

MINERAL RESOURCES OF THE UNITED STATES.

SUMMARY.

The total value of the mineral products of the United States in 1893 was the smallest since 1889. It represented \$609,821,670, compared with \$688,616,954 in 1892; a decline of 11.44 per cent. In 1892 there was an increase of 30½ millions or 4.67 per cent. over 1891. The decline in value was most conspicuous in pig iron and structural materials, but most other minerals also declined in the amount and the value of the product, the exceptions being gold, anthracite coal, aluminum, phosphate rock, and gypsum. Bituminous coal showed a slight increase in quantity but the normal increase was checked and the total value was less than in 1892. Petroleum increased in value but decreased in quantity. Salt, quicksilver, and several smaller products increased in quantity but shared the usual decline in value. This general decline was attributed to the financial depression and the consequent decreased consumptive demands. It was only conspicuous during the last half of the year, as considerable time is necessary for affecting the mining industry, and as it is correspondingly slow in recovering, its effect will be equally pronounced in 1894.

METALS.

Iron and steel.—Pig iron declined from 9,157,000 long tons in 1892 to 7,124,502 tons in 1893. The total value declined over \$46,000,000, or from \$131,161,039 in 1892 to \$84,810,426 in 1893. The limestone used for iron flux amounted to 3,958,055 long tons, worth \$2,374,833.

The total product of iron ores fell to 11,587,629 long tons, worth \$19,265,973, an average value of \$1.66 at the mines.

In 1892 the product was 16,296,666 long tons, worth \$33,204,896, or \$2.04 per ton at the mines.

Gold and silver.—The gold product increased from 1,596,375 Troy ounces with a coining value of \$33,000,000 in 1892 to 1,739,081 ounces worth \$35,950,000 in 1893. This product is the largest since 1886. The increase was due chiefly to the new mines in Colorado. Silver production was very active in the first part of 1893, due to the effort of smelters to work up accumulated stocks. The heavy decline in the last part of the year made the total less than in 1892 by 3,500,000 ounces, as follows: 1892, 63,500,000 ounces, coining value \$82,099,150; 1893, 60,000,000 ounces, coining value \$77,575,757.

Copper.—The industry took little notice of the depressed money market and the decreased consumption. The product from American ores aggregated 337,416,848 pounds, against 353,275,742 pounds in 1892. In addition, 7,723,387 pounds were produced in 1893 from imported pyrites. The necessary expenditures were also made for keeping up future production.

Lead.—Product: 163,982 short tons, worth \$11,839,590, compared with 173,654 short tons in 1892, worth \$13,892,320.

Zinc.—The rapidly increasing product of late years was checked and a slight decline noted; product: 78,832 short tons, worth \$6,306,560, compared with 87,260 short tons, worth \$8,027,920, in 1892.

Quicksilver.—The product showed a noteworthy increase from 27,993 flasks in 1892 to 30,164 flasks in 1893. The price fell, making the total value \$1,108,527 in 1893, compared with \$1,245,689 for the smaller product of 1892. The increased product came chiefly from the New Almaden, Mirabel, and Aetna mines.

Manganese.—The decline in quantity from 13,613 long tons in 1892 to 7,718 long tons in 1893 was offset by the following imports: 67,717 long tons in 1893 and 58,364 long tons in 1892. The product of maniferous iron, silver, and zinc ores shows change.

Aluminum.—The usual increase in product continued. In 1893, 339,629 pounds were made chiefly, by the Pittsburg Reduction Company; it was valued at \$266,903 in the producer's hands. The largest single use is for adding to steel before casting. It is also used for improving iron castings, for ornamental fancy articles, and aluminum cooking utensils, began to be generally introduced during the year. The quality of aluminum bronze castings is improving.

The southern deposits of bauxite furnish more and more of the raw material. The Arkansas bauxite deposit will probably be developed in 1894 for making alum.

Tin.—More careful examinations of the Kings Mountain, North Carolina, locality furnish indications of considerable ore which may yield 3 per cent. No work was done at the other deposits except running the concentrator at Hill City, South Dakota, for about a month. Eight thousand nine hundred and thirty-eight pounds of tin were smelted and sold from part of the concentrates.

Nickel.—The United States product was from Lancaster Gap, Pennsylvania, and Missouri. It is estimated at 49,399 pounds, worth \$22,197, a marked decline from 1892, due to Canadian competition. The Nevada and Oregon mines have not become producers, but prospecting and development continues. The New Caledonia mines increased their product and accumulated stock.

Antimony.—The value decreased from \$56,466 to \$45,000 in 1893. The product came from Nevada, and was smelted in San Francisco.

Platinum.—The product from the gold placers is still insignificant. The production in 1893 was 75 ounces.

FUELS.

Coal.—The product of all kinds of coal in 1893 was 162,814,977 long tons, or 182,352,774 short tons, valued at \$208,438,696, against 160,115,242 long tons, or 179,329,071 short tons, valued at \$207,566,381, in 1892. The increase in 1893 was 2,699,735 long tons, or 3,023,703 short tons, in quantity, but owing to a decline in the price of bituminous coal, the result of overproduction during the latter part of the year, the value increased but \$872,315. The product in 1893 consisted of 48,185,306 long tons, or 53,967,543 short tons of anthracite coal from Pennsylvania, an increase from 1892 of 1,334,856 long tons, or 1,495,039 short tons, and of 114,629,671 long tons, or 128,385,231 short tons of bituminous (including scattering lots of anthracite from Colorado, New Mexico, and Virginia), an increase over 1892 of 1,364,879 long tons, or 1,528,664 short tons. The value of Pennsylvania anthracite increased \$3,245,078, the average price, in spite of the industrial depression, advancing from \$1.92 to \$1.94 per ton. The value of bituminous coal decreased \$2,372,763, the average price declining from 99 cents per ton in 1892 to 96 cents in 1893. In stating the value of anthracite the marketable product only is included; that is, the amount of coal used at the collieries, which is merely culm or slack which would otherwise be wasted, while included in the product, is not included in the value. This item of colliery consumption in 1893 was 4,016,709 long tons, or 4,498,714 short tons. The value of bituminous includes all grades of coal produced except what is thrown on the dump and neither sold nor used.

Coke.—The total product of coke in the United States in 1893 was 9,460,310 tons as compared with 12,010,829 tons in 1892. This great reduction is due to the depression in the blast-furnace industry. Coke-made pig iron in 1893 was 5,390,184 tons as compared with 6,822,266 tons in 1892, and pig iron made with anthracite and with mixed anthracite and coke aggregated 1,347,529 tons in 1893 as compared with 1,797,113 tons in 1892. This would account for a reduction of about 2,000,000 tons of coke. The remainder of the decrease is due to the falling off in demand at foundries and other works where coke is used. Pennsylvania is still the chief coke-producing State, contributing 65.8 per cent. of the total, and Alabama is second, contributing 12.2 per cent.

Petroleum.—The chief features of interest in 1893 were: (1) The great decline in production of the older fields and the increase of the newer. (2) The decline in stocks held at the wells. (3) The increase in price. (4) The increase in exports. (5) The success in refining limestone oils.

Pennsylvania declined from 27,149,034 barrels of 42 gallons in 1892 to 19,283,122 barrels in 1893. Lima, Ohio, fell off from 15,169,507 barrels in 1892 to 13,646,804 barrels in 1893. On the other hand the production of West Virginia increased from 3,810,086 barrels in 1892 to 8,445,412 barrels in 1893.

Indiana increased from 698,068 barrels in 1892 to 2,335,293 barrels in 1893. The total product for all States declined from 50,509,136 barrels in 1892 to 48,412,666 barrels in 1893. The year 1891 marked the highest output, it being 54,291,980 barrels. This was the year of the remarkable product of the McDonald field in Pennsylvania.

The average value of certificate oil in the Pennsylvania fields was 64 cents a barrel compared with 55½ cents in 1892; an increase of 8½ cents. The price for Lima oil advanced from 36½ cents in 1892 to 47¼ cents in 1893, an increase of 10½ cents.

The total exports of petroleum in the calendar year 1893, including crude, refined, and residuum was 804,221,230 gallons, the largest export recorded, and an increase of nearly 60,000,000 gallons compared with 1892. All forms of oil except lubricating oil shared in the increase.

Natural gas.—The consumption of natural gas is limited more and more to domestic use. Only in Indiana has consumption increased for manufacturing purposes. Another feature of the situation is the increase in price to consumers. The total value of the product in 1893 was \$14,346,250; in 1892, \$14,800,714.

STRUCTURAL MATERIALS.

Stone.—The value of the total product of stone of all kinds decreased to \$33,865,573 in 1893 from \$48,706,625 in 1892. The depression was very great in the last half of the year and continues in 1894. The product of lime is an estimate, and is probably too high; the figures are merely kept as the best available.

Soapstone.—Soapstone in slabs, etc., aggregated 21,071 short tons in 1893, worth \$255,067. Fibrous talc amounted to 35,861 short tons, worth \$403,436. Both industries show the usual decline.

Clays.—The returns from the division of manufactures in the Census Office indicate that the value of brick clay in 1890 was \$8,500,000, and about \$9,000,000 in 1893. The total value of the finished brick, tile, and terra cotta aggregated \$67,000,000. The production of potter's clay of all qualities aggregated 400,000 tons, worth \$900,000.

Cement.—Natural rock cement decreased slightly, i. e., to 7,411,815 barrels, worth \$5,104,708; artificial Portland cement to 590,652 barrels, worth \$1,158,138.

Feldspar.—The product increased slightly, aggregating 18,391 long tons, worth \$68,037; the value shows the usual decrease.

Flint.—Product in 1893, 29,671 long tons, worth \$63,792.

Asphaltum.—The product came chiefly from California, with small amounts from Utah and Kentucky. The total in 1893 includes the ozocerite product of Utah, and amounted to 47,779 short tons, worth \$372,232. The product of asphaltum alone in 1892 was 87,930 short tons, worth \$445,375.

ABRASIVE MATERIALS.

Millstones.—The value decreased from \$23,417 in 1892 to \$16,645 in 1893; the product came from New York, Pennsylvania, and Virginia.

Grindstones.—Value in 1892, \$272,244; in 1893, \$338,787, including in the latter figure \$19,159 worth of whetstones made from sandstone chiefly in Ohio.

Corundum and emery.—The product remained nearly stationary, i. e., 1,771 short tons, worth \$181,300 in 1892, and 1,713 short tons, worth \$142,325 in 1893.

Novaculite.—The Arkansas, New Hampshire and other whetstones and oilstones produced in 1893 from novaculite had a value of \$135,173, against \$146,730 in 1892. This does not include the sandstone products of Ohio.

MINERALS USED FOR CHEMICAL PURPOSES.

Phosphate rock.—Florida produced 438,804 long tons and South Carolina 502,564 tons; total value, \$4,136,070. The chief event of importance was the cyclone of August 27, which wrecked the river phosphate industry in South Carolina and raised the price for Florida rock.

Marls.—The local use of marls in New Jersey, Virginia, and Alabama continues to decrease, being displaced by commercial fertilizers.

Gypsum.—Stocks decreased in 1892, due to the manufacture of staff for the World's Fair buildings. This caused the increased production of 1892 to continue. The product in 1892 was 246,374 short tons, worth \$671,548; 1893 it was 253,615 short tons, worth \$696,615.

Salt.—The product in 1892 was 11,698,890 barrels (of 280 pounds each); this increased slightly in 1893 to 11,816,772 barrels. The total value shows a decrease from \$5,654,915 in 1892 to \$4,054,668. This decrease is largely apparent only, since the cost of package is omitted in the latter year.

Bromine.—The market price in London advanced quite significantly, due to better understanding between the producers, so that 348,399 pounds, the product of 1893, showed a total value of \$104,520, against only \$64,502 for 379,480 pounds in 1892.

Iodine.—Search is being made for large quantities of salt brines containing even traces of iodine, with a view to a new process for extracting it.

Sulphur.—The product is still light and limited to the western mines. Quantity in 1893: 1,200 short tons, worth \$42,000 at Salt Lake City. The product in 1892 was 2,688 tons.

Pyrites.—The product declined from 114,717 long tons in 1892, worth \$305,191, to 83,277 long tons, worth \$275,302, in 1893. The imports increased. New sources of supply are being developed in North Carolina.

Borax.—The product declined to 8,699,000 pounds, worth \$652,425.

Fluorspar.—Price showed a slight decline with a small increase in quantity to 12,400 short tons, worth \$84,000.

Chromic iron ore.—The product was 1,450 long tons, all from Glenn County, California. It was worth \$21,750 in San Francisco. The consumption is chiefly supplied by imports from Asia Minor.

MINERAL PIGMENTS.

Barytes.—Product 28,970 short tons, worth \$88,506, a decrease from 32,108 tons in 1892. There is some promise of an increase again in 1894.

Metallic paint.—The product of metallic paint decreased from 30,211 short tons, valued at \$452,966, in 1892, to 19,950 short tons, worth \$297,189, in 1893.

Ocher, umber, etc.—The product of ocher decreased to 10,517 short tons, worth \$129,393. Of umber the product was about the same as in 1892, though the value increased slightly. Sienna decreased from 500 tons to 150 tons. The amount of soapstone ground for paint was 100 tons. Of mineral black the product was 70 tons.

Venetian reds.—The product declined from 4,900 short tons, worth \$106,800, to 3,214 tons, worth \$64,400.

Cobalt oxide.—Including the exports contained in speiss, the total product was 8,422 pounds, worth in the condition in which it was first sold \$10,346. The price for pure cobalt oxide ready for pottery or paint use was worth \$200 per pound.

Zinc white.—The product declined slightly, as follows: 24,059 short tons in 1893 against 27,500 tons in 1892. Prices remained steady.

Graphite.—The product, 843,103 pounds, includes the crude material mined for crucibles and all other purposes as well as that for pencils. It is valued at \$63,232 in the state in which it was first mined.

MISCELLANEOUS.

Precious stones.—The value of rough gems found in the United States decreased from \$312,050 in 1892 to \$264,041 in 1893. The principal items of interest was the discovery of a diamond weighing $3\frac{1}{8}$ carats in Wisconsin, and the large sale of American turquoise.

Mica.—The industry is still crippled by irregular mining methods. The product was 66,971 pounds in 1893, worth \$88,929.

Asbestos.—Deposits of chrysotile somewhat similar to the Canadian have been found near Casper, Wyoming, but need development. The domestic product from California was insignificant, i. e., 50 tons, worth \$2,500.

Infusorial earth.—The product decreased. Forty-three thousand six hundred and fifty-five dollars was the value of the product in 1892, which fell to \$22,582 in 1893.

Magnesite.—The deposits in California yielded 704 short tons in 1893, part of which was calcined and part sold crude. The price in San Francisco was \$10 per ton.

Mineral waters.—The statistics are limited to the actual amount sold; these show a gain from 21,876,604 gallons in 1892 to 23,544,495 gallons

SUMMARY.

7

in 1893, but, as usual, values declined, thus: 1892, \$4,905,970; 1893, \$4,246,734.

Metallic products of the United States in 1893.

Products.	Quantity.	Value.
Pig iron.....long tons..	7,124,502	\$84,810,426
Silver.....troy ounces..	60,000,000	77,575,757
Gold.....do.....	1,739,081	35,950,000
Copper.....pounds..	337,416,848	32,054,601
Lead.....short tons..	163,982	11,839,590
Zinc.....do.....	78,832	6,306,560
Quicksilver.....flasks..	30,164	1,108,527
Aluminum.....pounds..	339,629	266,903
Antimony.....short tons..	250	45,000
Nickel.....pounds..	49,399	22,197
Tin.....do.....	8,933	1,788
Platinum.....troy ounces..	75	517
Total value of metallic products.....		249,981,866

Non-metallic mineral products of the United States in 1893.

Products.	Quantity.	Value.
Bituminous coal.....long tons..	114,629,671	\$122,751,618
Pennsylvania anthracite.....do.....	48,185,306	85,687,078
Lime.....barrels..	58,000,000	35,960,000
Building stone.....do.....		33,865,573
Petroleum.....barrels..	48,412,666	28,932,326
Natural gas.....do.....		14,316,250
Clay (all except potter's clay).....do.....		9,000,000
Cement.....barrels..	8,002,467	6,262,841
Mineral waters.....gallons sold..	23,544,495	4,246,734
Phosphate rock.....long tons..	941,368	4,136,070
Salt.....barrels..	11,816,772	4,051,668
Limestone for iron flux.....long tons..	3,958,055	2,374,833
Zinc white.....short tons..	24,059	1,804,420
Potter's clay.....long tons..	400,000	900,000
Gypsum.....short tons..	253,615	696,615
Borax.....pounds..	8,699,000	652,425
Mineral paints.....short tons..	37,714	530,284
Fibrous talc.....do.....	35,861	403,436
Asphaltum.....do.....	47,779	372,232
Soapstone.....do.....	21,071	255,067
Precious stones.....do.....		264,041
Pyrites.....long tons..	83,277	275,302
Corundum.....short tons..	1,713	142,325
Novaculite.....pounds..		135,173
Mica.....do.....	66,971	88,929
Barytes.....short tons..	28,970	88,506
Bromine.....pounds..	348,399	104,520
Fluorspar.....short tons..	12,400	84,000
Feldspar.....long tons..	18,391	68,037
Manganese ore.....do.....	7,718	66,614
Flint.....do.....	29,671	63,792
Graphite.....pounds..	843,103	63,232
Sulphur.....short tons..	1,200	42,000
Marls.....do.....	75,000	40,000
Infusorial earth.....do.....		22,582
Millstones.....do.....		16,645
Chromic iron ore.....long tons..	1,450	21,750
Cobalt oxide.....pounds..	8,422	10,346
Magnesite.....short tons..	704	7,040
Asbestos.....do.....	50	2,500
Total value of non-metallic mineral products.....		358,839,894
Total value of metallic products.....		249,981,866
Estimated value of mineral products un-		
specified ^a		1,000,000
Grand total.....		609,821,670

^a Including building sand, glass sand, limestone used as flux in lead smelting, limestone in glass-making, iron ore used as flux in lead smelting, tin ore, iridosmine, nitrate of soda, carbonate of soda, sulphate of soda, bauxite and alum clays used by paper manufacturers.

Mineral products of the United States

	Products.	1880.		1881.	
		Quantity.	Value.	Quantity.	Value.
METALLIC.					
1	Pig iron, value at Philadelphia.....long tons..	3,375,912	\$89,315,569	4,144,254	\$87,029,334
2	Silver, coining value.....troy ounces..	30,320,000	39,200,000	33,077,000	43,000,000
3	Gold, coining value.....do.....	1,741,500	36,000,000	1,676,300	34,700,000
4	Copper, value at New York City.....pounds..	60,480,000	11,491,200	71,680,000	12,175,000
5	Lead, value at New York City...short tons..	97,825	9,782,500	117,085	11,240,100
6	Zinc, value at New York City.....do.....	23,239	2,277,432	26,800	2,680,000
7	Quicksilver, value at San Francisco...flasks..	59,926	1,797,780	60,851	1,764,679
8	Nickel, value at Philadelphia.....pounds..	329,968	164,984	265,668	292,235
9	Alumina, value at Pittsburg.....do.....				
10	Tin.....do.....				
11	Antimony, value at San Francisco short tons..	50	10,000	50	10,000
12	Platinum, value (crude) at San Francisco,				
	.....troy ounces..	100	400	100	400
13	Total value of metallic products		190,039,805		192,892,408
NON-METALLIC (spot values).					
14	Bituminous coal.....long tons..	38,242,641	53,443,718	48,179,475	60,224,344
15	Pennsylvania anthracite.....do.....	25,580,189	42,196,678	28,500,016	64,125,036
16	Building stone.....do.....		18,356,055		20,000,000
17	Petroleum.....barrels..	26,286,123	24,183,233	27,661,238	25,448,339
18	Lime.....do.....	28,000,000	19,000,000	30,000,000	20,000,000
19	Natural gas.....do.....				
20	Clay (all except potter's clays).....do.....				
21	Cement.....barrels..	2,072,943	1,852,707	2,500,000	2,000,000
22	Salt.....do.....	5,961,060	4,829,566	6,200,000	4,200,000
23	Phosphate rock.....long tons..	211,377	1,123,823	266,734	1,980,259
24	Limestone for iron flux.....do.....	4,500,000	3,800,000	6,000,000	4,100,000
25	Mineral waters.....gallons sold..	2,000,000	500,000	3,700,000	700,000
26	Zinc white.....short tons..	10,107	763,738	10,000	700,000
27	Potters' clay.....long tons..	25,783	200,457	25,000	200,000
28	Mineral paints.....short tons..	4,036	135,840	6,720	100,000
29	Borax.....pounds..	3,692,443	277,233	4,046,000	304,461
30	Gypsum.....short tons..	90,000	400,000	85,000	350,000
31	Grindstones.....do.....		500,000		500,000
32	Fibrous talc.....short tons..	4,210	54,730	5,000	60,000
33	Pyrites.....long tons..	2,000	5,000	10,000	60,000
34	Soapstone.....short tons..	8,441	66,665	7,000	75,000
35	Manganese ore.....long tons..	5,761	86,415	4,835	73,425
36	Asphaltum.....short tons..	444	4,440	2,000	8,000
37	Precious stones.....do.....		100,000		110,000
38	Bromine.....pounds..	404,890	114,752	300,000	75,000
39	Corundum.....short tons..	1,044	29,280	500	80,000
40	Barytes (crude).....do.....	26,000	80,000	20,000	80,000
41	Graphite.....pounds..		40,800	400,000	30,000
42	Millstones.....do.....		200,000		150,000
43	Novaculite.....pounds..	420,000	8,000	500,000	8,580
44	Marls.....short tons..	1,000,000	500,000	1,000,000	500,000
45	Flint.....long tons..	20,000	80,000	25,000	100,000
46	Fluorspar.....short tons..	4,000	16,000	4,000	16,000
47	Chromic iron ore.....long tons..	2,288	27,808	2,000	30,000
48	Infusorial earth.....short tons..	1,833	45,660	1,000	10,000
49	Feldspar.....long tons..	12,500	60,000	14,000	70,000
50	Mica.....pounds..	81,609	127,825	100,000	250,000
51	Ozocerite, refined.....do.....				
52	Cobalt oxide.....do.....	7,251	24,000	8,280	25,000
53	Slate ground as a pigment.....short tons..	1,000	10,000	1,000	10,000
54	Sulphur.....do.....	600	21,000	600	21,000
55	Asbestos.....do.....	150	4,312	200	7,000
56	Rutile.....pounds..	100	400	200	700
57	Lithographic stone.....short tons..			50	1,000
58	Total value of non-metallic mineral products.....		173,270,135		206,783,144
59	Total value of metallic products.....		190,039,865		192,892,408
60	Estimated value of mineral products unspecified. (a).....		6,000,000		6,500,000
61	Grand total.....		369,319,000		406,175,552

a Including clays, except potter's clay, prior to 1884.

SUMMARY.

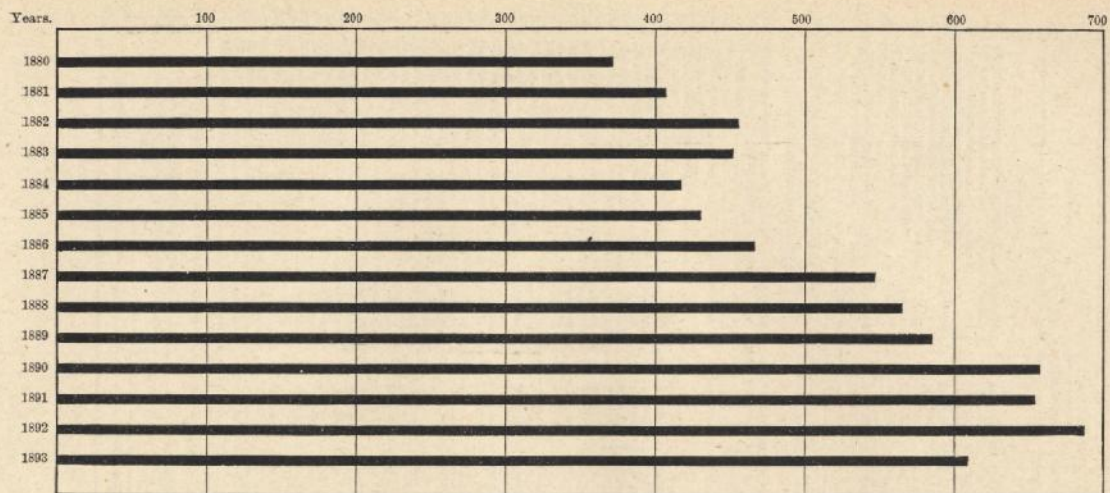
9

for the calendar years 1880 to 1893.

1882.		1883.		1884.		1885.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
4,623,323	\$106,336,429	4,595,510	\$91,910,200	4,097,868	\$73,761,624	4,044,425	\$64,712,400	1
36,197,695	46,800,000	35,733,622	46,200,000	37,744,605	48,800,000	39,910,279	51,600,000	2
1,572,186	32,500,000	1,451,249	30,000,000	1,489,949	30,800,000	1,538,376	31,800,000	3
91,646,232	16,038,091	117,151,795	18,064,807	145,221,934	17,789,687	170,962,607	18,292,999	4
132,890	12,624,550	143,957	12,322,719	139,897	10,537,042	129,412	10,469,431	5
33,765	3,646,620	36,872	3,311,106	38,544	3,422,707	40,688	3,539,856	6
52,732	1,487,042	46,725	1,253,632	31,913	936,327	32,073	979,189	7
281,616	309,777	58,800	52,920	64,550	48,412	277,904	179,975	8
		83	875	150	1,350	283	2,550	9
60	12,000	60	12,000	60	12,000	50	10,000	10
200	600	200	600	150	450	250	187	11
	219,755,109		203,128,859		186,109,599		181,586,587	12
60,861,190	76,076,487	68,531,500	82,237,800	73,730,539	77,417,066	64,840,668	82,347,648	13
31,358,264	70,556,094	34,336,469	77,257,055	33,175,756	66,351,512	34,228,548	76,671,948	14
	21,000,000		20,000,000		19,000,000		19,000,000	15
30,510,830	24,065,988	23,449,633	25,790,252	24,218,438	20,595,966	21,847,205	19,198,243	16
31,000,000	21,700,000	32,000,000	19,200,000	37,000,000	18,500,000	40,000,000	20,000,000	17
	215,000		475,000		1,460,000		4,857,200	18
					5,500,000		6,000,000	19
3,250,000	3,672,750	4,190,000	4,293,500	4,000,000	3,720,000	4,150,000	3,492,500	20
6,412,373	4,320,140	6,192,231	4,211,042	6,514,937	4,197,734	7,038,653	4,825,345	21
332,077	1,992,462	378,380	2,270,280	431,779	2,374,784	437,856	2,846,064	22
3,850,000	2,310,000	3,814,273	1,907,136	3,401,930	1,700,965	3,356,956	1,678,478	23
5,000,000	800,000	7,529,423	1,119,603	10,215,328	1,459,143	9,148,401	1,312,845	24
10,000	700,000	12,000	840,000	13,000	910,000	15,000	1,050,000	25
30,000	240,000	32,000	250,000	35,000	270,000	36,000	275,000	26
7,840	105,000	7,840	84,000	7,840	84,000	4,424	43,575	27
4,236,291	338,903	6,500,000	585,000	7,000,000	490,000	8,000,000	480,000	28
100,000	450,000	90,000	420,000	90,000	390,000	90,405	405,000	29
	700,000		600,000		570,000		500,000	30
6,000	75,000	6,000	75,000	10,000	110,000	10,000	110,000	31
12,000	72,000	25,000	137,500	35,000	175,000	49,000	220,500	32
6,000	90,000	8,000	150,000	10,000	200,000	10,000	200,000	33
4,532	67,980	6,155	92,325	10,180	122,160	23,258	190,281	34
3,000	10,500	3,000	10,500	3,000	10,500	3,000	10,500	35
	150,000		207,050		222,975		209,900	36
250,000	75,000	301,100	72,264	281,100	67,464	310,000	89,900	37
500	80,000	550	100,000	600	108,000	600	108,000	38
20,000	80,000	27,000	108,000	25,000	100,000	15,000	75,000	39
425,000	34,000	575,000	46,000			327,883	26,231	40
	200,000		150,000		150,000		100,000	41
600,000	10,000	600,000	10,000	800,000	12,000	1,000,000	15,000	42
1,080,000	540,000	972,000	486,000	875,000	437,500	875,000	437,500	43
25,000	100,000	25,000	100,000	30,000	120,000	30,000	120,000	44
4,000	20,000	4,000	20,000	4,000	20,000	5,000	22,500	45
2,500	50,000	3,000	60,000	2,000	35,000	2,700	40,000	46
1,000	8,000	1,000	5,000	1,000	5,000	1,000	5,000	47
14,000	70,000	14,100	71,112	10,900	55,112	13,600	68,000	48
100,000	250,000	114,000	285,000	147,410	368,525	92,000	161,000	49
								50
11,653	32,046	1,096	2,795	2,000	5,100	68,723	65,373	51
2,000	24,000	2,000	24,000	2,000	20,000	1,975	24,687	52
600	21,000	1,000	27,000	500	12,000	715	17,875	53
1,200	36,000	1,000	30,000	1,000	30,000	300	9,000	54
500	1,800	550	2,000	600	2,000	600	2,000	55
								56
	231,340,150		243,812,214		227,379,506		247,312,093	57
	219,755,109		203,128,859		186,109,599		181,586,587	58
	6,500,000		6,500,000		500,000		500,000	59
								60
	457,595,259		453,441,073		413,989,105		429,398,680	61

Mineral products of the United States for the

		1886.		1887.	
Products.		Quantity.	Value.	Quantity.	Value.
METALLIC.					
1	Pig iron, value at Philadelphia.....long tons..	5,683,329	\$95,195,760	6,417,148	\$121,925,800
2	Silver, coining value.....troy ounces..	39,445,312	51,000,000	41,269,240	53,350,000
3	Gold, coining value.....do.....	1,881,250	35,000,000	1,596,500	33,000,000
4	Copper, value at New York City.....pounds..	161,235,381	16,527,651	185,227,331	21,115,916
5	Lead, value at New York City.....short tons..	130,629	12,200,749	145,700	13,113,000
6	Zinc, value at New York City.....do.....	42,641	3,752,408	50,340	4,782,300
7	Quicksilver, value at San Francisco.....flasks..	29,981	1,060,000	33,825	1,429,000
8	Nickel, value at Philadelphia.....pounds..	214,992	127,157	205,566	133,200
9	Aluminum, value at Pittsburg.....do.....	3,000	27,000	18,000	59,000
10	Tin.....do.....				
11	Antimony, value at San Francisco.....short tons..	35	7,000	75	15,000
12	Platinum, value (crude) at San Francisco,				
	.....troy ounces..	50	100	448	1,838
13	Total value of metallic products		214,897,825		248,925,054
NON-METALLIC (spot values).					
14	Bituminous coal.....long tons..	65,810,676	78,481,056	78,470,857	98,004,656
15	Pennsylvania anthracite.....do.....	34,853,977	76,119,120	37,578,747	84,552,181
16	Building stone.....do.....		19,000,000		25,000,000
17	Petroleum.....barrels.....	28,064,841	19,996,313	28,278,866	18,877,094
18	Lime.....do.....	42,500,000	21,250,000	46,750,000	23,375,000
19	Natural gas.....do.....		10,012,000		15,817,500
20	Clay (all except potter's clay).....do.....		6,200,000		7,000,000
21	Cement.....barrels.....	4,500,000	3,990,000	6,692,744	5,674,377
22	Salt.....do.....	7,707,081	4,736,585	7,831,962	4,093,846
23	Phosphate rock.....long tons..	430,549	1,872,936	480,558	1,836,818
24	Limestone for iron flux.....do.....	4,717,163	2,830,297	5,377,000	3,226,200
25	Mineral waters.....gallons sold..	8,950,317	1,284,070	8,259,609	1,261,463
26	Zinc white.....short tons..	18,000	1,440,000	18,000	1,440,000
27	Potters' clay.....long tons..	40,000	325,000	43,000	1,340,000
28	Mineral paints.....short tons..	21,056	315,000	24,640	330,000
29	Borax.....pounds..	9,778,290	488,915	11,000,000	550,000
30	Gypsum.....short tons..	95,250	428,625	95,000	425,000
31	Grindstones.....do.....		250,000		224,400
32	Fibrous talc.....short tons..	12,000	125,000	15,000	160,000
33	Pyrites.....long tons..	55,000	220,000	52,000	210,000
34	Soapstone.....short tons..	12,000	225,000	12,000	225,000
35	Manganese ore.....long tons..	30,193	277,636	34,524	333,844
36	Asphaltum.....short tons..	3,500	14,000	4,000	16,000
37	Precious stones.....do.....		119,056		163,600
38	Bromine.....pounds..	428,334	141,350	199,087	61,717
39	Corundum.....short tons..	645	116,190	600	108,000
40	Barytes, crude.....do.....	10,000	50,000	15,000	75,000
41	Graphite.....pounds..	415,525	33,242	416,000	34,000
42	Millstones.....do.....		140,000		100,000
43	Novaculite.....pounds..	1,160,000	15,000	1,200,000	16,000
44	Marls.....short tons..	800,000	400,000	600,000	300,000
45	Flint.....long tons..	30,000	120,000	32,000	185,000
46	Fluorspar.....short tons..	5,000	22,000	5,000	20,000
47	Chromic iron ore.....long tons..	2,000	30,000	3,000	40,000
48	Infusorial earth.....short tons..	1,200	6,000	3,000	15,000
49	Feldspar.....long tons..	14,900	74,500	10,200	56,100
50	Mica.....pounds..	40,000	70,000	70,000	142,250
51	Ozocerite, refined.....do.....				
52	Cobalt oxide.....do.....	35,000	36,878	18,340	18,774
53	Sulphur.....short tons..	2,500	75,000	3,000	100,000
54	Asbestos.....do.....	200	6,000	150	4,500
55	Rutile.....pounds..	600	2,000	1,000	3,000
56	Magnesite.....short tons..				
57	Total value of non-metallic mineral products.....		251,338,769		294,416,320
58	Total value of metallic products.....		214,897,825		248,925,054
59	Estimated value of mineral products unspecified.....		800,000		800,000
60	Grand total.....		467,036,594		544,141,374



VALUE OF ALL MINERAL PRODUCTS OF THE UNITED STATES 1880 TO 1893.
[Millions of dollars.]

SUMMARY.

11

calendar years 1880 to 1893—Continued.

1888.		1889.		1890.		1891.		
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
6,489,738	\$107,000,000	7,603,642	\$120,000,000	9,202,703	\$151,200,410	8,279,870	\$128,337,985	1
45,783,632	59,195,000	51,354,851	66,396,988	54,500,000	70,464,845	58,330,000	75,416,565	2
1,604,927	33,175,000	1,590,869	32,886,744	1,588,880	32,845,000	1,604,840	33,175,000	3
231,270,622	33,833,954	231,246,214	26,907,809	265,115,133	30,848,797	295,810,076	38,465,300	4
151,919	13,399,256	156,397	13,794,235	143,630	12,668,166	178,554	15,534,198	5
55,903	5,500,855	58,860	5,791,824	63,683	6,266,407	80,337	8,033,700	6
33,250	1,413,125	26,484	1,190,500	22,925	1,203,615	22,904	1,036,386	7
204,328	127,632	252,063	151,598	223,488	134,093	118,498	71,099	8
19,000	65,000	47,468	97,335	61,281	61,281	150,000	100,000	9
100	20,000	115	26,000	120	40,756	125,289	25,058	10
500	2,000	500	2,000	600	2,500	278	47,007	11
253,731,822		267,247,033		305,735,670		300,232,798		13
91,106,998	101,850,520	85,383,059	94,246,809	99,392,871	110,420,801	105,268,082	117,188,400	14
41,624,611	89,020,483	40,714,721	65,879,514	41,489,858	66,383,772	45,236,992	73,944,735	15
25,500,000			42,800,706		47,000,000		47,294,746	16
27,612,025	17,947,620	35,160,513	29,963,349	45,822,672	35,365,105	54,281,980	50,520,553	17
49,087,000	24,543,500	68,474,668	33,217,015	60,000,000	35,000,000	60,000,000	35,000,000	18
	22,629,875		21,097,099		18,742,725		15,500,084	19
	7,500,000		8,000,000		8,500,000		9,000,000	20
6,503,295	5,021,139	7,000,000	5,000,000	8,000,000	6,000,000	8,222,732	6,080,951	21
8,055,881	4,374,203	8,005,565	4,195,412	8,776,991	4,752,286	9,987,945	4,716,121	22
448,567	2,018,552	550,245	2,937,776	510,499	3,213,795	587,988	3,651,150	23
5,438,000	2,719,000	6,318,000	3,150,000	5,521,622	2,760,811	5,000,000	2,300,000	24
9,578,648	1,679,202	12,780,471	1,748,458	13,907,418	2,600,750	18,382,732	2,996,250	25
20,000	1,600,000	16,970	1,357,600		1,600,000	23,700	1,600,000	26
36,750	300,000	294,344	635,578	350,000	756,000	400,000	900,000	27
29,680	405,000	84,307	483,768	47,732	681,992	49,652	678,478	28
7,580,000	455,340	8,000,000	500,000	9,500,000	617,500	13,380,000	809,700	29
110,000	550,000	267,769	764,118	182,995	574,523	208,126	628,051	30
	281,800		439,587		450,000		476,113	31
20,000	210,000	23,746	244,170	41,354	389,196	53,054	493,068	32
54,331	167,658	93,705	202,119	111,836	273,745	119,320	338,880	33
15,000	250,000	12,715	231,708	13,670	252,309	16,514	243,981	34
29,198	279,571	24,197	240,559	25,684	219,050	23,416	239,129	35
53,800	331,500	51,735	171,537	40,841	190,416	45,054	242,264	36
	139,850		188,807		118,833		235,300	37
307,386	95,290	418,891	125,067	387,847	104,719	343,000	54,880	38
589	91,620	2,245	105,565	1,970	89,305	2,265	90,230	39
20,000	110,000	19,161	106,213	21,911	86,505	31,069	118,363	40
400,000	33,000		72,662		77,500		110,000	41
	81,000		35,155		23,720		16,587	42
1,500,000	18,000	5,982,000	32,980		69,909	1,375,000	150,000	43
300,000	150,000	139,522	69,956	153,620	69,880	135,000	67,500	44
30,000	175,000	11,113	49,137	13,000	57,400	15,000	60,000	45
6,000	30,000	9,500	45,835	8,250	55,328	10,044	78,330	46
1,500	20,000	2,000	30,000	3,599	53,985	1,372	20,580	47
1,500	7,500	3,466	23,372	2,532	50,240		21,988	48
8,700	50,000	6,970	30,370	8,000	45,200	10,000	50,000	49
48,000	70,000	49,500	50,000	60,000	75,000	75,000	100,000	50
43,500	3,000	50,000	2,500	350,000	26,250	50,000	7,000	51
8,401	15,782	13,655	31,092	6,783	16,291	7,200	18,000	52
		1,150	7,850			1,200	39,600	53
100	3,000	30	1,800	71	4,560	66	3,960	54
1,000	3,000	1,000	3,000	400	1,000	300	800	55
						439	4,390	56
310,741,114		315,630,932		347,770,491		356,756,171		57
253,731,822		267,247,033		305,735,670		300,232,798		58
900,000		1,000,000		1,000,000		1,000,000		59
565,372,936		583,886,965		654,606,181		657,988,969		60

Mineral products of the United States for the calendar years 1880 to 1893—Continued.

Products.	1892.		1893.	
	Quantity.	Value.	Quantity.	Value.
METALLIC.				
Pig iron.....long tons..	9,157,000	\$131,161,039	7,124,501	\$84,810,426
Silver.....troy ounces..	63,500,000	82,089,150	60,000,000	77,575,757
Gold.....do.....	1,596,375	33,000,000	1,739,081	35,950,000
Copper.....pounds..	353,275,742	37,977,142	337,416,848	32,054,601
Lead.....short tons..	173,654	13,892,320	163,982	11,839,590
Zinc.....do.....	87,260	8,027,920	78,832	6,306,560
Quicksilver.....flasks..	27,993	1,245,689	30,164	1,108,527
Aluminum.....pounds..	259,885	173,824	339,629	266,903
Antimony.....short tons..	.....	56,466	250	45,000
Nickel.....pounds..	92,252	50,739	49,399	22,197
Tin.....do.....	162,000	32,400	8,938	1,788
Platinum.....troy ounces..	80	550	75	517
Total value of metallic products .....	.....	307,716,239	.....	249,981,866
NON-METALLIC.				
Bituminous coal.....long tons..	113,264,792	125,124,381	114,629,671	122,751,618
Pennsylvania anthracite.....do.....	46,850,450	82,442,000	48,185,306	85,687,078
Lime.....barrels..	65,000,000	40,000,000	58,000,000	35,960,000
Building stone.....do.....	.....	48,706,625	.....	33,865,573
Petroleum.....barrels..	50,509,136	26,034,196	48,412,666	28,932,326
Natural gas.....do.....	.....	14,800,714	.....	14,340,250
Clay (all, except potters' clay).....do.....	.....	9,000,000	.....	9,000,000
Cement.....barrels..	8,758,621	7,152,750	8,002,467	6,202,841
Mineral waters.....gallons sold..	21,876,604	4,905,970	23,544,495	4,246,734
Phosphate rock.....long tons..	681,571	3,296,227	941,368	4,136,070
Salt.....barrels..	11,698,890	5,654,915	11,816,772	4,054,668
Limestone for iron flux.....long tons..	5,172,114	3,620,480	3,958,055	2,374,833
Zinc, white.....short tons..	27,500	2,200,000	24,059	1,804,420
Potters' clay.....long tons..	420,000	1,000,000	400,000	900,000
Gypsum.....short tons..	246,374	671,548	253,615	696,615
Borax.....pounds..	13,500,000	900,000	8,699,000	652,425
Mineral paints.....short tons..	51,704	767,766	37,714	530,284
Grindstones.....do.....	.....	272,244	.....	(a)
Fibrous talc.....short tons..	41,925	472,485	35,861	403,436
Asphaltum.....do.....	87,930	445,375	47,779	372,232
Soapstone.....do.....	23,908	437,449	21,071	255,067
Precious stones.....do.....	.....	312,050	.....	264,041
Pyrites.....long tons..	114,717	305,191	83,277	275,302
Corundum.....short tons..	1,771	181,300	1,713	142,325
Novaculite.....pounds..	.....	146,730	.....	135,173
Mica.....do.....	75,000	100,000	66,971	88,929
Barytes.....long tons..	32,108	130,025	28,970	88,506
Bromine.....pounds..	379,480	64,502	348,399	104,520
Fluorspar.....short tons..	12,250	89,000	12,400	84,000
Feldspar.....long tons..	15,000	75,000	18,391	68,037
Manganese ore.....do.....	13,613	129,586	7,718	66,614
Flint.....do.....	20,000	80,000	29,671	63,792
Graphite.....pounds..	.....	104,000	843,103	63,232
Sulphur.....short tons..	2,688	80,640	1,200	42,600
Marls.....do.....	125,000	65,000	75,000	40,000
Infusorial earth.....do.....	.....	43,655	.....	22,582
Millstones.....do.....	.....	23,417	.....	16,645
Chromic iron ore.....long tons..	1,500	25,000	1,450	21,750
Cobalt oxide.....pounds..	7,869	15,738	8,422	10,346
Magnesite.....short tons..	1,004	10,040	704	7,040
Asbestos.....do.....	104	6,416	50	2,500
Rutile.....pounds..	100	300	.....	.....
Ozocerite, refined.....do.....	60,000	8,000	(b)	(b)
Total value of non-metallic mineral products.....	.....	379,900,715	.....	358,839,804
Total value of metallic products.....	.....	307,716,239	.....	249,981,866
Estimated value of mineral products unspecified.....	.....	1,000,000	.....	1,000,000
Grand total.....	.....	688,616,954	.....	609,821,670

a Included in sandstone product.

b Included in asphaltum.