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Nov. 1979

The Canadian Mineral Industry Monthly Report

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GEOLOGICAL SURVEY
COMMISSION GÉOLOGIQUE

November 1979



Energy, Mines and
Resources Canada

Énergie, Mines et
Ressources Canada

Minerals

Minéraux

PREFACE

This report is prepared in the Mineral Policy Sector of the Department of Energy, Mines and Resources. It is prepared from the best information available to us from many sources, but it is only intended to be a general review of the more important current developments in the Canadian mineral industry and of developments elsewhere that affect, or may affect, the Canadian industry. It should not be considered an authority for exact quotation or an expression of official Government of Canada views.

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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.

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THE CANADIAN MINERAL INDUSTRY FOR NOVEMBER

L'INDUSTRIE MINÉRALE DU CANADA - NOVEMBRE

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

Ceci constitue un résumé d'événements importants survenus dans l'industrie minière du Canada, selon des renseignements qui étaient disponibles en novembre.

HIGHLIGHTS

1. Canada's unadjusted index of Real Domestic Product was 163.9 in September 1979, an increase of 20.7 per cent from August 1979.
2. The September index for Mines, Quarries and Oil Wells was 119.4, up 2.6 per cent from the previous month.
3. The monthly average gold price for November 1979 of the afternoon fixing prices on the London Gold Market was \$391.99 (U.S.) (\$462.40 Cdn.) an ounce compared with \$391.66 (U.S.) (\$460.14 Cdn.) an ounce in October.
4. Oregon Steel Mills of Portland, Oregon announced that it will shut down its 300 000 tonnes-a-year direct reduction plant early in 1980.
5. A strike which began at Inco Limited's Exmibal project in Guatemala on November 7 was resolved and workers returned to work November 26.

FAITS SAILLANTS

1. L'indice non désaisonné du produit intérieur réel était de 163,9 en septembre 1979, soit une augmentation de 20,7% par rapport au mois d'août 1979.
2. En septembre, l'indice des mines, des carrières et des puits de pétrole était de 119,4, une augmentation de 2,6% sur le mois précédent.
3. En novembre 1979, le prix mensuel moyen de l'or, selon les fixings de l'après-midi sur le marché de l'or à Londres, a atteint \$391.99 (\$É.U.), \$462.40 (\$Can.) l'once, comparativement à \$391.66 (\$É.U.), \$460.14 (\$Can.) l'once en octobre.
4. La société Oregon Steel Mills, de Portland, en Oregon, a annoncé qu'elle allait fermer, au début de 1980, son usine de réduction directe d'une capacité de 300 000 tonnes métriques par année.
5. La grève qui avait débuté le 7 novembre à l'usine d'Exmibal de la Société Inco Limited, au Guatemala, est terminée et les travailleurs sont retournés au travail le 26 novembre.

6. The average silver price for November 1979 was \$16.60 (U.S.) an ounce compared with \$16.78 (U.S.) an ounce for October and \$13.96 (U.S.) an ounce for September.
7. Hecla Mining Company announced that it will spend more than \$26 million to sink a new shaft at its Lucky Friday silver-lead mine in Idaho.
8. On November 27, 1979, St. Joe Minerals Corporation announced the closure of its zinc plant at Monaco, Pennsylvania effective year-end 1979.
9. La société nationale de l'amiante (SNA) has been given a mandate to begin discussion with the management of Asbestos Corporation Limited (ACL) following the company's receipt of a proposed expropriation notice.
10. The Potash Corporation of Saskatchewan (PCS) announced on November 1, 1979 a 10-year, \$2.5 billion expansion plan.
11. Shell Canada Limited has recently announced plans to construct the "worlds first refinery designed to process synthetic crude".
6. Le prix moyen de l'argent était de \$16.60 (\$É.U.) l'once en novembre 1979, comparativement à \$16.78 (\$É.U.) en octobre et de \$13.96 (\$É.U.) en septembre.
7. La société Hecla Mining Co. a annoncé qu'elle dépenserait plus de 26 millions de dollars pour le fonçage d'un nouveau puits à sa mine d'argent et de plomb de Lucky Friday, en Idaho.
8. Le 27 novembre 1979, la société St. Joe Minerals a annoncé qu'elle fermerait, à la fin de 1979, son usine de traitement du zinc à Monaco, en Pennsylvanie.
9. La société nationale de l'amiante (S.N.A.) a reçu le mandat de négocier avec la direction de la Société Asbestos Limitée (S.A.L.), cette dernière ayant reçu l'avis d'expropriation annoncé.
10. Le 1^{er} novembre 1979, la Potash Corporation of Saskatchewan (P.C.S.) a annoncé qu'elle avait l'intention d'investir 2.5 milliards de dollars dans un programme d'expansion de 10 ans.
11. La société Shell Canada Limitée a récemment annoncé son intention de construire "la première raffinerie de brut synthétique au monde".

ECONOMIC TRENDS

Table 1 shows Canada's unadjusted indexes of Real Domestic Product (R.D.P.). The overall index in September was 163.9, a substantial increase of 20.7 per cent from the previous month.

The September index for mines, quarries and oil wells showed an increase of 2.6 per cent over the month moving from 116.4 to 119.4. Placer and gold quartz mines and other metal mines showed decreases of 10.6 per cent and 7.4 per cent respectively. The mineral fuels index was 122.6 in September with coal showing a 20.0 per cent increase during the month. Nonmetal mines moved from 117.4 in August to 143.6, an increase of 22.3 per cent.

Primary metal industries increased 12.9 per cent with iron foundries moving from 96.4 in August to 127.8 in September, a 32.6 per cent increase.

Table 2 compares volume of production in major Canadian minerals. Substantial changes from August 1979 to September 1979 were recorded in copper (down 17.8 per cent), lead (up 47.7 per cent), uranium (up 50.2 per cent), zinc (up 36.2 per cent) and salt (up 19.9 per cent).

Table 3 records consumption of selected metals for 1977 and 1978. Consumption increased significantly over the period in molybdenum (35.54 per cent), nickel (30.52 per cent), selenium (15.13 per cent) and zinc (17.14 per cent).

TABLE 1

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

Industry or Industry Group	1978			1979			Percentage Changes			
	Aug	Sept	Average 1st 9 Months	Aug	Sept	Average 1st 9 Months	Aug 1979	Sept 1979	Sept 1979	1st 9
							Aug 1978	Sept 1978	Aug 1979	Months 1979 1978
Real Domestic Product	130.9	163.6	134.9	135.8	163.9	139.1	3.7	0.2	20.7	3.1
Primary Industries										
Agriculture	40.7	784.9	144.4	44.6	688.2	139.1	9.6	-12.3	1443.0	-3.7
Forestry	127.4	160.1	113.4	132.2	131.0	121.3	3.8	-18.2	-0.9	6.9
Fishing and Trapping	236.5	137.0	131.6	207.1	133.8	134.1	-12.4	-2.3	-35.4	1.9
Mines, Quarries and Oil Wells	99.2	102.2	103.7	116.4	119.4	112.4	17.3	16.8	2.6	8.4
Metal Mines	73.8	79.3	85.6	107.4	102.1	89.4	45.5	28.8	-4.9	4.4
Placer and Gold Quartz Mines	64.2	62.8	64.9	58.6	52.4	56.9	-8.7	-16.6	-10.6	-12.4
Iron Mines	111.3	136.6	68.5	139.8	143.5	122.1	25.6	5.1	2.6	78.3
Other Metal Mines	65.0	65.9	90.9	101.8	94.3	82.9	56.6	43.1	-7.4	-8.8
Mineral Fuels	110.3	108.2	110.0	116.2	122.6	124.6	5.3	13.3	5.5	13.3
Coal Mines	224.7	241.6	222.3	218.4	262.1	243.6	-2.8	8.5	20.0	9.6
Crude Petroleum and Natural Gas	100.9	97.3	100.8	107.8	111.2	114.8	6.8	14.3	3.2	14.0
Nonmetal Mines	110.6	126.1	118.4	117.4	143.6	128.7	6.1	13.9	22.3	8.8
Asbestos Mines	94.8	89.7	86.5	95.9	95.5	92.8	1.2	6.5	-0.4	7.2
Secondary Industries										
Manufacturing	125.4	145.6	131.7	130.9	148.8	138.8	4.4	2.2	13.7	5.4
Nondurable Manufacturing	132.2	146.1	131.1	139.9	149.9	139.3	5.8	2.6	7.1	6.3
Petroleum and Coal Products Industries	143.6	132.8	134.0	153.0	133.7	142.7	6.5	0.7	-12.6	6.5
Durable Manufacturing	118.6	145.0	132.3	122.0	147.6	138.2	2.9	1.8	21.0	4.5
Primary Metal Industries	103.4	122.4	123.2	109.2	123.3	123.4	5.6	0.7	12.9	0.2
Iron and Steel Mills	111.7	136.2	135.1	132.3	151.4	145.4	18.4	11.2	14.4	7.7
Steel Pipe and Tube Mills	110.9	136.8	130.2	135.3	157.4	140.7	22.0	15.1	16.3	8.0
Iron Foundries	108.5	144.5	126.2	96.4	127.8	130.1	-11.2	-11.6	32.6	3.1
Smelting and Refining	86.1	96.9	103.4	75.3	76.2	85.4	-12.5	-21.4	1.2	-17.3
Nonmetallic Mineral Products Industries	146.2	165.4	129.9	152.8	164.9	134.8	4.5	-0.3	7.9	3.8
Cement Manufacturers	163.4	162.5	126.3	187.7	184.8	140.5	14.9	13.7	-1.5	11.3
Ready-mix Concrete Manufacturers	142.6	144.3	106.9	150.0	157.5	106.1	5.2	9.1	5.0	-0.8
Construction Industry	141.5	141.4	120.8	134.2	133.8	113.3	-5.2	-5.4	-0.3	-6.2
Transportation, Storage, Communication	150.9	150.1	144.5	161.4	160.8	154.1	7.0	7.1	-0.4	6.6
Electric Power, Gas and Water Utilities	134.8	138.3	155.6	147.5	149.0	167.1	9.4	7.7	1.0	7.4
Trade	136.6	147.1	137.2	142.6	149.8	141.0	4.4	1.8	5.0	2.8
Finance, Insurance, Real Estate	150.4	152.3	149.4	157.0	157.6	154.9	4.4	3.5	0.4	3.7
Community, Business and Personal Service	128.2	137.1	133.2	132.2	142.0	137.2	3.1	3.6	7.4	3.0
Public Administration and Defence	134.5	128.9	129.8	131.7	126.9	128.3	-2.1	-1.6	-3.6	-1.2

TABLE 2

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

		1978			1979			Percentage Changes		
		August	September	Total 9 months	August	September	Total 9 months	September 79 September 78	September 79 August 79	1st 9 months
										1979 1978
Metals										
Copper	kg	47.9	32.3	506.7	71.0	58.4	449.5	+80.8	-17.8	-11.3
Gold		4 270.5	4 058.5	38 642.6	3 919.5	3 851.6	35 865.8	-5.1	-1.7	-7.2
Iron ore		6 850.1	6 320.4	26 008.3 ^r	6 879.0	6 210.7	45 207.0	-1.7	-9.7	+73.8
Lead	t	11.8	25.0	216.4	25.8	38.1	239.1	+52.4	+47.7	+10.5
Molybdenum		1 142.2	1 225.6	10 817.0	922.3	886.7	8 705.2	-27.7	-3.9	-19.5
Nickel		2.7	6.0	112.1	14.2	12.9	85.6	+115.0	-9.2	-23.6
Silver	t	79.2	84.5	901.6	99.8	114.6	879.7	+35.6	+14.8	-2.4
Uranium ¹	t	581.1	612.0	5 201.2	387.4	581.8	4 551.6	-4.9	+50.2	-12.5
Zinc		88.7	88.3	726.2	106.1	144.5	909.4	+63.7	+36.2	+25.2
Nonmetals										
Asbestos		164.4	143.5 ^r	1 034.4 ^r	143.6	135.6	1 091.7	-5.5	-5.6	+5.5
Gypsum		886.9	802.9	5 770.8	867.0	834.0	5 919.3	+3.9	-3.8	+2.6
Potash K ₂ O		551.9	478.4	4 755.2	579.9	600.1	5 289.7	+25.4	+3.5	+11.2
Salt		399.2	476.1	4 474.9	485.2	581.8	4 808.9	+22.2	+19.9	+7.5
Cement	1	258.9	1 145.9	7 775.0	1 256.1	1 226.3	8 296.0	+7.0	-2.4	+6.7
Lime		175.8	174.6	1 484.4	..	..	..	..	..	..
Fuels										
Coal		2 557.4	2 505.5	22 190.5 ^r	2 567.1 ^r	2 801.6	24 415.1	+11.8	+9.1	+10.0
Natural gas	million m ³	6 477.6 ^r	6 342.3	64 811.6	6 699.3 ^r	6 865.6	69 223.6	+8.3	+2.5	+6.8
Crude oil and equivalent	000 m ³	6 973.6 ^r	6 482.9 ^r	59 619.3 ^r	7 510.0 ^r	7 461.3	68 792.0	+15.1	-0.7	+15.4

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

^r Revised. .. Not available.

TABLE 3
Canadian Consumption of Selected Metals

	Unit	1977	1978	Percentage Change
Aluminum (primary)	tonnes	332 393	..	..
Antimony	kilograms	1 575 283	1 348 638	-14.39
Cadmium	kilograms	50 369	47 523	- 5.65
Chrome ore	tonnes	30 299	27 472	- 9.33
Cobalt	kilograms	146 763	144 610	- 1.47
Lead (primary and secondary)	tonnes	110 763	100 762	- 9.03
Manganese ore	tonnes	182 157	201 320	+10.52
Metallic mercury	kilograms	30 447	29 904	- 1.78
Molybdenum	kilograms	927 847	1 257 601	+35.54
Nickel	tonnes	9 033	11 790	+30.52
Selenium	kilograms	12 476	14 364	+15.13
Tellurium	kilograms	291	..	..
Tin	tonnes	5 285	4 922	- 6.87
Tungsten	kilograms	449 365	390 760	-13.04
Zinc (primary and secondary)	tonnes	105 412	123 477	-17.14

.. Not available.

TAXATION AND LEGISLATION AFFECTING THE MINERAL AND ALLIED INDUSTRIES IN CANADA

Provincial

Quebec

Bill 60, an Act to Amend the **Mining Duties Act**, gives effect to three measures dealing with the mining industry contained in the Budget Speech of March 27, 1979.

The investment allowance of 33 1/3 per cent is applicable to mining exploration and development expenses incurred on the site of an underground mine, except expenses incurred on the site of an iron ore, titanium or asbestos mine, effective from March 28, 1979.

The annual profit exempt from duties is increased from \$150,000 to \$250,000, effective January 1, 1979.

The third measure authorizes the averaging of losses deductible from mining duties over four years instead of two years, effective January 1, 1979.

Saskatchewan

The Freehold Coal Tax Regulations, 1979, being Regulation 288/79 under the **Mineral Taxation Act**, details the method of assessing the remaining recoverable reserves of coal in the tract, determining the fair value of such reserves, and determining the operating cost allowance for an operating year.

METALLIC MINERALS AND PRODUCTS

Aluminum

A sixteen day, illegal strike ended at Aluminum Company of Canada, Limited's (Alcan) smelter at Shawinigan, Quebec. The walkout, which began November 13, was sparked by disciplinary action against two workers. Normal smelter production was maintained by supervisory personnel.

Alcan, Alpart (Alumina Partners of Jamaica), Reynolds Metals Company, Kaiser Aluminum & Chemical Corporation and Aluminum Company of America (Alcoa) have agreed to Jamaica's new bauxite levy formula, which is retroactive to July 1, 1979. The formula (according to Metals Week - November 26, 1979) is as follows:

<u>Average Realized Price</u>	<u>Base Levy Rate</u>	<u>Levy Rate Over Basic Price</u>
58.01 - 63.00¢	6.8%	5.0%
63.01 - 68.00¢	6.8	4.5
68.01 - 73.00¢	6.5	4.0
73.01 - 78.00¢	6.5	3.5
78.01 - 83.00¢	6.5	3.0
83.01 - 88.00¢	6.5	3.0

Levies will be applied to production at the following rates: (1) on the first 200 000 ldt - 75 per cent of the composite levy rate; (2) on the next 200 000 ldt - 60 per cent of the rate; (3) on the next 200 000 ldt - 50 per cent of the rate. For production in excess of 600 000 ldt above the minimum level, the levy will be negotiated.

Under the old rate, at a price of 66 cents a lb and with a straight levy of 7.5 per cent producers paid 4.95 cents a lb of aluminum.

Iraq is reported to have agreed to purchase 150 000 tonnes of alumina from Jamaica. This agreement together with a similar U.S.S.R. commitment for 250 000 tonnes and an Algerian contract for 150 000 tonnes of alumina has revived speculation that a 600 000 tonne alumina plant may be built at South Manchester, Jamaica next spring.

Bonneville Power Administration, which cut back 25 per cent of power deliveries July 1, is now offering "advance power" at its usual 3.2 mills per kWh to Alcoa, Anaconda Aluminum Company, Intalco Aluminum Corporation, Kaiser, Martin Marietta Aluminum Inc. and Reynolds.

If the reservoirs fill in the spring, abundant cheap power will be available to the aluminum companies. However, if they do not the aluminum companies may be forced to pay back with higher cost replacement power. Replacement power has been purchased from Canadian sources.

As far as regional power availability is concerned, Puget Sound Power and Light has deferred its two nuclear plants, Stragit 1 and 2, because of an antinuclear vote. Each plant would have added 1 288 MW to the Pacific Northwest power availability.

Copper

Copper prices on the London Metal Exchange (LME) were 90.1 cents (U.S.) per pound on November 1, and rose during the month to 96.5 cents (U.S.) per pound by November 30. The Canadian producer price was in the range of \$1.18 to \$1.19 a pound. At month end, several U.S. producers increased their U.S. price for refined copper from \$1.00 (U.S.) to \$1.07 (U.S.) a pound, effective December 1. The U.S. price had been 93.9 cents (U.S.) a pound at the beginning of November. Copper stocks in the LME and Comex warehouses stood at 137 200 tonnes and 65 350 tonnes respectively.

Lornex Mining Corporation Ltd. has announced the expansion of the Lornex mine in British Columbia. The increase in the milling rate will be approximately 68 per cent. New facilities will include a third semi-autogenous mill line, a new crusher, 18 new 170 ton trucks, three new shovels and other related facilities including provision for additional housing. The expansion is scheduled for completion in mid-1981 and will cost approximately \$160 million to be financed from general funds of the corporation supplemented by temporary bank borrowings if and when necessary.

Hudson Bay Mining and Smelting Co., Limited has announced that it has signed a letter of intent on a 10-year lease to mine the orebody about one mile from Hudson Bay's Stall Lake Mine, owned equally by Falconbridge Nickel Mines Limited and Stall Lake Mines Limited. The ore will be processed at Hudson Bay's new Snow Lake concentrator. Hudson Bay estimates that it will spend \$10 million to develop the mine, and production will begin during the latter half of 1982. Under the lease, Hudson Bay will pay a royalty of 7 per cent of the net realized value from the metals produced.

The deposit has previously been estimated to contain 672 641 tonnes grading 5.38 per cent Cu, 2.28 per cent Zn, and small amounts of silver and gold.

Brascan Limited has purchased 16.3 per cent of the shares of Noranda Mines Limited, thus making Brascan Noranda's largest single shareholder. Brascan indicated that it intended to acquire about a 20 per cent interest in Noranda, and to seek two seats to give it representation on the Noranda board of directors. Total purchase price of the shares acquired by Brascan was about \$300 million.

Subsequently, Noranda Mines completed a private sale of 14 million of its treasury shares at \$19.00 per share to raise \$266 million of equity capital. Noranda stated that this equity financing is considered appropriate in the light of the many opportunities for profitable investment presently available. The purchaser of the shares was Zinor Holdings Limited, a company owned by Brenda Mines Ltd. (13.9 per cent), Brunswick Mining and Smelting Corporation Limited (13.9 per cent), Fraser Inc. (8.5 per cent), Kerr Addison Mines Limited (27.3 per cent) and Placer Development Limited (36.3 per cent). Kerr Addison and Placer Development also contributed their existing Noranda holdings to Zinor, which now owns 23,980,202 (23.6 per cent) of Noranda's outstanding shares. The Noranda press release also stated that all of the participants in Zinor Holdings are companies in the Noranda Group, and that the transaction has been structured through holding companies so that each of the participants will be able to account for its investment on an equity accounting basis.

In addition to increasing the percentage of Noranda shares over which the Noranda Group has voting control to 23.6 per cent, the sale of treasury shares reduced Brascan's holdings of Noranda from 16.3 per cent to just over 14 per cent.

The Centre for Resource Studies at Queen's University, Kingston, Ontario has published Working Paper No. 16, "Canada's Competitive Position in Copper and Zinc Markets" by Brian W. Mackenzie. This study, based on the assessment and aggregation of break-even costs for all significant mineral producers, evaluates Canada's competitive position for copper and zinc. The study shows that Canadian copper has a very strong short-term competitive position, having the lowest average break-even cost among the non-communist world's ten major copper producers. This favourable position is attributed to the very low costs of Canadian nickel-copper and copper-zinc mines, with Canadian porphyry copper mines having costs comparable to the non-communist world's average break-even production costs of 50 cents (U.S.) per pound, assessed using mid-1978 byproduct prices.

It has been reported that the Intergovernmental Council of Copper Exporting Countries (CIPEC) hopes to consider a copper stabilization scheme that resembles the International Tin Council's buffer stock when it convenes in Zambia next summer. The main CIPEC objective would be intervention to stabilize the market and defend a floor price. Such a price stabilization agreement would, at least initially involve just the copper producing and exporting countries. One kind of intervention being considered would involve controlling market supplies of copper from time to time to prevent an oversupply situation from bringing prices down too far. Unless such a stocking and price protection system is eventually included as part of an international copper agreement, the CIPEC mechanism would not include provisions for putting additional copper into the market to prevent prices from going too high.

It has also been reported that an increasing number of copper sales by CIPEC producers are now basing their copper sales contracts on monthly average LME prices, with few, if any, special provisions made in the contracts to protect consumers from volatile price increases. At its November meeting in Paris, CIPEC members agreed to charge premiums on LME copper prices. Chilean mines minister Carlos Quinones stated that Chile has earned several tens of millions of dollars this year from premiums charged on the basis of the comparatively higher quality of Chilean copper.

Cities Service Company has announced that effective January 1, 1980 it will set its copper sales prices on the basis of Commodity Exchange prices, but charge a premium of either 3 cents per pound or 5 per cent above the monthly average of the spot settlement contract price on the Comex, whichever is the higher. Since April 1, Cities Service had been charging a 3.5 cent premium over the Comex spot average price. Both Kennecott Copper Corporation, New York, and The Anaconda Company, Denver, charge a 2.5 cent per pound premium over the spot Comex settlement prices. Anaconda had increased its premium to 3.5 cents at the beginning of March, but rolled it back to 2.5 cents on April 1, following a softening of the copper market. Earlier, Kennecott Copper had announced that it would terminate all its copper sales contracts including its fixed price "evergreen" contracts as of the end of November 1979. In August, Kennecott had approached the U.S. Council on Wage and Price Stability for approval on changing the 2.5 cent price differential, but the request was refused.

Texasgulf Inc. has ruled out acquiring another 20 per cent interest in the Cerro Colorado copper project in Panama, according to a statement made to security analysts in New York by company chairman Charles F. Fogarty. It has been reported that the International Monetary Fund might be pressuring Panama to reduce its participation in the project from 80 to 60 per cent. Texasgulf's third quarter 1979 report indicates that Texasgulf has informed the Panamanian corporation for the development of Cerro Colorado (CODEMIN), that it wishes to postpone development of the copper project pending favourable resolution of financing arrangements, improvement in the conditions bearing on the expected return on equity, and resolution of the terms and conditions of an agreement to proceed. Texasgulf has stated that it is willing to assist in finding other equity participants, and that if Panama wishes to choose another administrator and investor to replace Texasgulf, Texasgulf would cooperate. Texasgulf indicated that it continues to believe that Cerro Colorado has the potential of becoming one of the great copper mines of the world.

In his presentation to the New York security analysts, Fogarty stated that the price of copper would have to rise sharply above \$1.50 (U.S.) per pound before Texasgulf could get an adequate return on its Cerro Colorado investment.

Texasgulf has announced that construction of its Kidd Creek copper smelter and refinery is 60 per cent complete, with final completion of the planned 65,000 ton (58 970 tonne) per year capacity forecast for mid-1981 on time and under the budgeted \$300 million (Cdn.) cost. The smelter-refinery capacity is expected to climb to 100,000 tons (90 720 tonnes) per year by 1983, then gradually climb to an eventual capacity of 130,000 tons (117 930 tonnes) per year.

Noranda Mines Limited has announced that financing should be arranged by the end of 1979 for the development of the Andacollo copper mine in Chile, a joint project of Noranda and Empresa Nacional de Minería, a state owned smelting and marketing agency, with development to proceed once proper financing has been found. Production will begin no earlier than the first quarter of 1983, at about 40 000 tonnes of ore per day, to yield about 75 000 tonnes of copper in concentrates per year.

The Andacollo deposit, located 250 kilometres north of Santiago, has estimated reserves of 200 million tonnes of grade 0.65 per cent copper, plus some gold and silver. The joint venture is held 51 per cent by Noranda and 49 per cent by Empresa Nacional de Minería.

Gold

The demand for gold at the United States Treasury's auction held on November 1, 1979, was slack and the average bid price of \$372.20 (U.S.) was considerably below the price received at the U.S. October gold auction. Although all the gold offered was sold the lacklustre results forced the gold price downwards to a low for the month of \$372.80 (U.S.) an ounce at the afternoon fixing on the London Gold Market on November 2 after opening for the month at \$379.70 (U.S.). The take-over of the U.S. Consulate in Iran by Iranian students and the holding of U.S. hostages pushed the gold price upwards to \$395.00 (U.S.) an ounce at the afternoon fixing on November 7. The gold price fluctuated between this price and \$386.00 (U.S.) an ounce until November 28 when it increased sharply on the continuing Iranian crisis, reaching a high of \$417.20 (U.S.) an ounce for the month at the morning fixing on the London Market on November 30. The closing price for November was \$415.65 (U.S.) an ounce. The monthly average gold price, for November 1979, of the afternoon fixing prices on the London Gold Market was \$391.99 (U.S.) (\$462.40 Cdn.) an ounce compared with \$391.66 (U.S.) (\$460.14 Cdn.) an ounce in October.

The International Monetary Fund held its thirty-ninth gold auction on November 7, 1979, under the bid price method, and sold 444,000 fine ounce of gold at an average price of \$393.55 (U.S.) a troy ounce. Prices offered by successful bidders ranged from \$391.77 (U.S.) to \$393.55 (U.S.). Bids totalling 1,798,400 ounces were submitted by 16 bidders. The thirteen successful bidders were Alexander Trust Co., Zurich; Bank Leu Ltd., Zurich; Compagnie Luxembourgeoise de la

Dresdner Bank AG - Dresdner Bank International, Luxembourg; DG Bank-Deutsche Genossenschaftsbank, Frankfurt; Dresdner Bank AG, Frankfurt; Dresdner (Southeast Asia) Ltd., Singapore; Eastern Trade Corp., Dubai, United Arab Emirates; Johnson Matthey Bankers Ltd., London; Republic National Bank of New York, New York; Sharps Pixley, Inc., New York; Swiss Bank Corporation, Zurich; Union Bank of Switzerland, Zurich.

On November 2, 1979 the Treasury Department of the United States held its nineteenth gold auction, and sold the entire 1,250,000 ounces that had been offered at an average price of \$372.20 (U.S.) an ounce. Under new gold auction procedures, the final amount to be sold in any auction is determined only after the Treasury has opened and examined all bids. Prices offered by the 10 successful bidders ranged from \$365.50 (U.S.) an ounce to \$378.12 (U.S.) an ounce. Thirteen firms bid for a total of 1.5 million ounces, with the lowest bid \$320 (U.S.) an ounce.

Successful bidders in the November auction were Bank Leu, New York (29,400 ounces); Credit Suisse, Zurich (161,400 ounces); E.F. Hutton and Co., New York (15,000 ounces); Gold Standard Corp., Kansas City, Mo. (1,200 ounces); Phillip Brothers, New York (199,400 ounces); Samuel Montager Inc., New York (39,300 ounces); Sharps Pixley Inc., New York (28,800 ounces); Swiss Bank Corp., Zurich (295,000 ounces); Union Bank of Switzerland, Zurich (78,600 ounces); and Dresdner Bank AG, New York (312,000 ounces).

As of September 30, 1979 total U.S. Treasury gold stocks amounted to 264.7 million troy ounces of gold.

Les Mines Est-Malartic Ltée has decided to reopen, on a salvage basis, its Barnet Mine, adjoining the main property in northwestern Quebec. The mine was closed at the end of September at the same time as the Est-Malartic mine was closed because of ground conditions. It is planned to mine between 11 000 and 13 500 tonnes a month over a period of six to 12 months. The ore will be stockpiled on surface and treated at the Est-Malartic mill when capacity becomes available. Alterations were made to the Est-Malartic mill to treat ore from Les Mines d'Or Thompson-Bousquet Ltée at Cadillac and the mill is now treating about 18 000 to 23 000 tonnes per month from this mine. Est-Malartic is one of the older mines in Quebec and operated from 1938 until its recent closure.

In October, the government of the Dominican Republic purchased the 27 per cent interest of Rosario Resources Corporation and the 27 per cent interest of J.R. Simplot held by these two United States companies in the gold-silver Pueblo Viego mine of Rosario Dominicana, S.A. for an overall total price of \$70 million. The Dominican Central Bank already holds 46 per cent interest in this property. Pueblo Viego mine is the largest gold mine in the Western Hemisphere, producing 10 453 kilograms (336,073 ounces) of gold in 1978. Silver production was 57 343 kilograms (1,843,615 ounces).

In early November, the Nicaraguan government announced the nationalization of its mining industry. Noranda Mines Limited has a 60.5 per cent interest in the Nicaraguan gold property of Empresa Minera de el Setentrion. Other gold producers affected were Rosario Resources Corporation and ASARCO Incorporated both United States companies. Reports indicate that the companies will be compensated for their holdings, based on the book value of the properties.

Iron Ore

Oregon Steel Mills of Portland, Oregon announced that it will shut down its 300 000 tonne-a-year direct reduction plant early in 1980 because of high natural gas prices. Most of the gas consumed by the steel mill originated from western Canada.

The plant's shutdown will result in a loss of market for about 150 000 tonnes of iron ore pellet feed a year from Wesfrob Mines Limited of British Columbia. Annual production at Wesfrob Mines, owned by Falconbridge Nickel Mines Limited, is about 500 000 tonnes and employment is 140.

Iron and Steel

Notwithstanding its announcement in the previous month, Sydney Steel Corporation has decided to continue operating with two blast furnaces and keep employment at normal levels. However, according to the company, the two blast furnace operations will be continued only if higher steel production is achieved and if higher prices for its products are obtained.

Mr. Yves Duhaime, the Industry Minister of Quebec, introduced legislation in the national assembly that will permit the government-owned steel company "Sidbec" to enter joint steelmaking ventures with other firms.

The Quebec Government also announced that it will be providing \$150 million to Sidbec, of which: \$30 million will be for replacement of a loan by Quebec for purchase of Questeel Ltd., a bankrupt steel company in Longueuil; \$85 million for startup of a second steelmaking furnace at Questeel as well as for repairs at its Contrecoeur hot rolling mill and Montreal tube mill; and \$35 million to cover a deficit on operations expected for 1979.

Mercury

The General Service Administration (GSA) of the United States sold 1,000 flasks (76 pounds each) of mercury to Bache Halsey Stuart of New York for an average price of \$319.27 (U.S.) a flask as a result of the November 13 bid opening. The mercury price at the October GSA sale was \$320.65 (U.S.) a flask. The next sale held by GSA at which 1,000 flasks will be offered is December 11.

Nickel

The electrolytic refinery of Société Métallurgique Le Nickel at Sandouville, northern France, has resumed production after a gradual startup during October. The plant, with a capacity of 16 000 tonnes of electrolytic nickel annually was heavily damaged by a fire in February. The plant originally opened in the second half of 1978.

A strike which began at Inco Limited's Exmibal project in Guatemala on November 7 was resolved and workers returned to work November 26. The dispute started when workers from the ore processing operation walked off the job, shutting down the smelter. It was settled with the signing of a new two-year collective agreement. The settlement, reached with the assistance of the Ministry of Labour, provides improvements in wages, working conditions and other benefits.

Employees are still on strike at Inco's refinery at Clydach, Wales and at the Port Nickel refinery of AMAX Inc. At the end of November, Inco was holding talks with the craft unions, but no talks have been arranged with the Transport and General Workers Union. The workers have been on strike since October 18. No talks are scheduled between AMAX and its union workers who walked off the job at the end of August. Since then, the Port Nickel refinery has been operated at a reduced rate by supervisory and salaried personnel.

Silver

The silver price in November 1979 was comparatively stable until towards the end of the month. The opening price for the month of November as quoted by Handy & Harman of New York was \$16.06 (U.S.). The price increased to \$16.79 (U.S.) an ounce on November 7 on the Iranian situation and retreated to a low for the month of \$15.87 (U.S.) an ounce on November 15. On November 27 the price was \$16.86 (U.S.) an ounce and increased sharply over the next three days to close at an all time high of \$18.76 (U.S.) an ounce. The Iranian problem was partly responsible for the sharp price increase.

The average silver price for November 1979 was \$16.60 (U.S.) an ounce compared with \$16.78 (U.S.) an ounce for October and \$13.96 (U.S.) an ounce for September. The average silver price in Canadian dollars for the month of November was \$630.37 a kilogram (\$19.61 Cdn. an ounce) compared with \$634.70 a kilogram (\$19.74 Cdn. an ounce) in October.

Hecla Mining Company announced that it will spend more than \$26 million to sink a new shaft at its Lucky Friday silver-lead mine in Idaho. J.S. Redpath Corp., Temple, Arizona, an affiliate of J.S. Redpath Limited of North Bay, Ontario has been selected to perform the design engineering for the project. A construction contractor will be selected in March and shaft sinking should start shortly afterwards. Mine capacity will be increased from 660 tonnes per day to 900 tonnes per day when the construction program is completed.

Tin

Union opposition by Bolivian tin miners to the coup by Colonel Alberto Natusch Busch that ousted president Guevara Arze on November 1, 1979, forced Busch to step down 16 days later. Lydia Guiler Tejada was elected as president by the Bolivian Congress.

Although tin production has resumed, shipments are intermittent. Corporacion Minera de Bolivia and Empresa Nacional de Fundiciones are having difficulty meeting contractual commitments.

An early November preparatory meeting of the International Tin Council was held in Sydney, Australia. Concern over the proposed U.S. disposal of tin, was expressed by the producer members. The Council did not have time to consider draft proposals for the Sixth International Tin Agreement. Formal talks in Geneva will be conducted in April 1980.

Issues that will command attention include the tin price range, the council votes, exports controls, the size of the buffer stock and the duration of the new Tin Agreement.

Zinc

In the United States on November 27, 1979, St. Joe Minerals announced the closure of its zinc plant at Monaca, Pennsylvania effective year-end 1979. The plant employs 1,500 people and is one of the largest in the world with an annual capacity of 172 000 tonnes refined zinc and 64 000 tonnes of zinc oxide. Until it decides whether or not a replace-

ment plant will be built, interim one-year evergreen arrangements have been made with Canadian and U.S. producers to supply it with metal and oxide to satisfy its customers requirements. Persistent operating losses are the reason for the closure.

Elsewhere, presumably for similar reasons, Gulf Resources & Chemical Corporation have put the Bunker Hill Co. up for sale and it is understood that New Jersey Zinc and National Zinc are also in this same situation.

After the U.S. producers lost their trade action petition in 1978, many issued warnings about the adverse impact of this decision by the International Trade Commission. St. Joe Minerals in particular brought this out in its 1978 shareholder's report. As a result, the company and the industry are now in a position to say, "we told you so", to their government. The U.S. situation is therefore serious since 70 per cent zinc metal and zinc oxide capacity is either up for sale or about to close down.

In Canada, Cabinet approved the terms and conditions governing development of Arvik Mines Ltd.'s Polaris zinc-lead mineral deposit in early November. Cominco Ltd. which owns 75 per cent of Arvik, announced November 6, that the mine would start up in 1982 at a cost of \$150 million. The Polaris deposit, which will be the eleventh largest zinc-lead mine in the world, is located on Little Cornwallis Island, Northwest Territories. Ore reserves exceed 20 years of production. European/U.S. refineries have purchased the mine's production under three year evergreen contracts. The export licence covers eight years or 1.1 million tonnes of zinc and lead metal in concentrate, whichever comes first. Canarctic Shipping Company Limited, which is 51 per cent owned by the Federal Government, will transport the first 50 per cent of this tonnage based upon full operating costs; the balance is to be contracted competitively. The company has agreed to undertake a smelter feasibility study during the fifth year after commencement of production. The Federal Government has not given any financial concessions that are specific to this project; however, royalty payments will be held constant for seven years of operation or the period of capital repayment, whichever comes first. Any increased royalty rates during this period will then become payable with interest.

On November 29, 1979, a joint venture of Noranda Mines Limited and MacDonald Mines, Ltd. known as Les Mines Gallen Limitée announced it would spend \$5.5 million to reopen the open pit zinc mine formerly known as the West MacDonald mine in the Rouyn-Noranda area of Quebec. The mine will produce about 19 000 tonnes annually of zinc in concentrate at capacity when the mine commences production in mid-1981.

At month end, producer zinc prices were \$780 (U.S.) a tonne overseas, 37.5 cents a pound in the United States, and 43 cents a pound in Canada.

INDUSTRIAL MINERALS AND PRODUCTS

Asbestos

The United States Consumer Product Safety Commission (CPSC) and Environmental Protection Agency (EPA) have launched simultaneous investigations into the uses of asbestos in the U.S. (U.S. Federal Register, October 17, 1979). EPA has authority to regulate asbestos under a number of laws it administers and CPSC administers two statutes under which it is empowered to regulate asbestos in consumer products. Both agencies have issued "Advanced Notice of Proposed Rulemaking" notifying interested parties of their intent to gather information on asbestos exposure sources from primary processing through end use and disposal. EPA has indicated it will consider a ban or curb on the processing, manufacturing and use of asbestos and may limit the amount of asbestos imported and produced in the U.S.A. CPSC is considering the elimination of all nonessential uses of asbestos in consumer products from which fibres are released. Also, there is concern in Canada and the U.S. that the U.S. Occupational Health Administration (OSHA) may issue an emergency temporary order lowering the present workplace standard for asbestos exposure from two fibres/cc to 0.5 or 0.1 fibres/cc.

Following a three-year investigation of the health hazards of asbestos, a U.K. government committee (Advisory Committee on Asbestos or Simpson Committee) has published its final report rejecting calls for a complete ban on the use of asbestos but recommending much stricter controls on its use. Major conclusions are:

- 1) that there is no "safe" level for asbestos applications and hence the use of substitutes should be considered wherever possible.
- 2) that there should be further study of the link between gastro-intestinal cancers and asbestos contamination of food and drink.
- 3) the recommendation that the current voluntary ban on blue asbestos (crocidolite) be replaced with a statutory ban and lowering the maximum exposure levels or "control limits" for white asbestos (chrysotile) and brown asbestos (amosite) to 50 per cent and 25 per cent respectively of previously permitted exposure levels.

The Simpson Committee Report will be influential in discussions to establish asbestos-related regulations in other countries and industry in contesting the move to 0.5 fibres/cc because it has not been possible produce consistent control at that level. Also, the proposed implementation date, December 1, 1980, is too early and there must be time to assess the recommendations to allow industry, where necessary, to adapt to new conditions, and to protect jobs.

La Société nationale de l'amiante (SNA) has been given a mandate to begin discussions with the management of Asbestos Corporation Limited (ACL) following the company's receipt of a proposed expropriation notice. An expropriation order apparently would not be issued until, at least, early next year following the receipt of an expected December 31 report from SNA detailing some necessary corporate information for an orderly transition. Quebec indicated earlier that it would wait for a Supreme Court judgement on the validity of Quebec's language law. Bill 121, authorizing Quebec to expropriate some of ACL's assets, was passed in French only and the company contends that it is therefore unconstitutional.

Potash

The Potash Corporation of Saskatchewan (PCS), announced on November 1, 1979 a 10-year, \$2.5 billion expansion plan that will increase capacity from the current 5.8 million short tons of muriate of potash to approximately 15.5 million short tons by 1988/89 (1.0 million tons is from I.M.C.). This expansion will be achieved in three stages. Currently operating mines will be brought to full productive capacity by 1982 for a total capacity of almost 7 million short tons.

Further expansion to be completed by about 1984/85 will allow maximum utilization of the rated capacities of existing shafts to a total of about 8.2 million short tons. Subsequently PCS intends to increase production by about 50 per cent in some existing mines either by adding a third shaft or opening one or two mines that would have capacities of between 3 and 4 million short tons each.

PCS believes that world demand for potash will rise from 53 million tonnes in 1979 to 75 million tonnes in 1989. Such a scenario would allow not only for their expansion plans but for sizeable capacity increases in the private industry.

The government's new tax proposals were reluctantly accepted by industry and all but one company signed an agreement. The taxes will be in force at the end of the year. The agreement calls for a basic Cdn. \$6 a ton (short ton) fee on the first 300,000 tons of production (K_2O equivalent) and \$7.50 a ton thereafter. A graduated profit tax ranging from 10 to 50 per cent will also be applied. The companies that signed agreed to drop all legal action against the government.

Markets for potash are excellent and all the corporations are selling out of their current production and stocks are drawn down to a minimum. Shiploading for export in Vancouver was not affected as much as sulphur by the bridge accident (refer to the article on sulphur), but the potential for disruption still exists.

Sulphur

In October, a Japanese freighter rammed the railway bridge which crosses Burrard Inlet and services Vancouver Wharves, from which over 50 per cent of offshore sulphur shipments are handled. The collision occurred in heavy fog and resulted in the end of one span dropping into the water and the tilting of the towers supporting the raised span. The raised span had to be secured at a level insufficient for the passage of many ships used in the sulphur trade. At present, Port Moody is coping with the resulting extra traffic but larger vessels must take on some sulphur as ballast from Vancouver Wharves stocks in order to pass beneath the bridge. Sulphur exports through Vancouver have reached 4 million tonnes a year and it is questionable that this pace can be maintained for more than a few months. Repairs on the bridge could take 10 to 12 months and disruption of Port Moody traffic during this period is likely to be considerable. The tight schedule at the port itself means that facilities are going full out and a breakdown could mean total cessation of exports for periods of a month or more. The world tight supply situation for sulphur is already potentially a threat to adequate fertilizer production. In the event of further mishap, a serious impact on world food supply would arise given that Canada accounts for 35 per cent of world exports of sulphur.

Construction Materials

Agreement has been reached between Flintkote Company of Stanford, Connecticut and Genstar Limited of Montreal for the acquisition of Flintkote by Genstar in a cash tender offer of \$55 (U.S.) a share, a total of \$304.3 (U.S.) million.

The agreement also provides for the dismissal of a lawsuit launched last year by Flintkote against Genstar. The lawsuit claimed that when Genstar acquired about 21.5 per cent of Flintkote common stock in August 1978, it was attempting to acquire control of Flintkote and that this attempt violated U.S. anti-trust and securities laws.

Genstar's \$55 offer was originally made October 19. At the time, Flintkote was party to a merger agreement with Louisiana-Pacific Corp. of Portland, Oregon, which was approved by the directors of both companies. Louisiana-Pacific had bid \$53 a share for Flintkote and Genstar came in with its unsolicited higher bid.

After successful completion of the offer, Genstar said it intends to operate Flintkote as a separate subsidiary under its present management.

Flintkote now makes cement, wallboard, roofing, floor tiles and other construction materials in plants across the continent.

Flintkote's revenues last year were about \$730 million compared with more than \$1.1 billion for Genstar.

The Montreal company produces similar products in Canada and the U.S. and has additional interests in such areas as housebuilding, sale of serviced lots, tug and barge transportation, shipbuilding, fertilizer and financial services.

MINERAL FUELS AND PRODUCTS

Coal

Fording Coal Limited of Calgary and two electric utilities in Alberta are conducting preliminary market investigations into the feasibility of constructing a coal-fired thermal power generating station in southern Alberta that would produce electricity for export in the late 1980s. If potential markets can be identified in the western United States, further studies will be undertaken to investigate possible sites for the plant. If the project were to proceed, it would be the first fossil fuel power plant built in Canada exclusively for the export of electricity. Economic, environmental and other impact studies would be required before this proposal could be put forward for government and regulatory consideration and review.

Crude Oil and Natural Gas

Shell Canada Limited has recently announced plans to construct the "world's first refinery designed to process synthetic crude". Construction of the facility, to be near Edmonton, may begin in 1980 and completion is expected to be done by 1983. The refinery, to cost around \$350 million, is anticipated to have an initial throughput of 6,995 m³/d (44,000 barrels) increasing to a capacity of 11,129 m³/d (70,000 barrels).

Initially, the plant will draw feedstocks from the two existing facilities, Great Canadian Oil Sands Limited (now Suncor Inc.) and Syncrude Canada Ltd. and eventually draw feedstocks from the Alsands plant upon its completion. The synthetic oil refinery, besides supplying gasoline, stove oil, diesel and jet fuels for the western Canadian market, would also support an adjacent petrochemical complex.

The total output from the two mining facilities is expected to be about 29,413 m³/day (185,000 barrels) when the refinery is completed and Alsands will bring on an additional 22,258 m³/day (140,000 barrels), assuring the refinery of its rated capacity.

Uranium

On October 22, 1979, a Notice of Motion was placed before the House of Commons outlining the terms of reference for the intended Parliamentary Inquiry on Nuclear Energy. It will be moved "that a special joint committee of the Senate and the House of Commons be appointed to inquire into the economic, social, environmental, health and international considerations bearing on the role of the Government of Canada in the development, use, regulation and export of nuclear energy". The terms of reference will be very broad and will not be limited to those outlined in the motion. The motion has not yet been debated.

The Federal Court of Canada has ruled that the Inuit have aboriginal title to some 130 000 square kilometres in the Baker Lake area of the Northwest Territories which permits them to hunt and fish. However, the Court ruled that the Inuit do not possess the surface rights to the land and that the temporary injunction against exploration in the area will be lifted on December 17, 1980. Although it is not yet clear, it would appear that the judgement will permit uranium exploration activities to resume in the area before year-end.

Key Lake Mining Corporation has released for public comment its environmental impact statement relative to its proposed development in the Key Lake area of Saskatchewan. It is anticipated that provincial environmental hearings will commence in early 1980. The company has increased its uranium reserve estimate from 38 500 tonnes U to 57 700 tonnes U. It intends to operate two open pit mines, commencing with the exploitation of the Gaertner deposit. It is hoped that mill construction can commence in 1981 with a view to first production in 1983.

The directors of Rio Algom Limited and Preston Mines Limited have approved a plan whereby the two companies will amalgamate. Both companies are controlled by Rio Tinto Zinc Corporation Limited of London, England. Preston is currently planning to rehabilitate its Stanleigh uranium operation at Elliot Lake, Ontario to supply a contract with Ontario Hydro beginning in 1984.

Norcen Energy Resources Limited and Lacana Mining Corporation have reportedly signed a contract with Korea Electric Company (KECO) calling for the delivery of some 1 540 tonnes U over an eleven year period beginning in 1983. E & B Explorations Ltd. have apparently signed an additional contract with KECO for the delivery of about 850 tonnes U over the same period. Deliveries in both cases would come from the Blizzard property which the companies propose to develop in southern British Columbia. Development of the property will be dependent on a favourable outcome to the current provincial inquiry into uranium exploration and mining in British Columbia.

Rio Algom Limited has reportedly signed a contract with Japan Atomic Power Co. for the delivery of some 615 tonnes U in the late 1980s.

The government of Australia has announced that Electrolytic Zinc Company of Australasia Ltd. and Peko-Wallsend Operations Ltd. have signed contracts with Korea Electric Company (KECO) which provide for the delivery of 1 920 tonnes U from the company's Ranger operation over the period 1983 to 1992. The value of the contracts is reportedly between \$A160 and \$A180 million. Although the contracts were signed with the government's knowledge and authority, formal government approval has not yet been granted.

The government of Australia has received proposals from 14 Australian and foreign organizations to acquire the government's interest in the Ranger uranium project. Among the proposals is one from Denison Mines Limited of Canada. Discussions are being held with all of the organizations with the objective of divesting the whole of the Government's 50 per cent interest to a single assignee, provided that the level of foreign ownership in the total project does not exceed 25 per cent.

The Australian government has approved the acquisition by British Petroleum Company Limited of a 49 per cent interest in Western Mining Corporation Limited's uranium-copper-gold prospect at Olympic Dam in the Roxby Downs area of South Australia. The deposit could prove to be one of the largest uranium deposits in the world.

Queensland Mines Limited of Australia has completed the mining phase of its Nabarlek uranium project in Australia's Northern Territory. The deposit, now believed to contain 10 200 tonnes U, has been completely mined and stockpiled adjacent to the mill, which is currently under construction.

NEW PUBLICATIONS

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

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 novembre.

Annual Reviews of the Canadian Mineral Industry, 1978, Barite and Celestite; Bentonite; Cesium; Magnesium; Molybdenum; Platinum Metals; Potash; Stone; Sulphur; Tungsten; price \$1.00 a copy.

Revue annuelle de l'industrie minérale du Canada, 1978: Le calcium, la chaux, le gypse et l'anhydrite, le minerai de fer, le rhénium, le sel, le sulfate de sodium, prix: \$1 l'exemplaire.

Map. - 900 - A. 29th Edition: Principal Mineral Areas of Canada, available from EMR in English and French.

Carte. - 900 - A. 29^e édition: Principales régions minières du Canada, disponible de l'ÉMR, en français et en anglais.

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.

