

Copper Mines Limited began production of molybdenite as a byproduct at its Murdochville, Que., copper concentrator. Canadian shipments in 1963 of molybdenum contained in molybdenite and molybdic oxide amounted to 1,000,000 lb., valued at \$1,534,000. Exploration and development work continued at several molybdenum deposits: five miles north of Cadillac, Que.; in the Matachewan area of Ontario; and at Endako, Alice Arm, and Boss Mountain, B.C. Noranda announced plans for a \$5,000,000, 1,000-ton-a-day mining operation at Boss Mountain. Canadian Exploration plans a 10,000-ton-a-day operation at Alice Arm, to start production in 1965.

Titanium.—Ilmenite, an iron-titanium oxide, is mined in the Allard Lake and St. Urbain areas of Quebec. The Allard Lake ore, mined by Quebec Iron and Titanium Corporation, is smelted by the company in electric furnaces at Sorel, Que., to produce high-titania slag and pig iron. The slag is sold to producers of titanium-based pigments in Canada, the United States, Britain, Japan and other countries. Ilmenite mined at St. Urbain by Continental Titanium Corporation is used as heavy aggregate in weighting oil and gas transmission pipelines and in shielding nuclear reactors.

Selenium and Tellurium.—Selenium production in 1963 totalled 482,960 lb. valued at \$2,240,101, a minor decrease from 1962; tellurium output at 74,942 lb. valued at \$483,271 was about 28 p.c. higher than in 1962. These metals are recovered from the anode muds resulting from the electrolytic refining of copper at the plants of Canadian Copper Refiners Limited at Montreal East, Que., and International Nickel at Copper Cliff, Ont.

Magnesium.—An all-time Canadian production record of 8,700 tons was achieved in 1963 by the only Canadian producer, Dominion Magnesium Limited, also the only Canadian source of calcium and thorium. Dolomite of exceptional purity is quarried and reduced to metal by the ferrosilicon method at Haley, Ont. About 6,000 tons of magnesium were exported during the year.

Aluminum.—Canada is second, after the United States, in Free World aluminum production. At the end of 1963, annual capacity was 888,000 tons. Capacity for a further 20,000 tons was completed in March 1964 at the Kitimat, B.C., smelter of Aluminum Company of Canada Limited, and another 20,000 tons will be completed in 1965. This Company also has smelters at Arvida, Isle Maligne, Shawinigan and Beauharnois, all in Quebec. Canadian British Aluminium Company Limited operates a 90,000-ton smelter at Baie Comeau, Que. As all bauxite or alumina used by the aluminum smelters must be imported, mainly from the Caribbean area, metal production is classed in official statistical data with manufactures and not with smelter production of ores and metals of domestic origin. Production of primary aluminum in 1963 was 719,390 tons, of which 635,187 tons were exported. Domestic consumption was estimated at about 155,000 tons as measured at the semi-fabricated level.

Subsection 2.—Industrial Minerals

For the fifth successive year, Canada's industrial mineral production in 1963 rose to a new high. In that year the value of output exceeded \$607,500,000 and amounted to 20 p.c. of the total mineral production. New records were established for asbestos, potash, sulphur, gypsum, cement and sodium sulphate.

Asbestos.—Canada is by far the Free World's leading asbestos producer but is challenged by the U.S.S.R. for first position in world production. Despite competition from the U.S.S.R., Africa and the United States, all of which countries have expanded or are expanding production, Canada has maintained a steady increase in its asbestos exports and is at present supplying about 40 p.c. of the world output. In 1963, 1,206,425 tons of asbestos fibre valued at \$139,447,444 were exported from Canada.