



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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October 1982

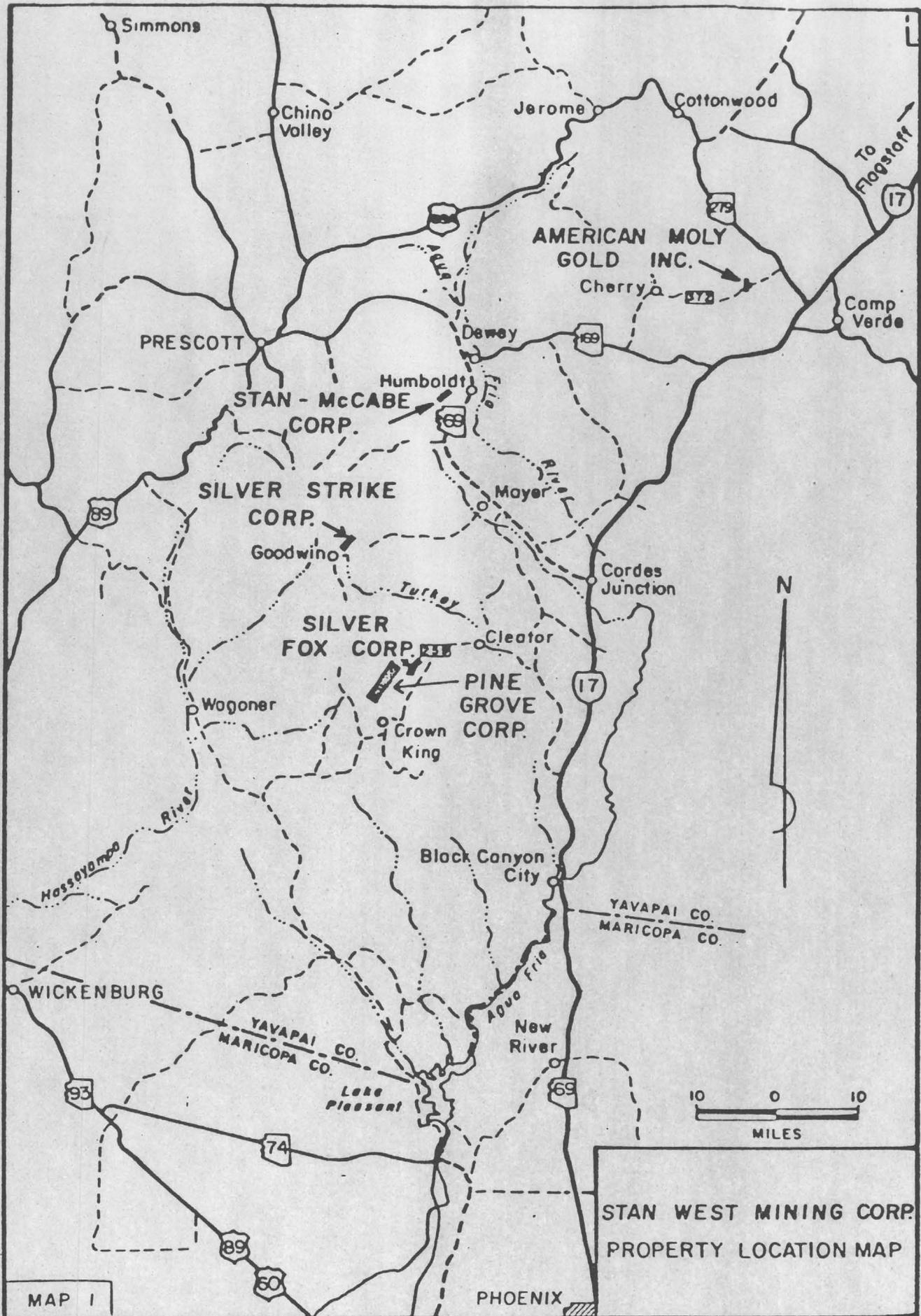
PEBBLE MILL CLAIM GROUP

The Pebble Mill group of claims consists of approximately 5,100 acres containing 272 unpatented lode claims and 5 unpatented placer claims. This property is also known as the American Moly - Gold Property. The area is located approximately 25 miles south of the town of Jerome in Yavapai County, Arizona (see attached maps).

The area had several producing mines in the early 1900's. These mines produced from gold-bearing quartz veins and generally were worked to depths of only 200-300 feet. The grades of these veins are reported to run from 0.5 to 1.0 ounces per ton gold. Two of the larger mines, the Logan and the Monarch, are included in this claim group. Trenching and rock/soil geochemistry substantiate that good grades (0.25 ounces/ton gold and higher) exist over some of these zones.

Areas of tungsten, molybdenum and copper mineralization are also present in the claim group.

The main rock type of the area is a Precambrian quartz diorite containing general granodiorite porphyry dikes. The intrusive is capped by tertiary volcanics (see attachments for additional information).

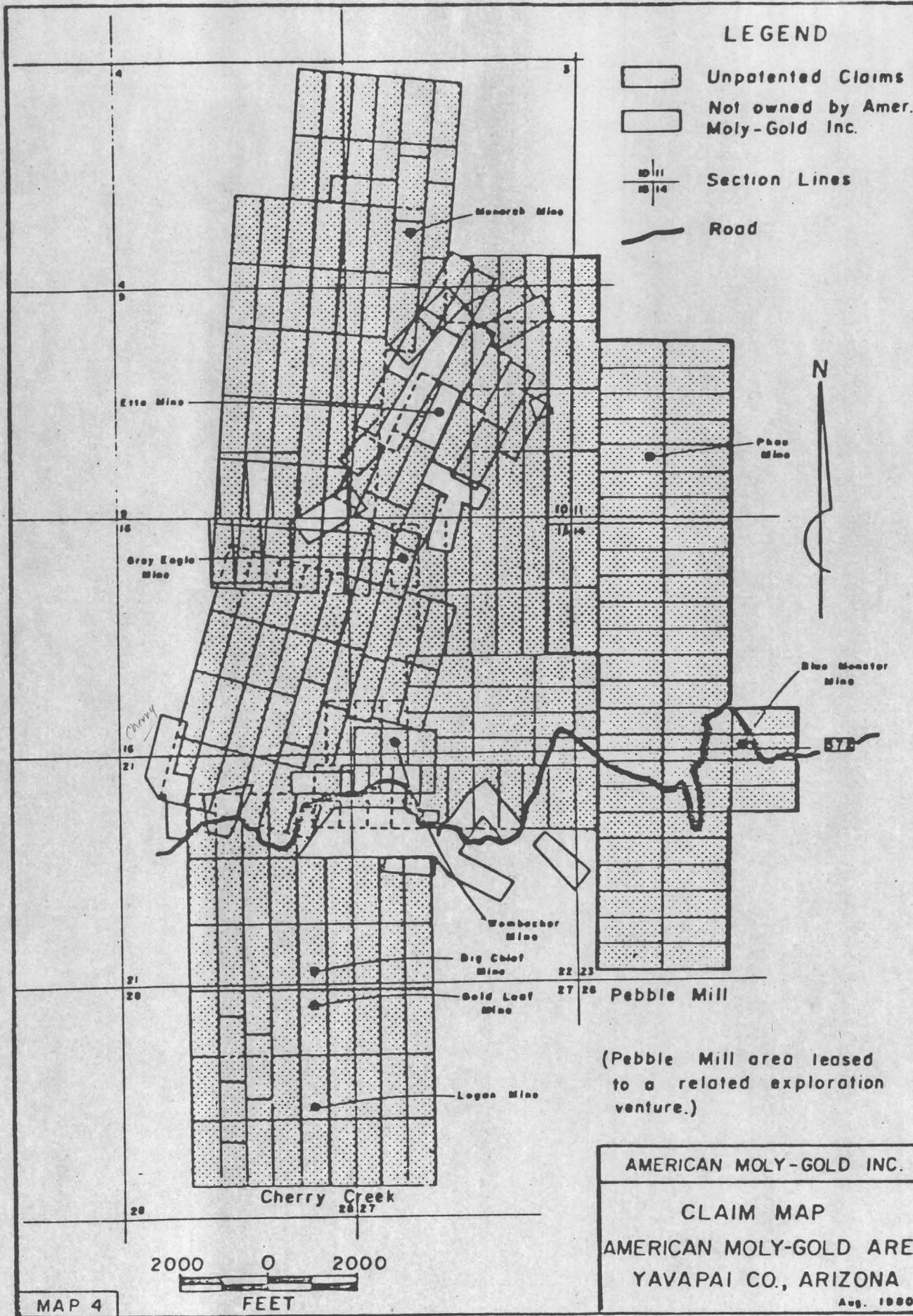


STAN WEST MINING CORP.
PROPERTY LOCATION MAP

MAP I

LEGEND

-  Unpatented Claims
-  Not owned by Amer. Moly-Gold Inc.
-  Section Lines
-  Road



October 1982

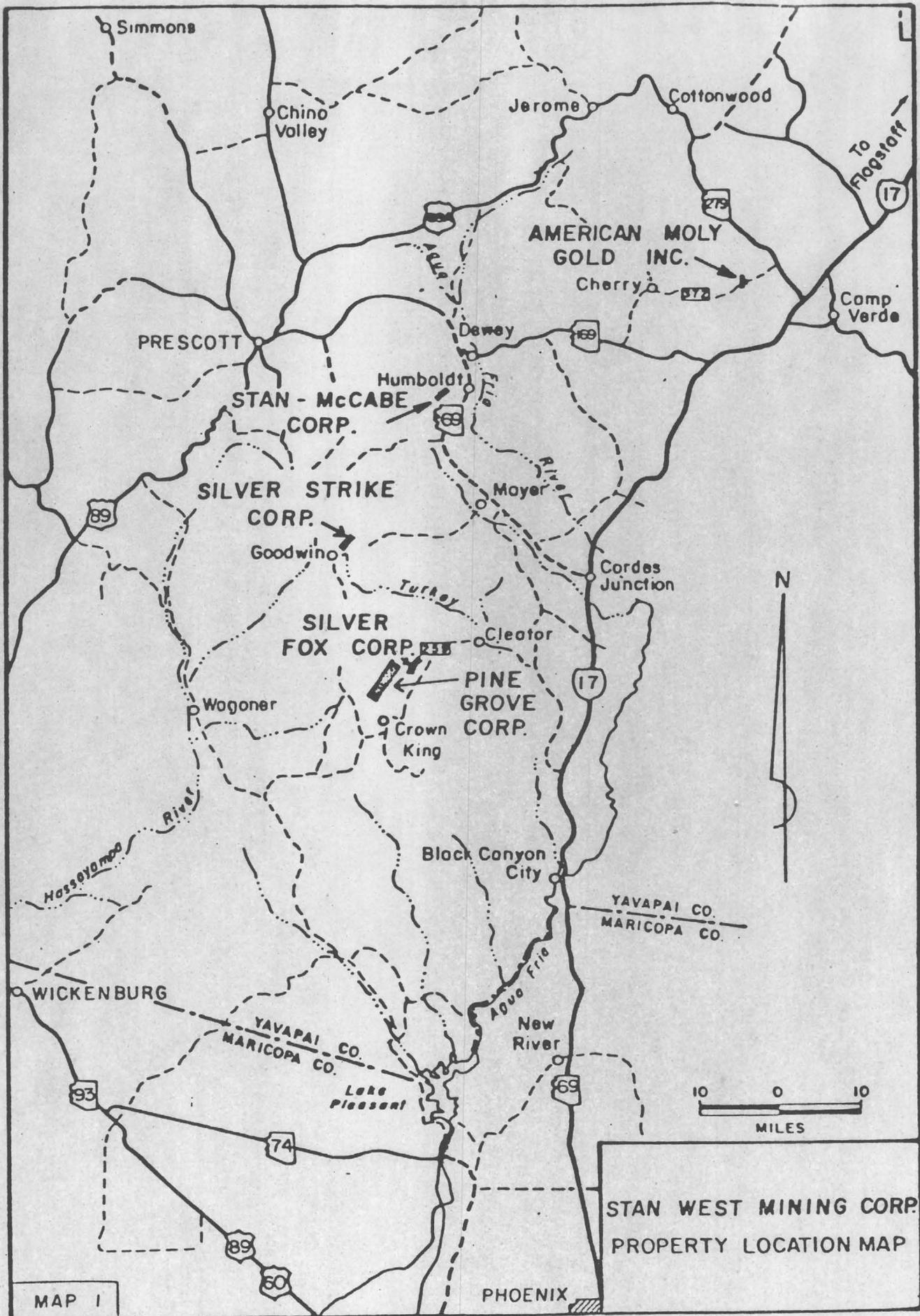
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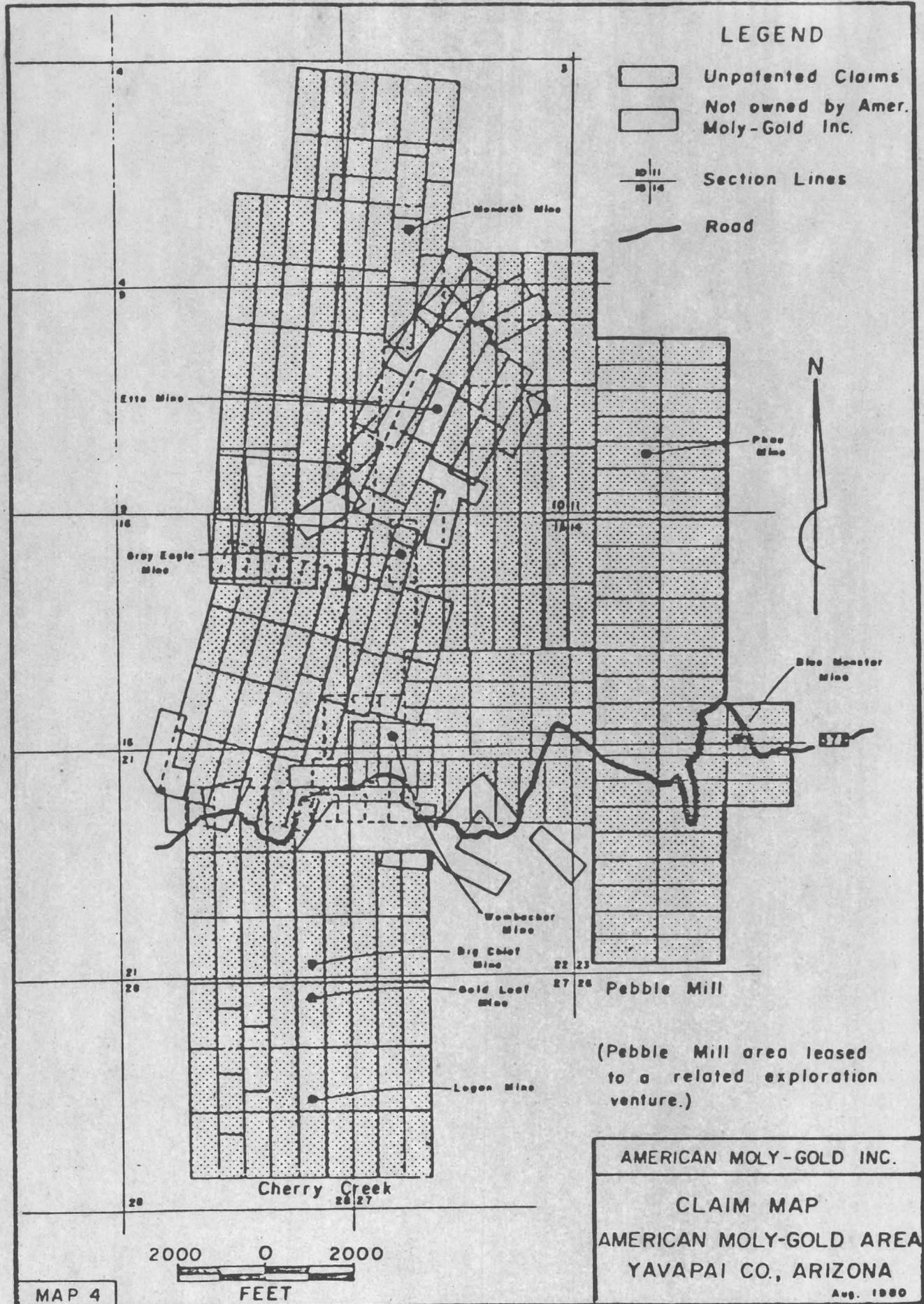
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MAP 4

2000 0 2000
FEET

AMERICAN MOLY-GOLD INC.
CLAIM MAP
AMERICAN MOLY-GOLD AREA
YAVAPAI CO., ARIZONA
Aug. 1980

Geology and Ore Deposits of the Jerome Area Yavapai County Arizona

By C. A. ANDERSON *and* S. C. CREASEY

GEOLOGICAL SURVEY PROFESSIONAL PAPER 308

*With sections on the United Verde Extension
mine by G. W. H. Norman and on the Cherry
Creek mining district by R. E. Lehner*



UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1958

TABLE 26.—Average analysis of shipping ore and concentrates, McCabe-Gladstone mine. From Lindgren (1926, p. 132)

Silica	percent	81.4
Copper	do	2.0
Lead	do	2.1
Zinc	do	4.7
Iron	do	24.6
Arsenic	do	3.9
Antimony	do	1.0
Sulfur	do	20.4
Gold	ounces per ton	1.6
Silver	do	10.2

The approximate production of the McCabe-Gladstone mine from 1880-1926 (Elsing and Heineman, 1936, p. 101) was 1,200,000 pounds of copper, 500,000 pounds of lead, \$2,200,000 in gold, and \$600,000 in silver. The total production was valued at \$3,000,000.

KIT CARSON VEIN

The Kit Carson vein is about 1,500 feet west of the Silver Belt-McCabe vein. It strikes parallel to the Silver Belt-McCabe vein, but has an opposite dip to the east. The Kit Carson vein was traced on the surface for about 4,000 feet, but is somewhat longer, for its northern extent is overlain by the gravel of the Hickey formation in Lonesome Valley. A short segment near 1,268,000 N.-388,500 E. may be the southward continuation of the vein. Little is known about the Kit Carson vein. It appears to resemble the Silver Belt-McCabe vein in structure, alteration, and character of the mineralized zone.

The vein consists of a sheared zone as much as 5 feet wide, characterized by fissile, sericitic rock in which local stringers of comb quartz and boxwork, possibly after ankerite, were observed. The vein was prospected by eight shafts and prospect pits. The material on the dumps of these openings contains considerable ankerite, but no sulfide minerals were found. The size of some of the dumps indicates that these shafts are 100 or more feet deep, or that short lateral workings extend off shallow shafts. Production from the Kit Carson vein has not been recorded.

CHERRY CREEK MINING DISTRICT

By R. E. LEHNER

The Cherry Creek mining district occupies the basin drained by Cherry Creek in the southeast corner of the Jerome area (pl. 1). Mining of gold ore has been intermittent since about 1880. Lindgren (1926, p. 104) made the following statement about the district:

The district contains many properties that have made some production, and some of them were in operation at the time of visit. Many of them appear to have a certain resemblance in their history. There was the discovery, the arrastre stage, the sinking of a shaft to a depth of 200 or 300 feet, followed by the

erection of a small mill, and next usually a prolonged rest, with a watchman in charge. The pockety character of the ore is the cause of this stoppage of exploration. Whether any large ore shoots will be found is probably doubtful.

PRODUCTION

Economic conditions in large part have controlled activity in the district. From 1917 to 1920, a period of economic prosperity, no mines were active; but from 1930 to 1934, activity is related to the economic depression of that period.

Most of the mines in the district were visited briefly, but many were not accessible for examination. Hugh Allen of Cherry, Ariz., a life-long resident of the district, has generously supplied information on the past history, development, and production of the mines.

Total production of the district is not known, but all available information indicates that it is not large. Table 27 gives the best summary available on the number of producers and production from 1908 to 1933. The Cherry Creek district has yielded less than 1 percent of the lode-gold production of Arizona (Wilson, 1942).

TABLE 27.—Production from Cherry Creek mining district, 1908-33
[From Elsing and Heineman (1936, p. 83)]

Year	Producers	Tons	Gold (value)	Silver (ounces)	Copper (pounds)	Total
1908	6	464	\$5,775	86		\$5,821
1909	4	330	7,646	242		7,772
1910	6	1,332	6,352	93	394	6,452
1911	4	531				9,402
1912	3					
1913	2					
1914	4					2,866
1915	5	86				958
1916	2					
1917						
1918						
1919						
1920						
1921	1					
1922						
1923	1					
1924						
1925	2					
1926	2					
1927						
1928						
1929						
1930	3	201	1,897	74	4,155	2,465
1931	1	40				
1932	6	223	3,023	96	968	3,111
1933	14	327	9,214	423	1,969	9,488
Total		3,524	\$33,907	1,014	7,484	\$48,335

GEOLOGY

The country rock in the Cherry Creek mining district is Precambrian quartz diorite cut by a few granodiorite porphyry dikes (pl. 1). Tapeats sandstone(?) and Martin limestone cap some of the ridges and peaks. The Hickey formation, comprising lava and gravel, in part overlies the Paleozoic rocks and in part rests directly on the quartz diorite.

The veins are abundant but discontinuous, and generally are uniform in character. They occur as lenses or pods in sheared zones of quartz diorite and granodiorite porphyry. Their width ranges from 1 inch or less to 6 feet, but average about 1-2 feet. Where the strike changes or the dip flattens the thicknesses appear to be above average. The veins range in strike from north to N. 45° E., but most lie between N. 15° E. and N. 35° E.

The vein filling is chiefly milky-white quartz, but in a few places is stained on weathered surfaces by limonite. Locally it contains vugs, lined with quartz crystals. Minor constituents are gold, tourmaline, pyrite, and, according to Lindgren (1926, p. 103), small quantities of chalcopyrite, bornite, sphalerite, and galena. The tourmaline occurs as minute needles in the quartz, and the pyrite as irregular grains intergrown with quartz. Some gold is free and may be megascopic, but some is derived from oxidized sulfide minerals. Gold and sulfide minerals are associated in most of the ore shoots. This spatial coincidence suggests contemporaneous deposition.

Adjacent to the quartz veins, limonite has stained the quartz diorite and granodiorite porphyry dikes orange and rusty brown. Mafic minerals are absent, and the plagioclase is sericitized and altered to albite. Farther from the veins, chlorite has replaced biotite and hornblende, the plagioclase is saussuritized, and epidote veins are locally present.

The limitation of the quartz veins and alteration zones to the quartz diorite and granodiorite porphyry dikes and their absence in the overlying Paleozoic sedimentary rocks proves that the gold-bearing quartz veins in the Cherry Creek district are of Precambrian age.

LEGHORN MINE

One of the northernmost mines in the district, this mine is developed by an inclined shaft 600 feet deep, but was inaccessible in 1951. The vein cannot be traced at the surface, but at the portal of the adit, the vein strikes N. 65° E. and dips 25° W. According to reports most of the ore came from the hanging-wall side of the vein which is stoped from the 400 level to near the surface for several hundred feet. Production from the Leghorn is reported to be among the largest in the district.

SITTING BULL MINE

The Sitting Bull mine is about 300 feet east of the Leghorn mine at a higher altitude, and both mines may be on the same vein or on parallel veins of the same system. Three adits within a vertical range of about 60 feet crosscut the vein and some ore has been mined from underhand and shrinkage stopes. The under-

ground workings are within the oxidized zone of the vein. The width of the vein ranges from small stringers to 2½ feet; the average strike is about N. 40° E. and the dip ranges from 25° to 45° W. The ore shoots occurred in the more gently dipping parts of the vein. About \$11,000 of gold was produced in 1940, and an unknown amount was produced earlier.

FEDERAL MINE

The Federal mine is about a mile southeast of the Leghorn mine, and the vein, averaging 2 feet in width, strikes N. 45° E. and dips 50° W. Lindgren (1926, p. 107) states that the mine was active about 1907, and was developed by an inclined shaft, 260 feet deep. An exploratory adit 1,000 feet long was driven, and a mill costing \$100,000 was built, but no ore was found.

GOLD BULLION MINE

The Gold Bullion mine is about a mile northwest of Cherry. Trenching and bulldozing have exposed about 350 feet of vein striking N. 15° E. and dipping 45° W. The underground workings, filled with water in 1951, consist of an inclined shaft 100 feet deep connecting with extensive drifts along the vein. Gold ore was shipped to the smelter at Clarkdale, but the amount of production is not known.

BUNKER MINE

Extensive underground workings were driven in an attempt to find ore shoots in a shear zone that is essentially barren. One small ore shoot, 3 feet wide, was found at the end of one of the exploratory drifts. The surface was scraped by mule teams in the early history of the district, and it is claimed that \$100,000 worth of gold was produced about 1880. The mine, which is about 1½ miles north of Cherry, was reported to be one of the three largest producers in the district.

SUGAR BOWL MINE

The Sugar Bowl mine is about a mile north of Cherry, on the road leading to the Bunker mine. A shaft 30 feet deep connects with a drift along the vein, from which some ore has been stoped. An adit crosscuts the vein 30 feet from the portal, and some ore was mined from connecting drifts. The vein, ranging from 2 to 18 inches in width, strikes N. 25°-45° E. and dips from 25° to 45° W. It is reported that about 20 carloads of gold ore ranging in value from \$66 to \$88 per ton have been shipped.

GOLDEN IDOL MINE

The Golden Idol mine is more than a mile northeast of Cherry. An inclined shaft 400 feet deep was sunk on one of the veins on the property, but was inacces-

sible in 1951. The vein that was mined is about 18 inches wide, and strikes N. 85° E. and dips 45° W. Lindgren (1926, p. 106) states that a stamp mill and cyanide plant were on the property in 1922, but they were operated only from 1907 to 1910, on ore worth \$7 to \$12 to the ton. It is reported that the best ore was near the surface.

BLACK HAWK MINE

The old workings of the Black Hawk mine are 1 mile northeast of Cherry. An inclined shaft 200 feet deep was sunk on a vein striking N. 45° E. and dipping 55° W. The shaft is now filled with water. It has been claimed that 30 cars of gold ore averaging \$25 per ton were shipped.

GOLD EAGLE MINE

The Gold Eagle mine is about 2 miles northeast of Cherry. An inclined shaft 100 feet deep connects with drifts along a vein striking N. 85° E. and dipping 5°-35° W. This mine has produced about 10 to 15 cars of ore according to unsubstantiated reports; some was reduced in arrastres and some was shipped.

WOMBACHER MINE

The Wombacher mine which is about 1½ miles east of Cherry, consists of a shaft 80 feet deep that connects with short drifts at the bottom. At a depth of 30 feet, a 10-foot crosscut connects to the vein, and below this level, the shaft follows the vein downward. The shaft cut through an ore shoot but the drifts were in barren rock. The mine is reported to have produced between \$5,000 and \$10,000 in gold ore; some ore was reduced in arrastres and some was shipped.

DOVE MINE

This mine which is about 100 feet west of the Wombacher mine, in 1951 consisted of a vertical shaft 70 feet deep, sunk in the vein. The operators planned to sink the shaft below the level of the Wombacher workings and run a drift eastward on the vein, which strikes N. 85° E. and dips 70° W. to vertical. This is one of the steepest veins in the district.

SUNNYBROOK MINE

The Sunnybrook mine, which is less than a mile west-southwest of Cherry, consists of an incline shaft sunk on the vein. The depth of the shaft is unknown. About 65 feet below the collar, short drifts connect to the shaft, and in 1951 ground water stood at the drift level. The vein strikes N. 15° W. and dips 55° W.; the average width is 18 inches. The vein wedges out at the face of the drift southwest of the shaft, and the gold content and the dip of the vein are reported to decrease with depth.

LOGAN MINE

This mine, 2 miles southeast of Cherry, is one of the deepest in the district. An inclined shaft on the vein is 600 feet deep and connects to three levels; at 60, 160, and 400 feet below the surface. The shaft was filled with water in 1951 to within 50 feet of the surface. Ore was not found below the 400 level. The vein ranges from 1 to 5 feet in width and strikes N. 40° W. and dips 35° W.; the northwest strike is unique in the district.

Gold worth about \$14,000 was mined from the 160 level and smelter return sheets show that the ore averaged about \$30 per ton. A northwest drift 350 feet long on the 400 level produced ore worth about \$25 per ton 175 feet from the shaft and near the end of the drift. Lindgren (1926, p. 107) stated that a mill was on the property in 1922, but it was gone in 1951.

BLACK HILLS MINING DISTRICT

This mining district is on the western slope of the Black Hills and extends eastward along the south margin of Mingus Mountain to near Cherry. Many scattered prospects are in this district, but only one mine, the Yaeger, has had any appreciable production. Small showings of copper occur in many parts of the district, but most prospecting has been disappointing. The district includes much of the quartz diorite in the southern part of the Bingus Mountain quadrangle and much of the Ash Creek and Alder groups. The age of mineral deposition is presumably Precambrian, because of the general similarity to the veins in the Cherry district that are definitely of Precambrian age. Although mineral deposition in the Yaeger mine cannot be proven positively to be of Precambrian age, the absence of mineralized faults and fractures in the nearby Paleozoic rocks is strongly indicative.

YAEGER MINE

The first production from this mine which is located about a mile south of the Prescott-Jerome highway next to the Shylock fault apparently was in 1890. According to Elsing and Heineman (1936, p. 102), 10,000,000 pounds of copper, \$52,000 of gold and \$50 of silver, having a total value of \$1,500,000, were produced from 1890 to 1922. Much of this production must have been before 1904, as subsequent production from the Black Hills district totals less than \$300,000. The mine has been inactive since 1923, except for a few attempts to mill some of the dump ore.

The mine is developed by an inclined shaft to the 1,300 level, with drifts extending mostly to the east for a maximum of 750 feet. The mine is now inaccessible.

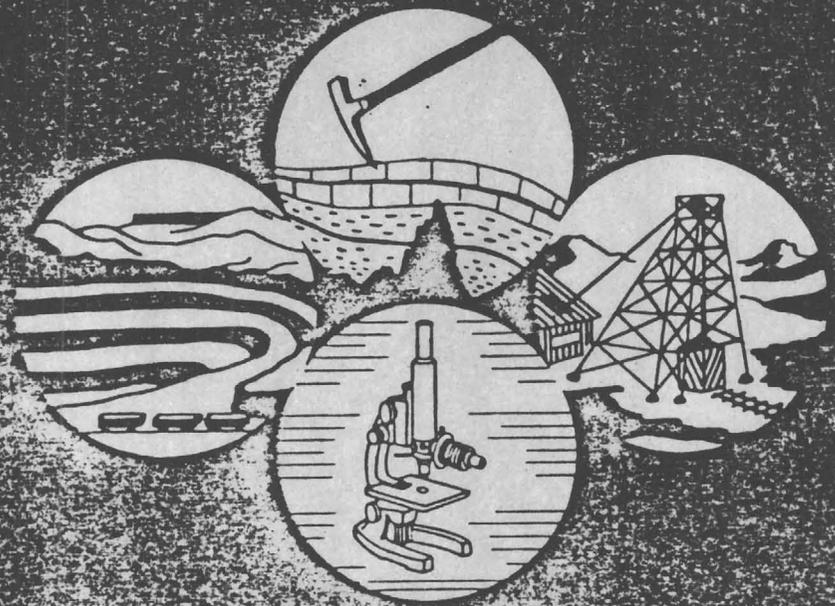
The Yaeger mine is in a lithic tuff member of the

ARIZONA LODE GOLD MINES AND GOLD MINING

by

ELDRED D. WILSON, J. B. CUNNINGHAM, AND G. M. BUTLER

THE ARIZONA BUREAU OF MINES



THE UNIVERSITY OF ARIZONA
TUCSON

strikes S. 70° W., dips 40° NW., and is about 20 feet long by 2 to 2½ feet thick. This vein material consists of coarse-grained milky quartz, pale-yellowish calcite, and fine-grained purple fluorite. Small masses and disseminations of yellowish pyrite are present in the quartz. In places, the pyrite is oxidized to limonite. The wall rock shows strong sericitization. According to Mr. Hubbard, the ore mined from this shoot in January, 1934, averaged about 0.4 per cent of copper, 0.51 ounces of gold, and 2 to 3 ounces of silver per ton. Trucking to Hillside cost \$1.50 per ton.

PRESCOTT DISTRICT

BULLWHACKER MINE

The Bullwhacker mine is about 4 miles in air-line east of Prescott and a short distance south of the Dewey road, on the divide between Granite and Agua Fria creeks. The principal rocks are dense black schists with dikes of diorite porphyry, intruded on the west by Bradshaw granite. Blake¹², in 1898, described this deposit as "A small mine . . . sometimes called the Boulder claim. It is notable for bearing coarse gold of high grade in a small quartz vein. The vein varies in thickness from a few inches to a foot. The quartz is hard and occurs in boulder-like masses, rounded hard lumps, in which the gold occurs. There is apparently one ore chute or chimney pitching northward. The claim has been worked to a depth of 132 feet by a shaft and most of the pay ore extracted (1886) to that depth."

Lindgren¹³ states that the massive milky-white quartz contains a little pyrite in crystals and stringers.

CHERRY CREEK DISTRICT¹⁴

The Cherry Creek district is in the southern portion of the Black Hills, in the vicinity of Cherry post office, on the headwaters of Cherry Creek. By highway, this place is 16 miles from the railway at Dewey and 22 miles from Clemenceau.

Regarding the history and production, Lindgren says:

"Many of the mines, the Monarch property in particular, were operated in a small way in the early days, their ore generally being reduced in arrastres . . . In 1907 seven properties were in operation, with six mills. Some high-grade ore containing as much as \$60 or even \$100 to the ton was extracted. In 1908 six mines yielded 464 tons, from which was obtained \$5,775 in gold and 86 ounces in silver, a total value of \$12 to the ton. In 1909

¹² Blake, Wm. P., In Rep't. of Gov. of Arizona, 1898, p. 262.

¹³ Work cited, p. 108.

¹⁴ Lindgren, W., Ore deposits of the Jerome and Bradshaw Mountains quadrangles, Arizona: U. S. Geol. Survey Bull. 782, pp. 102-107, 1926.

¹⁵ Reid, J. A., A sketch of the geology and ore deposits of the Cherry Creek district, Arizona: Econ. Geol., vol. 1, pp. 417-36, 1906.

four mines produced 330 tons yielding 329 ounces of gold and 127 ounces of silver, together with 29 tons of concentrates yielding 40 ounces of gold and 115 ounces of silver. In 1910 seven mines produced 1,332 tons, from which was obtained \$6,352 in gold and 93 ounces of silver; this ore was obviously of low grade. In 1911 the district yielded \$9,402 from 531 tons of ore, or about \$17 to the ton. The producers were the Etta, Federal, Hillside, and Leghorn mines. In 1912 the Monarch and two other properties produced gold. In 1914 the production was \$2,866 from four properties. In 1915 ore was mined from the St. Patrick, Garford, and Esmeralda claims. In 1916 two properties produced a little bullion . . . In 1922 operations were again begun at the Monarch and the Logan." A little gold bullion was produced in the district during 1923 and 1925. Several cars of ore were shipped in 1930, 1931, 1932, and 1933.

Most of the district is in the upland basin of Cherry Creek, with elevations of 5,000 to 5,500 feet, but part of it extends down the steep eastern slope of the Black Hills. The prevailing rock is Bradshaw granite, locally overlain by Cambrian and Devonian sedimentary rocks and Tertiary lavas.

The veins occur in the granite, within shear zones which strike north-northeastward and dip at low or moderate angles westward. Their filling consists of irregular, lenticular bodies of massive, shiny white quartz with small amounts of greenish-black tourmaline. The ore is marked by irregular grains and bunches of more or less oxidized chalcopyrite, bornite, sphalerite, and galena. In places, pseudomorphs of limonite after pyrite are abundant. Although the water level is about 60 feet below the surface, oxidation, which is probably of pre-Cambrian age, extends to depths of 300 feet. The ore bodies are generally small. Part of the gold occurs as visible but fine particles in the quartz, particularly with limonite, but part is contained in the sulphides. Lindgren¹⁵ states that the concentrates after amalgamation are reported to contain from 4 to 5 ounces of gold and a small amount of silver per ton. He regards these veins as positive examples of pre-Cambrian high temperature deposits. The Cherry Creek veins have yielded no placers of economic importance.

MONARCH AND NEARBY MINES¹⁶

The Monarch or Mocking Bird mine is at the eastern foot of the Black Hills, at an altitude of about 4,500 feet. It has been operated intermittently with stamp mills since 1886 and has probably produced more than any other mine in the district, but many of the old workings are caved. The country rock is fine-grained light colored granite which shows practically no alteration in the vein walls. The mineral deposit consists of several veins which

¹⁵ Work cited, p. 103.

¹⁶ Description abstracted from Lindgren, work cited, p. 105.

strike N. 10°-20°W. and dip 32°-45°W. They are made up of lenses, several feet in maximum width, of coarsely crystalline white quartz vein 5 to 6 feet wide, developed to a depth of 200 feet, ore is mostly free milling, but some galena and chalcopyrite are present.

The Etta, Gold Ring, and Conger mines, south of the Monarch, were producers during the eighties. The Conger is reported to have been recently worked in a small way by lessees. Lindgren says: "The Etta is mentioned in the Mint report for 1887 as a quartz vein 5 to 6 feet wide, developed to a depth of 200 feet, and containing ore of a value of \$29 to the ton."

The Pfau mine, according to J. S. Sessions, about 2 miles south-southeast of the Monarch, produced intermittently for about nine years prior to 1904.

BUNKER OR WHEATLEY PROPERTY

The Bunker or Wheatley property of eight claims is a short distance northwest of the Inspiration ground and about 1½ miles north of Cherry. This property was worked to some extent in the early days. In 1923, it produced a little ore that was treated in the Federal mill. During 1932 and 1933, the present owner, E. V. Bunker, shipped several cars of ore containing from 0.75 to 2.0 ounces of gold per ton. The principal workings are at an elevation of about 5,700 feet on three veins which dip gently southwestward and are from 25 to 45 feet apart. As exposed by the present shallow workings, these veins range up to 6 feet, but probably average less than one foot, in thickness. Considerable massive quartz is present. The gold occurs, very finely divided and associated with abundant limonite, within cellular and brecciated quartz.

GOLDEN IDOL OR HILLSIDE MINE

The Golden Idol or Hillside mine is 1½ miles by road north of Cherry, at an altitude of about 5,400 feet. Lindgren¹⁷ states that the property was worked from 1907 to 1910 and was equipped with a stamp mill and cyanide plant. During the past fifteen years, it has been held by the Verde Inspiration Company and the Western States Gold Mining Company, but has made little or no production. Lindgren continues: "There appear to be three veins on the property, and on one of them an incline 375 feet long has been sunk at a dip of 35° W. . . . Pits near the shaft show a 4-foot vein of sheared granite with bunches of quartz. The quartz shows bluish-black streaks of tourmaline, also a little pyrite and chalcopyrite. It contains solution cavities with limonite. The ore is said to have contained \$7 to \$12 to the ton."

¹⁷ Work cited, p. 106.

FEDERAL MINE

The Federal mine is west of the Bunker, about 1¼ miles north of Cherry at an altitude of 5,300 feet. Its southward-dipping vein is reported to have been explored by a 260-foot incline in 1907. A mill was built at about that time, but little ore was mined.

LEGHORN MINE

The Leghorn mine, about 1¾ miles north of Cherry, is reported to have been worked intermittently, with some production, from 1904 to 1918, and to a small extent in 1924¹⁸. Lindgren¹⁹ says: "The vein is contained in granite and has been opened by an incline 600 feet long, dipping 35° W. In Weed's Mines Handbook for 1922 it is stated that there are 6,000 feet of workings. A Chilean mill has been erected on the property. . . . The vein is said to average 2 feet in width. The quartz contains chalcopyrite and gold, but it is probable that difficulties were encountered below the zone of oxidation. Specimens from the dump show abundant solution cavities filled with hematite and secondary quartz."

GOLD BULLION OR COPPER BULLION MINE

The Gold Bullion, formerly know as the Copper Bullion property, is about 2 miles west-northwest of Cherry. During the early days, according to local reports, it was opened by a 660-foot incline and several hundred feet of shallower workings. These openings were on a steeply westward-dipping vein that pinches and swells to a maximum width of about 7 feet. As seen near the surface, it consists of lenses of quartz together with locally abundant masses of hematite and limonite. The gold is very finely divided. In places, the quartz contains irregular bunches of partially oxidized galena. Copper stain is locally present. Since 1930, several cars of shipping ore have been mined from near the surface.

GOLD COIN MINE

The Gold Coin property, which in 1934 was being worked by the Southwestern Gold Mining Corporation, is east of Hackberry Wash, about ¼ mile from the Dewey road. In the early days, this property was opened by a shaft about 100 feet deep. Within the past two years, it has been developed by a 118-foot shaft and has produced several cars of ore. The vein dips steeply eastward, is rather pockety, and attains a maximum width of about 3 feet.

QUAIL AND GOLDEN EAGLE MINES

Some ore has recently been shipped from shallow workings on lenticular, steeply eastward-dipping veins on the Quail and Golden Eagle groups which are adjacent to the Dewey road and Hackberry Wash.

¹⁸ Oral communication from J. S. Sessions.

¹⁹ Work cited, p. 107.

ARIZONA COMSTOCK OR RADIO MINE

The Arizona Comstock or Radio group, east of Hackberry Wash, is reported to have produced some ore from near the surface during the early days. It shows a steeply southwestward-dipping vein, up to about 20 inches wide, that was opened by a shallow shaft, a winze, and about 100 feet of drifts.

GOLDEN CROWN MINE

The Golden Crown property is east of Hackberry Wash and southeast of the Dewey road. Early in 1934, it was being worked by Binder Brothers, and is reported to have shipped two cars of ore during 1933. The vein, which is rather irregular, dips approximately 25° SW. and ranges up to about 3½ feet in thickness. It has been opened by about 300 feet of drifting from a shallow incline that encountered considerable water at 50 feet. Its quartz is massive to brecciated and contains abundant limonite derived from coarse-grained pyrite.

LOGAN MINE²⁰

The Logan mine, about 2 miles southwest of Cherry, was reopened in 1922 and operated for a short while by the New United Verde Copper Company. It was idle in 1934. Material on the dump consists of decomposed granite and slightly copper-stained quartz. The property was equipped with a small mill.

GROOM CREEK DISTRICT

The Groom Creek district is mainly in the vicinity of upper Groom Creek, an intermittent stream that flows southwestward to join the Hassayampa at a point about 5 miles south of Prescott. Within its drainage area, which ranges in elevation from 5,400 to more than 7,000 feet above sea level, are several silver-gold-bearing quartz veins which have been worked intermittently for many years. In this area, water and timber are relatively abundant, but operations during winter are sometimes hampered by snow.

The principal rocks are pre-Cambrian sedimentary schist, intruded by stocks and dikes of granodiorite and diorite. The quartz veins tend to be narrow and lenticular. They probably belong to the mesothermal type but have been worked mainly above the sulphide zone.

The Midnight Test (National Gold), Empire, King-Kelly-Monte Cristo, Victor, and Home Run properties are in this district. When visited in January, 1934, only the Midnight Test mine was being actively operated.

NATIONAL GOLD (MIDNIGHT TEST) MINE

The Midnight Test mine, held by the National Gold Corporation, is on the northwestern slope of Spruce Mountain, at an

²⁰ Abstracted from Lindgren, W., work cited, p. 107.