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Preliminary map showing the location of productive lode and placer gold mines in Montana (with explanatory text)

by

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Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Geological Survey. This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

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INTRODUCTION

This map shows the location of placer and lode mines and prospects in Montana that have produced or might be capable of producing more than 500 troy ounces of gold. The map shows only that portion of Montana west of 108° west longitude and north of 44° 45' north latitude--no gold has been produced from the parts of the State not shown.

Data for 446 gold mines and prospects are shown on the map by different sized and shaped spots. Size of spot denotes one of four size classes and shape is coded for deposit type. Table 1 lists site names numerically by map number and gives, for each locality, the map number, site name, synonymous names, commodities present, type and age of host rocks and any associated igneous rocks, location (latitude and longitude) and references to the sources from which we compiled the data. In the table, sites are organized by county and numbered consecutively by mining district within each county. Three indices are provided. Table 2 lists site names and synonyms alphabetically and gives the map number for each so the information may be cross referenced to either the map or table 1. Table 3 lists the names of mining districts alphabetically and lists the map numbers for the deposits the district comprises. Table 4 lists the names of the counties alphabetically and the map numbers for the deposits within each county.

AUTHORSHIP AND ACKNOWLEDGMENTS

All authors collaborated in planning the scope and form of this report. W. H. Raymond compiled all the data for placer mines. For the lode deposits and prospects, responsibilities for data compilation were divided among the authors based on latitude and longitude. R. C. Pearson compiled data for lode mines and prospects between 45° and 46° north latitude, 111° and 114° west longitude (the Dillon 1°x 2° quadrangle and the western half of the Bozeman 1°x 2° quadrangle); J. E. Elliott compiled data for the area between 46° and 47° north, 112° and 114° west (the Butte quadrangle) and 45° and 46° north, 109° and 111° west (the west half of the Billings and the east half of the Bozeman quadrangle); and E. E. Foord compiled data for the area between 46° and 47° north, 110° and 112° west (the White Sulphur Springs quadrangle). D. Frishman compiled data for the remainder of the State, merged and edited the data, produced the computer files used to plot the map, and organized and prepared the report.

The authors gratefully acknowledge Anna Wilson whose comments improved the clarity of this manuscript. Jane Ciener provided valuable advice on final preparation of the map, and Bill Stephens did the final drafting.

GOLD MINING HISTORY

As is true for most mineralized areas in the Western United States, the early mining history of Montana is synonymous with gold mining history. According to Browne (1868):

> Gold was discovered in Montana by a French half-breed, named Francois Finlay, about the year 1852, on Gold Creek, a branch of the Hell Gate river [now called the Clark Fork]. He was merely prospecting, and did not find the gold in sufficient quantities to induce him to work the mines. In 1856 other prospectors found gold at the same mines, but did not work them. In the fall of 1860 the Brothers Stuart & Co.

> prospected near the same place, and in 1861 and 1862 commenced working in earnest with sluices. This was the first regular placer mining in the Territory [of Montana]. In 1861 they wrote to some of their friends in Colorado in reference to their prospects and hopes, and induced quite a number of adventurers to come to Montana in the spring of 1862.
>
> The mines on Gold creek not promising as rich as was expected, the Stuarts and others began to prospect the country extensively, and that summer found some mines on a gulch at the head of the Big Hole, which, however, were not very productive. Early in the same summer the mines at Bannock on Grasshopper creek were discovered. These were so rich and extensive that the other mines were abandoned, and by the fall of 1862 nearly all the miners in the Territory, numbering about 1,000, had congregated at this place (Browne, 1868, p. 496-498).

The discovery of the rich placer gold deposits in Alder Gulch in the spring of 1863 and the discovery of the Last Chance placers on the present site of Helena in the summer of 1864 assured Montana's importance as a mining region; within 18 months of the Alder Gulch discovery, Virginia City and other nearby camps had a population of over 10,000 and it is reported that gold valued at $30 million (in early 1860 dollars) was recovered in the first three years of mining there (Browne, 1868).

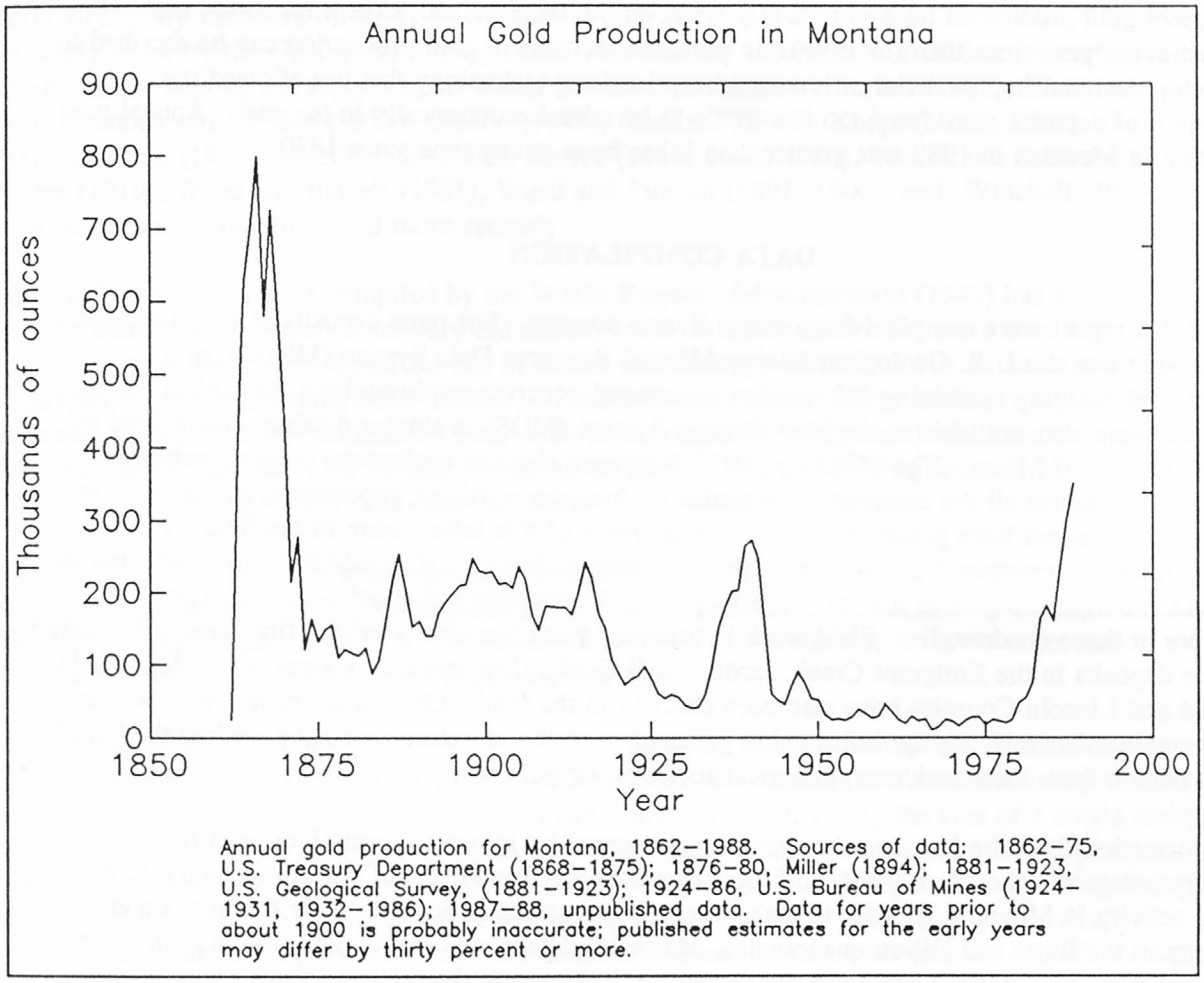
Estimates for the amount of gold produced annually in Montana in the early years range widely. Again according to Browne (1868):

> Montana is the most difficult mining region in the United States in which to estimate the yield of the mines. Occupation has a great effect in the formation of opinions on this subject. Bankers and expressmen always underestimate; merchants and successful miners generally overestimate; unsuccessful miners underestimate, while ranchmen and farmers have no opinion based on any reliable data on the subject (Browne, 1868, p. 507).

The difficulty of obtaining reliable production statistics notwithstanding, annual gold production for the State from 1862 through 1988 is shown below.

Although the early peak in production between the years 1863 and 1870 is largely due to production from placer deposits, lode deposits were discovered soon after or even contemporaneously with the placers. Lode production had become significant by the 1870's, although development of the mines was hindered by a lack of transportation and high freight charges. After the Union Pacific Railroad was completed in 1869, most supplies were brought in by wagon from the nearest rail point at Corrine, Utah, nearly 500 miles away. Most of the ore required advanced metallurgical treatment unavailable locally and so had to be either hauled by wagon to the railroad in Utah or to Fort Benton on the Missouri River. In either case, it was then transshipped to seaports where it was shipped to Europe for smelting. Rail transport became available in southwestern Montana in 1882 and the advent of lower freight charges did much to spur development of the mines (Winchell, 1914).

Gold production continued at an uneven though moderate level throughout the late 1800's and early 1900's, although the location of mining activity shifted with time. The Marysville district was prominent from 1880 to 1900, whereas the North Moccasin and Warm Springs districts in Fergus County were very active in the period between 1900 and 1920. Production dropped appreciably



Annual gold production for Montana, 1862–1988. Sources of data: 1862–75, U.S. Treasury Department (1868–1875); 1876–80, Miller (1894); 1881–1923, U.S. Geological Survey, (1881–1923); 1924–86, U.S. Bureau of Mines (1924–1931, 1932–1986); 1987–88, unpublished data. Data for years prior to about 1900 is probably inaccurate; published estimates for the early years may differ by thirty percent or more.

during World War I (gold exports were prohibited when the United States entered the war in 1918) and did not recover until the fixed price was raised nearly 70 percent from $20.67 to $35.00 per ounce in 1934. Production was again curtailed during World War II. War Production Board Order L-208 issued on October 8, 1942 declared most gold and silver mines to be "nonessential" and nearly all the mines in Montana were closed by the end of 1943 (Koschmann and Bergendahl, 1968, Shawe, 1988, U.S. Bureau of Mines, 1942, 1943).

When the ban on gold mining was lifted at the end of the war, production recovered briefly but declined again as inflation increased labor and material costs and eroded the value of the fixed price of $35 per ounce. Between the end of the war and 1979, annual gold production in Montana was low; average gold production for the 27 year period 1952 to 1979 was almost exactly 25,000 ounces per year. Well over half the gold produced during this period (approaching 90 percent in some years) was a byproduct of copper and zinc mining operations conducted by the Anaconda Company at Butte (U.S. Bureau of Mines, 1952-1979).

The United States international monetary policy was changing in the late 1960's and early 1970's, and the U.S. dropped the gold standard in 1971--private citizens were again allowed to own gold (Shawe, 1988). Price increases in subsequent years were a spur to gold exploration, if not gold production,

but by 1979 gold production on Montana was again on the increase and, except for 1985, has increased every year since then (to 1990). In part, the increase in gold production can be ascribed to the development and improvement of low cost heap-leaching technology that has allowed the exploitation of deposits considered too low-grade to be mined economically in the past. Annual gold production in Montana in 1989 was greater than it has been at any time since 1870.

DATA COMPILATION

Data for this report were compiled from many diverse sources. For most deposits in the State, our starting point was the U.S. Geological Survey Mineral Resource Data System (MRDS), a computerized database containing information on mineral occurrences throughout the United States. Some data were also available in the Map Overlay System (MOS), a similar database maintained by the U.S. Bureau of Mines. The MRDS or MOS data were checked against the original published references to confirm all the information available on location, geology, production, grade, etc. In most cases, it has not been possible to check the accuracy of this information in the field. Field work done for the Conterminous United States Mineral Appraisal Program (CUSMAP) in the Butte and the Dillon 1° x 2° quadrangles in the early 1980's provided additional information for some gold producers in those quadrangles. Field work in previous years has also provided first-hand information on some deposits in the Emigrant Creek, Jardine, and Cooke City areas, and some of the deposits in Flathead and Lincoln Counties have also been checked in the field. Other than those areas, we have not been able to corroborate the information gathered from the literature, nor have we had the benefit of information from local residents, historical societies, or miners.

The information from the literature has been supplemented by informal discussions with mining company personnel who are working in Montana and by our knowledge of current (January 1990) mining activity in Montana in order to make our data as current as possible. For the mines and prospects in the Butte and Dillon quadrangles, additional details concerning data compilation can be found in Elliott et al. (1986) and Loen and Pearson (1989), respectively.

Some of the more important data sources, some of them partly compilations of older information, have been reports published by the Montana Bureau of Mines and Geology. These include reports on the mines and mineral deposits of Sanders County by Crowley (1963), Beaverhead County by Geach (1972), Lincoln and Flathead Counties by Johns (1970), Powell County by McLernan (1976), Jefferson County by Roby and others (1960), Missoula and Ravalli Counties by Sahinen (1957), and the gold placers of Montana by Lyden (1948). Additional reports on mining districts or individual mines have also been valuable, as have the various directories of Montana mining enterprises published intermittently by the Bureau since 1919. Between 1968 and 1987, these invaluable reports were compiled by D. C. Lawson.

A series of reports published by the U.S. Bureau of Mines as part of a study of the Missouri River basin in the early 1950's complement the county reports published by the State. These are reports on the mines and mineral deposits of Park and Broadwater Counties by Reed (1950, 1951), reports on Fergus and Cascade Counties by Robertson (1950, 1951), a report on Meagher County by Roby (1950), and a report on Judith Basin County by Robertson and Roby (1951). Reports on the Tobacco Root Mountains and on the Philipsburg mining district by Lorain (1937 and 1950, respectively) were also helpful.

Reports written by members of the U.S. Geological Survey have also been used extensively. In many cases, early work by the Geological Survey constitutes the only information available for certain long inactive mines. Among the reports upon which we relied are those by Barrell (1907), Emmons (1907), Emmons and Calkins (1913), Gibson (1948), Goddard (1940), Knopf (1913), Lindgren (1903), Lovering (1929), MacDonald (1906), Pardee (1918, 1922, 1951), Pardee and Schrader (1933), Schrader (1910), Weed and Barrell (1901), Weed and Pirsson (1897, 1900), and Winchell (1914), as well as numerous works published more recently.

Finally, a little-known report compiled by the Works Projects Administration (1942) has been useful in gaining additional information on very old mines, some of them inactive for more than 100 years. This volume, published as Montana Bureau of Mines and Geology Memoir 21, is an annotated bibliography containing, among other indices, an index to mine names. This bibliography includes references to more obscure publications that, without its existence, would no doubt have escaped our notice (such as 19th and early 20th century volumes of Engineering and Mining Journal, Mining and Scientific Press, Mining World, and Mining Truth).

Many decisions must be made when making a compilation like this that are not based on firm data. Compromises are necessitated by the amount and quality of available information. We cannot discuss all these problematic matters here, but will mention two kinds of problems, if for no other reason to assure the knowledgeable reader that we are aware of them.

One type of problem is exemplified by the production histories of the lode deposits in the Butte district and the placer deposits around Virginia City. In both areas, the deposits were worked many times over many years. Initial production was from small mines, commonly only the size of a single claim, located on rich surficial or supergene-enriched deposits. Later, claims were amalgamated, placer ground once worked only by hand was worked over by steam powered dredges, and adjoining lode mines were connected underground. Later still, placers were reworked yet again by electrically powered dredges and underground mines were consolidated under one owner and the deposit worked as an open pit. In such a situation, what constitutes a mine? Does the deposit warrant one large spot on the map or many small ones? For Butte and Alder Gulch, we have made the pragmatic decision to represent each of these districts by a single symbol because we felt it would be essentially impossible to unravel their long and complicated production histories. Similar decisions had to be made for many other deposits and districts. Differences in the data available in the literature required that the way in which production is lumped or split in different mining districts is, unavoidably, inconsistent.

Another problem concerns the definitions of "production" and "reserves." We found references to mines that were developed extensively but had negligible production. Some of these mines probably have geologic reserves of more than 500 ounces of gold, but those reserves may be contained in relatively low grade, refractory ore in deep, narrow veins and we deemed it unlikely that those mines would ever be reopened. Such mines do not appear on the map. However, in some cases well-kept production and financial records indicate that a mine did produce more than 500 ounces of gold, but not economically. That is, the mine produced, but actually never had any economic or minable reserves. In the vast majority of cases, however, the available records do not allow us to distinguish geologic reserves from minable reserves. Therefore, if the records show that a mine produced enough gold to exceed our admittedly arbitrary threshold, it is shown on the map whether the property was profitable or not.

A similar situation exists for placer deposits. We are aware of a number of localities where large deposits of gold-bearing gravel occur, yet these placer deposits are not shown because the gold is so fine grained or the deposits so low grade that it can not be recovered economically.

MINES AND PROSPECTS MAP

In Montana, 446 deposits distributed in 22 counties have produced or contain plausibly producible reserves of more than 500 ounces of gold. Twelve deposits have produced or have reserves of more than 500,000 ounces each, and 60 other deposits have each produced between 50,000 and 500,000 ounces. Montana has produced about 19.3 million ounces of lode and placer gold from 1852 through 1988. Approximately half the total was mined before 1900 when production records were poorly kept; thus the figure for total production is, to a large extent, an estimate.

The locations of these gold mines and prospects are plotted on the maps. The large map shows all the mines and prospects. In three areas, the mines are so close together that they cannot be distinguished individually at a scale of 1:500,000. For those areas, the mine symbols only (without site numbers) are shown on the large map and detailed maps of individual mining districts (Detail Areas A through C) show the locations of the mines that could not be presented legibly at the smaller scale.

The mines and prospects are divided into seven types of deposits and into four classes based on amount of production plus reserves. The lode mines are further subdivided into four classes based on age of mineralization. Summaries for these deposit type, size, and age classes are listed below.

	Deposit type	Number of sites
1.	Placer	135
2.	Vein and replacement	289
3.	Stockwork or disseminated	7
4.	Breccia pipe	2
5.	Exhalative	3
6.	Skarn	8
7.	Unknown	2
	Total	446

Size Class	Number of lode deposits (percentage of total lodes)	Number of placer deposits (percentage of total placers)
500 to 5,000 ounces	67 (50)	175 (56)
5,000 to 50,000 ounces	42 (31)	90 (29)
50,000 to 500,000 ounces	23 (17)	37 (12)
More than 500,000 ounces	3 (2)	9 (3)
Total	135	311

Of the twenty numerically rare types of lode deposits (stockwork or disseminate, breccia pipe, exhalative, and skarn), approximately half of them are either currently major producers or are in advanced stages of development or permitting. Of the 289 vein and replacement deposits listed in table 1, fewer than ten produced in 1989 (McCulloch, 1989). Of those that did produce, many produced only minor amounts of gold from rescreening of dump material, processing small tonnages of ore produced by development work, or from small-scale heap-leaching operations.

TABLE 1

Table 1 lists information for each numbered site shown on the map. Site names are listed in numeric order by map number. Map numbers were assigned geographically by county with the intention of making it as easy as possible to find a particular number on the map after the site name and number have been identified in table 1. The site name listed is the one that seemed to be most commonly used and is usually the name of a mine (for lodes) or a creek or gulch (for placers). In some cases, the name is that of a claim, a group of claims, or, rarely, an exploration project. For simplicity, most of the descriptive terms by which the sites listed in table 1 have variously been known have been dropped from the list (i.e., mine, lode, shaft, tunnel, deposit, incline, fraction, etc.); lode mines are followed by "(L)" and placers by "(P)." In a few cases, the descriptive "placer", "group", "property", "dredge workings", or "prospect" label has been retained for clarity, to avoid duplication, or because the term is an integral part of the site name. Synonymous names are listed where they are known, as are the names of properties whose production was lumped with that of the property listed under "Site Name."

Metals and other commodities known to be present are listed in approximate decreasing order of economic importance. Several different sources were used to determine what commodities were present including descriptions and analyses in the literature, production and grade figures, and unpublished U.S. Geological Survey chemical analyses and mineral identifications. For some small mines and for some mines that ceased production long ago, we suspect that the list of commodities present is incomplete. For lode mines having recorded production, not all the commodities listed were necessarily recovered--some may be minor elements that are listed because they record the geochemical signature of the deposit. Industrial commodities, however (like silicon or abrasive sand), are listed only when they were produced. Silver is listed as a commodity along with gold for all placer mines because we are confident that silver was produced and, eventually, refined, even from those placer deposits whose gold was of high fineness.

Host rock type is the lithology from which the gold or gold-bearing minerals were extracted (for disseminated, stockwork, exhalative, breccia pipe, and placer deposits) or the rock surrounding the gold-bearing material (for vein, replacement, and skarn deposits). An entry is included under "Associated igneous rocks" if there is a close spatial relationship between the host rock and an igneous body (or bodies) or some other reason to suspect a genetic relationship between the igneous rock and ore. If the host rock is an igneous rock and no other igneous rock is present, the rock name or names listed under "Host rock type" are repeated under "Associated igneous rocks." Most of the lithologic terms used are taken from the literature, and therefore, the rigor of terminology used reflects the source of the information. Rock names may be based on detailed petrographic study, geochemistry, or field descriptions of any degree of precision. We did try, however, to use the most accurate description available.

Locations are listed to the nearest second of latitude and longitude. Mine locations were either digitized or manually interpolated from the most accurate map available, usually the standard edition U.S. Geological Survey 1:24,000 scale topographic quadrangles. Where 1:24,000 maps have not yet been published or have been published only as the Provisional Edition, 1:62,500 scale maps were used.

Table 1 lists a maximum of five sources of data for any property. The references listed as sources of data may not, therefore, constitute a complete list of sources. Where possible, we tried to include at least one recent reference that would allow a reader to compile a more complete list if desired. The data used to compile table 1 are listed in Frishman and others (1990).

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Table 1--Gold Mines in Montana

[Sites are plotted by site number on the map. Commodities are listed in approximate decreasing order of importance. Codes for commodities present and abbreviations for time terms are explained following this table. Numbers is the column entitled "Sources of data" are keyed to the list of references that also follows this table. --, no data or not applicable]

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Toole County							
1 Eclipse Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	48 52 00	111 23 00	86
Flathead County							
2 Flathead (L)	Includes West Flathead	Ag Pb Au Cu Zn	Latite porphyry (Olig.)	Rhyolite, vitrophyre, latite, andesite (Olig.)	47 55 23	114 34 55	53 61 131
3 Ole Hill (L)	Hog Heaven project	Ag Au	Volcaniclastics, latite, latite porphyry (Olig.)	Latite porphyry, rhyolite, andesite (Olig.)	47 55 26	114 36 01	53 61
Lincoln County							
4 Keystone and Goldflint (L)	Lincoln Mining Co., Haywire Mining Co., Morning Glory Mines Inc.	Au Ag Pb Cu	Quartzite, argillite (M. Prot.)	--	48 42 24	115 53 02	19 61 49 132 15
5 Evergreen placer (P)	Yaak (or Yahk) River; includes Fourth of July Creek	Au Ag	Alluvium (Quat.)	--	48 42 04	115 51 58	19 49
6 Snowstorm (L)	B & B	Ag Pb Zn Au Cu	Mafic dike (Prot?)	--	48 25 58	115 59 24	61 49
7 Glacier Silver-Lead (L)	Hazel T., Lukens-Hazel	Ag Pb Au	Sandstone, shale (M. Prot.)	--	48 18 15	115 35 46	61 49
8 Libby Creek (P)	Libby, Snowshoe; includes Howard Creek, Bear Creek, Little Cherry Creek, and other tributaries	Au Ag	Alluvium, glacial till (Quat.)	--	48 17 30	115 30 28	86 68 149 128
9 Snowshoe (L)	Rustler	Ag Pb Au Zn	Sandstone, limestone, calcareous shale, argillite (M. Prot.)	--	48 12 17	115 38 40	61 49 87

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Lincoln County--Continued							
10 Midas (L)	Includes Rose Consolidated	Au W	Argillite, siltstone, limestone, quartzite (M. Prot.)	--	48 04 56	115 30 36	61 49
11 Gloria (L)	Little Annie, Golden West Mining Co.	Au Pb Zn	Sandstone, sandy argillite (M. Prot.)	--	48 03 47	115 34 44	61 49
12 American Kootenai (L)	--	Au	Sandstone (M. Prot.)	--	48 03 02	115 32 40	61 49 16 18 156
13 Jumbo Group (L)	Blacktail, Tip Top, New Deal; includes Union Group (or Union Lode) and Hannegan (or Libby)	Au Ag	Argillite (M. Prot.)	--	48 02 43	115 32 17	61 49
14 Branagan (L)	Branigan, Fisher Creek	Au	Argillite (M. Prot.)	--	48 02 24	115 31 58	61 49 17 18
Sanders County							
15 Jack Waite (L)	--	Pb Zn Cu Ag Au	Argillite, quartzite (M. Prot.)	--	47 39 48	115 43 13	25 59
16 Drake (L)	Green Mountain, Trade Dollar, Dixon, Eagle	Cu Au Ag Pt Pd Pb	Quartzite and shaly quartzite (M. Prot.)	Hornblende gabbro (unknown)	47 16 02	114 24 17	25 56
Mineral County							
17 Cedar Creek, Oregon Gulch, and tributaries (P)	Includes Snowshoe Gulch	Au Ag	Alluvium (Quat.)	--	47 08 36	114 58 03	86 149 119
18 Deep Creek (P)	--	Au Ag	Alluvium (Quat.)	--	47 03 09	114 58 16	86
19 Trout Creek (P)	--	Au Ag	Alluvium (Quat.)	--	47 01 41	114 58 21	86
20 Windfall Creek (P)	--	Au Ag	Alluvium (Quat.)	--	47 02 11	114 55 18	149 119 2
21 Quartz Creek and Tucker Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	47 00 39	114 49 01	86 149
Missoula County							

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
22 Nine Mile and San Martina (L)	--	Au Ag	Argillite (Prot.)	--	47 12 57	114 39 20	123

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Missoula County--Continued							
23 Housum placer (P)	--	Au Ag	Glacial till, glacial moraine, alluvium (Quat.)	--	47 12 31	114 37 24	86 149
24 Josephine Creek (P)	--	Au Ag	Glacial till, glacial moraine, alluvium (Quat.)	--	47 09 49	114 31 00	86 149
25 McCormick Creek (P)	--	Au Ag	Glacial till, glacial moraine, alluvium (Quat.)	--	47 08 55	114 29 45	86 149
26 Ninemile Creek and tributaries (P)	Includes production from St. Louis Gulch, Eustache Gulch, Pine Creek, Marion Creek, and Dry Gulch	Au Ag	Glacial till, glacial moraine, alluvium (Quat.)	--	47 08 00	114 30 45	86 149 68 148 123
27 Elk Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 53 38	113 23 05	149 86 68 38
28 Rambler (L)	Valley, Crystal Springs, Clemantha, Cato	Au Ag Cu Sb As Mo Pb	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 50 45	113 22 55	35 100 123 73
29 Mammoth (L)	--	Au Ag Cu Sb Pb	Limestone (Camb.)	Granodiorite (L. Cret.)	46 50 33	113 22 57	30 35 100 109 123
30 McGinnis Creek (P)	Includes Melhorn Gulch and Washoe Creek	Au Ag	Alluvium (Quat.)	--	46 50 41	113 22 43	86 149 38
Ravalli County							
31 Eightmile Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 39 05	113 56 05	86 38
32 Curlew (L)	Elizabeth, Pauline	Zn Pb Ag Au Cu	Unknown (Prot?)	--	46 27 18	114 11 02	123 75 54
33 Hughes Creek (P)	Includes Wood placer	Au Ag	Undifferentiated sedimentary deposits (Quat., Tert?)	--	45 36 53	114 08 24	149 86
Beaverhead County							
34 Star & Star Extension (L)	--	Au Ag Cu Pb Zn	Quartzite (M. Prot.)	Tonalite (Cret.)	45 47 22	113 01 38	47

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Beaverhead County--Continued							
35 Lone Pine (L)	Quartz Hill, Jay Hawk, Argyle	Ag Cu Pb Zn Au	Dolomite (Camb.)	Granodiorite (Cret.)	45 42 56	112 53 48	144 47 125
36 Lion Mountain (L)	--	Ag Pb Zn Cu Au	Dolomite (Camb., Dev.)	Granodiorite (Cret.)	45 36 16	112 55 52	63 125 47
37 Cleve-Avon (L)	--	Ag Pb Au	Dolomite (Dev., Camb.(?))	Granodiorite (Cret.)	45 36 18	112 54 46	63 47 162
38 Trapper (L)	--	Pb Ag Au Cu Zn	Dolomite (Camb.)	Granodiorite (Cret.)	45 35 46	112 54 50	63 47
39 Elkhorn (L)	Boston and Montana	Ag Cu Pb Mo Au	Granodiorite (Cret.)	Granodiorite (Cret.)	45 29 24	113 02 20	125 162 47
40 Ajax (L)	--	Au Pb Ag Cu	Quartzite (M. Prot.)	Diorite (unknown)	45 19 25	113 43 26	125 47
41 French and Watson Gulches (P)	--	Au Ag	Alluvium (Quat.)	--	45 21 00	112 54 05	86 149
42 Yellow Band (L)	Shafer	Au Ag Cu Pb Zn	Dolomite (Dev.)	Andesite, latite porphyry (unknown)	45 20 06	112 54 15	47
43 Golden Era (L)	--	Au Ag Pb	Argillite (M. Prot.)	Granodiorite (Cret.)	45 19 05	112 53 07	125 130 47
44 Mayday (L)	--	Au Pb Ag Zn Cu	Argillite (M. Prot.)	Granodiorite (Cret.)	45 19 10	112 52 27	47
45 Rena (L)	--	Pb Zn Au Ag Cu	Argillite (M. Prot.)	Granodiorite (Cret.)	45 18 51	112 52 58	125
46 Groundhog (L)	--	Au Pb Ag	Limestone (Camb.)	Granodiorite (Cret.)	45 18 49	112 52 37	130
47 Tuscarora (L)	Includes Governor Tilden	Pb Ag Au Zn Cu	Dolomite (Dev.)	Granodiorite (Cret.)	45 18 47	112 52 19	125 130 47
48 Goldfinch (L)	--	Au Pb Ag Cu Zn	Argillite (M. Prot.)	Granodiorite (Cret.)	45 18 28	112 53 59	125 47
49 Sylvia (L)	--	Pb Ag Au Zn Cu	Quartzite (Camb.)	Granodiorite (Cret.)	45 18 19	112 53 28	47
50 Midnight (L)	--	Pb Ag Au Cu	Argillite (M. Prot.)	Granodiorite (Cret.)	45 18 25	112 53 08	162 130 47
51 Hand (L)	--	Pb Ag Cu Zn Au	Limestone (Miss.)	Granodiorite (Cret.)	45 17 12	112 51 53	125 130 47
52 Rattlesnake Creek (P)	--	Au Ag	Alluvium (Quat.)	--	45 16 50	112 51 30	86 149
53 Ermont (L)	--	Au Ag Cu	Limestone (Miss.), granodiorite (Cret.)	Porphyritic andesite (Cret.)	45 15 58	112 54 51	47 125

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Beaverhead County--Continued							
54 Grasshopper Creek (P)	Bannack placers; includes Bon Accord placer	Au Ag	Undifferentiated sedimentary deposits (Quat., Tert.)	--	45 09 10	112 58 30	86 68 149
55 Gold Bug (L)	Includes Blue Grass and Dakota	Au Ag Cu Pb	Limestone (Miss.)	Granodiorite (Cret.)	45 09 34	112 58 30	47 130
56 Hendricks (L)	Graeter	Au Ag Cu Pb	Limestone (Miss)	Granodiorite (Cret.)	45 09 20	112 59 45	47 130
57 Golden Leaf (L)	Sleeping Princess	Au Ag Cu Pb Zn	Limestone (Miss.)	Granodiorite (Cret.)	45 09 19	112 59 05	130 47 162
58 Excelsior (L)	--	Au Ag Cu	Limestone (Miss.)	Granodiorite (Cret.)	45 08 58	112 58 42	47 162 130
59 Jeff Davis Gulch (P)	Horse Prairie, Chinatown, Colorado Gulch	Au Ag	Alluvium (Quat.)	--	44 53 30	113 12 37	86 149
Madison County							
60 Barton Creek (P)	Mining Creek	Au Ag	Alluvium (Quat.)	--	45 12 50	112 04 21	86 149
61 Oro Cache (L)	--	Au	Gneiss (Arch.)	--	45 12 30	111 55 15	162
62 Kearsarge (L)	--	Au Ag	Gneiss (Arch.)	--	45 13 01	111 55 50	162 143
63 Marietta (L)	Greenback	Ag Au	Aplite, gneiss (Arch.?)	--	45 13 02	111 57 37	143 149
64 Bartlett (L)	--	Au	Gneiss (Arch.)	--	45 13 45	111 55 45	148
65 High Up (L)	--	Au	Gneiss (Arch.)	--	45 13 30	111 57 05	143 148
66 Easton-Pacific (L)	--	Au Ag	Aplite (Arch.)	--	45 13 54	111 57 35	162 143 149
67 Apex (L)	--	Au	Unknown (unknown)	--	45 14 22	111 58 27	148
68 Winnetka (L)	--	Au Ag Zn	Gneiss (Arch.)	--	45 15 12	111 54 40	143 82 149
69 St. John (L)	--	Au	Gneiss (Arch.)	--	45 15 16	111 54 45	162 148
70 Mountain Flower (L)	Mountain Chief	Au	Gneiss (Arch.)	--	45 15 37	111 59 37	143 148
71 Homestake and Blackrock (L)	Homestake, Black Rock	Au	Gneiss (Arch.)	--	45 16 20	111 57 20	82 143 148
72 El Fleeda (L)	El Fleda	Au	Gneiss (Arch.)	--	45 16 32	111 56 59	143 148
73 Cornucopia (L)	Includes Cabin Lode	Au Ag	Gneiss (Arch.)	--	45 16 45	111 56 44	148

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Madison County--Continued							
74 Alameda (L)	Includes Bamboo Chief	Au Ag	Gneiss (Arch.)	--	45 16 54	111 57 29	162 143 148
75 U.S. Grant (L)	--	Au Ag	Gneiss (Arch.)	--	45 16 55	111 56 28	162 143
76 Prospect (L)	--	Au Ag	Gneiss (Arch.)	--	45 17 22	111 57 48	143 148
77 Alder Gulch (P)	Virginia City; includes Browns Gulch and other tributaries	Au Ag	Alluvium (Quat.)	--	45 19 26	112 00 06	86 41
78 Mapleton (L)	Includes East Mapleton	Au	Gneiss (Arch.)	--	45 19 30	111 58 18	143 148
79 Missouri-McKee (L)	McKee, George McKee	Au Ag	Gneiss (Arch.)	Andesite porphyry (Cret?)	45 27 13	111 52 56	143 149 148
80 Lehigh (L)	Aurora Creek mine	Au	Gneiss (Arch.)	Granitic and aplitic dikes (Cret.)	45 29 47	111 50 33	82 162 148
81 North Meadow Creek (P)	Includes Hogum Gulch, Parker Gulch, and Washington Creek (Washington Bar)	Au Ag	Alluvium (Quat.)	--	45 30 45	111 49 15	86
82 Revenue (L)	Monitor-Revenue	Au Ag	Quartz monzonite (Cret.)	Quartz monzonite (Cret.)	45 32 04	111 46 15	143 162 149
83 Lexington (Norris district) (L)	--	Au Ag	Quartz monzonite (Cret.)	Quartz monzonite (Cret.)	45 32 10	111 46 00	148
84 Galena (L)	--	Au Ag	Quartz monzonite (Cret.)	Quartz monzonite, leucocratic monzonite (Cret.)	45 33 48	111 46 02	143 162 148
85 Madisonian (L)	--	Au Ag Cu Pb	Quartz monzonite (Cret.)	Quartz monzonite (Cret.)	45 29 45	111 42 30	162 82
86 Montana Boy (L)	Includes Grubstake	Au	Gneiss (Arch.)	Quartz monzonite (Cret.)	45 31 05	111 40 58	162 82
87 Josephine (L)	--	Au Ag	Gneiss (Arch.)	Quartz monzonite (Cret.)	45 33 32	111 39 25	143
88 Boaz (L)	--	Au Ag	Gneiss (Arch.)	Quartz monzonite aplite (unknown)	45 33 37	111 39 16	143 162 149
89 Red Bluff (L)	--	Au	Gneiss (Arch.)	Quartz monzonite (Cret.)	45 34 47	111 38 49	143 162

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Madison County--Continued							
90 Birdie (L)	--	Au Ag Cu Pb	Gneiss (Arch.)	Quartz monzonite (Cret.)	45 33 53	111 37 25	162 148
91 Norwegian Creek (P)	--	Au Ag	Alluvium (Quat.)	--	45 37 55	111 45 45	86
92 Norwegian (L)	--	Au	Quartz monzonite (Cret.)	Quartz monzonite (Cret.)	45 36 09	111 47 56	143 82
93 Harris Creek (P)	Includes California Creek (tributary to Harris Creek)	Au Ag	Alluvium (Quat.)	--	45 23 12	112 03 23	149 86
94 Bivens Gulch (P)	Bevins Creek	Au Ag	Alluvium (Quat.)	--	45 24 06	112 03 33	149 86
95 Agitator-Concentrator (L)	--	Au Ag	Marble (Arch.)	--	45 26 10	112 03 28	82 143 149
96 Goldschmidt (L)	Goldsmith, Steiner	Au Ag Mn	Marble (Arch.)	--	45 27 00	112 02 45	82
97 Smuggler (L)	Emma B	Au Ag Cu	Marble, gneiss (Arch.)	--	45 28 57	112 02 18	143
98 Broadgauge-Tamarack (L)	--	Au Ag	Marble, gneiss (Arch.)	Quartz monzonite (Cret.)	45 28 52	112 07 49	143 82 14
99 Wisconsin Creek (P)	--	Au Ag	Alluvium (Quat.)	--	45 30 10	112 10 10	149 86
100 Red Pine (L)	--	Au Ag Cu Pb	Marble (Arch.)	--	45 31 18	112 05 01	143 82 64 14
101 Noble (L)	Company	Au Ag Cu Zn	Marble (Arch.), trachyte, lamprophyre (Cret.?)	Quartz porphyry, trachyte, lamprophyre (Cret?)	45 32 12	112 06 30	162 143
102 Leiter (L)	--	Au Ag	Gneiss (Arch.)	--	45 33 02	112 06 50	162 143
103 Lakeshore (L)	Gladstone	Au Ag Pb Cu	Gneiss (Arch.)	Diorite (Cret.)	45 35 04	112 07 05	162 143 82
104 Fairview (L)	--	Au Ag Pb Zn Mn	Marble (Arch.)	Quartz monzonite (Cret.)	45 31 30	112 08 09	162 143 82
105 Corncracker (L)	--	Au Ag Cu	Gneiss (Arch.)	--	45 32 20	112 12 22	60 143 82
106 Hawkeye (L)	--	Au Ag Pb Zn	Limestone (Camb.)	--	45 32 48	112 12 12	82
107 High Ridge (L)	--	Au Ag Cu Pb Zn	Gneiss (Arch.), shale (Camb.)	--	45 32 32	112 11 53	60 143 162 82
108 Crystal Lake (L)	Elenora, Sunbeam	Au Ag Pb	Gneiss (Arch.)	--	45 33 10	112 10 40	162 143 60

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Madison County--Continued							
109 Carolina (L)	--	Au Ag Cu Pb Zn	Quartzite (Camb.)	--	45 33 17	112 11 15	60 162
110 Lottie (L)	--	Au Ag Cu Pb Zn	Gneiss (Arch.)	Quartz monzonite (Cret.)	45 33 45	112 11 30	60
111 Richmond (L)	Includes Eagle and Hummingbird	Au Ag Cu Pb Zn	Sandstone, shale (Camb.)	Andesite, quartz monzonite (Cret.)	45 34 00	112 11 45	60
112 Bielenberg & Higgins (L)	B & H	Au	Quartz monzonite (Cret.)	Quartz monzonite (Cret.)	45 35 38	112 07 50	82 143 60
113 Ohio (L)	--	Au Ag	Limestone (Camb.)	Syenite (Cret.)	45 38 05	112 09 20	99
114 Strawn (L)	--	Au Ag	Limestone (Camb.)	Porphyry dikes (Cret.)	45 40 00	112 07 53	143 60 82 99
115 Ridgeway (L)	Nicholson	Au Ag Cu Pb	Tonalite (Cret.)	Tonalite (Cret.)	45 35 43	112 00 48	99
116 Mammoth (L)	--	Au Ag Cu	Gneiss (Arch.)	Granodiorite (Cret.)	45 40 02	112 00 47	162 82 143 99
117 Atlantic and Pacific (L)	--	Au	Alaskite (Cret.)	Alaskite, tonalite (Cret.)	45 38 44	111 59 14	143 162 148
118 Ben Harrison Fraction (L)	--	Au Ag	Tonalite (Cret.)	Tonalite (Cret.)	45 39 22	111 58 27	82
119 Boss Tweed-Clipper (L)	--	Au Ag Cu	Gneiss (Arch.)	Tonalite (Cret.)	45 39 50	111 57 23	143 162
120 White Pine (L)	Pony	Au Ag	Gneiss (Arch.)	Tonalite (Cret.)	45 40 03	111 57 10	162
121 Old Joe (L)	--	Au Ag Pb	Gneiss (Arch.)	Tonalite (Cret.)	45 39 20	111 57 01	143 162
122 Strawberry-Keystone (L)	--	Au	Gneiss (Arch.)	Tonalite (Cret.)	45 39 50	111 56 09	149 143 162
123 Garnet (L)	--	Au Ag Pb	Tonalite (Cret.)	Tonalite (Cret.)	45 38 42	111 56 06	82 143 162
124 Mayflower (L)	Includes West Mayflower	Au Ag	Limestone (Camb.)	Andesite and latite (Cret.)	45 47 38	112 00 00	162 82 143
125 Gold Hill (L)	Includes Gold Hill, Mary Ingaber, Bluebird, Surprise, Parrot	Au Ag Cu	Sandstone (M. Prot.)	Quartz monzonite (Cret.)	45 47 06	112 05 55	162 109
126 Broadway (L)	Includes Bowery, Delaware, Maryland, and Victoria	Au Ag Cu Pb Zn	Limestone (Camb.)	Granodiorite (Cret.)	45 41 47	112 18 50	162 121 45 94
127 Hudson (L)	Includes Hudson, American, Ajax, Morning, Sample Orr	Au Ag Cu Pb Zn	Limestone (Camb.)	Granodiorite (Cret.)	45 41 40	112 18 37	162 121 45

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Madison County--Continued							
128 Green Campbell (L)	--	Au Ag Cu	Gneiss (Arch.)	Granodiorite (Cret.)	45 41 45	112 19 55	45 121
129 Aurora (L)	--	Au Ag Pb Cu Mn	Gneiss (Arch.)	Granodiorite (Cret.)	45 41 05	112 20 10	121
130 Iron Rod (L)	Golden Rod	Au Ag Cu Pb	Gneiss (Arch.)	Granodiorite (Cret.)	45 39 17	112 19 45	45 121 162 106
131 Watseca (L)	--	Au Pb Cu Zn	Gneiss (Arch.)	Diorite, quartz monzonite (Cret.)	45 37 12	112 30 19	162 121 149
132 Hidden Treasure (L)	Bieber, Kieth	Au	Unknown (unknown)	Granodiorite (Cret.)	45 30 27	112 35 40	148
Silver Bow County							
133 Moose Creek (P)	--	Au Ag	Alluvium (Quat.)	--	45 42 02	112 44 05	86
134 Gold King (L)	--	Au Ag Cu Pb	Limestone (Camb.)	Granodiorite (Cret.)	45 41 16	112 38 57	121
135 Clipper-Columbia (L)	--	Cu Au	Argillite (M. Prot.)	Quartz monzonite (Cret.)	45 43 27	112 33 19	122 162
136 Gold Hill (L)	Montreal	Au Ag Cu	Argillite (M. Prot.), diorite (Cret.)	Diorite (Cret.)	45 45 48	112 32 12	162 122
137 Butte Highlands (L)	Includes Highland, Nevin Hill, Only Chance, Tilton, Diamond T., Murphy, J. B. Thompson	Au Ag Cu Pb Zn	Dolomite (Camb.)	Diorite, quartz monzonite (Cret.)	45 47 50	112 30 56	98 122
138 Fish Creek (P)	--	Au Ag	Alluvium, eluvium (Quat.)	--	45 47 30	112 27 05	149 86
139 Butte district (L)	Summit Valley	Cu Ag Pb Zn Au Mn Cd Bi Se Te	Monzogranite (L. Cret.)	Monzogranite, aplite, pegmatite, alaksite, quartz porphyry (L. Cret.)	46 01 13	112 31 35	96
140 Missoula Gulch (P)	City of Butte, Summit Valley placer	Au Ag	Alluvium (Quat.)	--	46 00 15	112 32 55	149 86 38
141 Silver Bow Creek (P)	Clark Fork River	Au Ag	Alluvium (Quat.)	--	46 00 47	112 43 35	149 86 38
142 Tuxedo (L)	--	Au Ag Sil	Welded tuff (Tert.)	--	46 04 15	112 42 55	35

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Silver Bow County--Continued							
143 German Gulch (P)	--	Au Ag	Alluvium, eluvium (Quat.)	--	45 57 51	112 50 26	86 149
144 Beal Mountain (L)	--	Au	Hornfels (metamorphosed mudstone, sandstone, conglomerate) (Cret.)	Granodiorite (Cret.)	45 57 15	112 52 50	58
Deer Lodge County							
145 Champion Silver (L)	--	Ag Au Pb Zn Sb As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 13 59	112 36 36	35 69 103 109 148
146 Lost Creek (P)	Antelope Creek, Spring Creek	Au Ag	Alluvium (Quat.)	--	46 09 45	112 53 25	86 149 38
147 French Creek (P)	Includes California Creek (tributary to French Creek) and Oregon Creek	Au Ag	Alluvium (Quat.)	--	45 57 15	113 01 20	86 149 68
148 Gold Coin (L)	--	Au Ag Cu Pt	Dolomite (Camb.)	--	46 10 30	113 14 41	23 32 40 148
149 Luxemburg (L)	--	Au	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 11 34	113 14 25	32 40
150 Pyrenees (L)	--	Au Ag Cu As	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 11 43	113 14 15	32 40 109 148
151 Georgetown placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 11 53	113 14 58	86 149 68 38
152 Cable placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 11 47	113 12 50	86 149 38
153 Cable (L)	--	Au Ag Cu Pb Fe Mn Zn	Limestone, dolomite, shale (Camb.)	Granodiorite (L. Cret.)	46 12 00	113 12 59	32 39 40 109 142
154 Hold Fast-Short Shift-Goldenwedge (L)	--	Au Ag Cu	Dolomite (Camb.)	--	46 12 30	113 14 00	38
155 Southern Cross (L)	--	Au Ag Cu Bi As Fe Sb	Dolomite (Camb.)	--	46 12 37	113 14 07	10 32 40 148 3

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Granite County							
156 Hidden Lake (L)	--	Au Ag As Bi Zn	Quartzite (M. Prot.)	--	46 13 54	113 11 57	32 35
157 Red Lion (L)	--	Au Ag Co Ni	Dolomite (Camb.)	--	46 16 18	113 10 54	35 40 109
158 Hannah (L)	--	Au Ag Mn	Dolomite (Camb.)	--	46 16 48	113 10 42	32 35 40
159 Granite-Bimetallic (L)	Blaine, Ruby, Granite Mountain	Ag Au Cu Pb Zn Sb As	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 18 58	113 14 31	21 39 40 69 71
160 Trout (L)	Pocahontas, Speckled Trout, Gem, Algonquin	Mn Ag Pb Cu Zn Au As	Dolomite (Camb.)	--	46 19 46	113 16 01	40 44 50 83 105
161 Scratch Awl (L)	--	Ag Pb Zn Mn Cu Au As	Dolomite, limestone (Camb.)	Granodiorite (L. Cret.)	46 19 54	113 15 58	40 50 83 101 105
162 True Fissure (L)	--	Ag Pb Zn Mn Cu Au As	Limestone, dolomite (Camb., Dev.)	Granodiorite (L. Cret.)	46 20 06	113 15 53	40 50 83 101 105
163 Hope (L)	Potosi, Porter, Take All, Field, Prince, Imperial, and others	Ag Cu Pb Au Mn Ba Sb	Dolomite, limestone (Dev.)	--	46 20 38	113 16 27	21 40 72 105
164 Gold Hill (L)	--	Au Cu	Dolomite (Camb.)	--	46 24 23	113 11 10	40 109
165 Princeton Gulch (P)	--	Au PGM	Alluvium (Quat.)	--	46 25 15	113 09 50	48 86
166 Sunday (L)	--	Au Ag	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 24 44	113 05 40	40 134
167 Royal (L)	Port Royal	Au Ag Pb Cu	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 24 39	113 05 30	35 40 134
168 Pineau placer (P)	Friday placer	Au Ag	Alluvium (Quat.)	--	46 27 37	113 03 50	149 38
169 McFarland's placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 27 52	113 03 23	149 40
170 Master placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 28 15	113 03 00	149 38
171 Winchell placer (P)	Kolbeck placer	Au Ag	Alluvium (Quat.)	--	46 33 30	113 12 20	38
172 Durand (L)	--	Au Ag As	Quartzite (Camb.)	--	46 27 53	113 14 25	40 148
173 Henderson Creek (P)	--	Au W Snd Ag	Alluvium (Quat.)	--	46 30 06	113 15 42	149 86 68 38
174 Bunker Hill (L)	--	Au Ag Cu	Limestone (M. Prot.)	Granodiorite (L. Cret.)	46 28 50	113 19 15	40 148

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Granite County--Continued							
175 Sunrise (L)	Queen	Au Ag Cu Pb W As Sb	Marble (M. Prot.)	Granodiorite (L. Cret.)	46 29 05	113 19 42	12 22 35 40 153
176 Black Pine (L)	Combination	Ag Au Cu W Pb Zn As	Quartzite, argillite (M. Prot.)	--	46 26 52	113 21 56	35 40 150 153 161
177 Flint Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 19 50	113 19 08	149 86 38 137
178 Silver King (L)	--	Au Ag Cu Pb As Sb Bi	Limestone (M. Prot.)	Granodiorite (L. Cret.)	46 18 07	113 30 01	35 72
179 Mountain Ram (L)	--	Ag Au Ba Cu Mo Sn As	Limestone (M. Prot.)	--	46 14 08	113 27 10	35 40
180 Banner (L)	--	Au Ag Cu Zn As	Quartzite (M. Prot.)	--	46 03 03	113 32 07	35 155
181 Millers (L)	--	Au Ag Cu Pb Zn As B	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 01 48	113 40 48	35 155
182 Bee Bee No. 1 (L)	--	Au	Argillite (M. Prot.)	--	46 12 30	113 33 23	147
183 McDonald (L)	--	Au Ag	Argillite, limestone (M. Prot.)	--	46 12 35	113 33 12	35
184 Basin Creek and Quartz Creek (P)	--	Au Ag Sap	Alluvium (Quat.)	--	46 19 11	113 34 58	86 149 38
185 Miners Gulch (P)	Includes Alder Gulch, Niles Gulch, Homestake Gulch, Cowan Gulch, Sawpit Gulch, other minor producers	Au Ag	Alluvium (Quat.)	--	46 24 15	113 30 34	38 81
186 Welcome Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 34 30	113 44 30	149 86 38
187 Bear Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 43 00	113 19 42	149 68 86
188 Haparanda (L)	Aparanda	Au	Schist (M. Prot.), quartzite (Camb.)	--	46 48 38	113 17 38	100
189 Dandy (L)	Big Six	Au Ag Zn Cu Mo Sb	Quartzite (M. Prot.)	--	46 49 00	113 17 52	35 48 100 123
190 Fairview (L)	--	Au Ag Cu Ba Bi Mo Te	Quartzite (M. Prot.)	--	46 48 51	113 19 40	100

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Granite County--Continued							
191 Magone and Anderson (L)	--	Au Ag Cu Pb Sb	Quartzite (M. Prot.)	--	46 49 22	113 20 04	30 100 109
192 Red Cloud (L)	Crescent, Lead King	Au Ag Cu Pb Mo Ba Sb	Quartzite (M. Prot.)	Granodiorite (L. Cret.)	46 49 20	113 20 10	30 100 109 118
193 Grant and Hartford (L)	--	Au Ag Cu Pb Sb Ba	Quartzite (M. Prot.)	Granodiorite (L. Cret.)	46 49 23	113 20 12	30 100 109
194 Dewey (L)	--	Au Ag Cu Ba Sb	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 49 36	113 20 35	100 109
195 Tiger (L)	--	Au Ag	Limestone-dolomite (Camb.)	Granodiorite (L. Cret.)	46 49 33	113 20 40	100 109 148
196 Shamrock (L)	--	Au Cu Pb Sb Ba	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 49 38	113 20 32	100 118
197 Nancy Hanks (L)	Minnie Palmer	Au Ag Cu Pb Ba Sb As	Dolomite (Camb.)	Granodiorite (L. Cret.)	46 49 39	113 20 43	30 35 55 100 109
Powell County							
198 Gold Leaf (L)	--	Au Cu	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 49 54	113 15 41	30 100
199 Red Rock (L)	--	Au Ag Cu	Dolomite, limestone (Dev.)	Granodiorite (L. Cret.)	46 49 38	113 15 17	100
200 Pearl (L)	--	Au Cu Mn Mo Sn W	Dolomite, limestone (Dev.)	Granodiorite (L. Cret.)	46 49 18	113 15 22	35 100
201 Bilk & Weasel Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 49 03	113 14 47	149 38
202 Wasson Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 54 00	112 52 25	86 38
203 Wilson Creek (Big Blackfoot district) (P)	Kilburn, Raleigh	Au Ag	Alluvium (Quat.)	--	46 52 43	112 52 27	149 38
204 Blackfoot Gold (L)	Blackfoot	Au Ag Pb Cu W Bi Mo	Limestone (M. Prot.)	Granodiorite (L. Cret.)	46 51 50	112 50 48	35 90 141
205 Chimney Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 50 41	112 51 10	86 38
206 Nevada Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 49 58	112 53 40	86 38
207 Deer Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 48 48	112 50 14	86 38

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Powell County--Continued							
208 Chicken Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 48 40	112 49 00	86 38
209 Jefferson Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 47 33	112 42 56	149 86 38
210 Madison Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 47 38	112 42 50	86 149 38
211 Washington Creek (P)	Fontana placer	Au Ag	Alluvium (Quat.)	--	46 47 02	112 39 57	149 86 38
212 American Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 46 08	112 39 10	86 149 38
213 Lower Gold Creek (P)	China Bar	Au Ag	Alluvium (Quat.)	--	46 34 03	112 55 02	86 149 38 80 102
214 West Fork of Independence Creek (P)	Includes Windy Hill placer	Au Ag	Alluvium (Quat., Tert.)	--	46 31 47	112 53 30	149 38 80 102
215 Pikes Peak Creek (P)	--	Au Ag	Alluvium (Quat., Tert.)	--	46 31 00	112 54 45	86 149 38 80 102
216 Treadwater & Wilson Bar, Wood's Flat (P)	--	Au Ag	Colluvium, alluvium (Quat., Tert.)	--	46 31 12	112 55 30	38 80 102
217 Dry Gulch (P)	--	Au Ag	Colluvium, alluvium (Quat., Tert.)	--	46 30 45	112 56 10	149 38 80 102
218 Lower Pioneer Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 31 43	112 57 00	149 38 80
219 Pioneer Bar (P)	--	Au Ag	Alluvium (Quat., Tert.)	--	46 31 15	112 57 35	149 38 80 102
220 Reservoir Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 31 15	112 57 50	149 38 80 102
221 French Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 30 30	112 58 30	38 80 102
222 Ballard Hill (P)	Ballard, Job's Point	Au Ag	Alluvium (Quat., Tert.)	--	46 29 46	112 59 00	149 38 80 102
223 Main Fork of Pioneer Gulch (P)	Includes K and K Bar, Kohrs and Bielenberger placer, and 1916 pit	Au Ag	Alluvium (Quat., Tert.)	--	46 30 00	112 58 00	86 38 80 102
224 Pilgrim Bar (P)	--	Au Ag	Alluvium (Quat., Tert.)	--	46 30 10	112 55 05	38 80 102
225 Batterton Bar (P)	--	Au Ag	Alluvium (Quat., Tert.)	--	46 29 40	112 55 20	38 80 102
226 Squaw Gulch (P)	Kelly and Irvine pit	Au Ag	Alluvium (Quat., Tert.)	--	46 29 30	112 55 55	149 38 80 102

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Powell County--Continued							
227 Orphan Boy placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 28 25	112 55 25	38 80
228 Willow Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 26 43	112 57 02	86 149
229 Independence (L)	--	Au Ag Cu	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 27 00	113 00 22	37 90
230 Amazon (L)	--	Au Ag Cu	Quartz diorite (Cret.)	Quartz diorite (Cret.)	46 16 53	113 01 20	32 90
231 Caribou Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 19 06	112 44 05	86 149 38
232 Spring Creek and Rocker Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 21 55	112 35 40	149 86 38
233 Blue-eyed Maggie (L)	--	Ag Au Pb Cu Zn Sb As	Basalt (Tert. or Cret.)	--	46 22 31	112 34 58	90 103 113
234 Emery (L)	Carbonate Hill	Au Ag Pb Zn Cu As Sb	Andesite-basalt (Tert. or Cret.)	--	46 22 38	112 34 45	34 90 103 113
235 Bonanza (L)	--	Au Ag Pb Zn Cu As Sb	Basalt (Tert. or Cret.)	--	46 22 46	112 34 12	23 90 103 113 138
236 Hidden Hand (L)	--	Au Ag Pb Zn Cu Ni As	Andesite, tuff (Tert. or Cret.)	--	46 23 20	112 34 40	71 90 103 113 165
237 Emma Darling (L)	--	Ag Pb Au Cu Zn As	Basalt (Tert. or Cret.)	--	46 23 10	112 34 02	90 103 146
238 Monarch (L)	--	Ag Pb Au Cu Zn As Sb	Andesite (Cret.)	Monzogranite (L. Cret.)	46 24 25	112 24 10	67 71 90 103 120
239 Ontario (L)	--	Au Ag Pb Cu Zn As B	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 25 45	112 20 26	35 67 90 103 120
240 Surething (L)	O'Keefe	Au Ag Pb Zn Cu U As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 26 25	112 19 54	35 90 109 120
241 Anna R. and Hattie M. (L)	--	Au Ag Cu Pb Mn As B	Monzogranite, aplite (L. Cret.)	Monzogranite (L. Cret.)	46 27 17	112 20 36	35 90 120 146
242 Big Dick (L)	Evening Star	Au Ag Pb Cu Zn As Sb	Andesite breccia (Cret.)	--	46 28 35	112 24 25	35 67 90 103 120
243 Black Jack (L)	--	Au Ag Pb Cu Zn As	Andesite breccia (Cret.)	--	46 28 42	112 24 15	90 103 120

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Powell County--Continued							
244 Golden Anchor (L)	--	Au Ag Pb Zn As Sb	Volcanic rocks (Cret.)	--	46 28 40	112 24 40	90 103 120 165
245 Gold Canyon Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 37 10	112 24 45	149 86 38
246 Snowshoe Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 35 50	112 32 00	86 149 38
247 Carpenter Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 36 00	112 33 16	149 86 38
248 Ophir Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 37 55	112 32 32	149 86 38
249 Fairview (L)	Coulson	Ag Au Pb Cu Sb As Te	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 40 55	112 32 47	71 90 103
Lewis and Clark County							
250 Victory (L)	--	Au Ag Cu Mo Bi	Dolomite, limestone (Dev.)	Granodiorite (L. Cret.)	46 42 20	112 30 20	35 90 103
251 Ajax (L)	--	Au Ag Cu	Limestone (Camb.)	Granodiorite (L. Cret.)	46 42 55	112 29 30	90 103 35
252 McClellan Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 52 54	112 37 53	149 86 68 38
253 Sauerkraut Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 54 53	112 45 15	149 86 38
254 Stonewall Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 57 40	112 42 10	149 86
255 Lincoln Gulch (P)	--	Au Ag W	Alluvium (Quat.)	--	46 56 30	112 45 05	149 86 38
256 Blackfoot (L)	Big Blackfoot	Au	Limestone (M. Prot.)	Diorite (L. Cret.)	46 56 36	112 45 23	103 4
257 Calliope (L)	--	Au Ag	Rhyolite porphyry (Tert.)	--	47 03 02	112 22 18	103
258 Anaconda (L)	--	Au Ag Cu Pb	Argillite (M. Prot.), diorite (L. Prot.), granodiorite (Tert?)	Granodiorite porphyry (Tert?)	47 02 09	112 21 33	103 148
259 Mike Horse (L)	--	Pb Zn Ag Cu Au	Quartz diorite, siltite, argillite (Prot.)	Monzonite porphyry (Pal.-Eoc.)	47 01 33	112 21 36	103 148 97
260 Last Chance (L)	--	Au Ag Ba As Cu Mo	Andesite (Tert.)	Andesite (Tert.)	46 56 28	112 31 27	35 103

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Lewis and Clark County--Continued							
261 Silver Bell (L)	Swansea	Au Ag Cu Pb	Argillite (M. Prot.)	Granodiorite (Tert. or Cret.)	46 53 22	112 32 42	92
262 Nakoma (L)	Golconda	Au	Hornfels (M. Prot.)	--	46 52 42	112 28 04	103
263 Jay Gould (L)	Stemple	Au Ag Cu Fe	Hornfels (M. Prot.)	--	46 52 55	112 27 31	70 103
264 Fool Hen Creek (P)	Acme	Au Ag	Alluvium (Quat.)	--	46 53 46	112 25 55	86 147
265 Hubbard (L)	Mill tunnel	Au	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 52 15	112 27 13	103
266 Prize (L)	--	Au Cu	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 51 12	112 28 20	103
267 Gould Creek (P)	Blue Star placer	Au Ag	Alluvium (Quat.)	--	46 53 04	112 23 33	86 38 147
268 Virginia Creek (P)	Tarhead, Lopear, Specimen Creek	Au Ag	Alluvium (Quat.)	--	46 52 58	112 20 30	149 86 38
269 Canyon Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 51 04	112 17 40	149 86 38
270 Cottonwood Creek and Gravel Range (P)	--	Au Ag	Alluvium (Quat.)	--	46 50 27	112 19 04	149 86 38
271 Piegan Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 48 10	112 20 22	149 86 38
272 Piegan-Gloster (L)	--	Au	Granodiorite (L. Cret.)	Granodiorite (L. Cret.)	46 45 43	112 20 27	67 103
273 Empire (L)	--	Au Ag Cu Pb Zn	Hornfels (M. Prot.)	--	46 45 21	112 20 52	7 55 67 103 135
274 Empire Creek (P)	Lost Horse Creek	Au Ag	Alluvium (Quat.)	--	46 45 20	112 22 20	86 38
275 M and L (L)	--	Au Ag Cu Pb	Hornfels (M. Prot.)	Granodiorite (L. Cret.)	46 45 10	112 20 40	55 67 103
276 Bell Boy (L)	--	Au Ag Pb Zn Cu F	Hornfels (M. Prot.)	--	46 44 22	112 21 42	103
277 Penobscot (L)	--	Au Ag	Hornfels (M. Prot.)	--	46 43 50	112 21 22	52 67 93 103
278 Bald Butte (L)	--	Au Ag Pb F Mo Cu Zn	Hornfels (M. Prot.)	Granite (Tert.)	46 43 22	112 20 47	6 35 67 124 117
279 Shannon (L)	--	Au Ag	Hornfels (M. Prot.)	--	46 44 00	112 20 06	6 146 148
280 Belmont (L)	--	Au Ag	Hornfels (M. Prot.)	Granodiorite (L. Cret.)	46 44 42	112 19 02	6 67 93 103 148
281 Cruse (L)	Bald Mountain	Au Ag Pb	Hornfels (M. Prot.)	Granodiorite (L. Cret.)	46 44 56	112 19 14	6 67 103
282 Drumlummon (L)	--	Au Ag Cu Mn Sb Be	Hornfels (M. Prot.)	Granodiorite (L. Cret.)	46 44 36	112 17 45	6 20 52 67 103

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Lewis and Clark County--Continued							
283 Silver Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 44 38	112 10 40	86 38
284 Paupers Dream (L)	Basin Creek mine	Au As	Rhyolite (Tert.)	Rhyolite (Tert.)	46 25 19	112 17 45	103 120 145
285 Porphyry Dike (L)	--	Au As	Rhyolite (Tert.)	Rhyolite (Tert.)	46 25 40	112 17 15	67 103 120
286 Evergreen (L)	--	Ag Pb Au Zn Cu As Sb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 28 02	112 14 52	9 109
287 Lexington (Rimini district) (L)	--	Ag Au Pb Zn As Sb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 28 21	112 14 24	9 103
288 Eureka (L)	--	Ag Pb Au Zn	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 28 24	112 14 15	9 103
289 Lee Mountain (L)	--	Ag Au Zn Pb Sb As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 29 08	112 14 49	9 103 109
290 Valley Forge (L)	--	Au Ag Pb Zn Cu As Mn	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 29 30	112 14 25	9 35 67 103
291 Tenmile Creek (P)	Gould placer (on Try Again Creek), Monitor, Tucker and Minnihaha Creeks	Au Ag	Alluvium (Quat.)	--	46 30 45	112 15 35	86 149 38
292 Greenhorn Creek and Skelly Gulch (P)	Jeff Davis Gulch	Au Ag W	Alluvium (Quat.)	--	46 39 30	112 11 35	149 86 38 154
293 Helena (L)	--	Au Ag Pb Zn	Argillite (M. Prot.)	Monzogranite (L. Cret.)	46 37 37	112 07 27	103
294 Anderson (L)	--	Au W Mo	Limestone (Miss.)	Granite (L. Cret.)	46 36 55	112 11 15	154
295 Dutro (L)	Old Dominion	Au Bi Sn	Dolomite (Camb.)	Diorite (L. Cret.)	46 35 33	112 09 38	67 103
296 Nelson Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 34 40	112 08 45	149 86 38
297 Spring Hill (L)	--	Au Ag Pb Cu As Bi	Limestone (Miss.)	Granodiorite (L. Cret.)	46 33 18	112 05 45	35 62 67 103
298 Whitlatch-Union (L)	Owyhee, McIntyre	Au Ag	Hornfels (Mes.)	Granodiorite (L. Cret.)	46 32 53	112 05 34	67 103 109
299 Last Chance Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 34 55	112 02 35	149 38
300 Helena dredge workings (P)	Porter Brothers dredge	Au Ag	Alluvium (Quat.)	--	46 37 07	112 01 40	86
301 Seven Mile Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 37 54	112 04 00	149 68 86 38

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Lewis and Clark County--Continued							
302 Franklin (L)	Sam Gaty, Doctor Steele	Au Ag Cu Pb Sil Zn	Argillite (M. Prot.)	Monzonite (L. Cret.)	46 38 20	112 04 21	48 69 103
303 Scratch Gravel (L)	--	Au Ag Pb Zn	Hornfels (M. Prot.)	Monzonite (L. Cret.)	46 38 15	112 03 55	103
304 Lexington (Scratchgravel Hills area) (L)	--	Ag Pb Au Cu Mn As Zn	Limestone (M. Prot.)	Monzonite (L. Cret.)	46 39 45	112 04 10	35 70 103
305 Katy (L)	--	Ag Au Pb Cu	Monzonite (L. Cret.)	Monzonite (L. Cret.)	46 39 58	112 03 40	103
306 Golden Crown (L)	--	Au Ag Cu Sb	Hornfels (M. Prot.)	Monzonite (L. Cret.)	46 41 07	112 04 58	103
307 El Dorado Bar (P)	--	Au Sap PGM Ag	Alluvium (Quat.)	--	46 44 11	111 51 03	86 149
308 Golden Messenger (L)	--	Au	Diorite, limestone, shale (Prot.)	Diorite (Cret. or Tert.)	46 44 24	111 44 24	103
309 Little Dandy (L)	--	Au	Limestone, shale (Prot.)	--	46 44 24	111 44 01	103
310 York Gulch, Kingsbury Gulch and Trout Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 43 15	111 45 00	86 149 68
311 Old Amber (L)	Golden Cloud	Au	Limestone, shale (Prot.)	--	46 42 45	111 42 27	103
312 Magpie and Bar Gulches (P)	--	Au Ag	Alluvium (Quat.)	--	46 38 37	111 41 00	86 68
313 Cave Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 39 10	111 41 55	86 68
314 Clark Gulch and Oregon Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 40 10	111 44 00	86 68
315 French Bar (P)	--	Au Ag	Alluvium (Quat.)	--	46 39 39	111 44 15	86
316 Gruel Bar (P)	Gruel's Bar, Metropolitan Bar	Au Ag	Alluvium (Quat.)	--	46 39 35	111 44 40	86
317 Spokane Bar (P)	--	Au Ag	Alluvium (Quat.)	--	46 40 00	111 48 40	86
318 Lower Prickly Pear Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 34 37	111 54 52	86 149 38

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Jefferson County							
319 Holmes Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 33 10	112 00 00	86 149 38
320 Big Indian (L)	--	Au	Granodiorite (L. Cret.)	Granodiorite; aplite and diorite dikes (L. Cret.)	46 32 17	112 01 20	9 67 103 115
321 Pretty Girl placer (P)	--	Au Ag	Alluvium (Quat.)	--	46 31 55	112 01 32	35
322 Upper Prickly Pear Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 29 43	111 57 36	149
323 Clancy Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 27 49	112 00 04	86 149 38
324 Lump Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	46 27 38	112 06 15	149 86 38
325 Alta (L)	--	Ag Pb Zn Au Cu Sil Sb	Andesite (Cret.)	Monzogranite (L. Cret.)	46 22 20	112 05 35	9 67 103 115 165
326 Gregory (L)	--	Ag Pb Au Cu Zn As	Andesite (Cret.)	Monzogranite (L. Cret.)	46 23 24	112 06 53	9 103 115 142
327 Minnesota (L)	--	Au Ag Pb Cu Zn As	Monzogranite, andesite (Cret.)	Monzogranite (L. Cret.)	46 23 10	112 07 25	9 67 103 115
328 Montana Tunnels (L)	--	Au Ag Zn Pb Cu Mn	Breccia (Tert.)	Dacite porphyry (Tert.)	46 22 17	112 07 35	9 67 133 152
329 Minah (L)	Mina	Ag Au Pb Zn Cu As Sb	Andesite (Cret.), dacite (Tert.)	Monzogranite (L. Cret.)	46 21 55	112 08 01	9 67 84 103 115
330 Blizzard (L)	--	Ag Au Pb Cu Zn As	Andesite (Cret.)	--	46 21 37	112 08 28	9 67 103 115
331 Mount Washington (L)	--	Ag Au Pb Cu Zn Bi Sb	Tuff, monzogranite (Cret.)	Monzogranite (L. Cret.)	46 21 23	112 08 37	9 103 115
332 Blue Bird (L)	--	Au Ag Cu Pb Zn As Sb	Tuff (Cret.)	Monzogranite (L. Cret.)	46 21 32	112 09 58	9 67 103 115 163
333 Eva May (L)	--	Ag Pb Cu Au Zn Sb As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 20 56	112 13 20	9 35 67 103 115
334 Cateract Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 21 50	112 13 15	149 86 38

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Jefferson County--Continued							
335 Crystal (L)	St. Lawrence, Sparkling Water, Jack Fraction	Au Ag Cu Pb Zn Sil Sb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 21 00	112 15 38	103 109 115 120 165
336 Buckeye (L)	Boston	Ag Au Pb Zn Cu As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 23 53	112 17 40	115 120
337 Josephine (L)	--	Ag Au Pb Zn Cu Stn U	Monzogranite (L. Cret.)	Monzogranite (L. Cret.), rhyolite (Tert.)	46 24 56	112 18 44	115 120
338 Bullion (L)	--	Ag Cu Pb Au Zn U Sb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 21 22	112 17 40	67 103 115 120 165
339 Hattie Ferguson (L)	--	Ag Pb Au Cu Zn	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 19 58	112 14 51	9 67 103 115
340 Morning Glory (L)	--	Au Ag Pb Cu Zn As Sb	Monzogranite, tuff (Cret.)	Monzogranite (L. Cret.)	46 19 04	112 14 35	9 115
341 Hiawattaha (L)	Hiawatha	Ag Au Pb Cu Zn Sb	Monzogranite, tuff (Cret.)	Monzogranite (L. Cret.)	46 18 22	112 13 15	9 115 148
342 Custer (L)	--	Ag Au Pb Zn	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 18 15	112 13 45	9 67 103 115
343 Mantle and South Mantle (L)	Rock of Ages	Au Pb Ag Cu	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 17 27	112 14 30	9 115
344 Basin Creek (P)	--	Au Ag Sn	Alluvium (Quat.)	--	46 16 09	112 15 36	149 86 38
345 Boulder River (P)	--	Au Ag	Alluvium (Quat.)	--	46 16 01	112 15 22	149 86 38
346 Jib (L)	Hope-Katie, Katie Extension	Au Ag Cu Pb Zn Te Sb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 16 15	112 16 06	70 103 115 120
347 Lotta (L)	--	Au Ag Zn	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 16 13	112 16 50	115 120 142
348 Boulder (L)	--	Au Ag Zn Pb Cu	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 16 44	112 17 18	48 120 115
349 East Katie (L)	Lot 7	Au Ag Cu Pb	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 16 20	112 15 55	103 115
350 Lowland Creek (P)	Kit Carson placer	Au Ag	Alluvium (Quat.)	--	46 14 40	112 25 25	149 86 38
351 Kit Carson (L)	--	Au Ag Cu	Rhyolite (Tert.)	Rhyolite (Tert.)	46 12 10	112 26 58	67 103 115
352 Ruby (L)	--	Au Ag Pb Zn Cu	Rhyolite (Tert.)	Rhyolite (Tert.)	46 11 52	112 26 04	67 69 103 115

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Jefferson County--Continued							
353 Columbia (Lowland district) (L)	--	Au Ag Cu	Rhyolite (Tert.)	Rhyolite (Tert.)	46 11 38	112 25 50	67 103 115
354 Wilson Creek (South Boulder Mountains area) (P)	Wilson Creek, tributary to Little Boulder River	Au Ag	Alluvium (Quat.)	--	46 09 58	112 12 40	149 86 38
355 Gray Eagle (L)	--	Ag Pb Cu Zn Au U Mo	Welded tuff, monzogranite (Cret.)	Monzogranite (L. Cret.)	46 18 48	112 11 56	9 67 103 115 142
356 Rumley (L)	--	Ag Pb Au Cu Zn U	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 18 36	112 10 20	9 115
357 Comet (L)	--	Au Ag Cu Pb Zn U As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 18 35	112 10 00	8 9 67 103 115
358 Baltimore (L)	--	Ag Au Pb Zn Cu As	Monzogranite (L. Cret.)	Monzogranite (L. Cret.)	46 17 13	112 08 59	9 67 103 115
359 Sunny Corner (L)	Milburn	Au Ag Cu Pb Zn	Argillite (M. Prot.)	Latite porphyry (Cret.)	45 54 48	112 02 07	76 115
360 Lucky Hit (L)	--	Au Ag Cu Pb	Argillite (M. Prot.)	Latite porphyry (Cret.)	45 54 50	112 01 54	76 115
361 Columbia (Whitehall district) (L)	--	Au Ag Cu	Argillite (M. Prot.)	Latite porphyry (Cret?)	45 55 02	112 01 42	76 115
362 Golden Sunlight (L)	--	Au Ag Cu	Argillite-latite porphyry breccia (Cret. (breccia))	Latite porphyry (Cret.)	45 54 22	112 00 51	104 116 76 115 1
363 Elkhorn Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 11 41	111 57 32	86
364 Elkhorn Queen (L)	--	Au Ag Cu Pb Zn	Granodiorite porphyry (Cret.), dolomite, shale (hornfels) (Dev.)	Granodiorite porphyry andesite porphyry, andesite, tuff (L. Cret.)	46 14 49	111 57 29	115 65
365 Elkhorn (L)	Holter	Au Ag Pb Zn Cu Bi	Limestone, dolomite, marble (Camb.-Miss.)	Gabbro, diorite, quartz diorite porphyry, quartz monzonite (L. Cret.)	46 16 42	111 56 27	115 65 158 67
366 Swissmont (L)	Pittsmont, Moreau, Peacock, Turkey	Au Ag Cu Pb Zn	Diorite (L. Cret.), limestone (Camb.)	--	46 16 45	111 57 01	115 65

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Jefferson County--Continued							
367 Hardcash (L)	Dolcoath	Au Ag Cu Pb	Limestone (hornfels) (Camb.)	Diorite (Cret.)	46 16 47	111 56 54	115 65
368 Golden Curry (L)	Sourdough, Jacquemin	Au Ag Cu	Limestone (hornfels) (Camb.)	Quartz monzonite (Cret.)	46 17 05	111 57 34	115 65
369 Klondyke (L)	--	Au Ag Pb Cu	Silicated dolomite (Dev.)	Diorite (L. Cret.)	46 16 56	111 56 25	115 65
370 C & D (L)	Boulder Belle	Au Ag Cu Pb	Limestone (Miss.)	Quartz monzonite (Cret.)	46 17 21	111 56 00	65
371 Center Reef (L)	Ballard	Au Ag Cu Pb	Andesite and andesite breccia (L. Cret.)	--	46 19 00	111 52 12	115 65
372 Wilson Creek (Tizer-Wilson district) and upper Crow Creek (P)	Wilson Creek, tributary to Crow Creek. Includes Tizer Creek	Au Ag	Alluvium (Quat.)	--	46 20 59	111 49 17	86 149 68
373 Callahan (L)	Golden Age, Deer Horn	Au Ag Cu Pb Zn	Andesite (L. Cret.)	--	46 21 00	111 50 20	115 65
374 Belle (Tizer-Wilson district) (L)	--	Au Ag Pb Cu	Andesitic tuff (Cret.)	--	46 21 52	111 50 42	65
375 Newburgh (L)	Steinbrenner, Fleming	Au Ag Pb Cu	Quartz monzonite, rhyolite (L. Cret.)	--	46 24 40	111 52 49	115 136
376 Carbonate Chief (L)	--	Au Ag Pb Cu	Porphyritic quartz monzonite (L. Cret.)	Aplite and rhyolite dikes (L. Cret.)	46 24 52	111 52 49	115 136
377 Bell (Warm Springs district) (L)	--	Au Ag Pb Cu U	Porphyritic quartz monzonite (L. Cret. or Pal.)	--	46 24 55	111 52 47	115 136
378 Economy (L)	Last Chance, John and Jim Group	Au Ag Cu	Quartz diorite (Cret.)	--	46 31 30	111 50 50	108 136 91
379 Mitchell Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 31 58	111 50 45	86 136
Broadwater County							
380 Dobler (L)	--	Au Ag Pb	Dolomite and quartzite (Penn.)	--	46 32 30	111 46 45	108 136
381 Beaver Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 28 00	111 41 00	86

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Broadwater County--Continued							
382 Custer (L)	--	Au Ag Pb Cu Mo	Andesite (Cret.)	Quartz monzonite porphyry and aplite dikes (Cret.)	46 27 03	111 39 57	108 66 31
383 Chartam (L)	--	Au Ag	Andesite (Cret.)	--	46 26 34	111 39 55	33
384 Sunshine (L)	--	Au Ag Pb	Andesite (Cret.)	Granodiorite (L. Cret.)	46 26 17	111 41 57	108 66 31
385 Weasel Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 25 45	111 42 10	86
386 East Pacific (L)	--	Ag Au Pb Zn	Andesite (Cret.)	Porphyritic quartz monzonite (Cret.)	46 25 17	111 41 56	108 66 31
387 January (L)	--	Au Ag Pb Cu Zn	Andesite (Cret.)	Quartz monzonite (Cret.)	46 24 54	111 41 46	108 66 31 103
388 Stray Horse (L)	--	Au Ag Pb Zn	Andesite (Cret.)	Granodiorite (Cret.)	46 24 16	111 41 51	108 66 31
389 Vosburg (L)	--	Au Ag Pb Zn Mn	Quartz monzonite, granodiorite porphyry (Cret.)	Andesite (Cret.)	46 23 58	111 43 12	108 66 31
390 Park-New Era (L)	Includes Jackson, Kane, and Cotter workings	Au Ag Pb	Andesite (L. Cret.)	Mafic intrusives (unknown)	46 22 00	111 43 00	127 108 66 139 41
391 Marietta (L)	Little Annie, Gold Dust, Bullion King	Au Ag Pb Zn Cu	Andesite flows, basic dikes (L. Cret.)	Quartz diorite and diorite porphyry (L. Cret.)	46 21 53	111 42 21	127 108 66
392 Indian Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 18 20	111 39 54	86 149 148 43
393 Diamond Hill (L)	--	Au W	Andesite, syenodiorite, aplite (L. Cret. or Pal.)	Syenodiorite (L. Cret. or Pal.	46 18 48	111 40 30	108 66
394 Little Giant (L)	--	Au	Andesite (L. Cret.)	--	46 18 25	111 40 45	108 66
395 Blacksmith (L)	--	Au Ag Cu Pb	Andesite (L. Cret.)	Syenodiorite (L. Cret.-Pal.)	46 18 02	111 40 20	108 66
396 North Home (L)	--	Au Ag Pb Zn Ba Mn	Limestone (Miss.)	Quartz monzonite (L. Cret.)	46 10 50	111 44 03	108 66
397 Joe Dandy (L)	Jo Dandy	Au Ag Cu Pb Zn	Quartzite (Penn.)	Syenodiorite, granodiorite, diorite porphry (L. Cret.)	46 09 10	111 43 55	108 66

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Broadwater County--Continued							
398 Cyclone (L)	Simpson	Au Ag	Syenodiorite, granodiorite, diorite porphry (L. Cret.)	--	46 10 05	111 40 40	108 66
399 Black Friday (L)	--	Au Ag Pb Cu	Andesite, undifferentiated intrusives (L. Cret.)	Syenodiorite, granodiorite, diorite porphry (L. Cret.)	46 10 30	111 40 40	108 66
400 Hard Cash (L)	--	Au Ag Cu	Andesite and shale-mudstone-sandstone (Cret.)	Syenodiorite, granodiorite, diorite porphry (Cret.)	46 11 50	111 41 55	108 66
401 Ohio-Keating (L)	--	Au Ag Cu	Andesite and intrusives (L. Cret.)	Syenodiorite, granodiorite, diorite porphry (L. Cret.)	46 11 06	111 40 03	108 66
402 Keating (L)	--	Au Ag Cu	Andesite porphyry (L. Cret.)	Syenodiorite, granodiorite, diorite porphry (L. Cret.)	46 11 17	111 39 39	108 66
403 Crow Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 11 20	111 36 05	86
404 Avalanche Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 38 00	111 34 00	86
405 White Creek (P)	Includes Johnny Gulch	Au Ag	Alluvium (Quat.)	--	46 36 30	111 31 20	86
406 Satellite (L)	Baker	Au	Limestone (Prot?)	Quartz diorite (Tert.)	46 35 24	111 26 18	108 95
407 Confederate Gulch (P)	Includes Cement Gulch, Montana Gulch, Boulder Creek, and Diamond Bar	Au Ag	Alluvium (Quat.)	--	46 35 57	111 24 58	68 86 149 103
408 Miller (L)	Champion	Au	Limestone (Prot?)	Quartz diorite (Tert.)	46 37 13	111 24 49	103 108 95
Meagher County							
409 Thomas Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 40 48	111 17 16	86 114
410 Thompson Creek (P)	--	Au Ag	Alluvium (Quat.)	--	46 32 03	111 12 07	86 114

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Cascade County							
411 Star (L)	Evening Star, London, Morning Star	Ag Pb Au Cu Zn	Gneiss, schist, diorite (Arch?)	Rhyolite porphyry (Cret. or Tert.)	46 56 40	110 44 45	111 126
412 Broadwater (L)	--	Ag Au Cu Pb Zn	Schist and gneiss, diorite (Arch?)	Rhyolite porphyry, diorite (Cret.-Tert.)	46 56 04	110 43 27	111 126
413 Silver Belt (L)	--	Ag Pb Zn Au Cu	Diorite and gneiss (Arch?)	--	46 56 45	110 43 10	111 126
414 Big Seven (L)	--	Ag Au Cu Pb Zn Mo	Quartzite, diorite, gneiss (Arch?), rhyolite porphyry (Cret.-Tert)	Rhyolite porphyry, diorite (Cret.)	46 56 57	110 42 17	111 126
415 Benton (L)	--	Au Ag Pb Cu Zn	Gneiss and diorite (Arch?)	--	46 56 58	110 42 05	111 126
416 Ripple (L)	--	Ag Pb Au Cu Zn	Gneiss and diorite (Arch?)	--	46 56 55	110 42 02	111 126
417 Silver Dyke (L)	--	Cu Pb Ag Zn Au	Breccia composed of quartz porphyry (Tert.) and gneiss (Arch?)	Diorite, granite, rhyolite porphyry (Arch? and Tert.)	46 59 01	110 41 40	111 126
Judith Basin County							
418 Liberty (L)	Emerald, Danny T, Frances, Last Chance	Ag Pb Zn Au	Quartz monzonite (Eoc.)	Quartz rhyolite porphyry, composite dikes (Tert.)	47 04 43	110 37 54	164 112 88
419 Block P (L)	Barker, Wright-Edwards, and others	Ag Pb Zn Cu Au	Quartz monzonite (Eoc.)	Quartz monzonite, felsite dikes, composite dikes (Eoc.)	47 05 02	110 37 54	164 112 88
420 Gold Bug (L)	Weatherwax	Au	Limestone (Miss.)	Syenite porphyry (Cret.)	46 56 22	110 29 30	160

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Fergus County							
421 Kendall (L)	--	Au Ag	Limestone (Miss.), sandstone, calcareous shale (Mes.), syenite porphyry (Pal.)	Syenite porphyry (Pal.)	47 16 47	109 28 36	11 79 77 110 89
422 Barnes-King (L)	Includes Santiago and North Moccasin workings	Au Ag	Limestone (Miss.)	Syenite porphyry (Pal.)	47 17 13	109 27 56	11 79 74 110 89
423 Horseshoe (L)	Includes Muleshoe and Boxer	Au Ag	Limestone (Miss.)	Syenite porphyry (Pal.)	47 17 37	109 27 34	11 79 74 110 89
424 Kendall placer (P)	North Moccasin placer	Au Ag	Alluvium (Quat.)	--	47 17 01	109 27 37	86 149
425 New Year (L)	--	Au Ag	Limestone (Miss.)	Quartz monzonite, syenite porphyry (Pal.)	47 09 16	109 18 59	159 110 18 157
426 Whiskey Gulch (L)	Gold Crop, Red Rock	Au	Altered and silicified limestone (Miss.)	Rhyolite porphyry (L. Cret.-Pal.)	47 07 07	109 14 20	110 51
427 Gilt Edge (L)	--	Au Ag	Limestone (Miss.)	Rhyolite dike (L. Cret.-Pal.)	47 08 39	109 13 35	42 110 89 51
428 Maginnis (L)	--	Au Ag	Limestone breccia (Miss.)	Quartz monzonite and syenite porphyry (Pal.)	47 10 34	109 13 09	42 89 110 51
429 Spotted Horse (L)	--	Au Ag	Limestone (Miss.), quartz monzonite, syenite porphyry (Pal.)	Quartz monzonite and syenite porphyry (Pal.)	47 10 35	109 12 37	42 89 110 51 28
430 Tail Holt (L)	--	Au Ag	Syenite porphyry (L. Cret.-Pal.)	Syenite porphyry (Pal?)	47 12 24	109 12 36	24 110 51
431 Gies (L)	Bertha, Elk Peak project	Au Ag Pb Zn Te	Shale, siltstone, sandstone (Cret.), syenite (Tert.)	Syenite sills and phonolite (tinguaite) dikes (Tert.)	47 13 17	109 09 38	46 159 110

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Phillips County							
432 King Creek (P)	South Fork Peoples Creek	Au Ag	Alluvium (Quat.)	--	47 55 38	108 37 09	86
433 Landusky (L)	Includes Queen Rose, Gold Bug, August, Little Ben, Susie, Swift, Niseka, and others	Au Ag	Syenite porphyry, breccia (Pal.)	Syenite porphyry (Pal.)	47 55 15	108 36 46	57 24 13 89 27
434 Zortman (L)	Includes Ruby, OK, Ross, Mint, Independent, Alabama, Pinkeye Pearl, and others	Au Ag	Syenite porphyry, quartz latite porphyry (Pal.)	Syenite porphyry (Pal.)	47 56 11	108 33 35	57 24 29 89 78
435 Ruby Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	47 55 53	108 33 20	149 86
436 Alder Gulch (P)	--	Au Ag	Alluvium (Quat.)	--	47 54 45	108 30 39	86
Park County							
437 Emigrant dredge workings (P)	--	Au Ag	Alluvium (Quat.)	--	45 19 19	110 42 49	140 86 149
438 Emigrant Gulch (P)	Includes Sixmile and Mill Creek subdistricts	Au Ag	Alluvium (Quat.)	--	45 18 39	110 41 32	140 149 86
439 Jardine (L)	Mineral Hill mine	Au As W	Schist (Arch.)	Granite (Arch.)	45 04 23	110 37 41	129 151 5
440 Snowshoe (L)	Hulse	Au W As	Schist (Arch.)	Granite (Arch.)	45 02 35	110 36 02	129 107
441 Conrad (L)	Conrad-Stanford, Crevasse	Au As	Schist (Arch.)	Granite (Arch.)	45 02 06	110 35 55	129 107
442 Glengarry (L)	Como prospect, includes "Fisher Mountain zone"	Au Cu Ag	Limestone (Camb.)	Felsite, felsite breccia (Tert.)	45 04 15	109 57 22	35 107 85 36 26
443 McLaren (L)	Includes "Fisher Mountain breccia zone"	Au Cu Ag	Limestone (Camb.)	Felsite, felsite breccia (Tert.)	45 03 43	109 57 20	107 36 26
444 Homestake (L)	--	Au Cu Ag	Explosion/collapse breccia (Tert.)	Latite and rhyodacite porphyries (Tert.)	45 03 21	109 56 48	107 36 85
445 Miller Creek (L)	New World project, Loge Ree; includes Little Daisy	Au, Cu, Ag, Pb, Zn	Limestone (Camb.)	Rhyodacite porphyry (Tert.)	45 03 11	109 57 02	35 36 26

Map Number and Site Name	Synonyms	Commodities	Host rock type (and age)	Associated igneous rocks (and age)	Latitude (north)	Longitude (west)	Sources of Data
Park County--Continued							
446 Alice E. (L)	--	Au Cu Ag	Sandstone, collapse breccia (Tert.)	Latite porphyry (Tert.)	45 02 00	109 55 42	107 85 36

Notes.

(L) following the site name indicates a lode deposit, (P) indicates a placer deposit.

Abbreviations used for time terms:

L. Late
M. Middle

Quat. Quaternary
Olig. Oligocene
Eoc. Eocene
Pal. Paleocene
Tert. Tertiary
Cret. Cretaceous
Mes. Mesozoic
Penn. Pennsylvanian
Miss. Mississippian
Dev. Devonian
Camb. Cambrian
Prot. Proterozoic
Arch. Archean

Abbreviations for commodities

One- and two-letter abbreviations are the symbols for the chemical elements; three letter abbreviations are:

Snd abrasive sand
Stn building stone
Sil silica including quartz crystal, industrial silica, and smelter flux
PGM platinum-group metals (Pt, Pd, Os, Ir, Ru, Rh)
Sap sapphire (gem corundum)

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Table 2--Index to mines and prospects.

[This index lists both primary site names and synonymous names. Primary names (i.e those names listed under the Site Name heading in Table 1) are followed by "(L)" for "Lode" or "(P)" for "Placer". Other names are synonyms from the second column, Table 1. Where production from more than one mine is designated by a single spot on the map (e.g. the spot denoting the Zortman open pit mine includes historic production from the Ruby, Mint, Alabama, and other undergound mines worked in the 19th and early 20th Centuries) the names of the other mines are included in this index even though they are not true synonyms. Site names like "Lower Prickly Pear Creek" are listed under both "Lower" and under "Prickly", but variant spellings that would cause no confusion during an alphabetical search (e.g. Nine Mile vs. Ninemile) are listed only once if there is only one Nine Mile mine. Duplicate names or names that might be easily confused (like the Blue Bird mine in Jefferson County and the Bluebird mine in Madison County) are followed by the name of the county to distinguish them or by the name of the mining district with which they were most commonly associated where duplicate names occur in the same County.

The designation "Creek" and "Gulch" should be considered synonyms in this list. Many narrow, deep canyons that were called gulches in the geologic literature of the 1800's and early 1900's are shown as creeks on modern topographic maps. We have in most cases followed the terminology used by Lyden (1948) and have not included all possible variations of the same name in the index (e.g., Henderson Creek, Henderson Gulch, Henderson placer, Henderson Bar)]

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Alabama	434
Alameda (L)	74
Alder Gulch (Granite Co.)	185
Alder Gulch (Madison Co.) (P)	77
Alder Gulch (Phillips Co.) (P)	436
Algonquin	160
Alice E. (L)	446
Alta (L)	325
Amazon (L)	230
American Gulch (P)	212
American Kootenai (L)	12
American claim	127
Anaconda (L)	258
Anderson prospect (L)	294
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Argyle	35
Atlantic and Pacific (L)	117
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Aurora (L)	129
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Branigan 14
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Table 3--Index to Mining Districts and Areas

[Although some mining districts were established formally and had well-defined boundaries, many districts exist only because the name was in common use by the local miners, merchants, and other inhabitants. Historically, the term mining district has been used rather loosely, the boundaries of most districts are ill-defined, and the names of the districts have changed over time. The inclusion of any single locality within a specific district is in many cases a subjective decision. This index lists district names that are or were commonly used in the geologic literature as well as a number of regions called "areas" that are used to group mines that lie outside of formally or informally established mining districts]

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POCKET CONTAINS:
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