Production Statistics for the Coeur d'Alene Mining District, Shoshone County, Idaho—1884-1980

Victoria E. Mitchell
Earl H. Bennett

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Idaho Geological Survey
University of Idaho
Moscow, Idaho 83844

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Victoria E. Mitchell[1] and Earl H. Bennett[1]

INTRODUCTION

This report is a compilation of production figures from 1884 to 1980 for individual mines in the Coeur d'Alene mining district located in north Idaho. Total production for the district is summarized in Table 1. Most of the information was obtained from the U. S. Bureau of Mines' (USBM) files located at the U. S. Bureau of Mines' Western Field Operations Center in Spokane, Washington. Other important sources include Crosby (1959), Asarco (1960), a series of consulting reports by Shenon and Full (1948-1955), tonnage figures from the Shoshone County assessor's office, and data from individual companies. In most cases, figures from the different sources were in agreement. The U. S. Bureau of Mines' figures, being the most complete, were utilized as the major data base. For some mines, both USBM and company figures are presented for comparison.

The Idaho Bureau of Mines and Geology maintains a file on yearly production figures for each mine in the Coeur d'Alene district. These files are available for inspection at IBMG's office at the University of Idaho, Moscow, Idaho.

Our reason for compiling these data is to provide an accurate accounting of the distribution of metals throughout the district. We believe that this information will be useful to geologists and others interested in unraveling the origin of these deposits and in exploring for new ones.

[1] Idaho Bureau of Mines and Geology, Moscow, Idaho 83843.

The mines are grouped by a stratigraphic classification, rather than in the more familiar mineral belt concept used in other reports (Fryklund, 1964; Gott and Cathrall, 1980). Our purpose in using this classification is to show that definite differences exist in the metal production from mines localized in three different stratigraphic horizons, namely the Middle Prichard, the Prichard-Burke transition zone, and the Revett-St. Regis transition zone. The percentage of the total production in the district by stratigraphic group and selected districts is summarized in Table 2.

The production figures in Table 2 are misleading. The Revett-St. Regis deposits account for 76 percent of the total district tonnage; however, it is possible that the Bunker Hill mine and the Star mine, although in the Revett-St. Regis horizon, have derived a major part of their ore from the Prichard-Burke horizon, in effect making these two mines double orebodies (Bennett, in preparation). Juras (1979) described three vein types in the Bunker Hill mine: the Bluebird veins, the Link veins, and a combination of the two called hybrid veins. For this reason, we show the percentage of the total district production accounted for by the Wardner mines (includes Bunker Hill), and we also show beneath this figure, in parentheses, the percentage contributed by the Wardner mines minus the ore in the Bluebird veins and one third of the metal content from hybrid veins. The production figures that are calculated for the three vein types are shown in Table 3, and are derived from figures furnished by the Bunker Hill Company. Likewise, we show production from the remainder of the Revett-St. Regis deposits with the Star mine production and without the Star mine production (in parentheses). In the Summary of Stratigraphic Groups section, we show the percentage of the total district production attributed to the Prichard-Burke deposits by themselves and with the Bluebird veins, hybrid veins, and Star mine production added (in parentheses). Table 4 shows percentages of total production for the major mines in the district that produced over 3 million tons of ore.

A series of maps follows the production tables. These maps show the distribution of selected metal tonnages, grades, and ratios. The maps show the data for the mines as they are located in the district

today, and as they were probably located before movement along the Osburn and Dobson Pass faults. The palinspastic reconstruction places the Dago Peak stocks over the Gem stocks along the Dobson Pass fault, and assumes approximately 25 kilometers (19 miles) of right lateral transport along the Osburn fault as described by Bennett and Venkatakrishnan (1982). Explanations accompany each map set.

ACKNOWLEDGMENTS

The U. S. Bureau of Mines' figures used in this report are a valuable data base, and without these figures we would have little information about many of the mines in the Coeur d'Alene district. We would like to thank the Sunshine Mining Company, Hecla Mining Company, Asarco, Bunker Hill Company, Callahan Mining Company, Coeur d'Alene Mines Corporation, Sidney Mining Company, and Harry F. Magnuson and Associates for authorizing the release of these data to us. Individuals who were instrumental in providing company information included Garth Crosby and Wallace Crandall, Hecla Mining Company; Stan Huff, Asarco; and James Duff and Mel Baillie, the Bunker Hill Company. Donald Springer provided data from his personal files and helped edit the manuscript.

REFERENCES

Asarco, 1960, Summary of production by mineral belts; Coeur d'Alene district, to 1960: unpublished Asarco report, 21 p.

Bennett, E. H. and Ramesh Venkatakrishnan, 1982, A palinspastic reconstruction of the Coeur d'Alene mining district based on ore deposits and structural data: Economic Geology, v. 77, no. 8, p. 69-84.

Crosby, G. M., 1959, The mineral belts north of Osburn fault, Coeur d'Alene district, Shoshone County, Idaho: unpublished thesis for the professional degree of Geological Engineer, University of Minnesota, Minneapolis, Minnesota, 39 p.

Fryklund, V. C., 1964, Ore deposits of the Coeur d'Alene district, Shoshone County, Idaho: U. S. Geological Survey Professional Paper 445, 103 p.

Gott, G. B. and J. B. Cathrall, 1980, Geochemical exploration studies in the Coeur d'Alene district, Idaho and Montana: U. S. Geological Survey Professional Paper 1116, 63 p.

Juras, D. S., 1979, The importance of Link veins at the Bunker Hill mine, Kellogg, Idaho: paper presented at the American Institute of Mining Engineers, Pacific Northwest Metals and Minerals Conference, Spokane, Washington, unpublished manuscript, 16 p.

Ransome, F. L. and F. C. Calkins, 1908, The geology and ore deposits of the Coeur d'Alene district, Idaho: U. S. Geological Survey Professional Paper 62, 203 p.

Shenon, P. J. and R. P. Full, 1948, Geologic study of the Burke-Mullan area, Lelande and Hunter mining districts, Shoshone County, Idaho: private consulting report for Day Mines, Inc., 87 p.

Shenon, P. J., R. P. Full, and R. P. Gerwels, 1952, Geologic study of the Wallace-Burke-Mullan area, Lelande and Hunter mining districts, Shoshone County, Idaho: private consulting report for Day Mines, Inc., 81 p.

Springer, D. C., 1981, Production statistics for the Coeur d'Alene mining district, 1980: The Wallace Miner, North Idaho Press, March 5, 1981.

TABLES

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Table 1. Production summaries by areas and grand totals for the entire Coeur d'Alene mining district.

Area	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead
Pine Creek	3,247,290	4,623,595	202,564,833	420,788,259	1,837,185**	8,096	1.42	3.12	6.48	0.03**	0.46
Upper Ninemile Creek and Sunset Peak Area	3,708,030	4,210,670	205,472,651	401,256,743	3,138,200	2,178	1.14	2.77	5.41	0.04	0.41
Evolution District	26,251	152,001	4,203,101	236,400	38,233	39	5.79	8.01	0.45	0.07	0.72
Page Area	4,584,559	16,035,198	589,072,781	552,978,641	2,854,677	7,441	3.50	6.42	6.03	0.03	0.55
Alhambra Group	3,079	11,197	184,947	70,362	888	3	3.64	3.00	1.14	0.01	1.21
Wardner District	43,251,298	156,558,358	5,882,880,218	2,239,433,573	23,641,903	36,594	3.62	6.80	2.59	0.03	0.53
Silver Belt	16,883,053	457,820,751	168,838,520	11,133,878	192,292,319	24,118	27.12	0.50	0.03	0.57	54.24
Revett-St. Regis Deposits	34,584,828	153,371,300	4,595,602,388	3,345,602,388	22,197,389	51,052	4.43	6.64	4.84	0.03**	0.77
National/Snowstorm Area	996,588	4,450,727	--	--	57,793,431	--	4.47	--	--	2.90	--
Burke Area	24,473,082	129,423,759	3,771,310,693	569,344,917	12,985,084	22,702	5.29	7.71	1.16	0.03	0.69
Atlas-Reindeer Area	7,083	7,818	586,035	16,000	16,933	2	1.10	4.14	0.11	0.12	0.27
Tailings	6,805,779*	4,794,281	107,280,278	116,987,196	1,846,128	1,505	0.70	0.79	0.86	0.01	0.89
GRAND TOTALS (entire district)	131,765,106	931,459,538	14,891,859,715	7,661,662,629	318,642,370**	153,730	7.07	5.65	2.91	0.12**	1.25
Grand Totals (Tons)			7,445,930 tons	3,830,831 tons	159,321** tons						
Totals (1884-1980, from the Wallace Miner, 1981, Don Springer)		935,287,000 oz	7,679,772 tons	3,051,743 tons	160,985 tons						

* Not included in total of tons produced

-- Data insufficient or unavailable

** Correction: This number has been changed from that given in the original Technical Report. Copper production for the Constitution mine was corrected in March 1986.

Table 2. Percent of total production through 1980 in the Coeur d'Alene mining district by stratigraphic groups and districts.

Revett-St. Regis Deposits

District	Tonnage	Silver	Lead	Zinc
Wardner	33%	17%	40%	29%
(without Bluebird and 1/3 hybrid veins[1])	(24%)	(14%)	(31%)	(13%)
Page Group	3%	2%	4%	7%
Silver Belt	13%	49%	1%	0.1%
Remainder of Revett-St. Regis	26%	16%	31%	44%
(without Star mine[2])	(21%)	(15%)	(27%)	(27%)
TOTALS (with Star, Bluebird, and hybrid veins)	75%	84%	76%	80%
TOTALS (without Star, Bluebird, and hybrid veins)	(61%)	(80%)	(58%)	(47%)

Middle Prichard Deposits

District	Tonnage	Silver	Lead	Zinc
Pine Creek	2%	0.5%	1%	5%
Upper Ninemile Creek and Sunset Peak	3%	0.5%	1%	5%
TOTALS	5%	1%	2%	10%

Summary by Stratigraphic Groups

Stratigraphic Group[3]	Tonnage	Silver	Lead	Zinc
Middle Prichard (includes Evolution district)	5%	1%	2%	10%
Revett-St. Regis	75%	84%	76%	80%
(without Star, Bluebird, and hybrid veins)	(61%)	(80%)	(75%)	(47%)
Prichard-Burke	19%	14%	25%	7%
(with Star, Bluebird, and 1/3 hybrid veins[4])	(33%)	(18%)	(25%)	(41%)
TOTALS (with Star, Bluebird, and hybrid veins)	99%	99%	103%	97%
TOTALS (without Star, Bluebird, and hybrid veins)	(99%)	(99%)	(102%)	(98%)

[1] Bluebird and hybrid veins are in the Bunker Hill mine (see Introduction).

[2] Star subtracted from Revett-St. Regis percentages.

[3] See Figure 1 for the location of the individual mines in each group.

[4] Star, Bluebird, and one-third of the hybrid veins in the Bunker Hill mine are added to the Prichard-Burke percentages.

Table 3. Estimated production from the vein systems in the Bunker Hill mine through 1980.*

Vein type	Tonnage	Silver (oz)	Lead (tons)	Zinc (tons)	Silver (oz/ton)	% Lead	% Zinc
Link veins	18,629,883	117,574,783	1,982,426	474,304	6.3	10.6	2.5
Hybrid veins	9,361,101	42,754,125	928,266	263,584	4.6	9.9	2.8
Bluebird veins	8,993,246	14,245,625	294,024	535,513	1.6	3.0	6.0

* Calculated from figures provided by the Bunker Hill Company

Table 4. Percentage of total production in the Coeur d'Alene district by mines that produced more than three million tons of ore through 1980.

Mine	Total Tonnage	Total Silver	Total Lead	Total Zinc
Bunker Hill	29%	14%	35%	29%
Morning	14%	7%	19%	25%
Sunshine	7%	32%	1%	0.1%
Hecla	6%	4%	10%	0.9%
Star	6%	1%	4%	17%
Page Group	3%	2%	4%	7%
Galena	3%	10%	0.1%	0%
Lucky Friday	3%	7%	5.5%	0.9%
Standard Mammoth	3%	3%	4%	0%
Hercules	3%	3%	5%	0.1%
Gold Hunter	2%	1%	1%	0%
TOTALS	79%	84%	89%	80%

Table 5. Pine Creek area production (Middle Prichard deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
7	USBM	Sidney 1921-1967	1,071,197	1,931,081	88,002,942	171,151,606	511,795	1,772	1.80	4.11	7.99	0.02	0.44	0.51
12	USBM	Constitution (Spokane-Idaho) 1915-1968	667,326	1,275,319	38,964,464	90,261,100	334,684*	2,190	1.91	2.92	6.76	0.03*	0.65	0.43
10	USBM	Highland Surprise 1904-1971	518,706	370,848(?)	22,255,899	62,218,573	402,722	1,222	0.71	2.15	6.00	0.04	0.33	0.36
9	USBM	Little Pittsburg 1916-1955	320,674	283,478	13,408,919	33,027,399	140,361	768	0.88	2.09	5.15	0.02	0.42	0.41
4	USBM	Liberal King (Sunset Mines) 1937-1963	256,437	167,295	12,399,010	25,229,540	230,020	951	0.65	2.42	4.92	0.04	0.27	0.49
11	USBM	Douglas 1916-1972	167,162	305,175	7,460,135	21,264,769	71,662	276	1.83	2.23	6.36	0.02	0.82	0.35
6	USBM	Nabob 1907-1977	134,069	185,949	8,915,949	14,353,057	75,619	292	1.39	3.33	5.35	0.03	0.42	0.62
1	USBM	Hypotheek 1913-1954	88,702	49,866	8,124,965	7,100	61,611	586	0.56	4.58	0.004	0.03	0.12	1,145.00
6	Asarco	Denver Vein 1916-1944	13,000	46,800	2,210,000	3,094,000	--	--	3.60	8.50	11.90	--	0.42	0.71
3	USBM	Amy (Amy Matchless) 1912-1956	4,569	2,381	210,194	22,338	2,515	5	0.52	2.30	0.24	0.03	0.23	9.58
8	USBM	Hilarity 1926-1952	3,330	1,534	102,492	127,909	1,038	29	0.46	1.54	1.92	0.02	0.30	0.80
5	USBM	Lookout Mountain 1922-1952	1,595	2,938	445,698	375	3,609	4	1.84	13.97	0.01	0.11	0.13	1,397.00
2	USBM	Bobby Anderson 1927-1951	523	931	64,166	30,493	1,549	1	1.78	6.13	2.92	0.15	0.29	2.10
	TOTALS		3,247,290	4,623,595	202,564,833	420,788,259	1,837,185*	8,096	1.42	3.12	6.48	0.03*	0.46	0.48

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

* Correction: This number has been changed from that given in the original Technical Report. Copper production for the Constitution mine was corrected in March 1986.

Table 6. Upper Ninemile Creek and Sunset Peak area production (Middle Prichard deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
19	USBM	Interstate/ Callahan 1906-1977[1]	1,423,619	1,987,651	99,215,270	306,931,724	106,104	259	1.40	3.48	10.78	0.004	0.40	0.32
17	USBM	Amazon (includes Monitor and Parrot) 1912-1977	1,287,907	988,941	51,337,860	13,158,011	2,151,628	983	0.77	1.99	0.51	0.08	0.39	3.90
15	USBM	Sunset Lease (1913-1976)	355,032	578,817	22,909,129	31,213,950	639,752	568	1.63	3.23	4.40	0.09	0.50	0.73
17	USBM	Mountain Goat 1955-1970	344,674	234,065	12,504,600	34,358,100	94,800	160	0.68	1.81	4.98	0.01	0.38	0.36
20	USBM	Rex (includes 16 to 1 and Red Monarch) 1905-1949	154,441	246,095	10,671,876	9,592,070	35,629	100	1.59	3.46	3.11	0.01	0.46	1.11
16	Crosby	Carlisle 1942-1947	78,963	39,481	2,526,816	789,630	--	--	0.50	1.60	0.50	--	0.31	3.20
14	USBM	Silver Tip 1941-1959	30,255	63,972	2,855,484	2,420,711	101,847	59	2.11	4.72	4.00	0.17	0.45	1.18
13	USBM	Tuscumbia 1911-1956	12,632	38,179	1,851,516	16,300	6,214	39	3.02	7.33	0.06	0.02	0.41	122.17
18	Crosby	Nepsic 1943-1947	10,475	8,380	460,900	2,220,700	--	--	0.80	2.20	10.60	--	0.36	0.21
13	USBM	Idora 1907-1949[2]	5,707	19,948	876,941	7,475	540	3	3.50	7.68	0.07	0.005	0.46	109.71
17	USBM	Blue Grouse (1952-1969)	2,747	1,999	119,883	470,992	1,686	7	0.73	2.18	8.57	0.03	0.33	0.25
13	Crosby	Tough Nut (?)	1,448	1,738	75,296	72,400	--	--	1.20	2.60	2.50	--	0.46	1.04
17	Crosby	Ray Jefferson (?)	130	1,404	67,080	4,680	--	--	10.80	25.80	1.80	--	0.42	14.33
	TOTALS		3,708,030	4,210,670	205,472,651	401,256,743	3,138,200	2,178	1.14	2.77	5.41	0.04	0.41	0.51

[1] Figures for the Interstate/Callahan mine include dump material

[2] In 1948, lessees removed 2,034 tons of ore (grade unknown) from the Idora mine

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

Table 7. Evolution district production (Middle Prichard deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
M	USBM	Western Union 1920-1948	11,173	126,601	3,335,452	15,529	1,625	4	11.33	14.93	0.07	0.01	0.76	213.29
22	USBM	Evolution (1908-1948)	10,474	9,378	132,728	141,900	5,369	4	0.90	0.63	0.68	0.03	1.43	0.93
21	USBM	Charles Dickens 1902-1930	4,604	16,022	734,921	78,971	31,239	31	3.48	7.98	0.86	0.34	0.44	9.28
	TOTALS		26,251	152,001	4,203,101	236,400	38,233	39	5.79	8.01	0.45	0.07	0.72	17.80

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

Table 8. Page area production (Revett-St. Regis deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
1	USBM*	Page Group 1916-1969	4,307,335	14,609,180	541,567,870	543,559,226	2,724,286	7,239	3.39	6.29	6.31	0.03	0.54	1.00
	Asarco	1926-1969	4,306,489	--	--	--	--	--	3.58	6.84	7.33	--	0.52	0.93
1	USBM	Blackhawk 1916-1944	214,126	756,323	34,707,194	9,419,415	130,391	202	3.53	8.10	2.20	0.03	0.44	3.68
1	USBM	Crown Point 1901-1940*	63,098	669,695	12,797,717	--	--	--	10.61	10.14	--	--	1.05	--
	BH	1901-1915	49,399	646,894	11,999,852	--	--	--	--	--	--	--	--	--
1	Asarco	Wyoming 1916-1926	2,774	--	--	--	--	--	--	--	--	--	--	--
	TOTALS		4,584,559[1]	16,035,198	589,072,781	552,978,641	2,854,677	7,441	3.50	6.42	6.03	0.03	0.55	1.06

[1] Does not include Wyoming tonnage

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

BH Data from the Bunker Hill Company

* Data from this source used to calculate total

Table 9. Alhambra Group production (Revett-St. Regis deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
3	USBM	Alhambra 1917-1918	2,200	10,536	140,636	--	--	--	4.79	3.20	--	--	1.50	--
3	USBM	New Hilarity 1944-1946	879	661	44,311	70,362	888	3	0.75	2.52	4.00	0.05	0.30	0.63
	TOTALS		3,079	11,197	184,947	70,362	888	3	3.64	3.00	1.14	0.01	1.21	2.63

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

Table 10. Wardner district production (Revett-St. Regis deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
2	USBM[1]	Bunker Hill 1887-1980	38,483,673	130,152,164	5,152,156,627	2,239,024,888	19,050,550	30,630	3.38	6.69	2.91	0.02	0.51	2.30
	BH[2]	1887-1980	35,184,854	160,442,934	6,227,719,158	2,582,568,284	--	--	4.56	8.85	3.67	--	0.52	2.41
2	USBM*	Last Chance 1895-1918	2,845,356	8,611,079	432,477,581	--	275,334	1,305	3.03	7.60	--	0.005	0.40	--
	BH[3]	1904-1918	3,280,203	10,956,563	526,604,382	--	--	--	--	--	--	--	--	--
2	USBM*	Senator Stewart 1904-1951	1,041,814	6,610,160	150,925,283	323,888	480,106	1,513	6.34	7.24	0.02	0.02	0.88	362.00
	BH	1910-1953	1,047,500	8,281,560	171,888,628	345,189	--	--	--	--	--	--	--	--
2	USBM*	Ontario 1911-1917	325,502	1,776,391	41,675,316	--	69,550	133	5.46	6.40	--	0.01	0.85	--
	BH	1911-1953	325,749	1,673,725	44,725,166	--	--	--	--	--	--	--	--	--
2	USBM*	Sierra Nevada 1943-1947	289,450	1,314,667	38,811,872	55,485	58,612	2,690	4.54	6.70	0.01	0.01	0.68	670.00
	BH	1913-1953	317,299	1,235,333	39,527,078	71,053	--	--	--	--	--	--	--	--
2	USBM*	Caledonia 1909-1942	263,182	8,092,307	66,775,589	--	3,707,336	323	30.75	12.69	--	0.70	2.42	--
	BH	1909-1953	264,106	6,865,488	57,246,153	--	--	--	--	--	--	--	--	--
2	USBM	Arizona 1945-1946	2,321	1,590	57,950	29,312	415	--	0.69	1.25	0.63	0.01	0.55	1.98
	TOTALS		43,251,298	156,558,358	5,882,880,218	2,239,433,573	23,641,903	36,594	3.62	6.80	2.59	0.03	0.53	2.63

[1] Includes all lease records as well as metal production from rerun tailings and smelter slag (tonnages for tailings and slag were not included under tons produced, as these were already counted when originally mined). Metal figures are actual metal recovered.

[2] Company figures based on assays (production grade) and not on recovered metal.

[3] Bunker Hill estimate of ore tonnage prior to 1904 is believed to be too high. We used shipping records provided by Asarco to calculate early production and added these figures to the USBM figures.

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

BH Data from the Bunker Hill Company

-- Data insufficient or unavailable

* Data from this source used to calculate total

Table 11. Silver Belt production (Revett-St. Regis deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
5	USBM	Sunshine[1] 1904-1980	9,800,584	294,659,890	139,671,091	8,432,646	87,104,004	6,838	30.07	0.71	0.04	0.44	42.35	17.75
11	USBM	Galena 1922-1980	3,872,524	95,092,611	20,354,814	1,474,465	66,413,015	11,744	24.56	0.26	0.02	0.86	94.46	13.00
4	USBM	Crescent 1924-1977	868,926	22,570,068	3,261,626	582,731	6,955,109	689	25.97	0.19	0.03	0.40	136.68	6.33
6	USBM	Polaris[2] 1916-1943	320,783	7,368,759	3,682,340	29,718	2,197,222	1,265	22.97	0.57	0.005	0.34	40.30	114.00
7	USBM	Silver Summit[3] 1948-1969	798,761	19,932,835	147,555	119,200	9,997,506	2,275	24.95	0.01	0.01	0.63	2,495.00	1.00
9	USBM*	Coeur Unit 1969-1980	755,618	11,845,834	331,731	474,912	9,425,191	898	15.68	0.02	0.03	0.62	784.00	0.67
	Asarco	1969-1980	751,118	11,882,686	--	--	9,614,310	--	--	--	--	--	--	--
8	USBM	Mineral Point (Coeur d'Alene) 1919-1952	440,779	5,859,581	127,162	--	10,011,481	393	13.29	0.01	--	1.14	1,329.00	--
4	USBM	Big Creek Silver 1913-1935	16,847	323,019	1,239,698	--	92,891	16	19.17	3.68	--	0.28	5.21	--
10	WM	Rainbow 1958	7,582	163,771	--	--	92,500		21.60	--	--	0.61	--	--
11	USBM	Argentine 1921-1923	401	4,132	4,238	--	3,110	3	10.30	0.53	--	0.39	19.43	--
not plotted	USBM	Signal (1942)	248	251	18,265	20,206	290		1.01	3.68	4.07	0.06	0.27	0.90
	TOTALS		16,883,053	457,820,751	168,838,520	11,133,878	192,292,319	24,118	27.12	0.50	0.03	0.57	54.24	16.67

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

WM Data from the Wallace Miner

-- Data insufficient or unavailable

* Data from this source used to calculate total

Table 11. Continued.

[1] Sunshine mine notes:

Production figures from 1904 to 1942 were from the Sunshine vein. The 1943 production figures included the Sunshine and Chester veins.

In 1943, the Silver Syndicate-Chester vein was divided into the Rambo area to the west (owned 60 percent by Sunshine Mining Company and 40 percent by Silver Syndicate, Inc.) and the Omega area to the east (owned 50 percent by Sunshine Mining Company and 50 percent by Polaris Mining Company).

The 1944 production figures included the Sunshine, Chester, and Syndicate veins. The Chester and Syndicate veins are in the Rambo, Omega, and Rotbart areas (see below).

		Rambo (Sunshine, Syndicate)	Omega (Sunshine, Polaris)	Rotbart (Sunshine, Silver Dollar)
	Sunshine	Silver Syndicate Fault		Chester Vein
1943	141,955	None		21,405
1944	3,298	91,956 tons from the Rambo, Omega, and Rotbart areas		

The 1950 figures included production from areas controlled by Metropolitan, Syndicate, Polaris, and Silver Dollar.

The 1951 figures included production from areas controlled by Metropolitan, Syndicate, Polaris, Silver Dollar, and Big Creek Apex.

The 1952 figures included production from areas controlled by Metropolitan, Syndicate, Polaris, Silver Dollar, Big Creek Apex, the St. Germain-Purim mine, and the Rockford group.

The 1954 U. S. Bureau of Mines figures for the Sunshine mine include production from all areas.

Production for the following years are missing from totals: lead, 1971-1973 and 1978-1980; zinc, 1971-1974 and 1976-1980; gold, 1971-1973 and 1978-1980; and copper, 1978-1980.

[2] Polaris Mining Company mined the Polaris mine until 1943. All production from Polaris ground from 1944 on is included in the Sunshine mine figures.

[3] From 1948 to 1969, Polaris (Hecla) operated the Silver Summit mine.

Table 12. Other Revett-St. Regis deposits production.

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
14	Hecla	Morning 1895-1980	18,631,754	62,311,121	2,814,714,000	1,945,494,000	4,565,921	12,833	3.34	7.55	5.22	0.01	0.44	1.45
14	Hecla	Star 1925-1980	7,259,687	9,246,727	610,668,000	1,314,380,000	3,790,300	5,308	1.27	4.21	9.05	0.03	0.30	0.47
16	USBM*	Lucky Friday 1938-1980*	3,998,747	64,927,626	812,588,335	79,929,967	12,587,958	30,785	16.24	10.16	1.00	0.16	9.50	1.71
	Hecla	1942-1979	3,823,118	63,366,324	808,520,880	91,870,600	--	--	--	--	--	--	--	--
15	USBM	Gold Hunter[1] 1901-1954	3,260,750	9,955,082	195,209,698	1,144,318	456,810	615	3.05	2.99	0.02	0.01	1.02	149.50
12	USBM	Dayrock[2] 1924-1974	1,276,488	6,526,992	154,918,341	7,762,003	794,672	1,406	5.11	6.07	0.30	0.03	0.84	20.23
12	USBM	Monarch 1904-1942	58,840	51,289	6,792,667	687,519	1,322	59	0.87	5.77	0.58	0.001	0.15	9.95
13	USBM	Alice 1909-1926	49,419	80,806	3,562,915	7,552	17	--	1.64	3.60	0.01	0.00002	0.46	360.00
12	USBM	California 1902-1925	49,079	270,174	7,134,141	11,301	120	46	5.50	7.27	0.01	0.0001	0.76	727.00
not plotted	Shenon and Full	Butte and Coeur d'Alene[3] (Idaho Silver) 1926	35	497	1,540	3,360	--	--	14.2	2.2	4.8	--	6.45	0.46
17	USBM	Vindicator (1922-1938)	28	859	12,418	--	209	--	30.68	22.18	--	0.37	1.38	--
not plotted	USBM	Dear (1935)	1	117	333	--	60	--	117	16.65	--	3.00	7.03	--
	TOTALS		34,584,828	153,371,300	4,595,602,388	3,349,420,020	22,197,389	51,052	4.43	6.64	4.84	0.00	0.77	1.17

[1] The Gold Hunter mine is believed to have had considerable production prior to 1901, but there are no records available. This mine is in the Wallace Formation.

[2] The figures for the Dayrock mine include tonnages for 1924 to 1928, but not metal production for this period.

[3] The Butte and Coeur d'Alene mine is in the Wallace Formation.

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

* Data from this source used to calculate total

Table 13. National-Snowstorm area production (stratiform silver-lead deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
19	USBM	Snowstorm 1904-1943	826,580	4,123,186	--	--	55,170,447	3,283	4.99	--	--	3.34	--	--
18	USBM	National 1914-1922	170,008	327,541	--	--	2,622,984	429	1.93	--	--	0.77	--	--
	TOTALS		996,588	4,450,727	--	--	57,793,431	--	4.47	--	--	2.90	--	--

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

Table 14. Atlas-Reindeer area production (Atlas Structure).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
a	USBM	Atlas 1930-1970	6,936	7,768	586,035	16,000	2,801	2	1.12	4.22	0.12	0.02	0.27	35.17
b	USBM	Reindeer (1910-1916)	147	50	--	--	14,132	--	0.34	--	--	4.81	--	--
	TOTALS		7,083	7,818	586,035	16,000	16,933	2	1.10	4.14	0.11	0.12	0.27	37.67

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

Table 15. . Burke area production (Prichard-Burke deposits).

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
K	USBM	Hecla 1898-1969	7,686,967	40,788,931	1,424,099,978	73,824,278	4,966,979	7,007	5.31	9.26	0.48	0.03	0.57	19.29
E	USBM	Standard-Mammoth 1887-1965	3,763,893	25,542,538	568,733,357	949,832	205,966	2,452	6.79	7.56	0.01	0.003	0.90	756.00
B	USBM	Hercules 1901-1965	3,519,592	29,952,537	767,345,172	9,616,058	3,760,660	5,564	8.51	10.90	0.14	0.05	0.78	77.85
C	USBM	Tamarack-Custer 1905-1977	2,819,472	8,753,391	338,308,629	156,417,665	2,036,427	3,511	3.10	6.00	2.77	0.04	0.52	2.17
O	USBM	Helena-Frisco 1897-1967	2,676,379	6,131,065	213,201,249	174,966,741	790,241	1,030	2.29	3.98	3.27	0.01	0.58	1.22
H	USBM	Tiger-Poorman[1] 1901-1961	1,128,793	2,656,234	112,771,417	127,846	1,735	1	2.35	5.00	0.01	0.0001	0.47	500.00
E	USBM	Greenhill-Cleveland 1902-1918	791,447	8,378,611	126,565,606	13,784,888	391,388	1,273	10.59	8.00	0.87	0.02	1.32	9.20
L	USBM	Success 1905-1952	789,704	994,638	28,837,031	98,491,597	51,493	160	1.26	1.83	6.24	0.003	0.69	0.29
F	USBM	Sherman 1927-1972	661,071	3,930,759	118,700,646	8,546,128	528,808	1,246	5.95	8.98	0.65	0.04	0.66	13.82
Q	Shenon, Full, and Gerwels	Golconda[2] 1926-1967	339,228	1,317,502	36,660,044	26,116,343	178,608	180	3.88	5.40	3.85	0.03	0.72	1.40
J	USBM	Marsh 1908-1925	128,805	477,474	17,636,202	183,089	36,780	216	3.71	6.85	0.07	0.01	0.54	97.85
G	Shenon and Full	Fairview and Wide West 1945-1950	57,186	217,307	6,340,000	458,000	--	--	3.80	5.54	0.40	--	0.69	13.85
N	USBM	Canyon Silver/ Formosa CS 1966-1974 F 1931-1938	24,246	101,363	3,073,012	1,056,433	1,686	13	4.18	6.34	2.18	0.003	0.66	2.91
P	USBM	Black Bear 1927-1973	19,727	12,744	988,329	1,790,307	19,304	22	0.65	2.51	4.54	0.05	0.26	0.55

Table 15. Continued.

Map Symbol	Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %	Ratio, Silver oz/ton to % Lead	Ratio, % Lead to % Zinc
G	USBM*	Hummingbird 1926-1931	18,740	42,421	1,609,665	1,756,675	--	--	2.26	4.29	4.69	--	0.53	0.91
	Crosby	1926-1931	33,449	80,278	3,278,002	4,482,166	--	--	--	--	--	--	--	--
A	USBM	Ambergris, Guelph, Honolulu 1919-1934	16,786	83,940	2,713,645	--	6,659	--	5.00	8.08	--	0.02	0.62	--
not plotted	USBM	Vermillion 1941-1949	14,970	15,132	323,111	874,048	5,710	10	1.01	1.08	2.92	0.02	0.94	0.37
I	USBM	Ajax 1924-1951	6,235	6,270	1,215,755	672	97	1	1.01	9.75	0.01	0.001	0.10	975.00
D	Asarco	Union (?)	5,168	16,538	776,000	196,000	--	--	3.20	7.51	1.90	--	0.43	3.95
K	USBM	Anchor Group 1937-1951	2,589	2,432	320,151	188,317	2,543	16	0.94	6.18	3.64	0.05	0.15	1.70
not plotted	Shenon, Full, and Gerwels	Stanley 1906-1942	1,459	369	15,694	--	--	739	3.95	0.50	--	--	7.90	--
not plotted	Asarco	Benton 1955-1956	625	1,563	1,076,000(?)	--	--	--	2.50	86.08(?)	--	--	0.03	--
not plotted	Donald Springer (personal communication, 1983)	Sisters[3] 1920-1929	472	19,163	376,656	130,272	--	--	40.6	39.90	13.8	--		
	TOTALS		24,473,082	129,423,759	3,771,310,693	569,344,917	12,985,084	23,441	5.29	7.71(?)	1.16	0.03	0.69	6.65

[1] Figures prior to 1901 are from Ransome and Calkins, 1908, U. S. Geological Survey Professional Paper 62. There is an error in their production figures for the Tiger-Poorman mine. We have recalculated the figures, and instead of 286,424 ounces of silver (through 1905) we get 2,029,485 ounces, assuming 2.5 ounces of silver per ton.

[2] Gold and copper figures for the Golconda mine are from the U. S. Bureau of Mines for the years 1928 and 1929. The rest of the Golconda figures are from Shenon, Full, and Gerwels, 1952 (consulting report for Day Mines, Inc.).

[3] Production for the Sisters mine was provided by Donald Springer (personal communication, 1983). The mine is totally in the Prichard Formation and is of interest for the high silver value of the ore. Production is not added to the Prichard-Burke total as the small deposit is in the Prichard Formation.

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

* Data from this source used to calculate total

Table 16. Tailings projects production.

Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %
USBM	Osburn Tailings 1942-1951	4,370,203	2,765,918	53,912,662	76,808,276	1,317,809	893	0.63	0.62	0.88	0.02
USBM	Sweeney Tailings 1927-1946	1,216,941	571,432	24,349,372	8,340,720	150,439	183	0.47	1.00	0.34	0.01
USBM	Canyon Creek Tailings (1910-1952)	330,980	317,331	6,443,724	19,449,861	173,653	225	0.96	0.97	2.94	0.03
USBM	Hages Company Tailings 1917-1928	261,122	534,655	11,939,013	--	36,440	--	2.05	2.29	--	0.01
USBM	Big Creek Tailings (1948-1952)	173,988	107,265	2,167,452	2,646,688	65,756	52	0.62	0.62	0.76	0.02
USBM	Elgin and Memphis Tailings 1944-1951	163,770	107,618	2,626,145	5,808,536	55,016	105	0.66	0.80	1.77	0.02
USBM	Mullen Tailings 1918-1922	158,833	290,050	3,444,891	--	10,192	--	1.83	1.08	--	0.003
USBM	Tomsche Tailings 1941-1948	62,849	46,464	1,053,652	2,830,637	23,089	39	0.74	0.84	2.25	0.02
USBM	Osburn Mill Tailings 1953, 1961	28,834	13,846	350,514	432,478	8,434	8	0.48	0.61	0.75	0.01
USBM	West Star Tailings 1949	24,118	16,159	463,065	--	--	--	0.67	0.96	--	--
USBM	Evolution District Tailings 1938-39	13,808	23,500	496,400	670,000	5,300	--	1.70	1.80	2.43	0.02
USBM	Idaho Lead Tailings 1910	333	583	33,388	--	--	--	1.75	5.01	--	--
TOTALS		6,805,779	4,794,281	107,280,278	116,987,196	1,846,128	1,505	0.70	0.79	0.86	0.01

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

-- Data insufficient or unavailable

Table 17. Other areas outside the Coeur d'Alene mining district (most to the north near Murray).

Summit District

Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %
USBM	Golden Chest 1902-1949	61,704	6,610	93,450	719	16,366	11,874	0.11	0.08	0.001	0.01
USBM	Bear Top (Orofino) 1904-1973	29,396	28,959	7,514,944	679,582	14,359	38	0.99	12.78	1.16	0.02
USBM	Black Horse 1905, 1917-1948	8,621	1,129	248,652	781,075	70	1	0.13	1.44	4.53	0.0004
USBM	Terrible Edith 1904-1955	6,456	8,798	1,945,289	1,294,258	1,739	17	1.36	15.07	10.02	0.01
USBM	Silver Strike 1909-1948	4,186	13,330	513,510	4,100	2,525	25	3.18	6.13	0.05	0.03
USBM	Cedar Creek 1928-1930	4,011	28,628	1,124,635	--	--	--	7.14	14.02	--	--
USBM	Mother Lode 1911, 1939	350	76	1,550	--	1,200	60	0.22	0.22	--	0.17
USBM	Liberty (1954)	5	7	1,400	--	--	--	1.40	14.00	--	--
TOTALS		114,729	87,537	11,443,430	2,759,734	36,259	12,015	0.76	4.99	1.20	0.02

Eagle District

Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %
USBM	Jack Waite 1928-1969	513,652	536,583	117,560,288	28,252,223	53,750	190	1.04	11.44	2.75	0.01
USBM	Richmond 1913, 1923	13,190	6,969	12,797,717	--	--	--	0.53	48.51	--	--
USBM	Crystal Lead 1941-1952	11,237	20,548	1,569,204	122,158	22,059	48	1.83	6.98	0.54	0.10
TOTALS		538,079	564,100	131,927,209	28,374,381	75,809	238	1.05	12.26	2.64	0.01

Table 17. Continued.

Coeur d'Alene District[1]

Source	Property	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %
USBM	Pony Gulch 1934-1942, 1950	1,095	403	4,900	--	105	411	0.37	0.22	--	0.005
USBM	Idaho Goldfields 1953	24	101	4,356	300	--	--	4.21	9.08	0.63	--
TOTALS		1,119	504	9,256	300	105	411	0.45	0.41	0.01	0.005

Summary of Areas Outside the Coeur d'Alene Mining District.

Area	Tons Produced	Silver oz	Lead lb	Zinc lb	Copper lb	Gold oz	Silver oz/ton	Lead %	Zinc %	Copper %
Summit District	114,729	87,537	11,443,430	2,759,734	36,259	12,015	0.76	4.99	1.20	0.02
Eagle District	538,079	564,100	131,927,209	28,374,381	75,809	238	1.05	12.26	2.64	0.01
Coeur d'Alene District	1,119	504	9,256	300	105	411	0.45	0.41	0.01	0.005
TOTALS	653,927	652,141	143,379,895	31,134,415	112,173	12,664	1.00	10.96	2.38	0.01

[1] By common usage, the entire area discussed in this paper is now known as the Coeur d'Alene mining district; however, the district is actually composed of several mining districts, including the old Coeur d'Alene district listed in this section.

USBM Data from the U. S. Bureau of Mines' Western Field Operations Center, Spokane, Washington

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FIGURES

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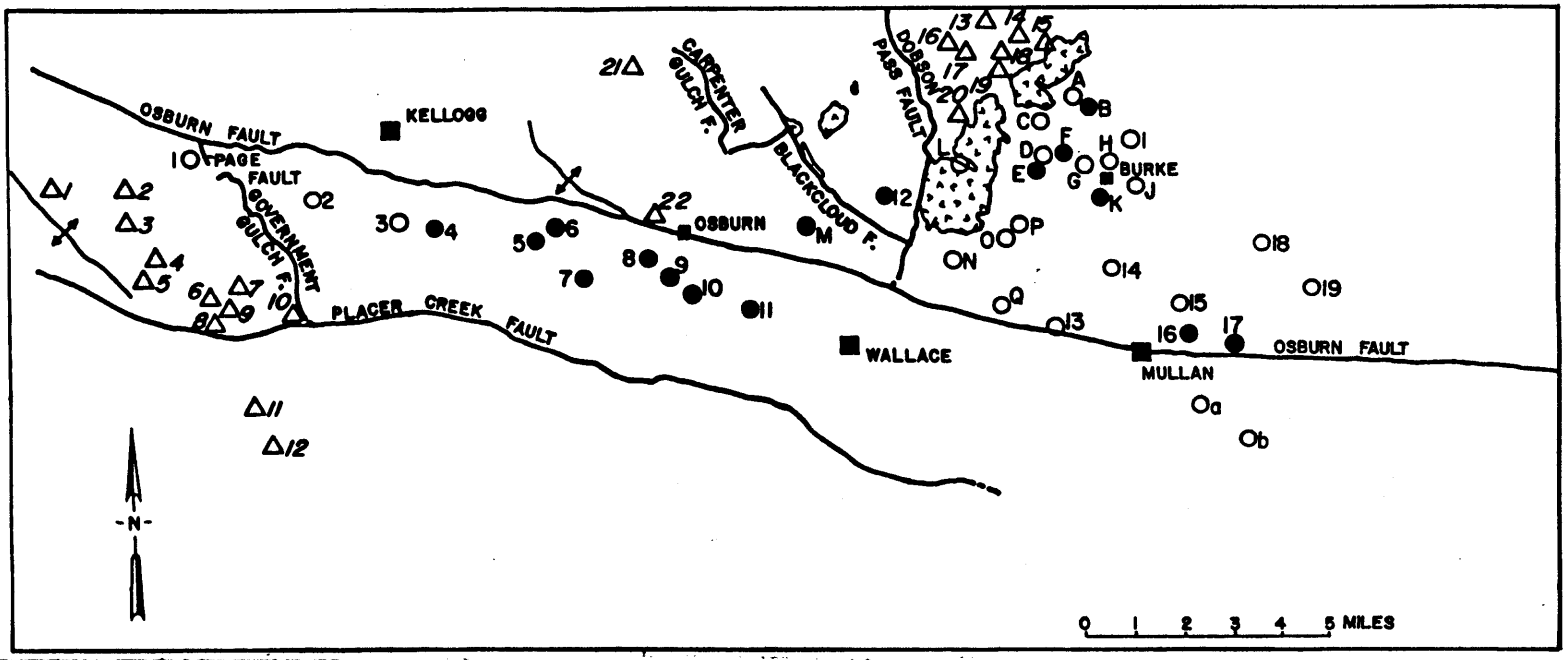


MIDDLE PRICHARD DEPOSITS

Pine Creek Area

1. Hypotheek
2. Bobby Anderson
3. Amy Matchless
4. Sunset (Liberal King)
5. Lookout Mountain
6. Nabob
7. Sidney
8. Hilarity
9. Little Pittsburg
10. Highland Surprise
11. Douglas
12. Constitution

Upper Ninemile Creek and Sunset Peak Area

13. Idora, Tuscumbia, and Tough Nut
14. Silver Tip
15. Sunset Lease
16. Carlisle
17. Amazon-Monitor
18. Nepsic
19. Interstate-Callahan
20. Rex (16 to 1)

Evolution District

21. Charles Dickens
22. Evolution

PRICHARD-BURKE DEPOSITS

A. Ambergris, Guelph, and Honolulu
B. Hercules
C. Tamarack
D. Union
E. Standard-Mammoth
F. Sherman
G. Hummingbird, Fairview, and Wide West
H. Tiger-Poorman
I. Ajax
J. Marsh
K. Hecla
L. Success (Granite)
M. Western Union
N. Canyon Silver (Formosa)
O. Helena-Frisco
P. Black Bear
Q. Golconda

REVETT-ST. REGIS DEPOSITS

1. Page
2. Bunker Hill
3. Alhambra

"Silver Belt"

4. Crescent
5. Sunshine
6. Polaris
7. Consolidated Silver (Silver Summit)
8. Coeur d'Alene (Mineral Point)
9. Coeur
10. Rainbow
11. Galena

Other Revett-St. Regis Deposits

12. Dayrock
13. Alice
14. Star-Morning
15. Gold Hunter
16. Lucky Friday
17. Vindicator

Stratabound Disseminated Copper-Silver Deposits

18. National
19. Snowstorm

ATLAS BLOCK

a. Atlas (Carbonate Hill)
b. Reindeer Queen

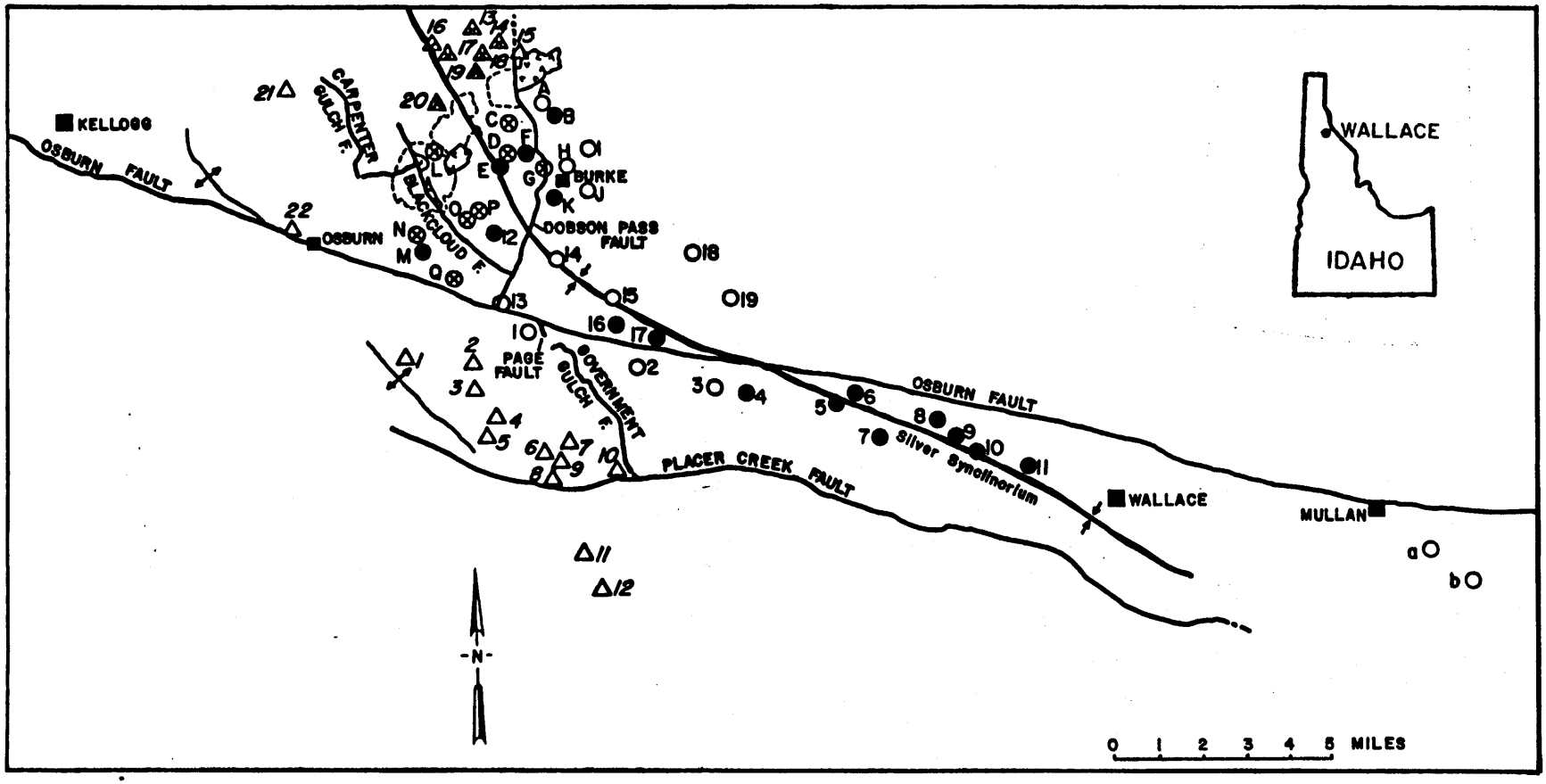
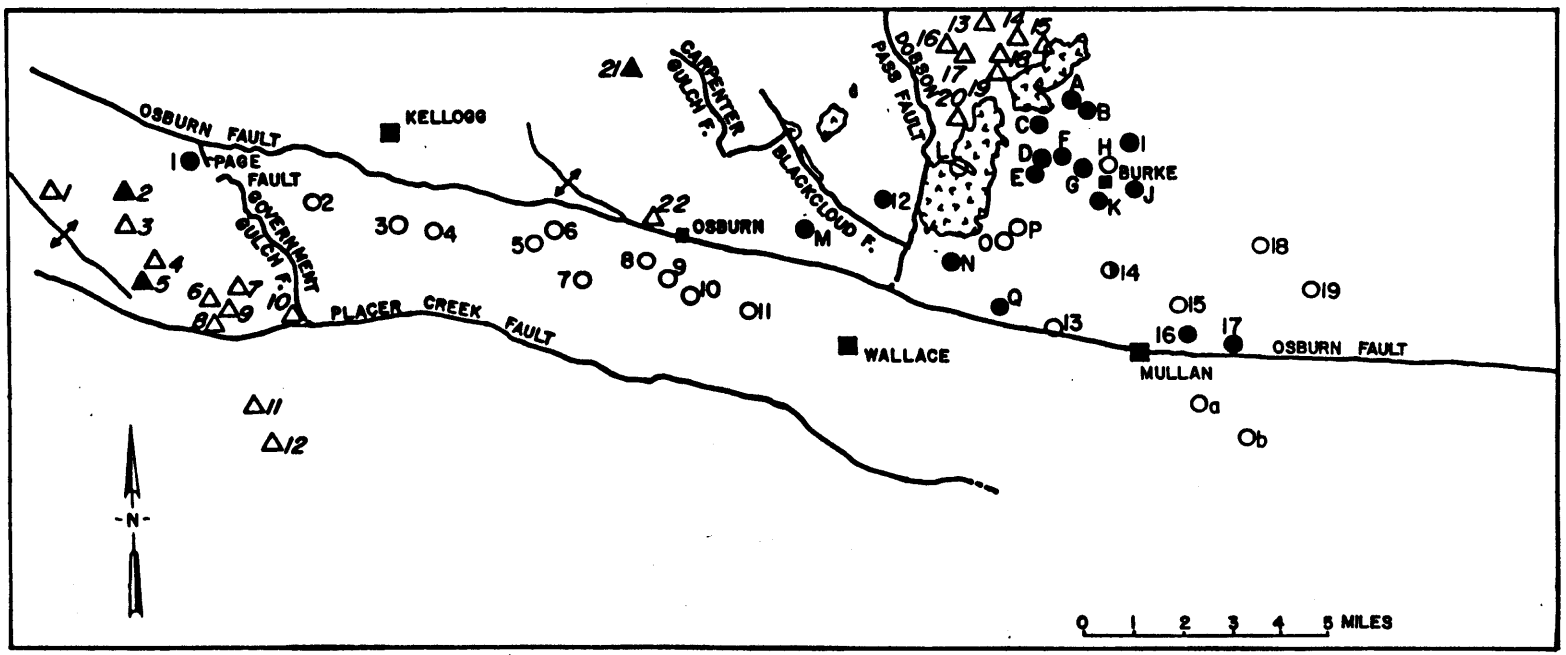


Figure 1. Location of mines in the Coeur d'Alene district grouped by stratigraphic position, highlighting the mines with 5 oz per ton silver or greater. Upper figure shows present locations and lower figure shows locations after reversing the movement along the Osburn and Dobson Pass faults (Bennett and Venkatakrishnan, 1982). Mines with 5 oz per ton silver or greater are shown as black dots. Circles and triangles with an X (⊗, ▲) represent mines located below the Dobson Pass fault as reconstructed in the lower figure. Deposits in the Middle Prichard are noted by italic numerals and a triangle symbol (*7*△). The Gemstocks are shown by a barbed pattern.



MIDDLE PRICHARD DEPOSITS

Pine Creek Area

1. Hypotheek
2. Bobby Anderson
3. Amy Matchless
4. Sunset (Liberal King)
5. Lookout Mountain
6. Nabob
7. Sidney
8. Hilarity
9. Little Pittsburg
10. Highland Surprise
11. Douglas
12. Constitution

Upper Ninemile Creek and Sunset Peak Area

13. Idora, Tuscumbia, and Tough Nut
14. Silver Tip
15. Sunset Lease
16. Carlisle
17. Amazon-Monitor
18. Nepsic
19. Interstate-Callahan
20. Rex (16 to 1)

Evolution District

21. Charles Dickens
22. Evolution

PRICHARD-BURKE DEPOSITS

A. Ambergris, Guelph, and Honolulu
B. Hercules
C. Tamarack
D. Union
E. Standard-Mammoth
F. Sherman
G. Hummingbird, Fairview, and Wide West
H. Tiger-Poorman
I. Ajax
J. Marsh
K. Hecla
L. Success (Granite)
M. Western Union
N. Canyon Silver (Formosa)
O. Helena-Frisco
P. Black Bear
Q. Golconda

REVETT-ST. REGIS DEPOSITS

1. Page
2. Bunker Hill
3. Alhambra

"Silver Belt"

4. Crescent
5. Sunshine
6. Polaris
7. Consolidated Silver (Silver Summit)
8. Coeur d'Alene (Mineral Point)
9. Coeur
10. Rainbow
11. Galena

Other Revett-St. Regis Deposits

12. Dayrock
13. Alice
14. Star-Morning
15. Gold Hunter
16. Lucky Friday
17. Vindicator

Stratabound Disseminated Copper-Silver Deposits

18. National
19. Snowstorm

ATLAS BLOCK

a. Atlas (Carbonate Hill)
b. Reindeer Queen

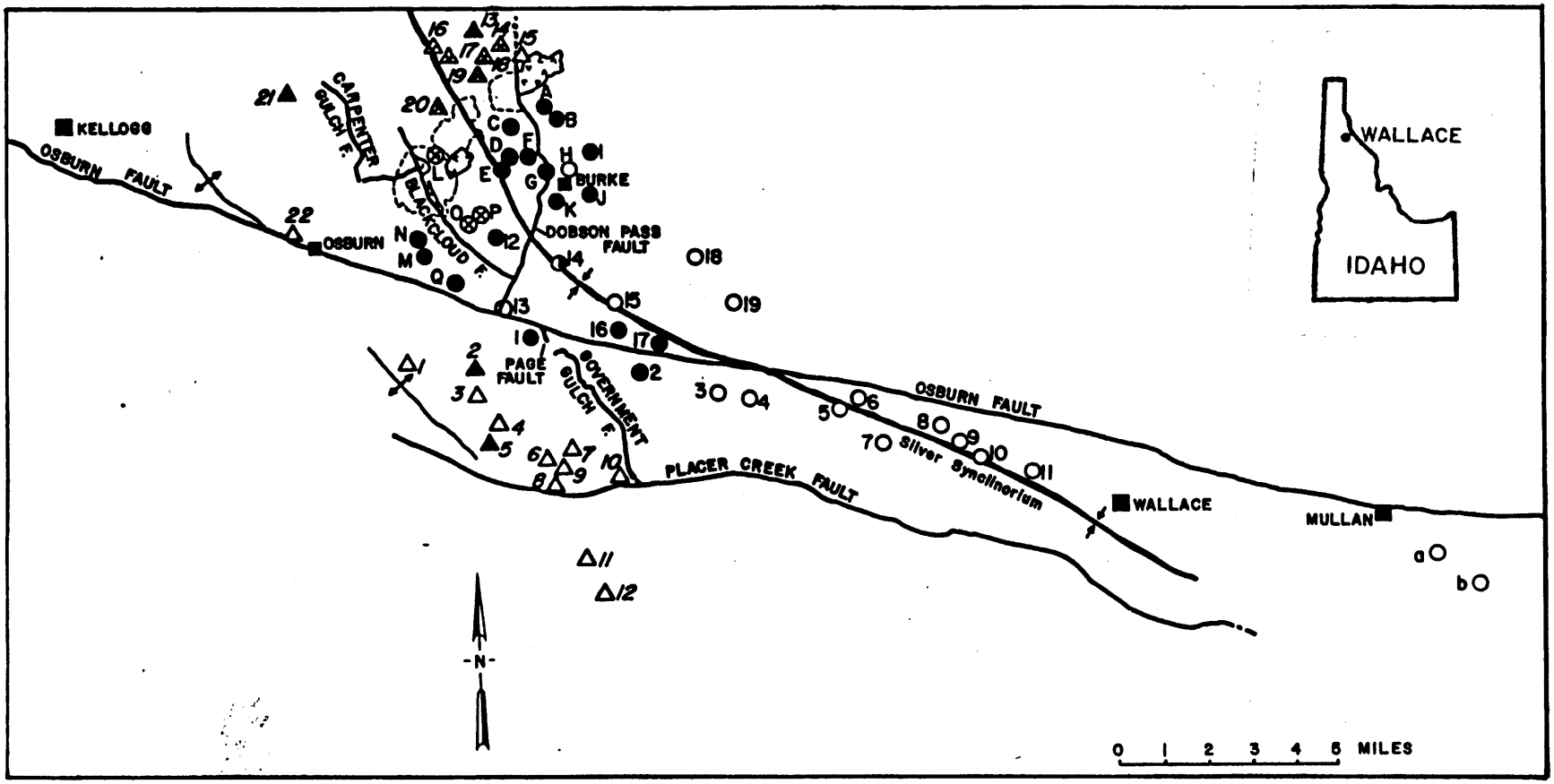
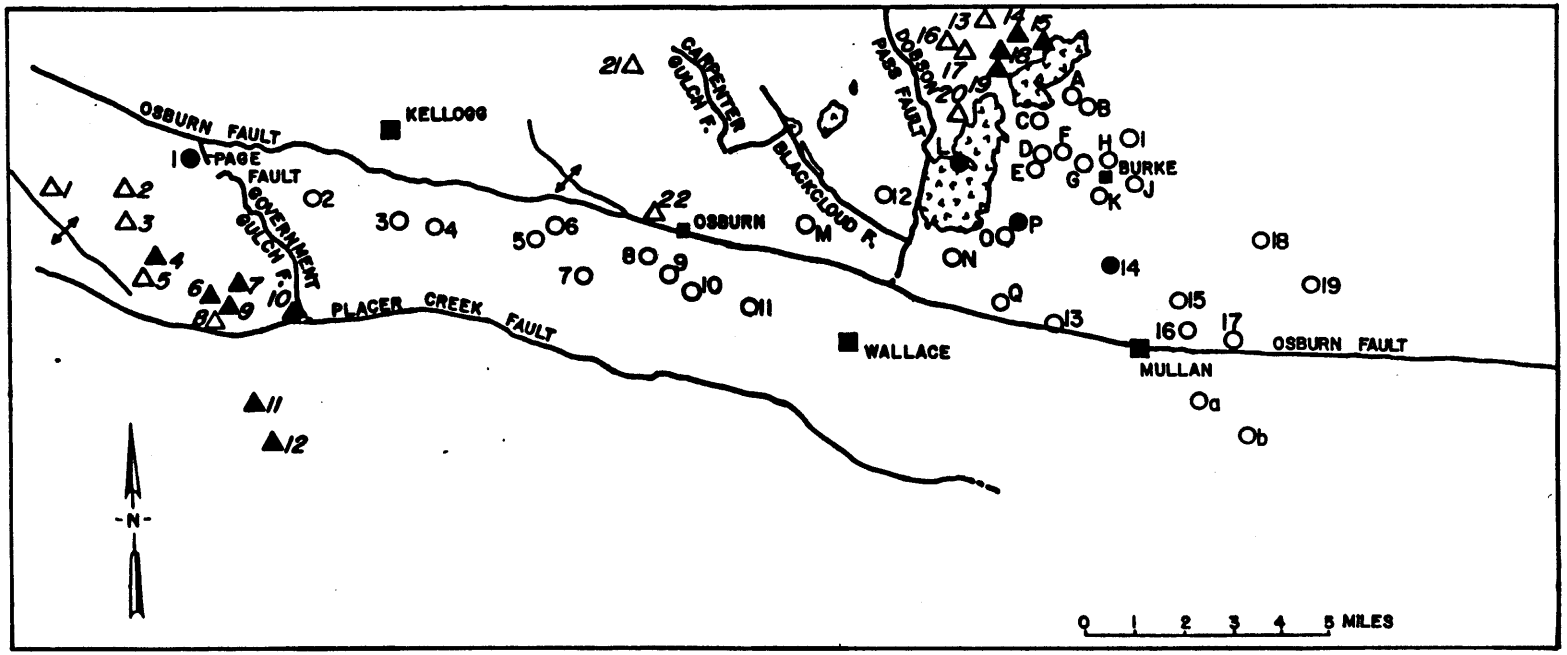


Figure 2. Location of mines in the Coeur d'Alene district grouped by stratigraphic position, highlighting the mines with 5 percent lead or greater. Upper figure shows present locations and lower figure shows locations after reversing the movement along the Osburn and Dobson Pass faults (Bennett and Venkatakrishnan, 1982). Mines with 5 percent lead or greater are shown as black dots. Circles and triangles with an X (⊗, ▲) represent mines located below the Dobson Pass fault as reconstructed in the lower figure. Deposits in the Middle Prichard are noted by italic numerals and a triangle symbol (7△). The Gemstocks are shown by a barbed pattern.



MIDDLE PRICHARD DEPOSITS

Pine Creek Area

1. Hypotheek
2. Bobby Anderson
3. Amy Matchless
4. Sunset (Liberal King)
5. Lookout Mountain
6. Nabob
7. Sidney
8. Hilarity
9. Little Pittsburg
10. Highland Surprise
11. Douglas
12. Constitution

Upper Ninemile Creek and Sunset Peak Area

13. Idora, Tuscumbia, and Tough Nut
14. Silver Tip
15. Sunset Lease
16. Carlisle
17. Amazon-Monitor
18. Nepsic
19. Interstate-Callahan
20. Rex (16 to 1)

Evolution District

21. Charles Dickens
22. Evolution

PRICHARD-BURKE DEPOSITS

A. Ambergris, Guelph, and Honolulu
B. Hercules
C. Tamarack
D. Union
E. Standard-Mammoth
F. Sherman
G. Hummingbird, Fairview, and Wide West
H. Tiger-Poorman
I. Ajax
J. Marsh
K. Hecla
L. Success (Granite)
M. Western Union
N. Canyon Silver (Formosa)
O. Helena-Frisco
P. Black Bear
Q. Golconda

REVETT-ST. REGIS DEPOSITS

1. Page
2. Bunker Hill
3. Alhambra

"Silver Belt"

4. Crescent
5. Sunshine
6. Polaris
7. Consolidated Silver (Silver Summit)
8. Coeur d'Alene (Mineral Point)
9. Coeur
10. Rainbow
11. Galena

Other Revett-St. Regis Deposits

12. Dayrock
13. Alice
14. Star-Morning
15. Gold Hunter
16. Lucky Friday
17. Vindicator

Stratabound Disseminated Copper-Silver Deposits

18. National
19. Snowstorm

ATLAS BLOCK

a. Atlas (Carbonate Hill)
b. Reindeer Queen

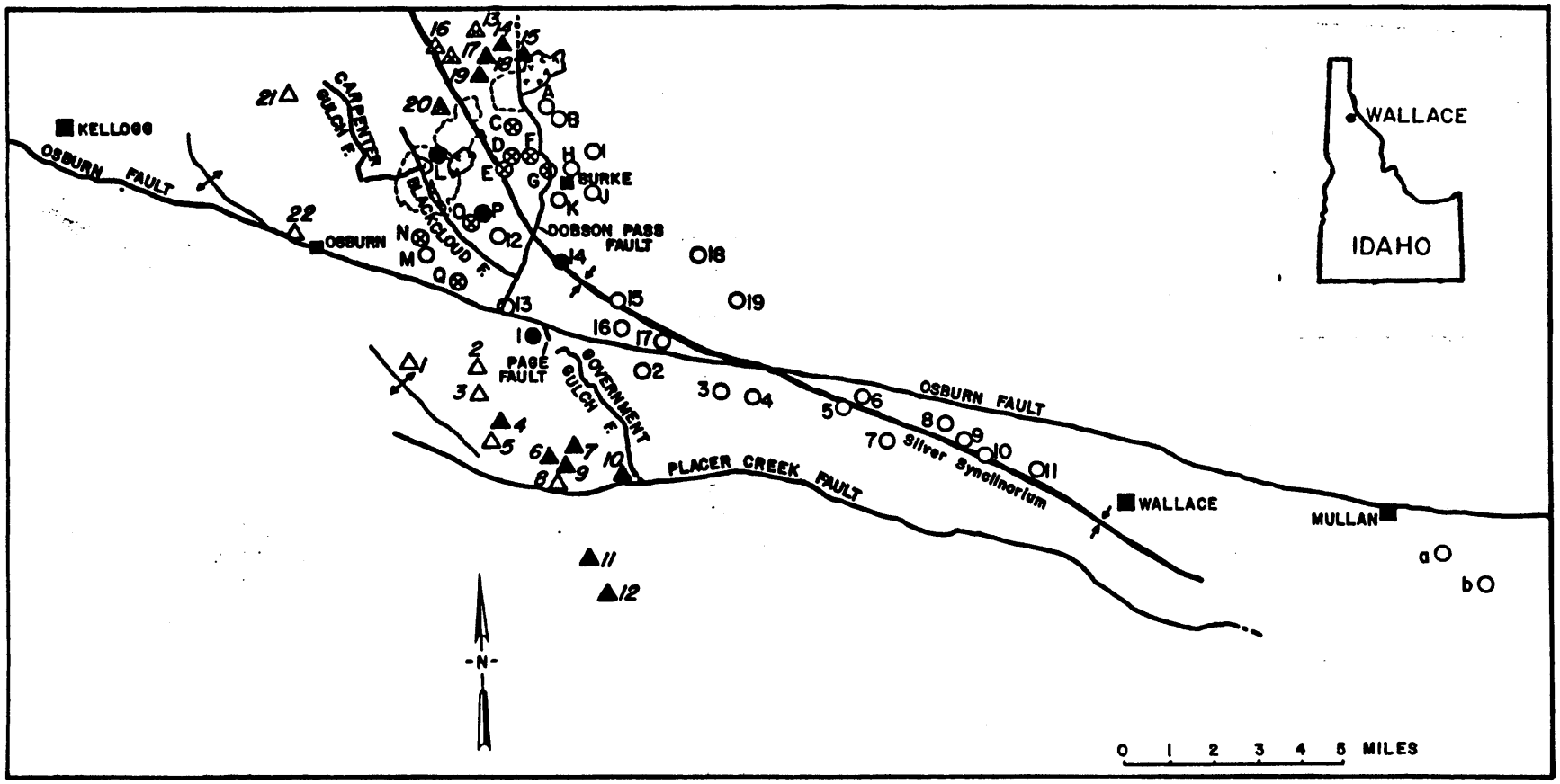
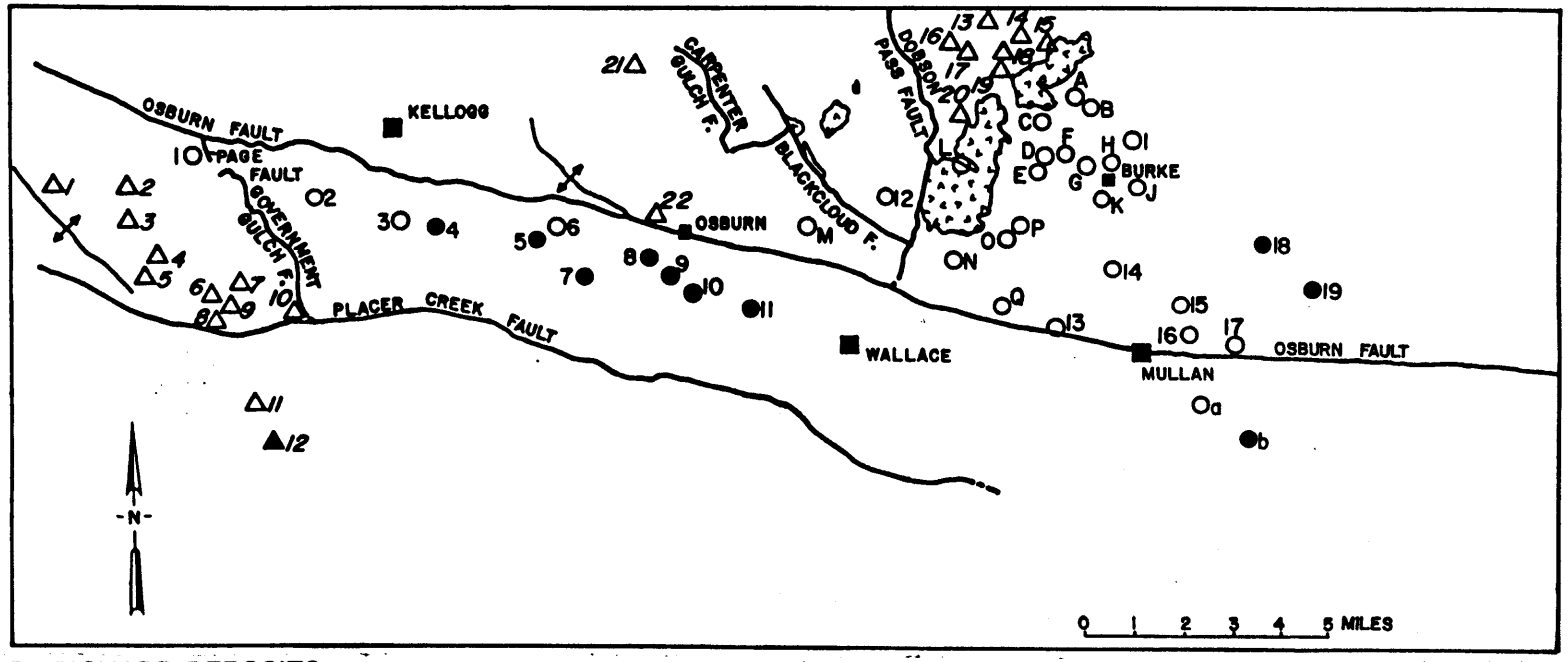


Figure 3. Location of mines in the Coeur d'Alene district grouped by stratigraphic position, highlighting the mines with 4 percent zinc or greater. Upper figure shows present locations and lower figure shows locations after reversing the movement along the Osburn and Dobson Pass faults (Bennett and Venkatakrishnan, 1982). Mines with 4 percent zinc or greater are shown as black dots. Circles and triangles with an X (⊗, ▲) represent mines located below the Dobson Pass fault as reconstructed in the lower figure. Deposits in the Middle Prichard are noted by italic numerals and a triangle symbol (*7*△). The Gemstocks are shown by a barbed pattern.



MIDDLE PRICHARD DEPOSITS

Pine Creek Area

1. Hypotheek
2. Bobby Anderson
3. Amy Matchless
4. Sunset (Liberal King)
5. Lookout Mountain
6. Nabob
7. Sidney
8. Hilarity
9. Little Pittsburg
10. Highland Surprise
11. Douglas
12. Constitution

Upper Ninemile Creek and Sunset Peak Area

13. Idora, Tuscumbia, and Tough Nut
14. Silver Tip
15. Sunset Lease
16. Carlisle
17. Amazon-Monitor
18. Nepsic
19. Interstate-Callahan
20. Rex (16 to 1)

Evolution District

21. Charles Dickens
22. Evolution

PRICHARD-BURKE DEPOSITS

A. Ambergris, Guelph, and Honolulu
B. Hercules
C. Tamarack
D. Union
E. Standard-Mammoth
F. Sherman
G. Hummingbird, Fairview, and Wide West
H. Tiger-Poorman
I. Ajax
J. Marsh
K. Hecla
L. Success (Granite)
M. Western Union
N. Canyon Silver (Formosa)
O. Helena-Frisco
P. Black Bear
Q. Golconda

REVETT-ST. REGIS DEPOSITS

1. Page
2. Bunker Hill
3. Alhambra

"Silver Belt"

4. Crescent
5. Sunshine
6. Polaris
7. Consolidated Silver (Silver Summit)
8. Coeur d'Alene (Mineral Point)
9. Coeur
10. Rainbow
11. Galena

Other Revett-St. Regis Deposits

12. Dayrock
13. Alice
14. Star-Morning
15. Gold Hunter
16. Lucky Friday
17. Vindicator

Stratabound Disseminated Copper-Silver Deposits

18. National
19. Snowstorm

ATLAS BLOCK

a. Atlas (Carbonate Hill)
b. Reindeer Queen

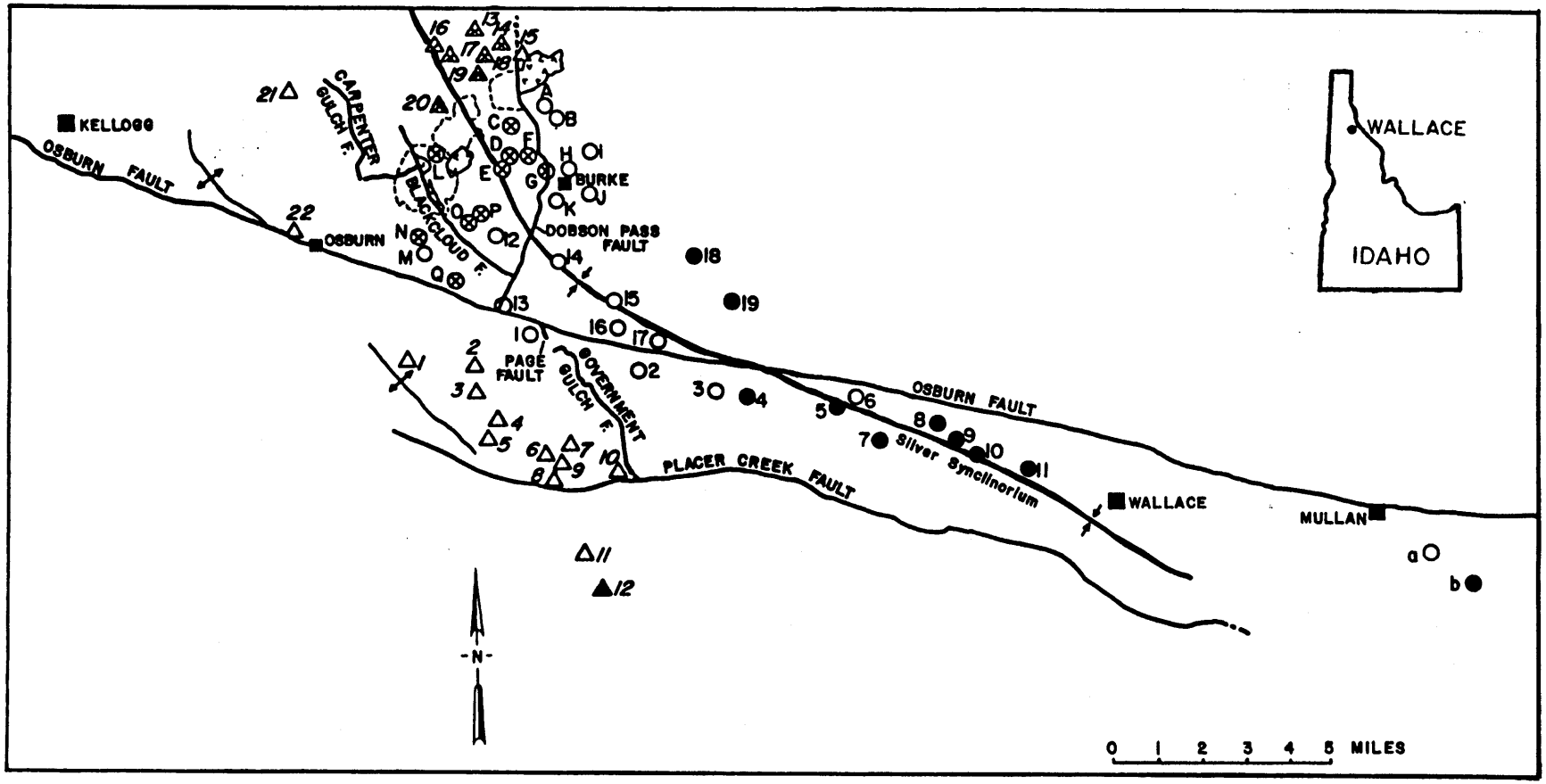


Figure 4. Location of mines in the Coeur d'Alene district grouped by stratigraphic position, highlighting the mines with 0.4 percent copper or greater. Upper figure shows present locations and lower figure shows locations after reversing the movement along the Osburn and Dobson Pass faults (Bennett and Venkatakrishnan, 1982). Mines with 0.4 percent copper or greater are shown as black dots. Circles and triangles with an X (⊗,▲) represent mines located below the Dobson Pass fault as reconstructed in the lower figure. Deposits in the Middle Prichard are noted by italic numerals and a triangle symbol (⊿). The Gemstocks are shown by a barbed pattern.