

DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 2

GOLD AND SILVER CONVERSION TABLE
OF TROY OUNCES OF FINE METAL
FINE METAL REPRESENT
OF UNITED STATES

WASHINGTON
GOVERNMENT PRINTING OFFICE
1885

QE 75

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No 2-5

ADVERTISEMENT.

The publications of the United States Geological Survey are issued in accordance with the statute, approved March 3, 1879, which declares that—

"The publications of the Geological Survey shall consist of the annual report of operations, geological and economic maps illustrating the resources and classifications of the lands, and reports upon general and economic geology and paleontology. The annual report of operations of the Geological Survey shall accompany the annual report of the Secretary of the Interior. All special memoirs and reports of said Survey shall be issued in uniform quarto series if deemed necessary by the Director but otherwise in ordinary octavos. Three thousand copies of each shall be published for scientific exchanges and for sale at the price of publication; and all literary and cartographic materials received in exchange shall be the property of the United States and form a part of the library of the organization. And the money resulting from the sale of such publications shall be covered into the Treasury of the United States."

ANNUAL REPORTS.

From the above it will be seen that only the Annual Reports, which form parts of the reports of the Secretary of the Interior and are printed as executive documents, are available for gratuitous distribution. A number of these are furnished the Survey for its exchange list, but the bulk of them are supplied directly, through the document rooms of Congress, to members of the Senate and House. Except, therefore, in those cases in which an extra number is supplied to this office by special resolution, application must be made to members of Congress for the Annual Reports, as for all other executive documents.

Of these annuals there have been already published:

I. First Annual Report to the Hon. Carl Schurz, by Clarence King, 8^o, Washington, 1880, 79 pp., 1 map.—A preliminary report describing plan of organization and publications.

II. Report of the Director of the United States Geological Survey for 1880-'81, by J. W. Powell, Washington, 1882, 1v, 588 pp., 61 plates, 1 map.

CONTENTS.

Report of the Director, pp. i-lv, plates 1-7.

Administrative Reports by Heads of Divisions, pp. 1-46, plates 8 and 9.

The Physical Geology of the Grand Cañon District, by Capt. C. E. Dutton, pp. 47-166, plates 10-36.

Contributions to the History of Lake Bonneville, by G. K. Gilbert, pp. 167-200, plates 37-43.

Abstract of Report on the Geology and Mining Industry of Leadville, Colorado, by S. F. Emmons, pp. 201-290, plates 44 and 45.

A Summary of the Geology of the Comstock Lode and the Washoe District, by George F. Becker, pp. 291-330, plates 46 and 47.

Production of Precious Metals in the United States, by Clarence King, pp. 331-401, plates 48-53.

A New Method of Measuring Heights by means of the Barometer, by G. K. Gilbert, pp. 402-565, plates 54-61.

Index, pp. 567-588.

The Third and Fourth Annual Reports are now in press.

MONOGRAPHS.

The Monographs of the Survey are printed for the Survey alone, and can be distributed by it only through a fair exchange for books needed in its library, or through the sale of those copies over and above the number needed for such exchange. They are not for gratuitous distribution.

So far as already determined upon, the list of these monographs is as follows:

I. The Precious Metals, by Clarence King. In preparation.

II. Tertiary History of the Grand Cañon District, with atlas, by Capt. C. E. Dutton. Published.

BULLETIN UNITED STATES GEOLOGICAL SURVEY.

III. Geology of the Comstock Lode and Washoe District, with atlas, by George F. Becker. Published.

IV. Comstock Mining and Miners, by Eliot Lord. In press.

V. Copper-bearing Rocks of Lake Superior, by Professor R. D. Irving. In press.

VI. Older Mesozoic Flora of Virginia, by Prof. Wm. M. Fontaine. In press.

Geology and Mining Industry of Leadville, with atlas, by S. F. Emmons. In preparation.

Geology of the Eureka Mining District, Nevada, with atlas, by Arnold Hague. In preparation.

Coal of the United States, by Prof. R. Pumpelly. In preparation.

Iron in the United States, by Prof. R. Pumpelly. In preparation.

Lesser Metals and General Mining Resources, by Prof. R. Pumpelly. In preparation.

Lake Bonneville, by G. K. Gilbert. In preparation.

Dinocerata. A monograph on an extinct order of Ungulates, by Prof. O. C. Marsh. In press.

Sauropoda, by Prof. O. C. Marsh. In preparation.

Stegosauria, by Prof. O. C. Marsh. In preparation.

Of these monographs, Nos. II and III are published, viz:

II. Tertiary History of the Grand Cañon District, with atlas, by C. E. Dutton, Capt. U. S. A., 1882, 4^o, 264 pp., 42 plates, and atlas of 26 double sheets folio. Price \$10.12.

III. Geology of the Comstock Lode and Washoe District, with atlas, by G. F. Becker. 1883. 4^o. XV, 422 pp. 7 pl. and atlas of 21 sheets folio. Price, \$11.

Nos. IV, V, and VI are in press and will appear in quick succession. The others, to which numbers are not assigned, are in preparation.

BULLETINS.

In its Bulletins the Survey will print such papers relating to the general purpose of its work as do not properly come under the heads of ANNUAL REPORTS or MONOGRAPHS.

The Bulletins will each contain but one paper, and be complete in itself. They will, however, be numbered in a continuous series, and will in time be united into volumes of convenient size. To facilitate this each Bulletin will have two paginations, one proper to itself at the top, and at the bottom, one which belongs to it in the volume.

Of this series of Bulletins there has already been published:

1. On Hypersthene-Andesite and on Triclinic Pyroxene in Augitic Rocks, by Whitman Cross, with a Geological Sketch of Buffalo Peaks, Colorado, by S. F. Emmons, Washington, 1883, pp. 1-42, 2 plates, 8^o. Price ten cents.

The following paper forms No. 2. Its price is five cents.

Correspondence relating to the publications of the Survey, and all remittances, should be addressed to the

DIRECTOR OF THE UNITED STATES GEOLOGICAL SURVEY,

Washington, D. C.

WASHINGTON, D. C., *August 24, 1883.*

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BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 2



WASHINGTON
GOVERNMENT PRINTING OFFICE
1883

UNITED STATES GEOLOGICAL SURVEY

J. W. POWELL DIRECTOR

GOLD AND SILVER
CONVERSION TABLES

GIVING THE

COINING VALUES OF TROY OUNCES OF FINE METAL, AND THE
WEIGHTS OF FINE METAL REPRESENTED BY GIVEN
SUMS OF UNITED STATES MONEY

COMPUTED BY

ALBERT WILLIAMS, Jr.,

CHIEF OF DIVISION OF MINING STATISTICS AND TECHNOLOGY



WASHINGTON
GOVERNMENT PRINTING OFFICE
1883

GOLD.

OUNCES TO DOLLARS.

[1 ounce Troy = \$20.671834.]

Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.
1	20.671834	51	1,054.263534	100	2,067.1834	5,100	105,326.3534
2	41.343668	52	1,074.935368	200	4,134.3668	5,200	107,493.5368
3	62.015502	53	1,095.607202	300	6,201.5502	5,300	109,560.7202
4	82.687336	54	1,116.279036	400	8,268.7336	5,400	111,627.9036
5	103.359170	55	1,136.950870	500	10,335.9170	5,500	113,695.0870
6	124.031004	56	1,157.622704	600	12,403.1004	5,600	115,762.2704
7	144.702838	57	1,178.294538	700	14,470.2838	5,700	117,829.4538
8	165.374672	58	1,198.966372	800	16,537.4672	5,800	119,896.6372
9	186.046506	59	1,219.638206	900	18,604.6506	5,900	121,963.8206
10	206.718340	60	1,240.310040	1,000	20,671.8340	6,000	124,031.0040
11	227.390174	61	1,260.981874	1,100	22,739.0174	6,100	126,098.1874
12	248.062008	62	1,281.653708	1,200	24,806.2008	6,200	128,165.3708
13	268.733842	63	1,302.325542	1,300	26,873.3842	6,300	130,232.5542
14	289.405676	64	1,322.997376	1,400	28,940.5676	6,400	132,299.7376
15	310.077510	65	1,343.669210	1,500	31,007.7510	6,500	134,366.9210
16	330.749344	66	1,364.341044	1,600	33,074.9344	6,600	136,434.1044
17	351.421178	67	1,385.012878	1,700	35,142.1178	6,700	138,501.2878
18	372.093012	68	1,405.684712	1,800	37,209.3012	6,800	140,568.4712
19	392.764846	69	1,426.356546	1,900	39,276.4846	6,900	142,635.6546
20	413.436680	70	1,447.028380	2,000	41,343.6680	7,000	144,702.8380
21	434.108514	71	1,467.700214	2,100	43,410.8514	7,100	146,770.0214
22	454.780348	72	1,488.372048	2,200	45,478.0348	7,200	148,837.2048
23	475.452182	73	1,509.043882	2,300	47,545.2182	7,300	150,904.3882
24	496.124016	74	1,529.715716	2,400	49,612.4016	7,400	152,971.5716
25	516.795850	75	1,550.387550	2,500	51,679.5850	7,500	155,038.7550
26	537.467684	76	1,571.059384	2,600	53,746.7684	7,600	157,105.9384
27	558.139518	77	1,591.731218	2,700	55,813.9518	7,700	159,173.1218
28	578.811352	78	1,612.403052	2,800	57,881.1352	7,800	161,240.3052
29	599.483186	79	1,633.074886	2,900	59,948.3186	7,900	163,307.4886
30	620.155020	80	1,653.746720	3,000	62,015.5020	8,000	165,374.6720
31	640.826854	81	1,674.418554	3,100	64,082.6854	8,100	167,441.8554
32	661.498688	82	1,695.090388	3,200	66,149.8688	8,200	169,509.0388
33	682.170522	83	1,715.762222	3,300	68,217.0522	8,300	171,576.2222
34	702.842356	84	1,736.434056	3,400	70,284.2356	8,400	173,643.4056
35	723.514190	85	1,757.105890	3,500	72,351.4190	8,500	175,710.5890
36	744.186024	86	1,777.777724	3,600	74,418.6024	8,600	177,777.7724
37	764.857858	87	1,798.449558	3,700	76,485.7858	8,700	179,844.9558
38	785.529692	88	1,819.121392	3,800	78,552.9692	8,800	181,912.1392
39	806.201526	89	1,839.793226	3,900	80,620.1526	8,900	183,979.3226
40	826.873360	90	1,860.465060	4,000	82,687.3360	9,000	186,046.5060
41	847.545194	91	1,881.136894	4,100	84,754.5194	9,100	188,113.6894
42	868.217028	92	1,901.808728	4,200	86,821.7028	9,200	190,180.8728
43	888.888862	93	1,922.480562	4,300	88,888.8862	9,300	192,248.0562
44	909.560696	94	1,943.152396	4,400	90,956.0696	9,400	194,315.2396
45	930.232530	95	1,963.824230	4,500	93,023.2530	9,500	196,382.4230
46	950.904364	96	1,984.496064	4,600	95,090.4364	9,600	198,449.6064
47	971.576198	97	2,005.167898	4,700	97,157.6198	9,700	200,516.7898
48	992.248032	98	2,025.839732	4,800	99,224.8032	9,800	202,583.9732
49	1,012.919866	99	2,046.511566	4,900	101,291.9866	9,900	204,651.1566
50	1,033.591700	100	2,067.183400	5,000	103,359.1700	10,000	206,718.3400

SILVER.
OUNCES TO DOLLARS.

[1 ounce Troy = \$1.2929.]

Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.
1	1.2929	51	65.9379	100	129.29	5,100	6,593.79
2	2.5858	52	67.2308	200	258.58	5,200	6,723.08
3	3.8787	53	68.5237	300	387.87	5,300	6,852.37
4	5.1716	54	69.8166	400	517.16	5,400	6,981.66
5	6.4645	55	71.1095	500	646.45	5,500	7,110.95
6	7.7574	56	72.4024	600	775.74	5,600	7,240.24
7	9.0503	57	73.6953	700	905.03	5,700	7,369.53
8	10.3432	58	74.9882	800	1,034.32	5,800	7,498.82
9	11.6361	59	76.2811	900	1,163.61	5,900	7,628.11
10	12.9290	60	77.5740	1,000	1,292.90	6,000	7,757.40
11	14.2219	61	78.8669	1,100	1,422.19	6,100	7,886.69
12	15.5148	62	80.1598	1,200	1,551.48	6,200	8,015.98
13	16.8077	63	81.4527	1,300	1,680.77	6,300	8,145.27
14	18.1006	64	82.7456	1,400	1,810.06	6,400	8,274.56
15	19.3935	65	84.0385	1,500	1,939.35	6,500	8,403.85
16	20.6864	66	85.3314	1,600	2,068.64	6,600	8,533.14
17	21.9793	67	86.6243	1,700	2,197.93	6,700	8,662.43
18	23.2722	68	87.9172	1,800	2,327.22	6,800	8,791.72
19	24.5651	69	89.2101	1,900	2,456.51	6,900	8,921.01
20	25.8580	70	90.5030	2,000	2,585.80	7,000	9,050.30
21	27.1509	71	91.7959	2,100	2,715.09	7,100	9,179.59
22	28.4438	72	93.0888	2,200	2,844.38	7,200	9,308.88
23	29.7367	73	94.3817	2,300	2,973.67	7,300	9,438.17
24	31.0296	74	95.6746	2,400	3,102.96	7,400	9,567.46
25	32.3225	75	96.9675	2,500	3,232.25	7,500	9,696.75
26	33.6154	76	98.2604	2,600	3,361.54	7,600	9,826.04
27	34.9083	77	99.5533	2,700	3,490.83	7,700	9,955.33
28	36.2012	78	100.8462	2,800	3,620.12	7,800	10,084.62
29	37.4941	79	102.1391	2,900	3,749.41	7,900	10,213.91
30	38.7870	80	103.4320	3,000	3,878.70	8,000	10,343.20
31	40.0799	81	104.7249	3,100	4,007.99	8,100	10,472.49
32	41.3728	82	106.0178	3,200	4,137.28	8,200	10,601.78
33	42.6657	83	107.3107	3,300	4,266.57	8,300	10,731.07
34	43.9586	84	108.6036	3,400	4,395.86	8,400	10,860.36
35	45.2515	85	109.8965	3,500	4,525.15	8,500	10,989.65
36	46.5444	86	111.1894	3,600	4,654.44	8,600	11,118.94
37	47.8373	87	112.4823	3,700	4,783.73	8,700	11,248.23
38	49.1302	88	113.7752	3,800	4,913.02	8,800	11,377.52
39	50.4231	89	115.0681	3,900	5,042.31	8,900	11,506.81
40	51.7160	90	116.3610	4,000	5,171.60	9,000	11,636.10
41	53.0089	91	117.6539	4,100	5,300.89	9,100	11,765.39
42	54.3018	92	118.9468	4,200	5,430.18	9,200	11,894.68
43	55.5947	93	120.2397	4,300	5,559.47	9,300	12,023.97
44	56.8876	94	121.5326	4,400	5,688.76	9,400	12,153.26
45	58.1805	95	122.8255	4,500	5,818.05	9,500	12,282.55
46	59.4734	96	124.1184	4,600	5,947.34	9,600	12,411.84
47	60.7663	97	125.4113	4,700	6,076.63	9,700	12,541.13
48	62.0592	98	126.7042	4,800	6,205.92	9,800	12,670.42
49	63.3521	99	127.9971	4,900	6,335.21	9,900	12,799.71
50	64.6450	100	129.2900	5,000	6,464.50	10,000	12,929.00

GOLD.

DOLLARS TO OUNCES.

[1 dollar=0.048374957925 ounce Troy.]

Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.
1	0.048375	51	2.467123	100	4.837496	5,100	246.712285
2	0.096750	52	2.515498	200	9.674992	5,200	251.549781
3	0.145125	53	2.563873	300	14.512487	5,300	256.387277
4	0.193500	54	2.612248	400	19.349983	5,400	261.224773
5	0.241875	55	2.660623	500	24.187470	5,500	266.062269
6	0.290250	56	2.708998	600	29.024975	5,600	270.899764
7	0.338625	57	2.757373	700	33.862471	5,700	275.737260
8	0.387000	58	2.805748	800	38.699966	5,800	280.574756
9	0.435375	59	2.854123	900	43.537462	5,900	285.412252
10	0.483750	60	2.902497	1,000	48.374958	6,000	290.249748
11	0.532125	61	2.950872	1,100	53.212454	6,100	295.087243
12	0.580499	62	2.999247	1,200	58.049950	6,200	299.924739
13	0.628874	63	3.047622	1,300	62.887445	6,300	304.762235
14	0.677249	64	3.095997	1,400	67.724941	6,400	309.599731
15	0.725624	65	3.144372	1,500	72.562437	6,500	314.437227
16	0.773999	66	3.192747	1,600	77.399933	6,600	319.274722
17	0.822374	67	3.241122	1,700	82.237428	6,700	324.112218
18	0.870749	68	3.289497	1,800	87.074924	6,800	328.949714
19	0.919124	69	3.337872	1,900	91.912420	6,900	333.787210
20	0.967499	70	3.386247	2,000	96.749916	7,000	338.624705
21	1.015874	71	3.434622	2,100	101.587412	7,100	343.462201
22	1.064249	72	3.482997	2,200	106.424907	7,200	348.299697
23	1.112624	73	3.531372	2,300	111.262403	7,300	353.137193
24	1.160999	74	3.579747	2,400	116.099899	7,400	357.974689
25	1.209374	75	3.628122	2,500	120.937395	7,500	362.812184
26	1.257749	76	3.676497	2,600	125.774891	7,600	367.649680
27	1.306124	77	3.724872	2,700	130.612386	7,700	372.487176
28	1.354499	78	3.773247	2,800	135.449882	7,800	377.324672
29	1.402874	79	3.821622	2,900	140.287378	7,900	382.162168
30	1.451249	80	3.869997	3,000	145.124874	8,000	387.999663
31	1.499624	81	3.918372	3,100	149.962370	8,100	391.837159
32	1.547999	82	3.966747	3,200	154.799865	8,200	396.674655
33	1.596374	83	4.015122	3,300	159.637361	8,300	401.512151
34	1.644749	84	4.063496	3,400	164.474857	8,400	406.349647
35	1.693124	85	4.111871	3,500	169.312353	8,500	411.187142
36	1.741498	86	4.160246	3,600	174.149849	8,600	416.024638
37	1.789873	87	4.208621	3,700	178.987344	8,700	420.862134
38	1.838248	88	4.256996	3,800	183.824840	8,800	425.699630
39	1.886623	89	4.305371	3,900	188.662336	8,900	430.537126
40	1.934998	90	4.353746	4,000	193.499832	9,000	435.374621
41	1.983373	91	4.402121	4,100	198.337327	9,100	440.212117
42	2.031748	92	4.450496	4,200	203.174823	9,200	445.049613
43	2.080123	93	4.498871	4,300	208.012319	9,300	449.887109
44	2.128498	94	4.547246	4,400	212.849815	9,400	454.724604
45	2.176873	95	4.595621	4,500	217.687311	9,500	459.562100
46	2.225248	96	4.643996	4,600	222.524806	9,600	464.399596
47	2.273623	97	4.692371	4,700	227.362302	9,700	469.237092
48	2.321998	98	4.740746	4,800	232.199798	9,800	474.074588
49	2.370373	99	4.789121	4,900	237.037294	9,900	478.912083
50	2.418748	100	4.837496	5,000	241.874790	10,000	483.749579

SILVER. DOLLARS TO OUNCES.

[1 dollar=0.773455023513 ounce Troy.]

Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.	Dollars.	Ounces.
1	0.77346	51	39.44621	100	77.34550	5,100	3,944.62062
2	1.54691	52	40.21966	200	154.69100	5,200	4,021.96612
3	2.32037	53	40.99312	300	232.03651	5,300	4,099.31162
4	3.09382	54	41.76657	400	309.38201	5,400	4,176.65713
5	3.86728	55	42.54003	500	386.72751	5,500	4,254.00263
6	4.64073	56	43.31348	600	464.07301	5,600	4,331.34813
7	5.41419	57	44.08694	700	541.41852	5,700	4,408.69363
8	6.18764	58	44.86039	800	618.76402	5,800	4,486.03914
9	6.96110	59	45.63385	900	696.10952	5,900	4,563.38464
10	7.73455	60	46.40730	1,000	773.45502	6,000	4,640.73014
11	8.50801	61	47.18076	1,100	850.80053	6,100	4,718.07564
12	9.28146	62	47.95421	1,200	928.14603	6,200	4,795.42115
13	10.05492	63	48.72767	1,300	1,005.49153	6,300	4,872.76665
14	10.82837	64	49.50112	1,400	1,082.83703	6,400	4,950.11215
15	11.60183	65	50.27458	1,500	1,160.18254	6,500	5,027.45765
16	12.37528	66	51.04803	1,600	1,237.52804	6,600	5,104.80316
17	13.14874	67	51.82149	1,700	1,314.87354	6,700	5,182.14866
18	13.92219	68	52.59494	1,800	1,392.21904	6,800	5,259.49416
19	14.69565	69	53.36840	1,900	1,469.56454	6,900	5,336.83966
20	15.46910	70	54.14185	2,000	1,546.91005	7,000	5,414.18516
21	16.24256	71	54.91531	2,100	1,624.25555	7,100	5,491.53067
22	17.01601	72	55.68876	2,200	1,701.60105	7,200	5,568.87617
23	17.78947	73	56.46222	2,300	1,778.94655	7,300	5,646.22167
24	18.56292	74	57.23567	2,400	1,856.29206	7,400	5,723.56717
25	19.33638	75	58.00913	2,500	1,933.63756	7,500	5,800.91268
26	20.10983	76	58.78258	2,600	2,010.98306	7,600	5,878.25818
27	20.88329	77	59.55604	2,700	2,088.32856	7,700	5,955.60368
28	21.65674	78	60.32949	2,800	2,165.67407	7,800	6,032.94918
29	22.43020	79	61.10295	2,900	2,243.01957	7,900	6,110.29468
30	23.20365	80	61.87640	3,000	2,320.36507	8,000	6,187.64019
31	23.97711	81	62.64986	3,100	2,397.71057	8,100	6,264.98569
32	24.75056	82	63.42331	3,200	2,475.05608	8,200	6,342.33119
33	25.52402	83	64.19677	3,300	2,552.40158	8,300	6,419.67670
34	26.29747	84	64.97022	3,400	2,629.74708	8,400	6,497.02220
35	27.07093	85	65.74368	3,500	2,707.09258	8,500	6,574.36770
36	27.84438	86	66.51713	3,600	2,784.43808	8,600	6,651.71320
37	28.61784	87	67.29059	3,700	2,861.78359	8,700	6,729.05870
38	29.39129	88	68.06404	3,800	2,939.12909	8,800	6,806.40421
39	30.16475	89	68.83750	3,900	3,016.47459	8,900	6,883.74971
40	30.93820	90	69.61095	4,000	3,093.82009	9,000	6,961.09521
41	31.71166	91	70.38441	4,100	3,171.16560	9,100	7,038.44071
42	32.48511	92	71.15786	4,200	3,248.51110	9,200	7,115.78622
43	33.25857	93	71.93132	4,300	3,325.85660	9,300	7,193.13172
44	34.03202	94	72.70477	4,400	3,403.20210	9,400	7,270.47722
45	34.80548	95	73.47823	4,500	3,480.54761	9,500	7,347.82272
46	35.57893	96	74.25168	4,600	3,557.89311	9,600	7,425.16823
47	36.35239	97	75.02514	4,700	3,635.23861	9,700	7,502.51373
48	37.12584	98	75.79859	4,800	3,712.58411	9,800	7,579.85923
49	37.89930	99	76.57205	4,900	3,789.92962	9,900	7,657.20473
50	38.67275	100	77.34550	5,000	3,867.27512	10,000	7,734.55024

NOTICE.

The bulletins of the United States Geological Survey will be numbered in a continuous series and will be bound in volumes of convenient size.

This bulletin will be included in Volume I.