

COPPER

STATISTICS FOR 1958 COMPARED WITH OTHER YEARS

ARIZONA, UNITED STATES AND FREE WORLD

COMPILED BY ARIZONA DEPARTMENT OF MINERAL RESOURCES

Source: United States Bureau of Mines, American Metals Reporter,
Copper Institute, Engineering & Mining Journal, Pay Dirt.

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COPPER INDUSTRY IN 1958

PRELIMINARY STATISTICS AND COMPARISON WITH OTHER YEARS

Source: U.S.B.M. "Mineral Market Reports"

Washington Reports in 1958

Source: "Pay Dirt", and American Metals Reporter's "Monthly Supplement"

Copper moved into the spotlight on the Washington scene as the second session of Congress got under way. One of the first measures to be dropped in the Congressional hopper was designed to sharply reduce copper imports by doubling the import duty. The copper duty bill, introduced by Rep. Bennett of Michigan, and sponsored by sixteen other Representatives, including Rhodes and Udall of Arizona, was the first gun sounded in the tariff battle within the House Ways and Means Committee. Under the law at that time, an import tax of 2 cents a pound was levied when the average price of copper fell below 24.00 c a pound for any one month. The new bill would increase the tax from 2 cents a pound to 4 cents, and the peril point would be 30 cents instead of 24 cents.

A similar bill was introduced into the Senate on January 16th, and was sponsored by 14 Senators, including Senators Goldwater and Hayden of Arizona.

On another front, Governor Ernest W. McFarland of Arizona sought the co-operation of the other 47 Governors in the country to fight to obtain adequate tariff protection for his state's copper mining industry. The Governor stressed that the 24 cent peril point was far out of line with current production costs, and urged that the original 4-cent excise tax be restored and the peril point be established at 32 cents, or two cents more than provided for in the Senate Bill. The 32-cent peril-point had been suggested by Mr. J. B. Pullen in a paper presented September 10, 1957 to the American Mining Congress. He cited production cost figures compiled by the Arizona Department of Mineral Resources, showing that there had been an increase of 33.1 percent in the cost of producing copper since April, 1951, when the 24 cent peril point was established.

The Arizona Copper Tariff Board, in cooperation with the Arizona Department of Mineral Resources (both State Boards), compiled historical data, statistics and special articles to aid in the fight. Copies were sent out to congressmen, governors, industrial representatives, industrial papers, members of State Sections of The American Mining Congress, and others.

In March, Senator Murray's Sub-Committee on Minerals conducted public hearings relative to a long range minerals program, and Mr. A. B. Parsons presented the copper industry's views on the need of a copper tariff to prevent disastrous shut-downs of many copper mines in the event of a long business depression.

On April 11th, Secretary Seaton endorsed Senator Watkins' bill to revoke the current suspension of the 2-cent import tax on copper. Then, on April 28th, the Secretary submitted the Administration's subsidy plan for domestic producers of copper, lead, zinc, acid-grade fluorspar and tungsten. The plan was plainly an alternative to any new tariffs or quotas which might affect favorable action

on Reciprocal Trade which was pending. Top executives in leading metal and mining companies were quick to raise their voices in opposition to the minerals subsidy program.

The already confused picture concerning government relief for the domestic mining industry, was further confused by the introduction of another new plan. This time it was a scheme for the government to purchase existing surplus copper in large lots and stockpile the metal. After a brief study of the plan, Secretary Seaton announced (June 11th) that the Interior Department would support a one-year program for the purchase of up to 150,000 tons of domestically mined copper at the market price, but not to exceed 27.5 cents a pound.

The Seaton Stabilization Bill, (S-4036), amended to include the authorization to purchase 150,000 tons of copper at market prices up to 27.50 cents a pound, was passed by the Senate (July 11th) by a vote of 70 to 12, and was sent to the House. The House Interior Committee added some amendments and gave it a "do pass" recommendation on July 30th, but it was August 15th before the House Rules Committee cleared it for floor consideration. The bill was defeated in the House of Representatives on August 21st by a vote of 182 to 159, after a bitter debate and many more crippling amendments. All four of Arizona's delegation to both Houses had voted for the bill.

Defeat of S-4036 ended all hopes of assistance for the mining industry at the second session of Congress. Mining men had accepted the subsidy plan as a "temporary alternative" although expressing a definite preference for higher tariffs. The Administration had feared higher duties because of the impact on friendly foreign countries, particularly Canada, Mexico and the South American nations. The subsidy program was advocated as an alternative and also as a means of gaining Congressional backing for the Reciprocal Trade Agreements Act. The House Ways and Means Committee never did get around to consideration of the original copper tariff bill (S-2998).

While the House was voting on the subsidy bill (S-4036) on August 21st, Kennecott Copper Corp. announced it would step up production at its Western division by extending the work week to six days from the current five days. An official cited "good business", with the emphasis on improved demand in Europe. This announcement by Kennecott can hardly be termed the turning point in the copper industry's distressed condition. As a matter of fact, copper prices had begun to rise about the middle of July, when the producers' price was raised from 25 cents to 26.0 - 26.5 cents. The next rise, from 26.1 to 27.0 cents plus did not really take place until October 13th. It was actually the middle of October when the signs of improvement in the copper situation became definite.

Record of Copper Prices and Production Curtailment

During The Year 1958

Source: U.S.B.M. Monthly Copper Reports
January, 1958

On January 13 and 14 primary copper producers reduced the price of electrolytic copper to 25 cents per pound, delivered. On January 8 the custom smelter price was lowered to 25 cents; it was reduced on January 13 to 24.5 cents, and again on January 21 to 24 cents, delivered. Prices on the London Metal Exchange and quotations by Union Miniere du Haut Katanga also dropped during January and near the end of the month were equivalent to 21.09 and 21.55 cents per pound respectively.

Additional reductions in outputs were announced in January. In the United States, the Phelps Dodge Corp. stated that output at its Arizona mines would be decreased by approximately 9 percent of the current production rate. The cutbacks announced by this company since October 1956 now total about 22 percent. The Chilean copper department stated on January 13 that it was authorizing a 10-percent reduction in copper production; the Union Miniere du Haut Katanga also announced a 10-percent cutback in output in the Belgian Congo; and the Rhodesian Anglo American, Ltd., group reported it would cut production by 10 percent at its properties in Northern Rhodesia starting March 1958.

February & March, 1958

On March 3 Miami Copper Co. announced that it would suspend mining operations at its underground mine, and on March 10 Kennecott Copper Corp. stated that the work week at their four Western Divisions would be reduced from 6 to 5 days. In Canada the International Nickel Co. announced a 10-percent reduction in nickel production with a resulting cutback in copper output of approximately the same amount.

Custom smelters in the United States advanced their price $\frac{1}{2}$ cent per pound to 23.5 cents on March 20 and another $\frac{1}{2}$ cent to 24 cents on March 24. The price quoted by primary producers remained unchanged at 25 cents per pound delivered.

During March the Union Miniere du Haut Katanga copper price was increased six times. On March 5 the quotation was 20.875 cents per pound c.i.f. New York or f.o.b. Antwerp and on March 28 the Belgian price was equivalent to 22.675 cents.

April, 1958

In Chile, operations at Chile Exploration Co's Chuquibambilla mine were halted by a strike which began April 1 and continued into May.

On April 17 Kennecott Copper Corp. stated another reduction in copper production would be made; effective May 4 the work week would be cut from 5 to 4 days at its Arizona, Nevada, and New Mexico properties, and on May 12 at its Utah mine. The International Nickel Co. of Canada, Ltd. on April 23 announced a further reduction of 10 percent in nickel output effective the beginning of May; copper production will be reduced about 10 percent also.

The custom-smelter price of electrolytic copper was lowered $\frac{1}{2}$ cent to 23.5 cents per pound, delivered, on April 8, but was advanced $\frac{1}{4}$ cent to 23.75 cents on April 24. The principal producers' price for electrolytic copper delivered in the United States remained at 25 cents per pound.

May, 1958

All of the principal copper-producing States, except Montana and Nevada shared in the lower output in May. Decreases of 19, 11, and 8 percent, respectively, in New Mexico, Utah, and Arizona reflected cutbacks announced by major producers. Production in Montana rose 12 percent, whereas that in Nevada was little changed from April.

On May 20, the Phelps Dodge Corp. announced an additional cutback of 20 percent in copper production. On May 27, the Anaconda Company announced the closing of the Leonard mine, thereby curtailing Butte mines' output by another 10 percent.

The 50-day strike at the Chuquicamata mine in Chile ended May 20, and normal operations were expected by May 25.

The custom-smelter price for electrolytic copper was advanced $\frac{1}{4}$ cent on May 22 to 24 cents per pound, delivered, and $\frac{1}{4}$ cent on May 27 to 24 $\frac{1}{4}$ cents. The principal producers' price of electrolytic copper remained unchanged at 25 cents per pound, delivered.

June, 1958

The price for electrolytic copper quoted by custom smelters was advanced $\frac{1}{4}$ ¢ per pound to 24 $\frac{1}{2}$ cents, delivered, on June 3. Additional increases in June brought the price to 25 cents by June 10, and the custom-smelter price was at the same level as that of the primary producers for the first time since November 1956, when copper was quoted at 36 cents. On June 11 the custom-smelter price rose twice and was 27 cents. On June 16, a primary copper producer raised its price 1 $\frac{1}{2}$ cents to 26.5 cents per pound, delivered. At the same time custom smelters advanced their price to 26.5 cents, but on June 23 lowered their price to 25.5 cents. At the end of the month the primary producers' price was quotable at a range of 25.0-26.5 cents a pound, delivered.

On June 5 the Inspiration Consolidated Copper Co. announced an additional cutback of 10 percent in copper production effective July 1. However, the company announced later in the month that it would close its Arizona properties from June 21 to July 7 because of the destruction by fire of a railroad bridge; vacations would be scheduled during this period and the reduction in output would be deferred from July 1 until about October 1.

July, 1958

After a 7-year suspension, the excise tax on copper imports was reimposed July 1. The effective rate was 1.7 cents a pound as a result of the GATT meetings in Geneva in 1956. The 1.7-cent-rate remains in effect when the price of copper is 24 cents a pound or more; should the price drop below 24 cents, the tariff will be 2 cents a pound.

On July 1 a primary copper producer raised its price for electrolytic copper to 26 $\frac{1}{2}$ cents a pound, delivered; another producer followed with a similar increase on July 16. These increases brought the quotations of all principal producers to 26 $\frac{1}{2}$ cents a pound as the first change in these producers' price had been in effect since June 16. The custom-smelter price rose to 26.0 cents on July 2, and to 26.5 cents on July 17.

On July 7 the International Nickel Co. of Canada, Ltd., announced an additional cutback in metal production, effective July 14; previous cutbacks had been announced in March and May 1958.

August, 1958

On August 4 the Kennecott Copper Corp. announced that operations at its four western divisions would return to a 5-day-week basis. On August 21 the company stated that a 6-day-work week would become effective the beginning of September.

On August 1 custom smelters advanced their price of electrolytic copper $\frac{1}{2}$ cent per pound to 27 cents, delivered; on August 6 they lowered the price to 26.5 cents, and again on August 28 to 26 cents, delivered. The primary producers' price of 26.5 cents per pound, delivered, established July 17, remained unchanged throughout August.

September, 1958

All of the principal copper-producing States, except Montana and Michigan, shared in the increased output in September. Production rose 16 percent in Arizona, 12 in New Mexico, and 11 in Nevada as a result of the return to a longer work week by some of the large producers. Utah's output was more than double that in August as operations were resumed on an extended work-week basis following vacations at the Utah Copper mine. Production in Montana was virtually unchanged from August, and a 5-percent decrease was registered in Michigan.

The custom-smelter price of electrolytic copper was advanced from 26 cents per pound, delivered, to 26.5 cents during the month, whereas primary copper producers' price of 26.5 cents continued throughout the month.

On September 15 Northern Rhodesian mines were closed by a strike, and on September 24, The International Nickel Co. Ltd.'s mining, smelting and refining operations at Sudbury and Port Colborne, Canada, were closed by strike. Both strikes were in effect beyond the end of the month.

October, 1958

Output of recoverable copper at mines in the United States totaled 91,500 tons in October, 10 percent more than in September and the largest since May 1957, according to the Bureau of Mines, United States Department of the Interior. Increases of 16 percent each in Arizona and Utah, and 10 percent each in Montana and Nevada were due mainly to increased operations at major copper producers, initiated in September, and to additional expanded operations beginning in October. Contrary to the general trend, production in New Mexico declined (65 percent) as a result of a strike at the Chino Division of Kennecott Copper Corp. in Grant County.

Stocks of refined copper at primary plants dropped for the fifth successive month; they were 24 percent below those on September 30 and the lowest since those at the end of October 1957, which they equalled. Inventories of blister and materials in process of refining were little changed from the previous month.

Consumption of refined copper totaled 135,600 tons in October - 19 percent above September and was the highest monthly rate since May 1956.

On October 10 two primary producers raised the price of electrolytic copper to 27.5 cents per pound, delivered, (from 26.5 cents established July 17); another producer followed with a similar increase on October 14. Another increase by these producers, on October 22 and 23, respectively, brought the price of all producers to 29 cents, delivered, effective October 24. Earlier in the month custom smelters raised their price to 27 cents and, following two increases about the middle of the month, were quoting 30 cents per pound on October 20. Quotations on the London Metal Exchange rose to the equivalent of slightly more than 31 cents a pound.

November, 1958

Mine production of copper in the United States in November totaled 94,100 tons, 2 percent more than in October. Output in New Mexico in November was triple that in October as operations returned to normal at the Chino mine in Grant County, following a strike in October, and Utah's production rose 2 percent. Michigan, Arizona, and Montana registered decreases of 5, 4, and 2 percent, respectively, and production in Nevada was unchanged.

Stocks of refined copper at primary refineries decreased 41 percent in November and were the lowest since June 1956.

On November 3, the British Board of Trade announced that it would offer 10,000 tons of Government stockpile copper for delivery and pricing from mid-November to the end of January 1959. On November 25, the Board stated that an additional quantity of 7,500 tons would be offered before the middle of January.

The 53-day strike at Rhodesian mines ended November 5. It was estimated that loss in production of copper was between 60,000 and 65,000 tons; Rhodesian copper was not expected to reach European markets until the latter part of January 1959. The strike at Canadian properties of The International Nickel Co., of Canada, Ltd., continued throughout the month.

Effective November 10 copper items, including ores, concentrates, etc., refined copper, copper scrap, and copper-base scrap, were removed from the Department of Commerce's positive list (requiring export licenses) and placed on the general list for export to all destinations except Hong Kong, Macao, and the Sino-Soviet bloc.

During November the London spot price for copper rose above 32.5 cents per pound; the domestic smelter price quoted at 30 cents, delivered at the beginning of the month was reduced to 29 cents near the end of the month; and the primary producers' price remained unchanged at 29 cents throughout the month.

December, 1958

Consumption of refined copper in the United States in December rose 4 percent over November and, except for October, was the highest monthly rate during 1958, according to the Bureau of Mines, United States Department of the Interior. Mine output of copper at domestic mines was virtually unchanged from November.

Stocks of refined copper at primary plants fell 3 percent, and inventories of blister and unfinished materials were 2 percent less.

From "Pay Dirt" Dec. 19, 1958

"During the last 20 months there has been a sizeable reduction in copper imports into, and a sizeable increase in copper exports from the United States. The result has been an annual drop of over 209,000 tons in the excess of imports over exports. This factor, no doubt, has had an appreciably beneficial effect on the domestic copper situation. U. S. copper mines have been encouraged to increase their production to take care of a greater proportion of the new demand than was possible before, when foreign mines had been capturing 40 per cent of our market.

Instead of augmenting the bullish sentiment, the tendency this month has been to discount the figures, realizing they resulted largely from erratic individual circumstances, such as loss of production through strikes and over-buying for consumers inventories, rather than from improvements in the economic climate. A stabilizing of production, buying, selling, and prices prevailed during the latter part of November and into December. Prices have leveled off at 29 cents, production has become more normal by the ending of the major strikes, and the year 1958 is ending and 1959 is starting with a far sounder condition and less erratic and unfounded optimism than two months ago.

Copper started out in 1958 with a very pessimistic outlook. It is ending the year far better than it started, but with an understanding that the world's economic progress must improve more than is revealed so far, if the hopes of those interested in copper are to be realized.

The situation remains that the productive capacity still exceeds consumption, and world consumption must increase materially before the two can be in balance. Furthermore, the current higher prices for copper in the United States are partially due to the fact that the tariff of 1.7 cents per pound went into effect on July 1 and that this tariff, even though small and inadequate, is certain to be attacked by the next Congress.

In other words, the copper industry has much to be optimistic about as 1958 ends, compared to the beginning of the year, but realizes there is a long road ahead before we can expect stable and profitable conditions."

Copper Mining Operations in Arizona during 1958

Source: U.S.B.M. Area Report D-82

Arizona continued as the leading copper-producing State in the United States in 1958, a position it has held since 1910. Preliminary data indicate that Morenci, San Manuel, Copper Queen, New Cornelia, Ray, and Inspiration operations were the six major ones. Declines in 1958 copper output, compared with 1957, were reported for all of the principal producers with the exception of San Manuel, Inspiration, Silver Bell, Pima, and Bagdad mines.

The general fluctuation in demand for copper during 1958 was indicated by the Phelps Dodge Corp. changes in the work-week schedule per man at its Ajo, Bisbee, Morenci, and Douglas mining, milling, and smelting operations throughout the year. From January 1 to June 1 it operated on a 5-day-week basis, then to September 3 on a 4-day week, to October 1 on a 5-day week, to the middle of October on a 5½-day week when it was changed to a 6-day week.

The first two carloads of anode copper produced from the Kennecott Copper Corp. Ray Mines Division new smelter at Hayden were shipped on July 3. The American Smelting and Refining Co. smelter at Hayden which previously handled Ray concentrate continued to operate but went on a full custom-ore and -concentrate basis September 1.

At the Esperanza open-pit copper mine, being developed by Duval Sulphur & Potash Co., in Pima County, the Isbell Construction Co. continued stripping 5 million tons of waste covering the ore body. The Stearns-Roger Manufacturing Co. continued the construction of the 10,000-ton-per-day concentration mill.

Approximately 45 men were employed throughout the year by Inspiration Consolidated Copper Co. for development work at the Christmas mine at Winkelman. Magma Copper Co. acquired an option on the Queen Creek Copper Co. holdings located just east of Superior. On March 16 San Manuel Copper Corp. eliminated overtime for each of its 2,600 employees by reducing the employee work week to 5 days. However, operations continued on a 3-shift, 7-day-week basis.

TABLE I

TONS RECOVERABLE COPPER MINED IN ARIZONA, UNITED STATES AND WORLD
 U. S. COPPER PRICE, U. S. CONSUMPTION AND U. S. PRODUCTION AS PERCENT OF CONSUMPTION

Source: U. S. Bureau of Mines

Year	Tons	ARIZONA		UNITED STATES		WORLD Production	Apparent U.S. Con- sumption Tons	U. S. Prod. % of Apparent Con- sumption	E. & M.J. Price Per Lb.	Export or Foreign Refinery Price Per Pound
		% of U. S. Prod.	% of World Prod.	Tons	% of World Prod.					
1927	341,095	41.3	20.1	824,980	48.5	1,700,000	711,000	116.0	12.920¢	-
1928	366,138	40.5	19.3	904,898	47.6	1,900,000	804,000	112.4	14.570¢	-
1929	415,314	41.6	19.3	997,555	46.4	2,150,000	889,000	112.2	18.107¢	-
1930	288,095	40.9	1/16.0	705,074	39.2	1,800,000	633,000	111.4	12.982¢	-
1931	200,672	37.9	1/13.0	528,875	34.1	1,550,000	451,000	117.3	8.116¢	-
1932	91,246	38.3	1/9.1	238,111	23.8	1,000,000	260,000	91.6	5.555¢	-
1933	57,021	29.9	1/5.0	190,643	16.6	1,150,000	339,000	56.2	7.025¢	6.713¢
1934	89,041	37.5	1/6.4	237,401	17.0	1,400,000	323,000	73.5	8.428¢	7.271¢
1935	139,015	36.5	1/8.4	380,491	23.1	1,650,000	441,000	86.3	8.649¢	7.538¢
1936	211,275	34.4	1/11.1	614,516	32.4	1,900,000	656,000	93.7	9.474¢	9.230¢
1937	288,478	34.3	1/11.1	841,998	32.4	2,600,000	695,000	121.2	13.167¢	13.018¢
1938	210,797	37.8	2/9.2	557,763	24.2	2,300,000	407,000	137.0	10.000	9.695¢
1939	262,112	36.0	3/10.5	728,320	29.1	2,500,000	715,000	101.9	10.965¢	10.727¢
1940	281,169	32.0	10.4	878,086	32.5	2,700,000	1,009,000	87.0	11.296¢	10.770¢
1941	326,317	34.1	11.7	958,149	34.2	2,800,000	1,642,000	58.4	11.797¢	10.901¢
1942	393,387	36.4	13.1	1,080,061	36.0	3,000,000	1,678,000	64.4	11.775¢	11.684¢
1943	403,181	37.0	13.4	1,090,818	36.4	3,000,000	1,502,000	72.6	11.775¢	11.700¢
1944	358,303	36.8	3/12.8	972,549	34.7	2,800,000	1,504,000	64.7	11.775¢	11.700¢
1945	287,203	37.2	12.0	772,894	32.2	2,400,000	1,415,000	54.6	11.775¢	11.700¢
1946	289,223	47.5	14.5	608,737	30.4	2,000,000	1,391,000	43.8	13.820¢	14.791¢
1947	366,218	43.2	14.6	847,563	33.9	2,500,000	1,286,000	65.9	20.958¢	21.624¢
1948	375,121	44.9	14.4	834,813	32.1	2,600,000	1,214,000	68.8	22.038¢	22.348¢
1949	359,010	47.7	4/14.4	752,750	30.1	2,500,000	1,072,000	70.2	19.202¢	19.421¢
1950	403,301	44.4	14.4	909,343	32.5	2,800,000	1,447,000	62.8	21.235¢	21.549¢
1951	415,870	44.8	14.3	928,330	32.0	2,900,000	1,304,000	71.2	24.200¢	26.258¢
1952	395,719	42.8	13.2	925,337	30.8	3,000,000	1,360,000	68.0	24.200¢	31.746¢
1953	393,525	42.5	12.7	926,448	29.9	3,100,000	1,435,000	64.6	28.798¢	30.845¢
1954	377,927	45.2	12.2	835,472	5/27.0	3,100,000	1,235,000	67.6	29.694¢	29.889¢
1955	454,105	45.5	13.3	998,570	29.3	3,405,000	1,335,000	74.8	37.491¢	39.115¢
1956	505,908	45.7	13.5	1,106,215	29.5	3,750,000	1,367,000	80.9	41.818¢	40.434¢
1957	515,854	47.5	13.3	1,086,141	28.1	3,870,000	1,239,000	87.7	29.576¢	27.157¢
1958p	489,000	49.9	13.1	980,304	26.3	3,730,000	1,156,000	84.8	25.764¢	24.123¢

See Footnotes page 11.

TABLE I (Cont'd) Year 1958 By Months

Note: World Mine Production Not Available

1958 Month	ARIZONA		UNITED STATES		U. S. Production % of Consumption	E. & M. J. Price Per Lb.	Exporter Foreign Re- finery Price Per Lb.
	Tons	% of U. S. Production	Tons	Apparent U.S. Consumption Tons			
Jan.	45,332	51.4	88,236	109,000	81.0	25.114¢	21.253¢
Feb.	41,161	50.2	82,048	93,000	88.2	24.397¢	20.079¢
Mar.	43,711	50.2	87,146	82,856	105.2	24.018¢	20.738¢
Apr.	43,303	51.5	84,121	86,800	96.1	24.253¢	21.475¢
May	39,910	50.9	78,413	71,600	109.5	24.298¢	21.944¢
June	34,409	50.5	68,145	105,400	64.7	24.689¢	23.670¢
July	26,017	42.5	61,200	84,200	72.7	25.674¢	24.397¢
Aug.	35,651	53.2	67,057	79,900	83.9	26.088¢	25.179¢
Sept.	41,218	49.7	82,988	109,300	75.9	26.081¢	25.489¢
Oct.	47,388	51.4	92,140	107,000	86.1	27.310¢	28.573¢
Nov.	45,400	48.3	94,056	127,600	73.7	28.665¢	27.476¢
Dec.	45,500	48.0	94,754	98,900	96.6	28.583¢	27.041¢
Totals	489,000		980,304	1,156,000			
Averages	40,750	49.9	81,692		84.8	25.764¢	24.123¢

NOTES: 1/ Depression began in 1930; was at its worst in 1933; gradually improved till 1937.

2/ Recession in 1938. Recovery in 1939 caused by War demand.

3/ World War II began in 1939; copper consumption reached its height in 1944.

4/ In the year 1948 and the early months of 1949, copper was being produced in the United States at the rate of 68,000 short tons per month, imports were at the rate of 18,000 tons of blister copper and 22,000 tons of refined copper, and exports were at the rate of 12,000 tons per month. The price of copper averaged 22.5 cts. during this period, varying from 21 3/8 to 23 3/8 cts.

In March 1949 the copper import tax was suspended, and during the months following the suspension, domestic demand fell drastically, and for four months net domestic consumption of copper was at or below the level of domestic production, even though the latter was severely curtailed. During this period, imports continued at practically the same rate. The price of copper dropped from 23 3/8 cts. to 16 1/2 cts. per pound. Many mines were forced to close down, and the large low-cost producers curtailed production. The average monthly production dropped from a high of 78,000 to a low of 56,000 tons.

5/ Curtailment early in the year, and a series of strikes in August and September caused a loss in production of over 100,000 tons. Reduced consumption in the U. S. was offset by an appreciable rise in the use of copper outside of this country, chiefly Europe. Result: a short supply of copper at the end of the year.

P Preliminary.

SOURCE: Mineral Resources of the United States and Minerals Yearbook of the U. S. Bureau of Mines, and preliminary estimates.

Arizona Department of Mineral Resources

Revised April, 1959

TABLE II

SALIENT U. S. COPPER STATISTICS

Years 1956, 1957 and 1958

Compiled by Arizona Department of Mineral Resources From U.S.B.M. Reports
Preliminary 1958

	1956	1957	1958
Arizona Mine Production - Tons Copper	505,908	515,854	489,000
U. S. Mine Production - Tons Copper	1,106,215	1,086,141	980,304
World Mine Production - Tons Copper	3,750,000	3,870,000	3,730,000
Refined Stocks - Beginning of period	34,000	78,000	109,000
Refined Stocks - End of period	78,000	109,000	43,000
Refinery Production (From Domestic Ores)	1,080,207	1,050,496	990,000
Refinery Production (From Foreign Ores)	362,426	403,680	353,000
Secondary Copper Recovered from Scrap as unalloyed Copper	273,060	248,015	240,000
<u>IMPORTS:</u> Copper from Ores, Matte, Regulus	122,174	124,776	92,602
Blister Copper	276,085	301,180	268,178
Refined Copper	191,745	161,907	127,630
Total Imports - Crude & Refined	590,004	587,863	488,410
<u>EXPORTS:</u> Copper in Ores, etc.	13,717	15,656	11,475
Refined Copper	222,536	345,834	384,868
Total Exports - Crude & Refined	236,253	361,490	396,343
EXCESS IMPORTS OVER EXPORTS	353,751	226,373	92,067
<u>CONSUMPTION:</u> New Refined (Apparent Consumption)	1,367,275	1,239,460	1,156,000
Total Refined (Actual)	1,521,389	1,347,815	1,257,421
U. S. Mine Production % of Appar. Cons.	80.9	87.7	84.8
AVERAGE E. & M. J. PRICE OF COPPER	41.818¢	29.576¢	25.764¢

April, 1959

TABLE III

NEW (PRIMARY) REFINED COPPER WITHDRAWN FROM SUPPLY ON DOMESTIC ACCOUNT

Years 1951-1958

Source: U.S.B.M.

Unit: Short Tons

	Year 1951	Year 1952	Year 1953	Year 1954
Ref. Prod. of New Cu From U.S. Ores	951,559	923,192	932,232	841,717
Ref. Prod. of New Cu From Foreign Ores	255,429	254,504	360,885	370,202
Total Ref. Prod. of New Copper	1,206,988	1,177,696	1,293,117	1,211,919
Imports of Refined Copper	238,972	346,960	274,111	215,086
Stocks at Beginning of Period	26,000	35,000	26,000	49,000
TOTAL AVAILABLE SUPPLY	1,471,960	1,559,656	1,593,228	1,476,005
Exports of Refined Copper	133,305	174,135	109,580	215,951
Stocks at End of Period	35,000	26,000	49,000	25,000
Total	168,305	200,135	158,580	240,951
Withdrawn on Domes.Acc.(Apparent Cons.)	1,303,655	1,359,521	1,434,648	1,235,054
Reported Actual Consumption	1,416,865	1,479,732	1,494,215	1,254,729

	Year 1955	Year 1956	Year 1957	Preliminary 1958
Ref. Prod. of New Cu From U.S. Ores	997,499	1,080,207	1,050,496	1,001,645
Ref. Prod. of New Cu From Foreign Ores	344,960	362,426	403,680	350,875
Total Ref. Prod. of New Copper	1,342,459	1,442,633	1,454,176	1,352,520
Imports of Refined Copper	202,312	191,745	162,309	127,630
Stocks at Beginning of Period	25,000	34,000	78,000	109,000
TOTAL AVAILABLE SUPPLY	1,569,771	1,668,378	1,694,485	1,589,150
Exports of Refined Copper	199,819	223,103	346,025	384,868
Stocks at End of Period	34,000	78,000	109,000	48,000
Total	233,819	301,103	455,025	432,868
Withdrawn on Domes.Acc.(Apparent Cons.)	1,335,952	1,367,275	1,239,460	1,156,000
Reported Actual Consumption	1,502,004	1,521,389	1,347,815	1,257,421

TABLE IV

WORLD MINE PRODUCTION OF RECOVERABLE COPPER - Source: U.S.B.M.

YEAR	MINE PRODUCTION RECOVERABLE COPPER				SECONDARY COPPER PRODUCTION ^{1/}			
	UNITED STATES	REST OF FREE WORLD	COMMUNIST CONTROLLED	TOTAL WORLD	UNITED STATES	REST OF ^{2/} FREE WORLD	COMMUNIST ^{2/} CONTROLLED	TOTAL WORLD ^{2/}
1951	928,330	1,617,000	355,000	2,900,000	186,462	325,000	71,000	582,000
1952	925,359	1,691,000	404,000	3,020,000	173,904	318,000	76,000	568,000
1953	926,448	1,708,000	416,000	3,050,000	242,855	447,000	109,000	799,000
1954	835,472	1,826,000	439,000	3,100,000	212,241	464,000	111,000	787,000
1955	998,570	1,926,000	475,000	3,400,000	246,928	476,000	117,000	840,000
1956	1,106,215	2,136,000	508,000	3,750,000	273,060	527,000	125,000	925,000
1957	1,086,141	2,219,000	565,000	3,870,000	248,015	509,000	129,000	887,000
1958 P	980,304	2,150,000	600,000	3,730,000	240,000	500,000	135,000	875,000

^{1/} Secondary copper refers to unalloyed copper recovered from secondary material.^{2/} No records published. Estimated on basis that total industrial use provides the same percentage of recoverable copper as it does in the United States.

TABLE V

APPARENT CONSUMPTION OF NEW REFINED COPPER - Source: U.S.B.M.

	Average 1951-1955	1956	1957	1958 P
Apparent Consumption of New Refined Copper in U.S.A.	1,334,000	1,367,000	1,239,000	1,156,000
U. S. Mine Production of Recoverable Copper	923,000	1,106,215	1,086,141	980,304
New Copper Needed to be Imported	411,000	260,785	152,859	175,696
% of Apparent Consumption Needed to be Imported	30.81%	19.08%	12.34%	15.20%
Free World (outside U.S.A.) Mine Production	1,754,000	2,136,000	2,219,000	2,150,000
Less Exported to U.S. for Consumption	411,000	260,785	152,859	175,696
Est. Free World (outside U.S.A.) Consumption ^{1/}	1,343,000	1,875,215	2,066,141	1,974,304

^{1/} No reports published. Estimate based on Total Free World(outside U.S.A.) Production less Apparent U. S. Consumption. This estimated consumption would include shipments to communist countries.

Reported Actual Consumption in U.S.A.	1,430,000	1,521,000	1,348,000	1,257,421
Estimated Actual Consumption in Free World(outside U.S.A.) ^{1/}	1,442,000	2,086,000	2,248,000	2,147,510

^{1/} No reports published. Estimate based upon same relation to apparent consumption as in United States.

TABLE VI

SUMMARY OF NEW COPPER PRODUCTION AND CONSUMPTION AS REPORTED BY U. S. B. M.

AND COPPER INSTITUTE - IN U. S. A. AND REST OF FREE WORLD 1/

YEAR	PRODUCTION				CONSUMPTION			
	IN U. S. A.		OUTSIDE U. S. A.		IN U. S. A.		OUTSIDE U. S. A.	
	Reported By U.S.B.M.	Reported By Copper Institute <u>1/</u>	Reported By U.S.B.M. <u>2/</u>	Reported By Copper Institute <u>1/</u>	Apparent Consumption	Deliveries To Fabricators	Estimated Consumption <u>3/</u>	Deliveries To Fabricators
1951	928,330	964,589	1,617,000	1,378,833	1,304,000	1,367,787	1,241,000	1,013,450
1952	925,359	961,886	1,691,000	1,401,001	1,360,000	1,445,834	1,256,000	1,005,259
1953	926,448	957,318	1,708,000	1,441,874	1,435,000	1,443,719	1,200,000	831,441
1954	835,472	863,721	1,826,000	1,494,386	1,235,000	1,208,755	1,426,000	1,247,120
1955	998,570	1,036,702	1,926,000	1,576,960	1,336,000	1,446,354	1,588,570	1,298,037
1956	1,106,215	1,133,134	2,136,000	1,729,705	1,367,000	1,465,999	1,875,215	1,366,979
1957	1,086,141	1,116,380	2,219,000	1,781,339	1,239,000	1,277,946	2,066,141	1,575,361
1958 P	980,304	1,008,147	2,150,000	1,699,766	1,156,000	1,179,416	1,981,304	1,737,172

P = Preliminary

1/ "In U. S. A." - Includes that of Cuba and the Philippines entering U. S. A. duty free through June, 1958.
 "Outside U. S. A." - Includes production from Canada, Mexico, So. America, Europe, Asia and Africa, and, starting with July 1958, that of Cuba and the Philippines entering the U. S. Excludes production of Russia, Japan, Australia, Yugoslavia, Norway, Sweden, Finland and the production of several other small countries from which reports are not available. The Institute coverage represents approximately 90% of the Free World.

2/ "Outside U. S. A." - Includes Free World countries not under Communist control. Excludes Russia, E. Germany, Poland, China, Yugoslavia, Finland. An estimated 400,000 tons of Free World copper (all outside the U. S.) is not reported to the C. I. An estimated 500,000 tons produced outside the Free World is also excluded.

3/ Estimated Consumption of new refined copper, based on U. S. B. M.'s reported production minus reported exports to U. S. A. for consumption. But does include possible exports to Communist countries for consumption. Does not take into account changes in stocks.

TABLE VII

STOCKS OF REFINED COPPER REPORTED BY

U. S. B. M. AND COPPER INSTITUTE *

STOCKS END OF PERIOD	IN U. S. A.		OUTSIDE U. S. A.
	U.S.B.M.	Copper Institute	Copper Institute
Year 1951	35,000	71,528	152,203
Year 1952	26,000	58,858	130,103
Year 1953	49,000	89,193	280,530
Year 1954	25,000	47,108	181,529
Year 1955	34,000	61,554	159,777
Year 1956	78,000	120,645	233,775
Year 1957	109,000	181,024	277,316
Jan. 1958	110,800	176,287	272,613
Feb. 1958	123,300	201,223	268,524
Mar. 1958	139,400	238,641	254,685
Apr. 1958	147,300	251,099	250,067
May 1958	155,400	253,463	245,053
June 1958	151,500	245,450	231,373
July 1958	144,000	242,781	232,383
Aug. 1958	131,600	215,560	220,168
Sept. 1958	109,800	178,222	196,558
Oct. 1958	83,600	128,490	141,164
Nov. 1958	49,400	93,596	143,178
Dec. 1958	48,000	80,722	178,152

* Inventory data of the Bureau of Mines and Copper Institute always differ owing to somewhat different bases. After Jan. 1, 1947, differences were due chiefly to the method of handling metal in process of refining (included as "refined" by Copper Institute and as "unrefined" by the U. S. B. M.), and to other minor variations in interpretation until May, 1951. Then the Institute's inventory data began to include tonnages delivered to U. S. consumers at foreign ports. Bureau of Mines figures are on the basis of metal physically held at primary smelting and refining plants in the U. S. In the Bureau's classification cathodes to be used chiefly for casting into shapes are considered stocks in process and not refined stocks.

TABLE VIII

REFINED COPPER CONSUMED IN U. S. 1955-1958
By Classes of Consumers

Source: U.S.B.M.

Unit: Short Tons

Class of Consumer	Cathodes	Wire Bars	Ingots and Ingot Bars	Cakes and Slabs	Billets	Other	Total
<u>1955:</u>							
Wire mills	9,050	791,816	11,797	.....	.....	.....	812,663
Brass mills	100,819	63,394	133,710	200,012	149,064	45	647,044
Chemical plants.	.....	.....	564	.....	.....	1,180	1,744
Secondary smelters	4,768	.....	1,213	469	.....	377	6,827
Foundries	4,063	58	13,004	3	211	139	17,478
Miscellaneous-1/	1,403	131	4,079	318	377	9,940	16,248
Total	120,103	855,399	164,367	200,802	149,652	11,681	1,502,004
<u>1956:</u>							
Wire mills	9,694	838,476	16,415	.....	.....	.....	864,585
Brass mills	91,887	72,716	102,451	177,583	166,426	35	611,098
Chemical plants.	.....	.....	559	.....	.....	1,199	1,758
Secondary smelters	5,602	.....	1,411	207	.....	434	7,654
Foundries	5,180	76	13,341	3	237	143	18,980
Miscellaneous 1/	1,824	85	5,532	402	538	8,933	17,314
Total	114,187	911,353	139,709	178,195	167,201	10,744	1,521,389
<u>1957:</u>							
Wire mills 1/...	5,641	753,108	15,540	.....	.....	791	775,080
Brass mills 2/..	87,451	57,417	75,638	158,343	157,102	.....	535,951
Chemical plants.	(3)	(3)	(3)	(3)	(3)	(3)	(4)
Secondary smelters	659	.....	1,685	15	.....	621	2,980
Foundries & miscellaneous .	(3)	(3)	(3)	(3)	(3)	(3)	(4)
Total	93,751	810,525	92,863	158,358	157,102	1,412	4/ 1,350,011
<u>1958:</u>							
Wire mills 1/	4,394	722,984	11,464	.....	.....	962	739,804
Brass mills 2/	90,740	47,353	73,372	117,131	149,810	.....	478,406
Chemical plants	(3)	(3)	(3)	(3)	(3)	(3)	(4)
Secondary smelters	553	.....	2,244	15	.....	399	3,211
Foundries & miscellaneous .	(3)	(3)	(3)	(3)	(3)	(3)	(4)
Total	95,687	770,337	87,080	117,146	149,810	1,361	4/ 1,257,421

1/ Includes all wire mills with rod-rolling facilities.

2/ Includes all brass mills using copper in refinery shapes; some have rod-rolling facilities.

3/ Not available.

4/ Consumption by chemical plants, foundries, and miscellaneous plants not included. Estimate of 36,000 tons included in total for 1957 and 1958.

TABLE IX

IMPORTS OF COPPER INTO THE UNITED STATES

BY QUARTERS IN 1958

Source: American Bureau of Metal Statistics

Compiled by Quarters by Arizona Department of Mineral Resources

1958	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year 1958
Ore, Matte & Regulus (Copper Content)	26,737	27,981	15,311	22,573	92,602
Canada	4,344	985	1,669	878	7,876
Mexico	1,625	2,128	817	1,100	5,670
Cuba	3,342	3,714	3,128	3,807	13,991
Bolivia	1,033	889	818	656	3,396
Chile	4,135	4,581	2,595	5,069	16,380
Peru	2,049	2,995	2,285	2,618	9,947
Cyprus	-	4,476	-	1,908	6,384
Philippines	4,999	4,308	2,399	2,815	14,521
Union of So. Africa	4,575	3,698	1,160	3,485	12,918
Australia	144	73	252	160	629
Other Countries	491	134	188	77	890
Blister Copper (Copper Content)	65,237	67,707	61,706	73,528	268,178
Mexico	8,366	15,416	6,642	9,605	40,029
Chile	43,389	39,314	44,113	56,236	183,052
Peru	3,135	1,613	2,668	1,714	9,130
Rhodesia & Nyasaland	5,881	6,919	2,594	1,382	16,776
Union of So. Africa	3,372	4,443	4,029	1,810	13,654
Turkey	1,094	-	-	-	1,094
Australia	-	-	1,658	2,780	4,438
Other Countries	-	2	2	1	5

Cont'd

TABLE IX (Continued)

IMPORTS OF COPPER INTO THE U. S. (Continued)

1958	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year 1958
Refined Cathodes and Shapes	48,610	43,513	16,994	18,513	127,630
Canada	19,598	19,548	9,599	13,271	62,016
Mexico	1,864	1,909	-	462	4,235
Chile	263	-	-	450	713
Peru	4,051	6,698	-	599	11,348
Germany (West)	1,500	2,640	-	18	4,158
United Kingdom	5,127	1,736	94	-	6,957
Belgian Congo	4,647	4,330	4,122	2,416	15,515
Rhodesia & Nyasaland	8,657	5,782	2,843	770	18,052
Union of So. Africa	2,398	198	-	-	2,596
Other Countries	505	672	336	527	2,040
Total Imports (Crude & Refined)	140,584	139,201	94,011	114,614	488,410
Total Exports	73,710	85,948	101,633	135,052	396,343
Excess Imports	66,874	53,253	-	-	92,067
Excess Exports	-	-	7,622	20,438	-

SUMMARY OF YEARS 1951 - 1957 INCLUSIVE

	1951	1952	1953	1954	1955	1956	1957
TOTAL IMPORTS	482,555	614,343	668,856	585,551	580,521	590,004	587,863
TOTAL EXPORTS	132,991	174,783	110,179	218,320	207,105	236,253	361,490
EXCESS IMPORTS	349,564	439,560	558,677	367,231	373,416	353,751	226,373

TABLE X

EXPORTS OF COPPER FROM THE UNITED STATESBY QUARTERS IN 1958

Source: American Bureau of Metal Statistics.

Compiled by Quarters by Arizona Department of Mineral Resources

1958	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year 1958
Ore, Concs & Matte	2,885	4,050	2,714	1,826	11,475
Refined Ingots, Bars, etc.*	70,825	81,898	98,919	133,226	384,868
Canada	439	370	430	1,405	2,644
Argentina	3,245	2,231	4,172	3,359	13,007
Brazil	235	664	3,289	4,686	8,874
Austria	6	28	168	-	202
Belgium	338	5	1,386	427	2,156
Denmark	224	22	224	336	806
France	22,482	20,233	14,641	33,800	91,156
Germany (West)	11,938	13,043	22,517	18,333	65,831
Italy	5,832	6,836	9,298	8,581	30,547
Netherlands	666	2,546	5,127	5,912	14,251
Norway	1,075	896	682	1,522	4,175
Sweden	672	1,008	446	5,039	7,165
Switzerland	1,510	2,741	3,708	3,435	11,394
United Kingdom	16,818	27,221	29,214	42,210	115,463
Yugoslavia	2,520	-	1,120	-	3,640
India	154	13	110	673	950
Japan	1,841	2,890	1,531	2,488	8,750
Australia	168	280	224	-	672
Other Countries	662	871	632	1,020	3,185

* Includes exports of refined copper resulting from scrap that was reprocessed in toll for account of shipper.

Total Exports Crude & Refined	73,710	85,948	101,633	135,052	396,343
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TABLE XI

SHOWING TONNAGE OF UNNEEDED IMPORTS OF COPPER INTO UNITED STATES

Years 1951 - 1958

Source: U.S.B.M.

Unit: Short Tons

	Average 1951-54	1955	1956	1957	Preliminary 1958
U. S. Mine Production	903,902	998,570	1,106,215	1,086,141	980,304
Secondary Prod. Unalloyed Copper	203,865	246,928	273,060	248,940	240,000
Excess Imports over Exports	428,758	373,416	353,751	226,373	92,067
Refined Stocks-Increase or Decrease	1,000 *	9,000 *	44,000 *	31,000 *	66,000 *
Available Supply	1,537,525	1,609,914	1,689,026	1,530,454	1,378,371
Actual Reported Consumption	1,411,385	1,502,004	1,521,389	1,347,815	1,257,421
Unneeded Imports	126,140	107,910	166,637	182,639	120,950

* Denotes increase in stocks.

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* Denotes decrease in stocks.