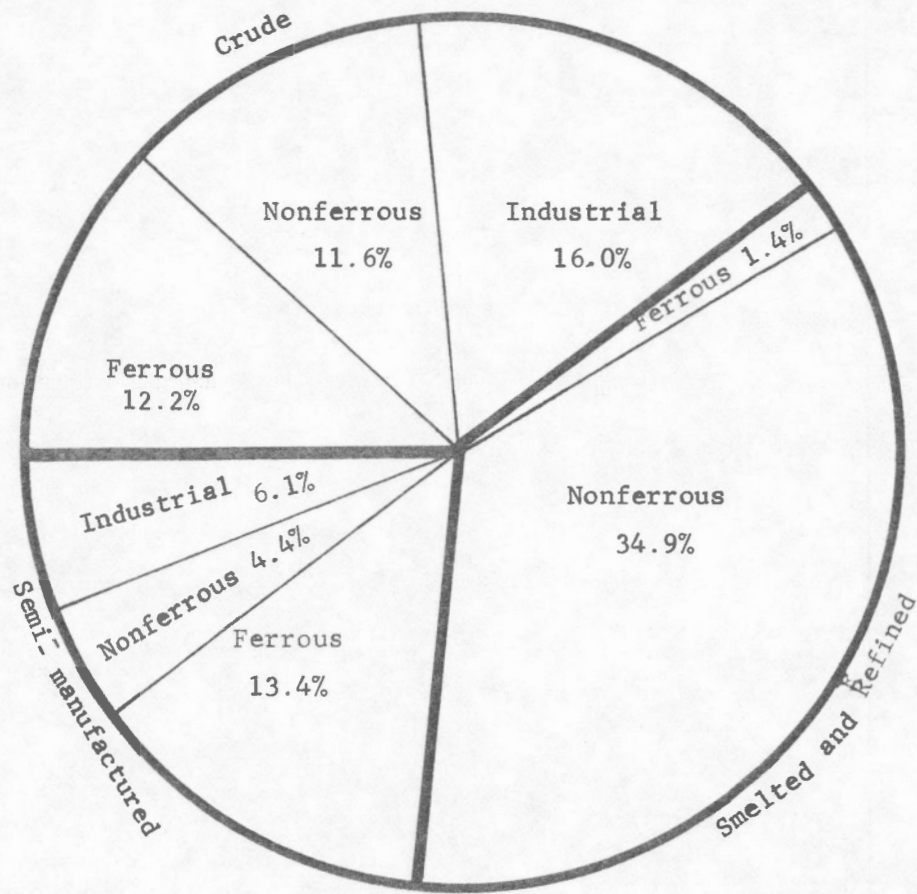


FIGURE A
Exports

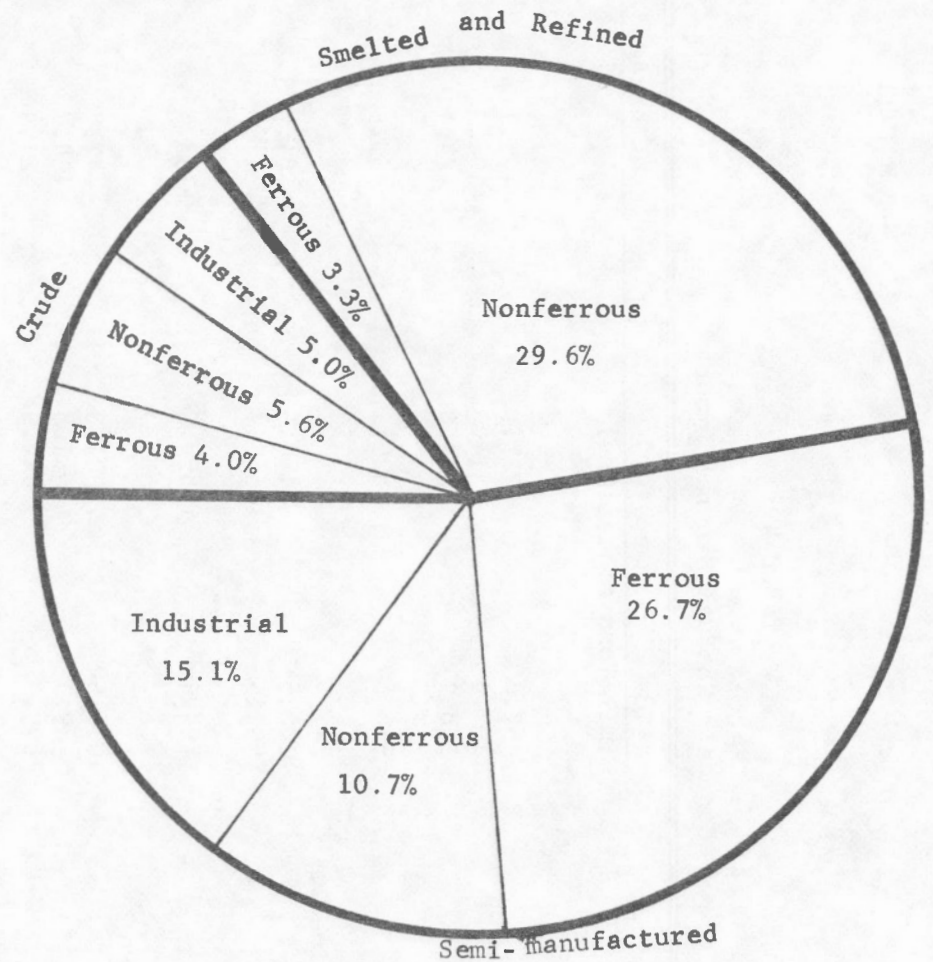


FIGURE B
Imports

FIGURES C AND D

Canada's Nonfuel Mineral Trade

(billions of dollars)

FIGURE C
1978

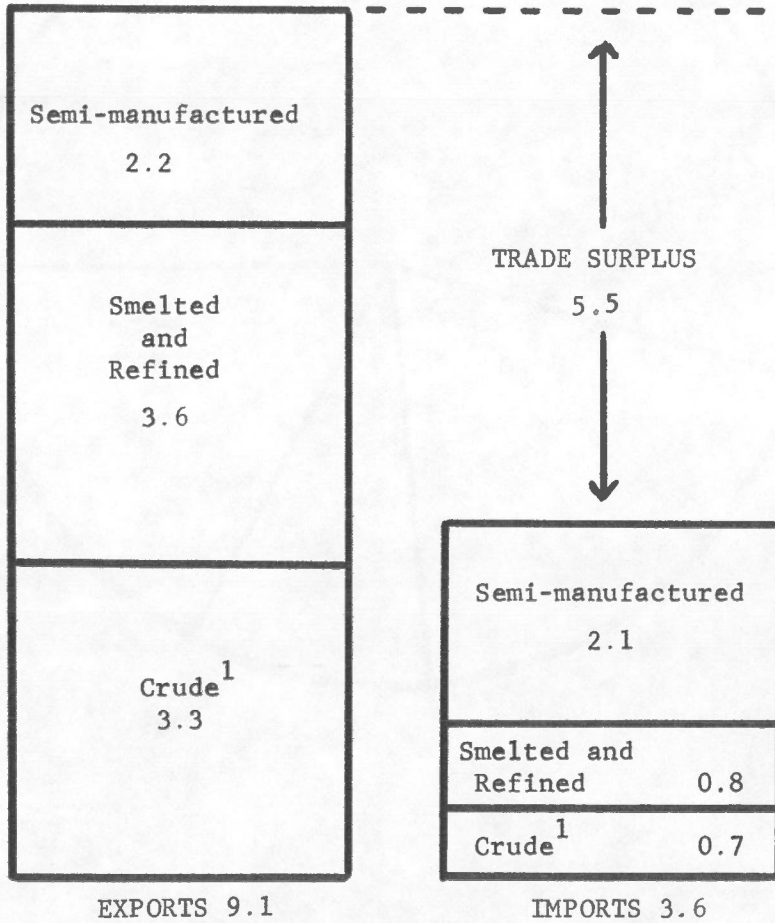
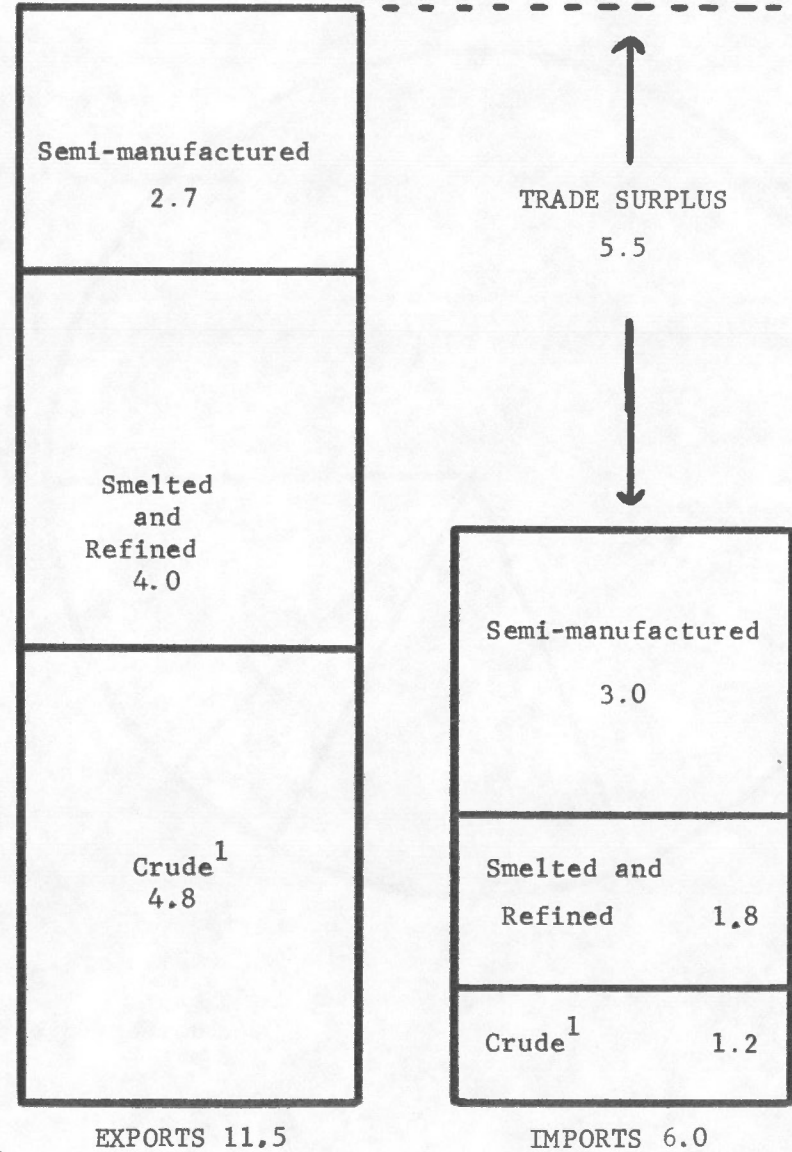


FIGURE D
1979



¹ Crude includes scrap

FIGURES E AND F

Canada's Nonfuel Mineral Trade by Region, 1979

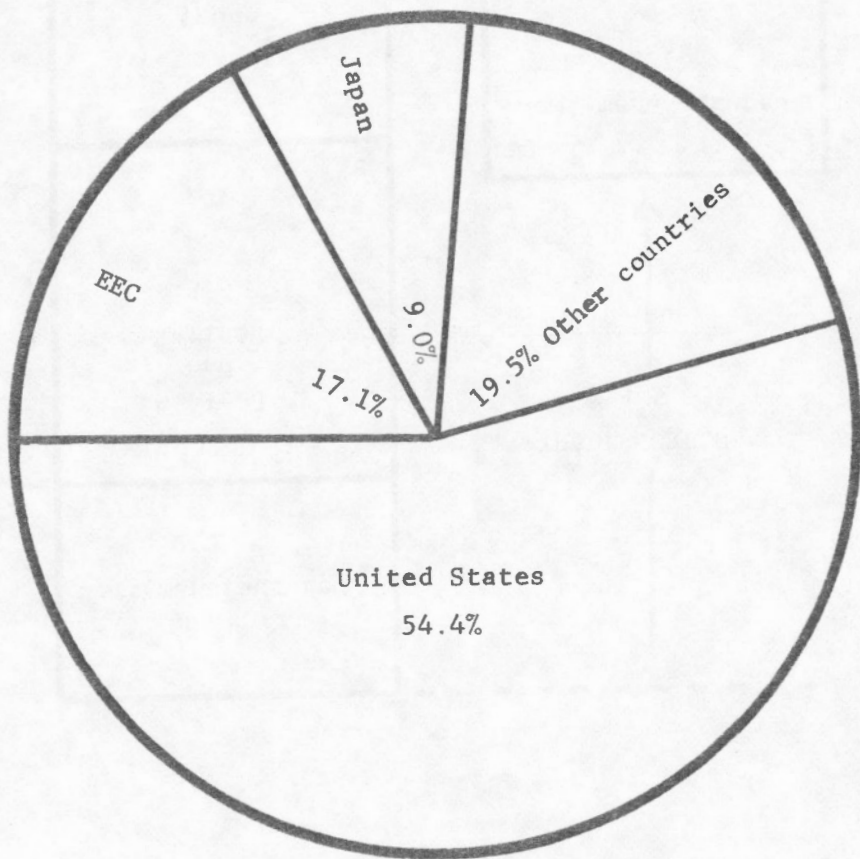


FIGURE E
Exports by Destination

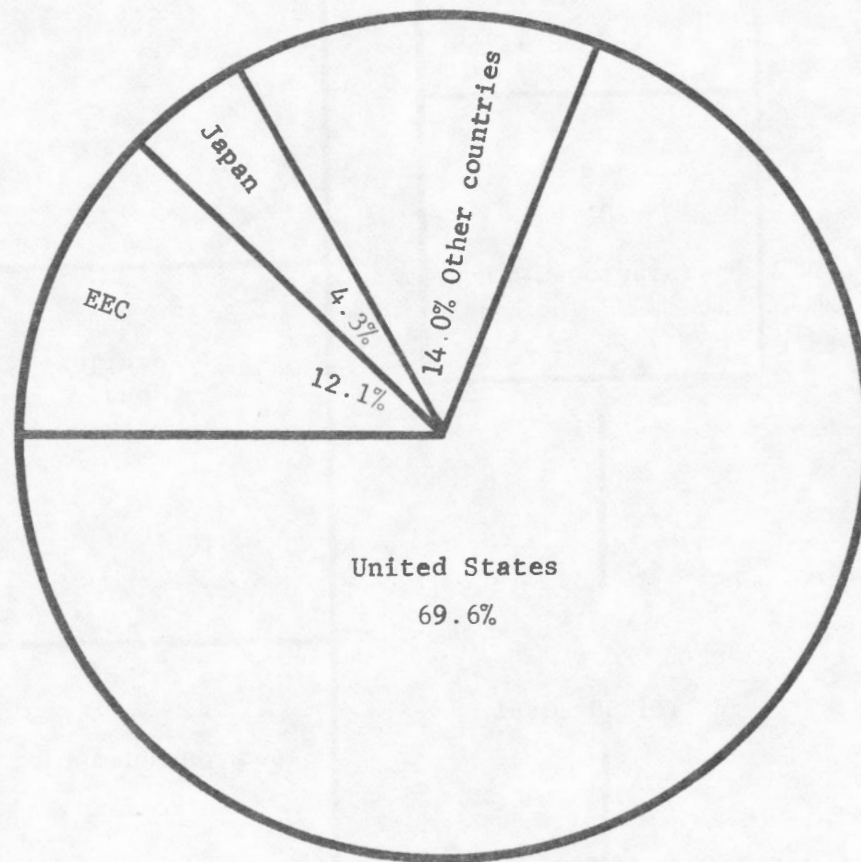


FIGURE F
Imports by Origin

TAXATION AND LEGISLATION AFFECTING THE MINERAL AND ALLIED INDUSTRIES IN CANADA

Provincial

Alberta

AR 29/80 under **The Mines and Minerals Act** sets the Crude Oil Par Price at \$94.77 per cubic metre for the month of January, 1980 and subsequent months; and the royalty factor with respect to the month of January, 1980, and subsequent months is set at

- (i) 1.4786 with respect to crude oil other than new oil, and
- (ii) 0.6283 with respect to new oil.

The **Interest Rate Regulations** is amended by AR 374/79 to set the rate at 16 per cent per year for the month of December, 1979, and subsequent months.

AR 373/79 under the **Freehold Mineral Taxation Act** continues the tax rate on each owner's petroleum and natural gas rights as 16 mills on the dollar for the year 1979.

British Columbia

By B.C.R. 562/79 under **The Mineral Act** the fee for every free miner certificate issued or renewed to a corporation for each calendar year or portion thereof is set at \$300.00. The sliding scale based on capitalization is struck out.

The former **Coal Act Regulations** BCR 436/75 are repealed and replaced by BCR 555/79.

Effective July 31, 1979, the **Mining Tax Act** is amended. The minimum annual net income exemption is raised to \$50,000 from \$10,000; and a processing allowance of 8 per cent of the original capital cost of processing and manufacturing assets will be allowed instead of the present allowance of 8 per cent of the undepreciated part of the original capital cost.

Effective January 1, 1980, the **Mineral Resource Tax Act** is amended. The minimum annual income exemption level is raised to \$50,000 from \$25,000 for individuals and partners; and a processing allowance equal to 8 per cent of the original capital cost of processing and manufacturing assets will be allowed instead of the present allowance of 8 per cent of the undepreciated part of the original capital cost.

Effective December 31, 1979, the taxation of surface rights of Crown land for holders of coal leases and licences under the **Taxation Act** is abolished.

Quebec

Bill 50, which received royal assent on November 12, 1979, provides for the creation and organization of the **Ministère de l'environnement**. The Minister is to be responsible for the management of the public water supply and of water considered as a natural resource, and for ecological reserves.

O.C. 319-80 under **The Mining Act** prescribes the safety measures to be taken where a mine ceases operation or is no longer in operation.

O.C. 320-80 under the **Mining Duties Act** prescribes the costs which may be deducted as an investment allowance and also sets out the costs which are not allowable as an investment allowance.

Saskatchewan

The Mineral Disposition Regulations, 1961, Part VIA, Uranium Royalties, have been extensively revised by SR 50/80.

"Liability for royalty" is replaced by "Calculation of Royalty" as the sum of the basic royalty and the graduated royalty. Basic royalty is clarified, but unchanged at three per cent of gross sales of uranium from the production unit. The graduated royalty, as determined below, shall be reduced by 35 per cent of any designated expenditures as determined below.

To determine the graduated royalty, calculate the sum of:

(a) 15 per cent of the lesser of:

- (i) operating profits for the royalty year less 15 per cent of the capital investment at the end of the royalty years; and,
- (ii) 10 per cent of the capital investment at the end of the royalty year.

(b) 30 per cent of the lesser of:

- (i) operating profits for the royalty year less 25 per cent of the capital investment at the end of the royalty year; and,
- (ii) 20 per cent of the capital investment at the end of the royalty year.

- (c) 50 per cent of the amount by which operating profits for the royalty year exceed 45 per cent of the capital investment at the end of the royalty year.

Designated expenditures are those exploration expenditures that have not previously been so designated or included as production costs or pre-production expenditures and that were incurred:

- (a) during the twenty-year period ending with the beginning of commercial production; or such longer period as agreed upon; or
- (b) after the beginning of commercial production, for exploration outside the boundaries of the production unit.

Section 99F has been revised to clarify the value of the disposition of uranium for financing costs, property or a service.

Section 99G "Fair Value" has been revised and clarified.

Section 99I "Carry-forwards" has been replaced with "allocation of qualified exploration expenditures.

Section 99J "Capital investment" has been rewritten for clarification.

Section 99T "Sale of mines" has been replaced with "Disposal of an interest in a production unit".

A new section 103 "Requirements to inform" has been added. SR 50/80 comes into force on March 1, 1980.

The Petroleum and Natural Gas Regulations, 1969 royalty regulations being sections 57 to 67 both inclusive, have been rewritten as SR 30/80. All prior regulations in respect of royalty provisions are replaced by this regulation. The regulation provides new tables for calculating the Crown royalty on oil. The royalty on gas is set at seventy-one cents per thousand cubic metres.

New Brunswick

The New Brunswick Mining Regulation 77-58 is amended by NBR 79-180 to change the deposit on land disrupted by a surface mine and waste disposal from a maximum of \$500.00 per acre to a maximum of \$1,250.00 per hectare.

REGIONAL PROFILES

NEW BRUNSWICK

Value of Mineral Production

The value of mineral production in 1979 was \$465.4 million, up from \$339.6 million in 1978 as a result of a 65.2 per cent increase in metallic minerals, led by zinc, lead, silver and copper, which accounted for 87.8 per cent of the total. This increase was mainly due to metal price increases. New Brunswick is Canada's largest producer of antimony and bismuth, second largest producer of zinc and third largest producer of lead and silver.

New Brunswick, Principal Mineral Production, 1979P

| Commodity | Value (\$'000,000) | Change From 1978 (per cent) | Proportion of Canada |
|----------------------|-----------------------|-----------------------------------|-------------------------|
| Zinc | 255.1 | 63.0 | 31.2 |
| Lead | 99.3 | 68.3 | 38.3 |
| Silver | 74.9 | 88.2 | 29.8 |
| Copper | 25.7 | 51.1 | 2.4 |
| Cement | 15.8 | 24.9 | 2.8 |
| Sand and gravel | 11.6 | 10.5 | 2.8 |
| Stone | 10.8 | 9.6 | 3.0 |
| Coal | 10.1 | 15.8 | 1.3 |
| Peat | 10.0 | 0.9 | 28.6 |
| Other | 16.5 | - | - |
| Metallics | 465.4 | 65.2 | 8.2 |
| Nonmetallics | 11.7 | 3.3 | 0.8 |
| Fuels | 10.2 | 15.7 | 0.1 |
| Structural materials | 42.6 | 13.2 | 2.8 |
| Total all minerals | 529.9 | 56.0 | 2.6 |

P Preliminary.

New Brunswick, Socio-Economic Indicators

| | | Amount | Change From Previous Year (per cent) | Proportion of Canada |
|-----------------------------------|------------|--------|--|-------------------------|
| Population | | | | |
| July 1, 1979 | '000 | 702 | 0.9 | 3.0 |
| Labour Force, seas. adj. | | | | |
| December, 1979 | '000 | 284 | 2.5 | 2.5 |
| Employment, seas. adj. | | | | |
| December, 1979 | '000 | 255 | 4.1 | 2.4 |
| Unemployment, seas. adj. | | | | |
| December, 1979 | '000 | 29 | -9.4 | 3.4 |
| Employment in Mining | | | | |
| December, 1979 (preliminary) | '000 | 2.6 | -13.0 | 1.8 |
| Ave. Weekly Wages | | | | |
| December, 1979 (preliminary) | \$ | 332 | 3.5 | 76.7 |
| Gross Provincial Product, 1978 | \$'000,000 | 4,396 | 11.5 | 1.9 |

Mine Developments

In October 1979, Noranda Mines Limited announced that it had acquired ownership of Heath Steele Mines Limited which has a 75 per cent interest in the Little River joint venture zinc, lead and copper mine near Newcastle.

Consolidated Durham Mines & Resources Limited announced in December, 1979 that it will spend at least \$500,000 over the next year on an exploration and development program at its Lake George antimony mine to increase reserves above the 1 1/2 years currently available. This decision was warranted because of favourable prices and demand for the high-quality antimony concentrate produced by the mine.

Exploration Activities

Canadian Occidental Petroleum Ltd. is currently completing an evaluation of its 500,000 acre bituminous oil shale licence and could then select up to 50 per cent of the acreage to be held under lease. The parent company is developing an in-situ oil recovery process in the Colorado oil shales, but it is not known if the same process can be adapted for New Brunswick oil shales.

Eldorado Nuclear Limited, in a uranium exploration Joint venture with Consolidated Durham Mines & Resources Limited in the Lake George area, has chosen two of the six areas previously investigated for further work in 1980.

REGIONAL PROFILES

NOVA SCOTIA

Value of Mineral Production

The value of mineral production in 1979 was \$208.7 million, down from \$210.7 in 1978 as a result of a 16.7 per cent decline in coal production, which accounted for 48.2 per cent of total. Nova Scotia is Canada's largest producer of gypsum, second largest producer of salt and third largest producer of coal.

Nova Scotia, Principal Mineral Production, 1979P

| Commodity | Value (\$'000,000) | Change From 1978 (per cent) | Proportion of Canada |
|----------------------|-----------------------|-----------------------------------|-------------------------|
| Coal | 100.5 | -16.7 | 12.9 |
| Gypsum | 26.4 | 7.3 | 68.5 |
| Salt | 24.3 | 22.6 | 24.7 |
| Cement | 22.9 | 88.4 | 4.0 |
| Sand and gravel | 20.5 | 3.3 | 4.9 |
| Other | 14.1 | - | - |
| Metallics | - | - | - |
| Nonmetallics | 53.0 | 12.7 | 3.6 |
| Fuels | 100.5 | -16.7 | 0.9 |
| Structural materials | 55.2 | 28.7 | 3.7 |
| Total all minerals | 208.7 | -0.9 | 1.0 |

P Preliminary.

Nova Scotia, Socio-Economic Indicators

| | | Amount | Change From Previous Year (per cent) | Proportion of Canada |
|-----------------------------------|------------|--------|--|-------------------------|
| Population | | | | |
| July 1, 1979 | '000 | 847 | 0.6 | 3.6 |
| Labour Force, seas. adj. | | | | |
| December, 1979 | '000 | 356 | -0.3 | 3.1 |
| Employment, seas. adj. | | | | |
| December, 1979 | '000 | 320 | 1.3 | 3.0 |
| Unemployment, seas. adj. | | | | |
| December, 1979 | '000 | 36 | -12.2 | 4.2 |
| Employment in Mining | | | | |
| December, 1979 (preliminary) | '000 | 4.6 | -4.2 | 3.3 |
| Ave. Weekly Wages | | | | |
| December, 1979 (preliminary) | \$ | 309 | 16.1 | 74.4 |
| Gross Provincial Product, 1978 | \$'000,000 | 5,636 | 10.8 | 2.4 |

Mine Developments

On March 10, it was announced that Nova Construction Ltd. had been chosen to operate an open-pit coal mine at Point Aconi, near North Sydney, for Novaco, the province's coal development agency. The work force of 20 miners will produce 180 000 tonnes of thermal coal annually for a five-year period to be burned at the Lingan station of Nova Scotia Power Corporation.

The Department of Regional Economic Expansion announced on January 7 that it has agreed to help fund the development of the Donkin mine in Cape Breton. Previous off-shore federal-provincial drilling programs had indicated extensive coal deposits, of which 700 million tonnes is identified as recoverable. Over the period April 1, 1980 to December 31, 1981, \$30 million will be spent on drilling two tunnels from shore to the coal face and to build infrastructure. The new mine, expected to begin production in 1982 at 180 000 tonnes of coal annually and increasing to 1.8 million tonnes by 1986, is expected

to reduce Nova Scotia's dependence on foreign oil for the generation of electricity to about 20 per cent from nearly 70 per cent. Coal development is the keystone of the province's \$1.2 billion energy policy outlined in October to reduce dependence on oil for energy by developing Donkin and expanding existing mines in the province. The bulk of the remaining funds will be used to construct thermal power generating stations.

Exploration Activities

Over the past six months, mineral exploration programs by several companies have shown some promising results. These include: indications of tin mineralization by diamond drilling over a length of four kilometers by Shell Canada Resources Limited in the East Kemptville area, near Yarmouth; discovery of silver on a molybdenite prospect held by Louisbourg Property Holdings near Louisbourg; and indications of a potash deposit discovered by Chevron Standard Limited with Irving Oil Limited while drilling for hydrocarbons about 12 miles from Port Hawkesbury.

Other Highlights

Tests are being conducted to determine whether coal that can be reclaimed from old mine dumps in the town of Westville is suitable for use at Nova Scotia Power Corporation generating station at Trenton. For several years, reclaimed coal from old dumps at Stellarton has been used successfully for power generation at the Trenton plant.

The provincial government has apparently abandoned its hopes to have established emergency oil storage caverns in underground salt domes, near Canso Strait, for use by the U.S. government. The reasons cited by the province were the international situation (presumably the unwillingness of the U.S. to have such a facility on foreign soil) and the current tight oil supply that tends to pre-empt additional purchases of oil for storage purposes.

Another element in the province's goal toward energy self sufficiency by 1990 was announced February 24. Agreement has been reached with Algas Resources Ltd. and Petro-Canada to set up a consortium that would produce natural gas from mainland coal fields. The target is to produce 10 million cubic feet of gas per day from the coal seams that may contain up to 45 billion cubic feet. Initial investment by the consortium is to be \$25 million in the Stellarton and Westville areas. The province plans to assume a minority interest in the venture.

METALLIC MINERALS AND PRODUCTS

Aluminum

A brief two-day strike at the Baie Comeau smelter ended on February 27, 1980.

The new three-year agreement calls for annual wage percentage hikes on January 1 of each contract year, retroactive this year to January. Workers are to receive a 15-cent-an-hour increase on the same dates. The COLA clause remains in the new agreement.

Some observers see the Baie Comeau agreement as indicative of the general trend in this year's U.S. primary aluminum contract negotiations.

It was recently announced that a 180 000-tonne primary aluminum smelter is to be built in Columbus County, North Carolina. The \$400 million project is scheduled for completion in early 1983.

Southwire Co. will increase its price for 99.5 per cent primary aluminum ingot to 75 cents a pound from 71 cents, effective April 1; Alcan Aluminum Corporation, the U.S. subsidiary of Alcan Aluminium Limited, is also raising the price of ingot by 6 cents to 72 cents a pound; and Kaiser Aluminum & Chemical Corporation will also increase prices to 72 cents a pound from 66 cents a pound.

Negotiations by the Dubai government for full ownership of the \$1,300 million aluminum smelter/desalinization plant are reported underway. The government presently has an 80 per cent share in Dubai Aluminum (Dubal).

Alusuisse plans to invest S.F. \$250 million over the next few years on new technology in the Chippis and Steg works in Switzerland.

Copper

Copper prices dropped sharply in March, falling on the London Metal Exchange from \$1.26 (U.S.) a pound at the end of February to 89 cents (U.S.) on March 31. The Canadian producer price, which was \$1.43 a pound at the end of February, had fallen to \$1.13 a pound by March 31. At month end, copper stocks in the COMEX and LME warehouses stood at 133 195 tonnes and 117 925 tonnes respectively.

Noranda Mines Limited will develop its Goldstream copper-zinc deposit, 80 kilometers north of Revelstoke, British Columbia for production, at a cost of some \$62 million. The new mine is scheduled for production by the third quarter of 1982, and will produce some 68 000 tonnes/year of copper concentrate and 10 500 tonnes/year of zinc concentrate. Detailed engineering is to be completed this year, with major construction to begin in the spring of 1981. The operation will have 185 employees once production begins.

Brenda Mines Ltd. has announced that the ore reserves at the company's open pit copper-molybdenum mine west of Peachland, British Columbia were estimated to be 139 000 000 tonnes averaging 0.145% Cu and 0.032% Mo as of December 31, 1979. A year earlier, ore reserves had been reported to be 88 600 000 tonnes averaging 0.165% Cu and 0.040% Mo. On February 28, 1980, the company indicated that the additional tonnage will extend the life of the mine at least five years under present economic conditions.

Gold

The downward trend in the price of gold which began towards the end of January 1980 continued in March. The opening price on the London Gold Market for March was \$637.00 (U.S.) per ounce, the high of \$643.50 (U.S.) per ounce being recorded on March 5. The price declined steadily from this high to a low of \$474.00 (U.S.) per ounce on March 18. Record high interest rates in the United States was a major factor in the price decline. Speculators and hedgers liquidated their margin positions rather than pay the high interest rates. In all probability some investors sold their gold holdings to take advantage of the higher interest rate. The gold price recovered from the monthly low to reach \$561.00 (U.S.) per ounce on March 20. The price again declined and closed for the month at \$494.50 (U.S.) an ounce. The gold price is expected to continue its erratic pattern but appears to be showing a more stable pattern in the range of \$500 (U.S.) per ounce.

The monthly average gold price for March 1980, of the afternoon fixing prices on the London Gold Market, was \$553.58 (U.S.), (\$649.41 Cdn.) per ounce compared with an average price of \$665.32 (U.S.) (\$769.11 Cdn.) per ounce for February 1980.

The International Monetary Fund (IMF) held its forty-third gold auction on March 5, 1980 and awarded a total of 440,000 fine ounces of gold to 14 successful bidders at an average price of \$641.23 (U.S.) per ounce. Prices offered by successful bidders ranged from \$636.16 (U.S.) to \$649.07 (U.S.) per ounce of gold. Bids were received for a total of 1,410,000 ounces of gold, indicating an active

interest. Most of the buyers were European banks and bullion dealers but sales were also made to the Bank of Nova Scotia of Toronto, United States bullion dealers and Eastern Trade Corporation of Dubai.

The Treasury department of the United States did not hold a gold auction in March, 1980.

The Republic of South Africa has an overall balance of payments surplus which allows the country to be more flexible in its gold marketing strategy. Gold can be added to its official reserves and sales made at times which are beneficial to the country. Reports indicate that South Africa has withheld some gold from the market. Besides the one ounce and one-half ounce gold coins South Africa is giving consideration to minting of a one-quarter and one-third of an ounce coins in the latter part of the year. The objective of the new coins is to make gold coins available to a larger proportion of potential buyers.

Mexico is to embark on a program to promote the sales of its gold coins in the United States. The coins, which range in size from less than one-twentieth of an ounce to 1.2 ounces, will be sold on their gold content plus a four to five per cent premium.

Australia has introduced legislation which when passed will authorize the issue of a numismatic gold coin. The coin will have a face value of \$200 (A), be composed of 22 carat gold and weigh 10 grams. The price will be determined at time of issuance. The government has also decided to make provisions for the issuance of bullion coins at a later date.

Shareholders of Silver Eureka Corporation of Toronto agreed to sell their controlling interest in Mines et Produits Chimiques de Salsigne, a French company which operates a gold mine in southern France, to Compagnie Francaise de Mines. Sale price is approximately \$3.9 million.

Le minerai de fer

Les directeurs de la compagnie Robe River Ltd. d'Australie fermeront temporairement leur usine de boulettage de minerai de fer à Cape Lambert à la fin d'avril 1980.

La fermeture est due à des augmentations excessives du coût de l'huile utilisée dans le procédé de boulettage, ce qui rend la production de boulettes non rentables. Environ 250 personnes seront affectées par la fermeture.

Les négociations d'achat de minerai de fer entre le Japon et ses principaux fournisseurs tels que l'Australie, le Brésil et le Canada sont maintenant terminées.

En général les augmentations des prix ont été très élevées à comparer avec celles des années précédentes et furent établies comme suite: Australie 20 pourcent; Brésil 16 percent; Canada (IOC) 15 pourcent. Les augmentations furent jugées nécessaires par les producteurs et les consommateurs afin de promouvoir le développement de nouvelles mines qui seront nécessaires dû à une demande accrue d'acier dans le monde prévue pour la prochaine décennie.

Iron and Steel

In spite of increased sales during the third quarter of 1979 compared with the previous third quarter of 1978 most integrated steel producers in the United States reported lower earnings.

The worst performance was recorded by United States Steel Corporation, the nation's largest steelmaker which reported a loss in earnings of \$561 million.

In general profit margins (net profit/net sales) for the major steel producers in the United States were only in the order of 3 per cent during the third quarter of 1979. U.S. Steel, Bethlehem Steel Corporation and Lykes Corporation which have interests in the Iron Ore Company of Canada, Wabush Mines and Quebec Cartier Mining Company have closed several aging and uneconomical plants in the United States during the past couple of years and more closures are anticipated.

Lead

The cash price of lead on the London Metal Exchange (LME) declined very dramatically during March, from £588 to £488 per tonne. The "backwardation", or amount by which the cash price exceeded the 3 month future price, persisted through March but was considerably smaller at month-end than earlier in the month. The month-end cash price was equivalent to 43 (U.S.) cents or 51 (Canadian) cents a pound. These price moves were a reflection of rising stocks both in LME warehouses (8 900 tonnes to 12 550 tonnes) and in North America.

The producer prices remained at 57 cents a pound in Canada and 50 U.S. cents a pound in the United States.

In the United States, Bunker Hill Company asked a U.S. Appeals Court in Washington to stay portions of the OSHA lead standard that would require worker relocation without loss of pay for those employees whose blood levels exceed 70 micrograms per 100 grams of whole blood. The company also asked a waiver of required engineering controls to reduce worker exposure to lead. It was reported to the National Association of Recycling Industries (NARI) in the United States at its recent annual convention that a large majority of companies in primary and secondary lead production do not in fact comply with U.S. federal guidelines on pollution control, or even testing to determine what the conditions are at their own facilities. NARI is challenging the Occupational Safety and Health Administration lead pollution standard of 50 micrograms of lead per cubic foot of air.

U.S. lead consumers have been pressing for abolition of the 3.5 per cent ad valorem lead tariff, and return to the constant 1.0625 cents per pound tariff until January 1, 1983. U.S. lead producers on the other hand are happy with the ad valorem rate.

Platinum Group Metals

The platinum and palladium dealer prices were erratic during March. On March 5 the nearby platinum price on the New York Mercantile Exchange reached an all time high of \$1,040.00 (U.S.) per ounce. The palladium price was \$317.50 (U.S.) per ounce. Speculative interest was responsible for the increased price performance. The uses of platinum and palladium are more industrial than is the case for gold and silver, to a lesser extent, and there are no large above ground stocks. Both metals are in demand by industry.

The producer price of platinum remained unchanged at \$420.00 (U.S.) per ounce. The reluctance on the part of the producers to increase their price is probably related to the possibility of losing industrial customers to substitute materials as happened to palladium in the past in its application in the telephone industry.

The dealer price of both platinum and palladium followed the pattern established by gold and silver and declined sharply from the established highs. The closing nearby price for platinum on the Mercantile Exchange on March 28 was \$512.00 (U.S.) per ounce, recovering to a price of \$560.00 (U.S.) on March 31, 1980. The dealer price of palladium on March 26 was in the range of \$190 (U.S.) per ounce.

In the latter part of March the producer of iridium in the Republic of South Africa increased the price of iridium to \$500.00 (U.S. per ounce from \$400.00 (U.S.) per ounce.

Silver

A collapse in the silver market occurred on March 27, 1980 when brokerage firms began liquidating customers' collateral to meet margin requirements on future contracts. Reportedly one of the major groups caught in the margin call to satisfy the broker's call for extra funds was the Hunt family of Texas. They were forced to sell assets to meet their responsibilities.

Prior to the market activities of the last two days of March the silver market suffered a steady decline during the month. The opening silver price for the month as quoted by Handy and Harman of New York was \$34.25 (U.S.) per ounce, the high of \$36.70 (U.S.) per ounce being recorded on March 5.

Although the price fluctuated the general trend was downwards and a price of \$16.05 (U.S.) was recorded on March 26. On March 27, the day of the market price collapse, the price fell to \$11.10 (U.S.) per ounce. On this day some silver trading took place in the \$10.00 (U.S.) range per ounce. A modest recovery in the silver price took place and the closing quote for the month of March was \$14.25 (U.S.) per ounce.

The monthly average silver price for March 1980 as quoted by Handy and Harman was \$24.13 (U.S.) per ounce compared with \$35.08 (U.S.) per ounce for February. The average silver price in Canadian dollars (Handy and Harman) for the month of March was \$906.85 per kilogram (\$28.21 per ounce) compared with \$1,303.98 per kilogram (\$40.56 per ounce).

Tin

Shell Canada Resources Limited estimates a drill-indicated reserve of 25 million tonnes of material containing 0.20 per cent tin, on its tin property in the Kemptville area of southwestern Nova Scotia. Additional diamond drilling, metallurgical tests and mine feasibility studies are planned for 1980 to further evaluate the economic significance of the deposit.

In Australia, Aberfoyle is planning to build a large scale tin treatment plant incorporating a matte-fuming process. Recovery could exceed 90 per cent for extremely fine-grained ore, compared to 60 to 70 per cent with conventional treatment.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

Employees of Asbestos Corporation Limited (ACL) and Bell Asbestos Mines, Ltd. struck early in the month. Primary points of dispute are wages, overtime, the use of outside subcontractors and grievance procedures. About 1,200 employees at ACL, affiliated with the Confederation of National Trade Unions and 442 employees at Bell, members of the United Steelworkers and affiliated with the Quebec Federation of Labour, are affected. At ACL, the miner currently earns approximately an average of \$9.40 an hour. The union seeks five per cent increases for each of the next two years and payment of cost-of-living bonuses every month, rather than once a year.

MINERAL FUELS AND PRODUCTS

Crude Oil and Natural Gas

The Canadian Petroleum Association (CPA) had recently released year-end 1979 figures concerning reserves, production and gross additions for crude oil and natural gas in Canada. The CPA has noted a decline in the remaining reserves of crude oil of some 193.0 million barrels (30.7 million cubic meters) whereas the remaining marketable reserves of natural gas increased by a record 6,200 billion cubic feet (175.6 billion cubic meters).

For crude oil, much of the gross additions, 391.3 million barrels or 62.2 million cubic meters, came as a result of enhanced-recovery projects at Norman Wells in the Northwest Territories, Judy

Creek in Alberta and conventional heavy oil development in the Lloydminster area in Saskatchewan and Alberta. The reserves-to-production ratio, also known as a "reserves-life index", has been calculated to be 12 years for crude oil and 14 years if one were to include natural gas liquids, assuming that future consumption does not exceed that of the present.

The gross additions for natural gas, amounting to 6,100 billion cubic feet or 172.8 billion cubic meters, were attributed to discoveries made in the Arctic Islands and in the Deep Basin region of Alberta. The "reserves-life index" is currently 44 years, assuming that future production remains constant.

**Reserves and Production
Year-end 1979 - CPA - March, 1980**

| | Million Barrels | Change | Million M ³ | Change |
|----------------------|-----------------------|----------|---------------------------|----------|
| Crude Oil | | | | |
| a) Reserves: | | | | |
| - crude oil | 6,800 | (-50.7) | 1 081.1 | (-8.1) |
| - liquids | 1,300 | (-142.3) | 206.7 | (-22.6) |
| - total | 8,100 | (-193.0) | 1 287.8 | (-30.7) |
| b) Total Production: | 584.4 | | 92.9 | |
| c) Gross Additions: | 391.3 | | 62.2 | |
| | | | | |
| | Billion Cubic Feet | Change | Billion M ³ | Change |
| Natural Gas | | | | |
| a) Reserves: | 88,600 | (+6,200) | 2 509.8 | (+175.6) |
| b) Production: | 2,000 | | 56.7 | |
| c) Gross Additions: | 6,100 | | 172.8 | |

Uranium

The Government of British Columbia has announced that it will permit the Royal Commission of Inquiry into Health and Environmental Protection in Uranium Mining to continue to receive submissions until April 15, 1980; no further hearings will be scheduled. In addition, major participants will be permitted to submit concluding summaries. The date for the Commission's report has been extended from May 31 to October 31, 1980.

The federal government has initiated a review of the decision made last spring to locate Eldorado Nuclear Limited's new uranium hexafluoride plant at a site in Hope Township, near Port Hope, Ontario. Site preparation work has been suspended by the company pending the outcome of the review. Other sites that had earlier been approved by a federal environmental assessment panel are in Dill Township, near Sudbury, and at Blind River, Ontario.

The final report of Ontario's Royal Commission on Electric Power Planning, under the chairmanship of Dr. Arthur Porter, was released on March 26, 1980. Twenty-eight of its eighty-eight recommendations dealt with nuclear power, the overall tenor of which was that nuclear energy has a role to play in the expansion of Ontario Hydro's program. The Commission's conclusions and recommendations with respect to uranium mining and milling are as follows:

"Because of the uncertainties surrounding the health consequences of the exposure of humans to chronic doses of low-level radiation, it is important to ensure the minimization of risks (resulting from the ingestion and inhalation of radiation) to uranium mine and mill workers and to the general public.

We recommend that:

- 5.11 Continuing epidemiologic evaluation of Elliot Lake miners and uranium mill workers should be undertaken. The public should be informed of the progress of these studies.
- 5.12 Ontario should contribute its share to any national programme for uranium mine and mill waste research.
- 5.13 Measures should be taken to ensure that the costs of long-term tailings monitoring, management, and R&D are reflected in the cost of uranium fuel rather than becoming a general charge to the Ontario taxpayer, not least because most of the uranium is currently being exported (over 90 per cent).

- 5.14 The further expansion of the nuclear power programme in Ontario, and in particular the uranium mining and milling portion of the fuel cycle, should be contingent on demonstrated progress in research and development with respect to both the short and the long-term aspects of the low-level uranium tailings waste disposal problem, as judged by the provincial and federal regulatory agencies and the people of Ontario, especially those who would be most directly affected by uranium mining operations. It would be unacceptable to continue to generate these wastes in the absence of clear progress to minimize their impact on future generations."

NEW PUBLICATIONS

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

NOUVELLES PUBLICATIONS

Les publications suivantes ont été préparées par le Secteur de la politique minérale du ministère de l'Énergie, des Mines et des Ressources et diffusées pour distribution au cours du mois de mars.

Annual Reviews of the Canadian Mineral Industry, 1978, Antimony; Cement; Clays and Clay Products; Columbium (niobium) and Tantalum; Mercury; Nepheline Syenite and Feldspar; Fluorspar; Silica; Silver; Talc, Soapstone and Pyrophyllite; price \$1.00 a copy.

MR - 186 Canadian Reserves of Copper, Nickel, Lead, Zinc, Molybdenum, Silver and Gold, as of Jan. 1, 1979, R.T. Whillans, D.A. Cranstone.

MR - 186 Réserves Canadiennes de Cuivre, Nickel, Plomb, Zinc, Molybdène, Argent et Or, au 1^{er} janvier 1979, R.T. Whillans, D.A. Cranstone.

MR - 187 Canadian Mines: 1979 Perspective. Reserves, supply capability, development, exploration.

MR - 187 Les Mines au Canada: perspective 1979. Réserves, capacité d'approvisionnement, mise en valeur, exploration.

The above publications are available from the Canadian Government Publishing Centre, Supply and Services Canada, Ottawa.

Les publications ci-dessus sont disponibles en s'adressant au: Centre d'édition du gouvernement du Canada, Approvisionnement et Services Canada, Ottawa.

INFORMATION FROM THE TRC

Amalgamated Rare Earth Mines Limited changed their name to Rare Earth Resources Limited on August 14, 1979.

Hollinger Mines Limited changed their name to Hollinger Argus Limited on August 23, 1979.

Headvue Mines Limited changed their name on August 22, 1979 to Phaeton Exploration Ltd.

Cochenour Willans Gold Mines, Limited changed their name to Wilanour Resources Limited on August 8, 1979.

Amax Potash Limited changed their name to Amax of Canada Limited on August 30, 1979.

Darius Gold Mines Inc. changed their name to Delfer Gold Mines Inc. - Les Mines d'Or Delfer Inc.

Interprovincial Steel and Pipe Corporation Ltd. is now registered in Manitoba and using the name Ipsco Steel Sales. This is not a name change but rather special name being used in Manitoba only.

Atlas Yellowknife Mines Limited changed their name on July 18, 1979 to Atlas Yellowknife Resources Limited.

