World Sources of Chromite are Shifting

(Cont. from Nov. 1936)

The Union of South Africa became a significant producer of chromite immediately before the depression. Production was started in 1924 and rapidly increased till by 1929 nearly 45,000 metric tons were exported. As in other countries, the depression affected the industry and production dropped to about 50 per cent of its boom year. 1934 was a rapid comeback with 46,000 tons exported. From 1930 to 1934 exports amounted to 9 per cent of the world total.

The chromite industry participates in the government bonus of 7 per cent granted to base metals exported from the Union. South African ore is mainly low-grade.

New Caledonia is the principal source for chemical ore and although exports dropped during the depression, it continued to supply a large part of the world's requirements. During the period 1930 to 1934 it maintained its same relative position with other producing countries; exporting between 10 to 12 per cent of the world's total. In the early 1920's New Caledonia chromite exports were much larger, supplying a much larger part of the world's needs.

The World War brought about the beginning of the Cuban chromite industry, which declined rapidly at the close of hostilities. In 1923, with the development of the refractory grade deposits, production was revived and has become quite substantial. Cuba made no shipments in 1932, but contributed 8 per cent of the world exports from 1930 to 1934. In the preceding 5-year period Cuban exports amouted to 10 per cent.

Russia, being a producing and consuming nation, obtains its chromite requirements from domestic mines and exports material quantities to other world markets. Before the war, Russia was an important factor in the international chromite market, but from wartime to 1927 no outside shipments were made. Since 1927 Russian chromite exports have rapidly increased, reaching a peak of 41,527 tons in 1932, or 19 per cent of the world's exports. From 1930 to 1934 about 10 per cent of the world's chromite came out of Russia.

Chromite reserves in the U. S. S. R. are reported to be about 15,000,000 tons, but the ore is generally low-grade. Only the high-grade ore is exported, although some of the 40 per cent ore has been shipped. Imports of Russian ore to the United States in 1934 contained 45 per cent Cr203.

Chromite exports from India are much less than formerly. The peak years of Indian production were between 1920-1924 when 21 per cent of the world total was exported. In the period 1930-1934 its exports amounted to 7 per cent, compared to 12 per cent in the preceding pentad. The 1934 exports were the largest since 1929.

In Southern Europe Yugoslavia is probably the principal source for chromite deposits, and although small amounts were mined prior to 1914 definite production really began in 1925. Shipments to foreign countries followed immediately after production began; 33,060 tons being exported in 1930, the peak year. From 1930 to 1934 Yugoslavia supplied 8 per cent of the world's exports. Some of the chromite is hand picked and shipped as mined; the remaining shipments are washed ore. The crude ore to the concentration plants runs 24 to 40 per cent Cr203, but all shipments are of high-grade chromite, much of it being of metallurgical grade. During 1929 Yogoslav produeers began using Saloniki as a port of export.

Greece's recovery from the depression period is worthy of note. In the years 1931-1932 chromite exports dropped to a little over 1000 tons per year, but recovered to 22,141 tons in 1934. For the past ten years Greece's exports have averaged about 5 per cent of the world's total. Greek ores are low-grade and are said to contain 38 to 40 per cent chromic oxide.

Japanese chromite production is absorbed by her domestic industries with no exports whatever to the outside market. In 1933 her production amounted to 19,897 tons, slightly double that of

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Metals Hit High Levels

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Most traders continued optimistic despite the removal of restrictions, feeling that it will require many months to stimulate production sufficiently to offset the present low copper reserves, and prices of copper mining shares on the New York Stock Exchange remained popular with traders.

The demand for lead has continued good with prices holding around last month's levels. Philippine interest in lead this month turned to Hong Kong where L. R. Nielson, Manila broker, concluded a contract to operate the lead mines of Hong Kong Mines, Ltd. After a personal inspection of the property, Nielson announced his engineers were satisfied with the prospects sufficiently to warrant early installation of a 150-ton mill.

AVERAGE METAL PRICES FOR DECEMBER, 1936

(*By United Press*)

NEW YORK, Jan. 16.—The market for non-ferrous metals moved steadily upward during the past month with copper very strong, the magazine *Metal & Mineral Markets* reported today.

Domestic copper during December averaged about one cent above the price prevailing during October and November. Demand was strong.

Lead and zinc also found brisk demand and prices gained about one cent a pound on the average. Sales were estimated at more than 25,000 tons of lead for the month and sales of zinc exceeded 20,000 tons.

Substantial improvement in the demand for tin has sent prices for that metal steadily higher during the winter. The average New York price for Straits in December was 51.823 as compared to less than 45 cents last October.

Metal & Mineral Markets reported average metal prices for December as follows:

Copper:	
Electrolytic, Domestic, Refinery	10.763
Electrolytic, Export, Refinery	10.835
London, Standard Spot	45.946
London, Forward	50.364
Lead:	
New York	5.554
St. Louis	5.406
London, Spot	25.560
London, Forward	25.503
Silver and Sterling Exchange:	
Silver, New York, per oz.	45.352
Silver, London, pence per oz.	21.238
Sterling Exchange, "checks"	490.670
Zinc:	
St. Louis, Spot	5.273
London, Spot	17.957
London, Forward	18.145
Tin:	
New York, Straits	51.823
London, Standard Spot	232.108
Gold, per oz., U. S. price	$35.000
Quicksilver, per flask	$90.25
Antimony	12.918
Cadmium	90.000
Platinum, Refined, per oz.	$48.000
Aluminum, 99+%	20.000

Domestic quotations above, unless otherwise stated, are in cents per pound. London averages for copper, lead, zinc and tin are in pounds sterling per long ton. Sterling exchange, checks, is in cents.

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World Sources of Chromite

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1931. Japanese imports of chromite in 1933 equalled home production.

In the Philippines, the chromite industry is just beginning to receive serious attention, and with the United States, the largest chromite consumer, depending entirely on foreign sources for its supply, the development of chromite mines in the Islands will prove a boon to the national welfare of both countries. Quoting a report from the United States Bureau of Mines issued this year: "Recent reports from the Philippines indicate considerable development of chromite in the islands. Exploration work has been going on for several years, and reserves of some magnitude have been blocked out. A trial shipment of 500 tons of high-grade ore shipped to the United States in 1935 was reported to run 53.59 per cent chromic oxide and 14.43 per cent ferric oxide. Present plans are said to provide for shipment of 25,000 tons yearly over the next 4 years". The importance of the chromite industry to the Philippines will be obvious when the figures on American Chromium imports and exports are considered.

American imports contrasted with world chromium exports for the decade 1925 to 1934 show the importance of the industrial setup in the United States to chromite producing countries, and though exports from America increased during the latter part of the depression, the United States still remains by far the world's largest user of chromite. American requirements during the post-war period caused imports to reach a peak of 331,860 metric tons or 78 per cent of world exports in 1930. During the next 2 years imports dropped sharply, amounting to only 90,574 tons (42 per cent of world exports) in 1932. Although imports had recovered 100 per cent, to 195,383 tons in 1934, their relation to world exports varied but little, being 41 per cent in 1933 and 44 per cent in 1934 compared with 66 per cent for the pentad 1925-1929. During the past 10 years the United States imported chromite from Cuba, Greece, India, New Caledonia, Southern Rhodesia, Turkey, Russia, U. S. Africa, and Yugoslovia.

Examination of the above sources from which America received chromite for her industrial needs reveals the changes in locality from which she drew her supplies. Nearly 60 per cent of American requirements during the period 1925-29 were met by imports from British Africa, but in the five years following less than one-third came from this source. Cuba maintained the same relative position during the two periods while India showed a decrease. Increased imports are credited to Greece, New Caledonia, Turkey and Russia. The extent of the Greek increase is questionable as the movement of Yugoslavian ore out of the port of Saloniki is credited to Greece in import statistics.

Imports of chromite into the United States enter through the Atlantic Coast ports and are used largely in the industrial States in the northeastern part of the country.

Such is the story of chromite during the past two decades; that it has definitely influenced world commerce and added greatly to the prosperity of the producing nations is without question. With the further developement of chromite mining in the Philippines a new chapter will have to be written into the history of this important mineral. As yet, the full extent of chromite deposits in the Philippines is undetermined, but as further explorations and developments reveal the abundance of chromite ore here, the Philippines stands a fair chance of becoming the world's next great source of Chromite.