MINERAL RESOURCES OF THE UNITED STATES.

SUMMARY.

METALS.

Iron and steel.—The production of pig iron declined from 10,307,028 short tons in 1890 to 9,273,455 short tons in 1891. The production of most other manufactures of iron, notably steel ingots, steel rails, and cut nails, declined also. The product of pig iron was, however, greater than in any other country.

Gold and silver.—The output of gold aggregated 1,604,840 fine ounces (troy), with a value of $33,175,000; an increase of $330,000 over 1890. This product equaled that of 1888, and is larger than in any other year since 1881, with the single exception of 1886, when it reached $35,000,000. While there have been many new finds, notably in Oregon, Montana, and Colorado, there have been no rich strikes in the nature of bonanzas, and many old properties have been abandoned.

The silver product amounted to 58,330,000 ounces; a gain of 3,830,000 ounces over 1890. The coining value was $75,416,565. The commercial price of silver bullion averaged $0.988 per ounce.

The above statistics of gold and silver were collected by the Director of the Mint.

Copper.—Total product was 295,810,076 pounds, valued in New York at $38,455,300, against 265,115,133 pounds in 1890. Copper from imported pyrites is included in both years. The product is greater than in any previous year. The increase came from Lake Superior, Arizona, and California; Montana's output remained about the same as in 1890. The stock of copper declined in the United States.

Lead.—The product increased beyond all previous years to 202,406 short tons, worth in New York $17,609,322. The increase was in desilverized lead.

Zinc.—The total product was 80,337 short tons in 1891, against 63,683 short tons in 1890. Its value was $8,033,700. The product has been increasing each year since 1882. Nearly every important producer showed an increased output.

Quicksilver.—The product was practically the same in 1891 as in 1890. In 1889 it amounted to 26,484 flasks of 76½ pounds net. In 1890, 22,926 flasks were produced and 22,904 flasks in 1891. California was the

only producing State. The largest producer, the New Almaden mine, declined to small proportions, but its decreased output was compensated by increases in others. In spite of decreased production over the world and also decreased stock the price declined. It is expected that the price will improve in 1892 but that the production will not increase.

Aluminum.—The amount made is constantly increasing. In 1890 47,881 pounds of metallic aluminum were made, besides 13,400 pounds of aluminum contained in ferro-aluminum and aluminum bronze. In 1891 this increased to 100,000 pounds of aluminum and 50,000 pounds in bronze and ferro-aluminum. The demand for experimental purposes increases. The total product in 1891, including that in alloys, is valued at $100,000.

Large deposits of bauxite have been found in Arkansas in addition to that which has already been mined in Georgia. Careful tests are being made to determine the availability of these new sources of supply.

Manganese.—The product declined from 25,684 long tons, worth $219,050, in 1890, to 23,416 long tons in 1891, worth $239,129. The decrease was in the Virginia mines, which was partly compensated by production in Colorado.

Nickel and cobalt.—In 1891 the Gap mine in Pennsylvania was the only actual producer of nickel and cobalt. Its product was 118,498 pounds, worth $71,099. In 1890 the total product was 223,488 pounds, worth $134,093. In 1891 the quantity of nickel from Canadian matte smelted in the United States exceeded the domestic product.

Chrome-iron ore.—The production decreased from 3,599 long tons in 1890 to 1,372 long tons in 1891. It was valued at $15 per ton in San Francisco during 1891, but the price declined to $10 in 1892, and shipments stopped after 300 tons had been delivered.

Tin.—The industrial production of tin began in California and amounted to 125,289 pounds, worth at the New York price $25,058. Machinery was erected at the Virginia mines for testing the value of the ore, and the mill in South Dakota was nearly complete at the end of the year.

Antimony.—The product consisted of 278 short tons of metallic antimony and antimony contained in exported ores, all valued at $47,007. This all came from Nevada. The mines in Idaho, which produced in 1890, are closed by litigation. The product in 1890 aggregated 129 short tons of metallic antimony, worth $40,756.

FUELS.

Coal.—The product increased from 157,788,656 short tons in 1890, worth at the mines $176,804,573, to 168,566,669 short tons in 1891, valued at $191,133,135. The gain in tonnage was 10,778,013, and in value $14,328,562. The production of Pennsylvania anthracite increased from 46,468,641 short tons in 1890 to 50,665,431 in 1891. In spite of a de-

creased production in the Connellsville coke region the yield of Pennsylvania bituminous coal increased about 500,000 tons, owing chiefly to increased consumption by local trade. The notable increases were in West Virginia, where a gain of nearly 2,000,000 tons brings the product for 1891 to over 9,000,000, and in the Indian Territory, where the million-ton mark is touched for the first time. Ohio and Illinois, the two largest coal producers outside of Pennsylvania, report a somewhat larger output in 1890.

Coke.—A strike in the Connellsville region from February until May effected a decrease of over a million tons in the product from Pennsylvania. In the Flat Top region the product was also slightly less than in 1890.

Petroleum.—The discovery of the McDonald and several other new fields in Pennsylvania, together with the increase in Ohio, resulted in a product of 54,291,980 barrels, worth, at the average price of oil at the producing centers, $32,575,188. This is the greatest product of any year in the history of the oil industry in the United States. In 1890 the product amounted to 45,822,672 barrels, worth $35,365,105.

Natural gas.—The product declined from a value of $18,742,725 in 1890 to $15,500,084 in 1891. The value used is that of the coal displaced. Efforts have been made to utilize the natural gas which has been observed for years on the eastern shore of Great Salt lake.

STRUCTURAL MATERIALS.

Stone.—The stone product of all kinds was about the same as the preceding year, being valued at $47,000,000 in 1890 and $47,294,746 in 1891, not including the limestone used for lime. The lime amounted to 60,000,000 barrels, worth $35,000,000.

Cement.—The production of Portland cement is constantly increasing. In the year under review it amounted to 450,000 barrels. The total product of all kinds of cement aggregated 8,222,792 barrels, worth $6,680,951.

Limestone for iron flux.—This product declined with the pig-iron industry to 5,000,000 long tons, worth $2,300,000. In 1890 5,521,622 long tons were produced, worth $2,760,811.

MISCELLANEOUS.

Precious stones.—Turquois is now mined regularly in New Mexico. The sapphire mines in Montana are also to be opened systematically, and in the state of Washington a find of very valuable opals will be mined. The product in 1891 increased to a value of $235,300 from $118,833 in 1890. The gem mines of North Carolina and Paris, Maine, were not operated.

Phosphate rock.—South Carolina produced 332,414 long tons of land rock, valued at $2,071,693, and 130,528 tons of river rock, worth $760,977, as against 353,757 long tons of land rock and 110,241 tons of

river rock, with an aggregate value of $2,875,605 in 1890. Phosphate mining in Florida had not settled down to a firm condition, and a great deal of rock was taken out without regard to the condition of the market. The consequence was that over 50,000 tons of land rock and 12,000 tons of river pebble were carried over January 1, 1892, having failed to find a remunerative demand. The Florida rock marketed consisted of 57,982 tons of land rock, worth $391,894, and 54,500 tons of river pebble, worth $285,890.

Marls.—The product in New Jersey is still declining; 135,000 tons, worth $67,500, comprised the output in 1891. The marls of Virginia were used to a slight extent.

Asphaltum.—The product consisted of 39,962 tons of bituminous rock from California, worth $154,164; 3,000 tons of the same material from Kentucky, valued at $6,000, and 1,732 tons of gilsonite from Utah. Part of this, sold at Salt Lake City, brought $2,000; the remainder was shipped to St. Louis for distribution and manufacture into varnishes, insulators, etc. The value at St. Louis is about $50 per ton. The total value for this portion of the product was $80,100. The combined value of bituminous rock and gilsonite was $242,264, against $190,416 in 1890, a gain of $51,848.

Salt.—Product in 1891, 9,987,945 barrels, worth $4,716,121; in 1890, 8,776,991 barrels, worth $4,752,286.

Bromine.—The product decreased from 387,847 pounds, worth $104,719, in 1890, to 343,000 pounds, worth $54,880 in 1891. The considerable decrease in value was caused by a decline in the price from 25 to 15 cents per pound. The decline was due to accumulated stocks.

Sulphur.—In Utah 1,200 tons were mined and sold at $33 per ton. No sulphur was mined in 1890.

Pyrites.—The demand is more than equal to the supply, and new mines are being opened in Virginia. The old mines at Ducktown, Tennessee, will be reopened. Product, 119,320 tons in 1891, worth $338,880.

Graphite.—The product was limited to New York state and was valued at $110,000. The product in 1890 was worth $77,500.

Barytes.—The production continues to increase. The output, which came principally from Missouri and Virginia, and smaller amounts from North Carolina and South Carolina, was 31,069 tons in 1891. This was a gain of 9,158 tons over 1890, in which year the product was entirely from Missouri and Virginia.

Gypsum.—The product increased from 182,995 short tons in 1890 to 208,126 tons in 1891. The value increased from $574,523 to $628,051. The states producing it were California, Colorado, Iowa, Kansas, Michigan, New York, Ohio, South Dakota, Utah, Virginia, and Wyoming.

Mineral paints.—The product includes 25,142 short tons of metallic paint, worth $334,455; 18,294 short tons of ocher, umber, and sienna, worth $233,823; 4,091 tons of Venetian reds, valued at $90,000; and 25 tons of soapstone pigment, worth $200.

Mineral waters.—The amount sold in bottles, barrels, etc., aggregated 18,392,732 gallons, worth $2,996,259, against 13,907,418 gallons in 1890, worth $2,600,750.

Metallic products of the United States in 1891.

Products.	Quantity.	Value.
Pig iron.....long tons..	8,279,870	$128,337,985
Silver.....troy ounces..	58,330,000	75,416,565
Gold.....do....	1,604,840	33,175,000
Copper.....pounds..	295,810,076	38,455,300
Lead.....short tons..	202,406	17,609,322
Zinc.....do....	80,337	8,033,700
Quicksilver.....flasks..	22,904	1,036,386
Nickel.....pounds..	118,498	71,099
Aluminum.....do....	150,000	100,000
Tin.....do....	125,289	25,058
Antimony.....short tons..	278	47,007
Platinum.....troy ounces..	100	500
Total value.....	.....	302,307,922

Non-metallic mineral products of the United States in 1891.

Products.	Quantity.	Value.
Bituminous coal.....long tons..	105,268,962	$117,188,400
Pennsylvania anthracite.....do....	45,236,992	73,944,735
Building stone.....	.....	47,294,746
Petroleum.....barrels..	54,291,980	32,575,188
Lime.....do....	60,000,000	35,000,000
Natural gas.....	.....	15,500,084
Cement.....barrels..	8,222,792	6,680,951
Salt.....do....	9,987,945	4,716,121
Phosphate rock.....long tons..	587,988	3,651,150
Limestone for iron flux.....do....	5,000,000	2,300,000
Mineral waters.....gallons sold..	18,392,732	2,996,259
Zinc white.....short tons..	.....	1,600,000
Potters' clay.....long tons..	400,000	900,000
Mineral paints.....do....	47,652	658,478
Borax.....pounds..	13,380,000	869,700
Gypsum.....short tons..	208,126	628,051
Grindstones.....	.....	476,113
Fibrous talc.....short tons..	53,054	493,068
Pyrites.....long tons..	119,320	338,880
Soapstone.....short tons..	16,514	243,981
Manganese ore.....long tons..	23,416	239,129
Asphaltum.....short tons..	45,054	242,264
Precious stones.....	.....	235,300
Bromine.....pounds..	343,000	54,880
Corundum.....short tons..	2,265	90,230
Barytes (crude).....long tons..	31,069	118,363
Graphite.....pounds..	.....	110,000
Millstones.....	.....	16,587
Novaculite.....pounds..	1,375,000	150,000
Marls.....short tons..	135,000	67,500
Flint.....long tons..	15,000	60,000
Fluorspar.....short tons..	10,044	78,330
Chromic iron ore.....long tons..	1,372	20,580
Infusorial earth.....short tons..	.....	21,988
Feldspar.....long tons..	10,000	50,000
Mica.....pounds..	75,000	100,000
Ozocerite, refined.....do....	50,000	7,000
Cobalt oxide.....do....	7,200	18,000
Slate ground as a pigment.....long tons..	2,000	20,000
Sulphur.....short tons..	1,200	39,600
Asbestos.....do....	66	3,960
Rutile.....pounds..	300	800
Lithographic stone.....short tons..	.....	.....
Total value.....	.....	353,790,416

Résumé.

Metals.....	$302,307,922
Non-metallic mineral substances named in foregoing table.....	353,790,416
Estimated value of mineral products, unspecified.....	10,000,000
Grand total.....	666,105,837

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	12,175,600
5	Lead, value at New York City ..... short tons..	97,825	9,782,500	117,085	11,240,160
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	Aluminum, 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	.....	190,039,865	.....	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	.....	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	.....	.....	.....	.....
20	Cement ..... barrels..	2,072,943	1,852,707	2,500,000	2,000,000
21	Salt ..... do....	5,961,060	4,829,566	6,200,000	4,200,000
22	Phosphate rock ..... long tons..	211,377	1,123,823	266,734	1,980,259
23	Limestone for iron flux ..... do....	4,500,000	3,800,000	6,000,000	4,100,000
24	Mineral waters ..... gallons sold..	2,000,000	500,000	3,700,000	700,000
25	Zinc-white ..... short tons..	10,107	763,738	10,000	700,000
26	Potters' clay ..... long tons..	25,783	200,457	25,000	200,000
27	Mineral paints ..... do....	3,604	135,840	6,000	100,000
28	Borax ..... pounds..	3,692,443	277,233	4,046,000	304,461
29	Gypsum ..... short tons..	90,000	400,000	85,000	350,000
30	Grindstones	.....	500,000	.....	500,000
31	Fibrous talc ..... short tons..	4,210	54,730	5,000	60,000
32	Pyrites ..... long tons..	2,000	5,000	10,000	60,000
33	Soapstone ..... short tons..	8,441	66,665	7,000	75,000
34	Manganese ore ..... long tons..	5,761	86,415	4,895	73,425
35	Asphaltum ..... short tons..	444	4,440	2,000	8,000
36	Precious stones	.....	100,000	.....	110,000
37	Bromine ..... pounds..	404,690	114,752	300,000	75,000
38	Corundum ..... short tons..	1,044	29,280	500	80,000
39	Barytes (crude) ..... long tons..	20,000	80,000	20,000	80,000
40	Graphite ..... pounds..	.....	49,800	400,000	30,000
41	Millstones	.....	200,000	.....	150,000
42	Novaculite ..... pounds..	420,000	8,000	500,000	8,580
43	Marls ..... short tons..	1,000,000	500,000	1,000,000	500,000
44	Flint ..... long tons..	20,000	80,000	25,000	100,000
45	Fluorspar ..... short tons..	4,000	16,000	4,000	16,000
46	Chromic iron ore ..... long tons..	2,288	27,808	2,000	30,000
47	Infusorial earth ..... short tons..	1,833	45,660	1,000	10,000
48	Feldspar ..... long tons..	12,500	60,000	14,000	70,000
49	Mica ..... pounds..	81,669	127,825	100,000	250,000
50	Ozocerite, refined ..... do....	.....	.....	.....	.....
51	Cobalt oxide ..... do....	7,251	24,000	8,280	25,000
52	Slate ground as a pigment ..... long tons..	1,000	10,000	1,000	10,000
53	Sulphur ..... short tons..	600	21,000	600	21,000
54	Asbestos ..... do....	150	4,312	200	7,000
55	Rutile ..... pounds..	100	400	200	700
56	Lithographic stone ..... short tons	.....	.....	50	1,000
57	Total value of non-metallic mineral products..	.....	173,279,135	.....	206,783,144
58	Total value of metallic products	.....	190,039,865	.....	192,892,408
59	Estimated value of mineral products unspecified.	.....	6,000,000	.....	6,500,000
60	Grand total	.....	369,319,000	.....	406,175,552

for the calendar years 1880 to 1891.

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	4,044,525	$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	1,258,632	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
.....	.....	.....	.....	.....	.....	.....	.....	10
60	12,000	60	12,000	60	12,000	50	10,000	11
200	600	200	600	150	450	250	187	12
.....	219,755,109	.....	203,128,859	.....	186,109,599	.....	181,586,587	13
60,861,190	76,076,487	68,531,500	82,237,800	73,730,539	77,417,066	64,840,668	82,347,648	14
31,358,264	70,556,094	34,336,469	77,257,055	33,175,756	66,351,512	34,228,548	76,671,948	15
.....	21,000,000	.....	20,000,000	.....	19,000,000	.....	19,000,000	16
30,510,880	24,065,988	23,449,633	25,790,252	24,218,438	20,595,966	21,847,205	19,198,243	17
31,000,000	21,700,000	32,000,000	19,200,000	37,000,000	18,500,000	40,000,000	20,000,000	18
.....	215,000	.....	475,000	.....	1,460,000	.....	4,857,200	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
7,000	105,000	7,000	84,000	7,000	84,000	3,950	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	.....	221,879,506	.....	241,312,093	57
.....	219,755,109	.....	203,128,859	.....	186,109,599	.....	181,586,587	58
.....	6,500,000	.....	6,500,000	.....	5,000,000	.....	5,000,000	59
.....	457,595,259	.....	453,441,073	.....	412,989,105	.....	427,898,680	60

Mineral products of the United States for the

	Products.	1886.		1887.	
		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..	135,629	12,667,749	160,700	14,463,000
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.....	.....	215,364,825	.....	250,275,054
	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....	34,853,077	76,119,120	37,578,747	84,552,181
16	Building stone.....	.....	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.....	.....	10,012,000	.....	15,817,500
20	Cement.....barrels..	4,500,000	3,990,000	6,692,744	5,674,377
21	Salt .....do....	7,707,081	4,736,585	7,831,962	4,093,846
22	Phosphate rock .....long tons..	430,549	1,872,936	480,558	1,836,818
23	Limestone for iron flux.....do....	4,717,163	2,830,297	5,377,000	3,226,200
24	Mineral waters .....gallons sold..	8,950,317	1,284,070	8,259,609	1,261,463
25	Zinc-white .....short tons..	18,000	1,440,000	18,000	1,440,000
26	Potters' clay .....long tons..	40,000	325,000	43,000	340,000
27	Mineral paints .....do....	15,800	285,000	20,000	310,000
28	Borax .....pounds..	9,778,290	488,915	11,000,000	550,000
29	Gypsum.....short tons..	95,250	428,625	95,000	425,000
30	Grindstones.....	.....	250,000	.....	224,400
31	Fibrous talc.....short tons..	12,000	125,000	15,000	160,000
32	Pyrites.....long tons..	55,000	220,000	52,000	210,000
33	Soapstones.....short tons..	12,000	225,000	12,000	225,000
34	Manganese ore.....long tons..	30,193	277,636	34,524	333,844
35	Asphaltum.....short tons..	3,500	14,000	4,000	16,000
36	Precious stones.....	.....	119,056	.....	163,600
37	Bromine.....pounds..	428,334	141,350	199,087	61,717
38	Corundum.....short tons..	645	116,190	600	108,000
39	Barytes (crude) .....long tons..	10,000	50,000	15,000	75,000
40	Graphite .....pounds..	415,525	33,242	416,000	34,000
41	Millstones.....	.....	140,000	.....	100,000
42	Novaculite .....pounds..	1,160,000	15,000	1,200,000	16,000
43	Marls .....short tons..	800,000	400,000	600,000	300,000
44	Flint.....long tons..	30,000	120,000	32,000	185,000
45	Fluorspar .....short tons..	5,000	22,000	5,000	20,000
46	Chromic iron ore.....long tons..	2,000	30,000	3,000	40,000
47	Infusorial earth .....short tons..	1,200	6,000	3,000	15,000
48	Feldspar .....long tons..	14,900	74,500	10,200	56,100
49	Mica .....pounds..	40,000	70,000	70,000	142,250
50	Ozocerite, refined .....do....	.....	.....	.....	.....
51	Cobalt oxide.....do....	35,000	36,878	18,340	18,774
52	Slate ground as a pigment.....long tons..	3,000	30,000	2,000	20,000
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	Lithographic stone .....short tons..	40	700	.....	.....
57	Total value of non-metallic mineral products.	.....	245,139,469	.....	287,416,320
58	Total value of metallic products.....	.....	215,364,825	.....	250,275,054
59	Estimated value of mineral products unspecified.	.....	5,000,000	.....	5,000,000
60	Grand total.....	.....	465,504,294	.....	542,691,374

calendar years 1880 to 1891—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	70,464,645	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	38,455,300	4
180,555	15,924,951	182,967	16,137,689	161,754	14,266,703	202,406	17,609,322	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	22,926	1,203,615	22,904	1,036,386	7
204,328	127,632	252,663	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
.....	.....	.....	.....	.....	.....	125,289	25,058	10
100	20,000	115	28,000	129	40,756	278	47,007	11
500	2,000	500	2,000	600	2,500	100	500	12
.....	256,257,517	.....	269,590,487	.....	307,334,207	.....	302,307,922	13
91,106,998	101,860,529	85,383,059	94,346,809	99,392,871	110,420,801	105,268,962	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	.....	42,809,706	.....	47,000,000	.....	47,294,746	16
27,612,025	17,947,620	35,163,513	26,963,340	45,822,672	35,365,105	54,291,980	32,575,188	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
6,503,295	5,021,139	7,000,000	5,000,000	8,000,000	6,000,000	8,222,792	6,680,951	20
8,055,881	4,374,203	8,005,565	4,195,412	8,776,991	4,752,286	9,987,945	4,716,121	21
448,567	2,018,552	550,245	2,937,776	510,499	3,213,795	587,988	3,651,150	22
5,438,000	2,719,000	6,318,000	3,159,000	5,521,622	2,760,811	5,000,000	2,300,000	23
9,578,648	1,679,302	12,780,471	1,748,458	13,907,418	2,600,750	18,392,732	2,996,259	24
20,000	1,600,000	16,970	1,357,600	.....	1,600,000	.....	1,600,000	25
36,750	300,000	294,344	635,578	350,000	756,000	400,000	900,000	26
24,000	380,000	32,307	463,766	45,732	661,992	47,652	658,478	27
7,589,000	455,340	8,000,000	500,000	9,500,000	617,500	13,380,000	869,700	28
110,000	550,000	267,769	764,118	182,995	574,523	208,126	628,051	29
.....	281,800	.....	439,587	.....	450,000	.....	476,113	30
20,000	210,000	23,746	244,170	41,354	389,196	53,054	493,068	31
54,331	167,658	93,705	202,119	111,836	273,745	119,320	338,880	32
15,000	250,000	12,715	231,708	13,670	252,309	16,514	243,981	33
29,198	279,571	24,197	240,559	25,684	219,050	23,416	239,129	34
53,800	331,500	51,735	171,537	40,841	190,416	45,054	242,264	35
.....	139,850	.....	188,807	.....	118,833	.....	235,300	36
307,386	95,290	418,891	125,667	387,847	104,719	343,000	54,880	37
589	91,620	2,245	105,565	1,970	89,395	2,265	90,230	38
20,000	110,000	19,161	106,313	21,911	86,505	31,069	118,363	39
400,000	33,000	.....	72,662	.....	77,509	.....	110,000	40
.....	81,000	.....	35,155	.....	23,720	.....	16,587	41
1,500,000	18,000	5,982,000	32,980	.....	69,909	1,375,000	150,000	42
300,000	150,000	139,522	63,956	153,620	69,880	135,000	67,500	43
30,000	175,000	11,113	49,137	13,000	57,400	15,000	60,000	44
6,000	30,000	9,500	45,835	8,250	55,328	10,044	78,330	45
1,500	20,000	2,000	30,000	3,599	53,985	1,372	20,580	46
1,500	7,500	3,466	23,372	2,532	50,240	.....	21,988	47
8,700	50,000	6,970	39,370	8,000	45,200	10,000	50,000	48
48,000	70,000	49,500	50,000	60,000	75,000	75,000	100,000	49
43,500	3,000	50,000	2,500	350,000	26,250	50,000	7,000	50
8,491	15,782	13,955	31,092	6,788	16,291	7,200	18,000	51
2,500	25,000	2,000	20,000	2,000	20,000	2,000	20,000	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
.....	.....	18	243	.....	.....	.....	.....	56
.....	303,241,114	.....	307,640,175	.....	339,270,491	.....	353,790,416	57
.....	256,257,517	.....	269,590,487	.....	307,334,207	.....	302,307,922	58
.....	5,000,000	.....	10,000,000	.....	10,000,000	.....	10,000,000	59
.....	564,498,631	.....	587,230,662	.....	656,604,698	.....	666,105,837	60