

Chapter Four

Big Bug Lead—Zinc District

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Introduction

Located in central Arizona and lying south of Prescott between the Agua Fria River and the eastern flank of the Bradshaw Mountains, the Big Bug Mining District is one of the oldest mining districts in the region. The discovery of the Big Bug District parallels that of many of the early areas in the Southwestern U.S.A. The primitive years of the district were marked by widely scattered settlements, usually centered along the routes between the larger populated areas.

A second phase of re-development and discovery were triggered by the creation of new jobs related to mining discoveries. Mineral discovery was usually followed by rapid growth, both population-wise and industrially. Cities sprang up in the Big Bug District upon the announcement of a new mineral find. Immediately people rushed into the new area to set up shops and services. In many cases transportation to these once remote areas followed within a matter of years.

Once the rich ore deposits were exhausted or became uneconomic, these same areas experienced an equally rapid decline. Merchants and service-oriented business people often knew when a vein was nearing depletion or that the ore grades were falling below the profit margin. Often these people were the first to leave and set up shop in the next promising settlement.

The history of the Big Bug District is full of people that were responsible for the exploration and development of new ore deposits, development of new forms of transportation that never existed previously in the district. Men such as Mr. Frank Murphy, who in addition to developing the Prescott and Eastern Railroad and its many branch lines, was also directly involved in many mining ventures and in the Humboldt Smelter. Men such as Mr. Fred Gibbs, who had the persistence and the foresight to believe that the long-idle Iron King Mine could be made into a producing mine.

1860—1880: The Early Discoveries

Exact dates of the earliest events in the Big Bug District are somewhat nebulous. Probably the first significant recorded activities in the district centered around the discoveries and settlements of the Walker Party led by Joseph Reddeford Walker, who discovered gold in the

Bradshaw Mountains in 1863. Members of the Walker Party, Mr. Davis R. Poland, Mr. John M. Roberts, and Mr. Theodore W. Boggs, went on to make several large mineral discoveries in and adjacent to the Big Bug District. Notable among their discoveries was the Big Bug Mine, located on the north bank of Big Bug Creek, in 1863. The Big Bug Mine was a steady producer of gold, silver and copper from the time of its discovery. These three men all came from pioneer-type backgrounds. Mr. Boggs's mother was the granddaughter of Daniel Boone and his father was governor of Missouri at one time. At age ten Boggs was a member of the ill-fated Donner Party.

While Boggs and his colleagues were busy along the Big Bug Creek, the area to the north along Galena Gulch was being prospected by a Mr. Hatfield and a Mr. Slaughter in an area that would later be known as the McCabe-Gladstone area.

In 1879 Mr. Frank McCabe arrived in the Galena Gulch area and traded Mr. Hatfield a horse for his right to claim the property. Mr. Slaughter had left the area earlier and thereby abandoned his interest in the property.

Further south, at the extreme southern boundary of the Big Bug District, the earliest history of the town known today as Mayer, began in the 1870's, originally a stage station between Prescott and Phoenix. Mr. Joseph Mayer arrived in Big Bug from Tip Top, Arizona in 1881. He immediately built a new stage station, general store and saloon.

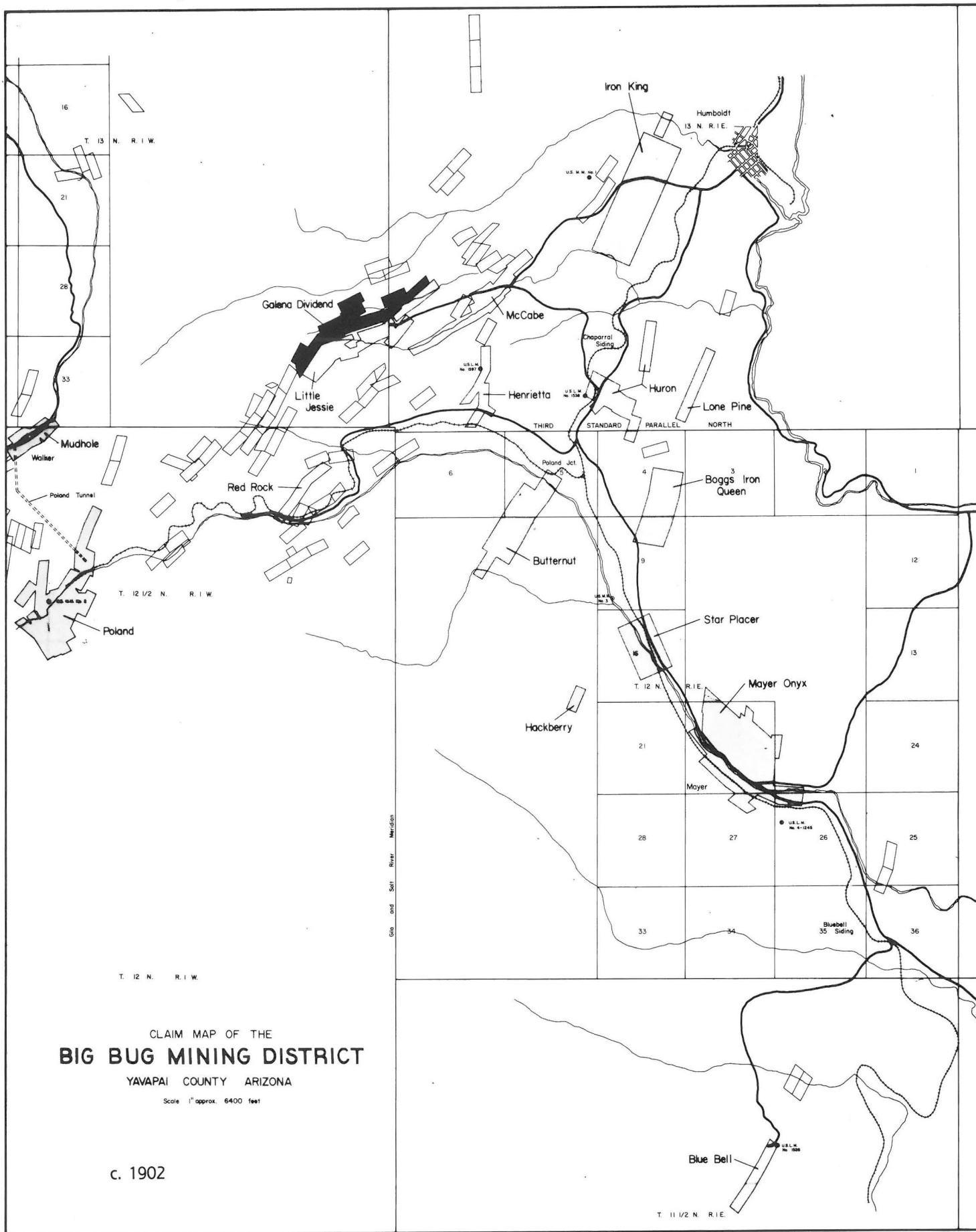
The earliest history of the Iron King dates back to the 1880's when the mine was explored for iron ore. Not much took place at the Iron King until the 1900's.

High grade lead and silver ore was discovered at the Silver Belt Mine, located between the Iron King and McCabe, in 1870. The property was later sold to Mr. Thorne and Mr. Simms who operated it for a few years.

The Little Jessie Mine, just west of McCabe and seven miles east of Walker, was discovered in 1867 and became an early producer of high grade gold while the Lelan Mine, just northwest of the Jessie, is believed to have been located in the 1860's.

Placer mining was the main attraction in Providence, upper Big Bug Creek, between 1870 and 1880.

By the end of 1880, most of the major mines in the district had been discovered and a few small towns and a



handful of mining camps had been established. No major ore production is recorded for this period and no significant advancements in transportation were established. The period of 1860–1880 may be termed the discovery and initial development period of the Big Bug District.

1880–1900: The Railroad Years

The period between 1880 and 1900 saw a phenomenal growth of the Big Bug District. Significant achievements and discoveries during the period include the construction of the Val Verde Smelter, discovery of the Blue Bell Mine at the southern end of the district and the completion of the Prescott and Eastern Railroad from Prescott to the Blue Bell siding. This period also saw the first interest in the Big Bug District by large companies when Phelps Dodge, through its subsidiary known as the Commercial Mining Company, worked the Boggs Mine.

Between 1880 and 1900 the McCabe Mine was a major gold-silver and base metal producer. After the original work along Galena Gulch, Mr. Frank McCabe filed a claim location notice on the Sink to Rise Claim in 1883. In 1887 a Mr. Parsons filed several other claim locations adjacent to those of Mr. McCabe. To this point production in the area was severely limited due to the fact that both McCabe and Parsons lacked the capital to purchase modern equipment. On May 1, 1893, McCabe and Parsons sold fifty percent of their interest in the Sink to Rise and McCabe claims to Mr. Wells and Mr. Packard. On the same day, the McCabe Mining Company was incorporated in Prescott and issued stock worth \$100,000. McCabe sold his remaining fifty percent in 1895 to Mr. Parsons and a Mr. Crum. This same year, the McCabe Mining Company erected a new hoist, a 5-stamp mill and a concentrator. The town of McCabe received a post office in 1897 and telephone service in 1899.

One of the single most important events in the development of the Big Bug District was the construction of the Prescott and Eastern Railroad on March 1, 1898. According to Sayre (1985), the railroad was the idea of Mr. Frank Murphy, who years earlier had spearheaded the drive to bring reliable rail service from the Atlantic and Pacific mainline near Ashfork to Prescott in 1893. During the late 1890's, mines south of Prescott were desperately short of capital and a railroad into mining country could reduce mining costs and thereby make the mines profitable. The Prescott and Eastern Railroad reached Mayer on October 15, 1898. Besides spurring development of the mines of the Big Bug District, the Prescott and Eastern Railroad transported livestock, merchandise and people. Numerous small communities developed near the railroad sidings between Prescott and Mayer. Mr. Frank Murphy, as will be noted later, took an even more direct involvement in the mining and milling of Big Bug's ore deposits.

The Blue Bell Mine, located south of Mayer, was a clear cut example of the railroad's stimulus to the district's mines. Originally discovered in 1893, it wasn't until the railroad that the Blue Bell Mine finally began large scale production.

The Blue Bell was promoted by Mr. Edward Burt Perin of Williams, Arizona and his son-in-law, Mr. William Park. They brought eastern capitalists to invest in the Blue Bell.

Of equal magnitude of importance to the Prescott and Eastern Railroad was the construction of the Val Verde Smelter at Val Verde (now called Humboldt) on a mill site that was originally patented in 1879 by Mr. Levi Bashford. The smelter was originally built to process copper mined in the Bradshaws and other areas. It was owned and operated by the Val Verde Copper Company and had a daily capacity of 250 tons. A one and one-half mile railroad spur was completed to the Val Verde Smelter in 1899.

The area along the upper reaches of Big Bug Creek (i.e., Poland and Providence), were moderately active during this period. In the 1890's the Red Rock Mine was owned and operated by the United Verde Extension Mining Company of Jerome. The Red Rock along with the Belcher, Mammoth, Postmaster, and Occidental all produced limited amounts of high quality ore in the 1890's. Between 1890 and 1900 the Merchants Home Mine east of Poland and owned by Mr. Ed Block produced over \$70,000 of silver and lead.

The Big Bug Mine was a major gold-silver-copper producer in 1884. In 1899, Mr. Boggs was granted a post office for the community of Big Bug. In 1900 the Big Bug Mine was changed to the Henrietta Mine in honor of actress Henrietta Crossman, the pin-up girl of the times. The Henrietta Mine produced ore from an 1,800 foot long tunnel.

Mayer experienced rapid growth between 1881 and the 1890's. A post office was established in 1884 in the home of Mr. Joseph Mayer. Onyx was discovered just north of Mayer in 1889. It was cut into large blocks and shipped to Prescott. Mayer received its first newspaper, called the *Weekly Reflex*, in 1898. It was followed by the *Mayer Miner* and the *Big Bug Copper News*. The newspapers were short-lived in Mayer because they had trouble competing with the Prescott newspapers.

The area several miles north of Mayer along the west side of the Prescott and Eastern Mainline was known as Arizona City. There were several small mines in the area of which the Boggs and Iron Queen were typical. These two mines were operated for a number of years by the Commercial Mining Co., a subsidiary of Phelps Dodge. Mr. James Douglas visited the area before his company pulled out in 1895. Arizona City was revived briefly by the fraudulent mining schemes of Mr. Henry Clifford.

Both the Huron and Chaparral sidings were established in 1898. The Huron siding was near the mine of the same name owned by Mr. Frank Murphy.

The Huron Mine was a very small producer and the siding was used mainly to supply materials to the McCabe Mine. The Chaparral siding was used mainly by merchants and rarely for ore. It was named after the town of Chaparral, four miles west of the spur and near the town of Little Jessie.

In 1899 the original mining claim locations were made on the Iron King by Mr. J. R. Hagins. Due to the complex nature of the ore, he was not able to work or sell it.

At the close of this period, the Big Bug District was poised for its peak years ahead. The transportation system was in place and with the addition of the Blue Bell discovery during this period, all the major ore deposits

in the district were now made. The beginning of the twentieth century appeared very promising.

1900—1910: Upper Big Bug

The ten-year period between 1900 and 1910 was marked by numerous historical events in the Big Bug District. Transportation was advanced when the Prescott and Eastern Railroad completed the branch line to Poland in 1901. Disaster struck at the Humboldt Smelter in 1904 when fire destroyed the facilities. New ownership went on to remodel and enlarge the smelter to handle the increased load from the surrounding area.

Development and production at the McCabe Mine reached its peak during this period. In 1901 the McCabe Mine was purchased by a Chicago based company known as the Model Gold Mining Company. Mr. Edward Wager became the first merchant and the largest property owner at the McCabe in 1902 when he built a music and billiard hall, saloon and several residential dwellings.

The Gladstone claim was not the site of large scale production until the latter part of 1901 when it was purchased by the Ideal Mining Company. Between 1893 and 1901 the McCabe Mine produced over \$1,250,000 in ore. At the start of the year in 1902, McCabe received electrical power.

After a fire at the McCabe Mine in 1903, the Model Gold Mining Company modernized the mining and milling equipment. They installed a powerful new 65-hp. hoist and a mill with a 50-ton per day capacity. These improvements were completed in November, 1904.

In January of 1904 Mr. Frank Jaeger, Model Gold Mining President, and another board member were arrested for fraudulent use of the mail. Apparently they used the mail system to promote worthless mining and oil companies and the McCabe Mine may have been their only valuable property. The ensuing legal action that resulted, plus severe flooding in January and February throughout the Big Bug District, severely crippled the Model Gold Mining Company.

On October 24, 1905, the McCabe Power and Light Company was incorporated. Its first goal was the domestic and commercial distribution of water at McCabe with water piped from the nearby mountains.

All of the holdings of the Model Gold Mining Company at McCabe and elsewhere were sold at a receiver's sale on December 22, 1905. Ownership of the McCabe passed into the hands of the Ideal Mining Company. This brought ownership of both the McCabe and Gladstone Mines under one owner and the two mines were joined at the 600-foot level.

In June of 1906, the McCabe Mine had 180 miners on the payroll and in that same year 200 voters cast their votes at McCabe during an election (women could not vote). McCabe had an estimated population of 400 to 600 between 1903 and 1909.

Under ownership of the Ideal Mining and Development Company from 1906 to 1909, the McCabe Mine produced over 37,000 tons of ore valued at over \$1,000,000 (\$32.00 per ton).

The national economic downswing of 1907 did not affect the McCabe Mine until 1909 when large scale ac-

tivities at McCabe were curtailed. At this point, the Gladstone Shaft was 1,100 feet, the McCabe 900 feet and there were over 27,000 feet of underground workings. The Ideal Mining Company ceased mining operations late in 1909, but the pumps remained on until 1910.

During 1900 to 1910 there was not much actual mining at the Blue Bell Mine due to a lawsuit. However, in 1906 plans were made for large scale production, while the lawsuit was in progress, under the name of the Consolidated Arizona Smelting Company (CAS).

A three-mile tramway, designed in Germany and similar to one already in use at the DeSoto Mine, was built by the Consolidated Arizona Smelting Company. The tramway had 71 buckets and went from the mine to a railroad siding called Blue Bell which was one and one-half miles south of Mayer. The CAS Company also installed modern hoisting equipment, capable of 1,000-foot depth, and electricity from the Humboldt Smelter. Underground workings in 1906 consisted of six shafts and several tunnels.

Late in 1907, the CAS Company went bankrupt and the company was purchased in 1908 by Mr. Ackerman and Mr. Hooley for \$200,000. The company was re-organized December 22, 1908 with a capitalization of \$9.2 million. In 1909 the re-organized CAS Company purchased the property back from Mr. Ackerman and Mr. Hooley. Over 26,000 tons of crude copper marked the first substantial production year for the Blue Bell in 1910.

The Bradshaw Mountain Railroad was incorporated in February of 1901 to primarily serve the mining camps of the Bradshaw Mountains. In the Big Bug Mining District the branch line of the Prescott and Eastern Railroad was known as the Poland Branch and extended from Poland Junction to Poland. The railroad arrived in Poland on May 11, 1902. It appears that the community of Poland was actually a creation of the railroad. The area, canyon and creek were named for one of the pioneers of Big Bug country, Davis Robert Poland, who lived at his cabin near the Poland Mine until he died in 1882.

Mr. Frank Murphy and his associates acquired the Poland Mine in 1900 and established the Poland Mining Company to develop the mine. At this time, the Poland Mine consisted of an 800-foot tunnel and a 20-stamp mill. Murphy and his colleagues decided to extend the tunnel all the way through the mountain in 1901. They had several objectives in mind.

First, they hoped that additional ore would be discovered. Secondly, the tunnel could carry ore from mines in the Walker area to the railroad at Poland and then on to Humboldt, thereby reducing their transportation costs. It appears that Mr. Murphy had personal reasons for constructing the tunnel, known as the Poland-Walker or Poland-Lynx Creek tunnel. The Development Company of America operated many of the mines in the Lynx Creek area and was owned by Mr. Murphy.

Construction was completed on the 8,017-foot tunnel in May, 1904 at a cost of \$500,000. It was driven from both sides with the sides meeting only 6 inches off center. Originally ten feet wide and eight feet high, the tunnel was enlarged in 1905 when gasoline powered engines replaced the mule-drawn ore cars through the tunnel.

Mining activity slowed in Poland in 1907 when a recession forced most mines to close down. The Poland Tunnel was closed between 1907 and 1916.

Production from Poland between 1900 and 1912 was over \$750,000 in gold, silver and lead. The best vein was 3,000 feet from the Poland portal and it was called the Poland Vein. There was a smaller vein 500 feet from the Walker Portal called the Occidental Vein.

While Poland was reaching its peak during this period, the camp of Providence reached its peak between 1899 and 1902. It received a Wells Fargo Office in 1903. The Post Office was discontinued in 1904 and schools were closed in 1907.

Prosperity in Providence was short-lived. The years between 1905 and 1910 saw a rapid decline in the area. Some mines were fraudulently promoted, such as the Belcher and Mammoth mines, by Mr. Henry Clifford who kept the mines going long after the ore ran out.

As Providence was declining and Poland was experiencing prosperous times, the Iron King was showing some activity. In 1903, the Prescott and Eastern Railroad completed a spur to the Iron King Mine. For the next 30 years this spur was considered a flagstop (i.e., the train stopped only if the flag was up, which indicated a full ore car). Also in 1903, Mr. Hagins sold the Iron King claims to a New York based stock promotion company called the American Copper Company which had the claims patented in 1904. A small cyanide plant to recover the gold and silver in the oxide ore was also constructed in 1904. This same year, the camp at the Iron King was named Blanchard in honor of the mine superintendent from 1906 to 1907, Rev. Blanchard. Blanchard received a Post Office in 1903 but the Post Office name was changed to Iron King in 1907. The Iron King Post Office was removed in 1912 and Humboldt became the center for housing and services.

Mayer, Arizona continued to grow during this period. The town was incorporated in 1904 by Mr. Joseph Mayer. Lots sold for \$100 to \$500. By 1907 Mayer had a population of 600 people and telephones furnished by the Prescott Electric Company. Commercial electricity reached Mayer in 1909 and an eight-mile water supply line from Crystal Springs furnished Mayer residents with 400,000 gallons of water per day.

Mr. Joseph Mayer died in 1909 when he accidentally discharged his gun while investigating a noise outside his home. He contributed a great amount of both time and money to the early success of Mayer.

Prior to 1905, Mayer had a smelter on the south side of town known as the Great Western Smelter (Boggs Smelter). It was owned by the Treadwell Mining Company which owned the Boggs, Hackberry and Iron Queen Mines. It could not compete with the Humboldt Smelter and only operated a short while before closing.

The Henrietta Mine was fairly active during this period. A spur line from the Poland Branch of the Prescott and Eastern Railroad reached the mine in 1902 and for the first several years the mine kept the six-car spur busy. The small camp below the mine never developed and eventually all the activities moved up Big Bug Creek. Prior to 1910 the Henrietta Mine produced \$1,250,000 worth of ore. The mine closed in 1910. Just south of the Henri-

etta Mine, the Butternut Mine produced \$225,000 of copper and gold from a 425-foot shaft in the early 1900's.

Major changes occurred at the Val Verde Smelter during this time. In early 1904 the smelter was purchased by the Bradshaw Mountain Copper Smelting Company. In September of that year the smelter was destroyed by fire. The Bradshaw Mountain Copper Mining & Smelting Company sold the few remaining buildings and the smelter site to the Arizona Smelting Company which constructed a new 1,000-ton per day smelter that was completed in 1906. Mr. Frank Murphy was a major owner of the Arizona Smelting Company along with the Santa Fe Railroad. In November, 1905 the community of Val Verde was changed to Humboldt. The 1906 census of Humboldt listed a population of 1,000 people.

Mr. Henry B. Clifford reopened the Silver Belt Mine in 1906 and sank the main shaft to 480 feet. Up to 1906 the Silver Belt had recorded production of \$330,000 in lead and silver.

1910—1920. World War I

World War I (1914-1918) had a direct influence on the mines and smelting facilities of the Big Bug Mining District. In fact the peak levels of production for many of the mines in the district were during this time period.

By 1910 most of the mines in the Big Bug District were dependant on the Humboldt Smelter for processing their ores. In 1914 the Humboldt Smelter underwent a major reconstruction at a cost of \$1.6 million and became one of the most modern facilities of the day. The year 1916 was the peak year for the smelter when 2,000,000 pounds of copper left the smelter each month. Copper prices climbed sharply during World War I and reached a wartime high of 29.19 cents per pound in 1918, only to drop to 12.65 cents per pound in 1921. The Humboldt Smelter and people of Humboldt were at the mercy of both the mines and the national metals market. In 1916 Humboldt had over 1,000 people, ten saloons, five restaurants, three hotels and three mining companies. After World War I came to a close in 1918, the population of Humboldt declined quickly and the Humboldt Smelter closed in 1918.

This period was one of great activity at the Blue Bell Mine. In 1911 the mine produced 35,000 tons of crude copper. The main ore body was at the 300-foot level and the ore grade was 5.5% copper with \$3.50 per ton in gold and silver. By 1913 the main shaft had reached 850 feet and estimated ore reserves exceeded 154,000 tons at a grade of 3.5% copper, 0.05 ounces per ton of gold and 1.2 ounces per ton silver. It appeared that the copper content in the Blue Bell Mine was decreasing and the gold content was increasing with depth. Two large ore bodies were discovered at the 1,000 foot level of the Blue Bell in 1915. They increased the ore reserves to 479,500 tons at 3.3% copper, 0.04 ounces per ton gold and 1.2 ounces per ton silver. Underground development totaled 14,000 feet in 1915.

The sharp rise in the price of copper during World War I made it profitable to mine lower grade (2%) copper ore and stope widths were widened accordingly. The years 1917 to 1920 were very good ones for the Blue Bell Mine. Over 116,000 tons of crude copper were produced annually between these years. The main shaft was deepened to

1,200 feet and total lateral development totaled 20,000 feet by 1918. Diamond drilling was used for the first time underground at the Blue Bell in 1918 when 3,112 feet were drilled at a cost of 2.94 cents per foot. Exploration in 1918 discovered three new ore bodies. At the close of 1918 estimated ore reserves were 470,000 tons at 2.8% copper with \$2.00 per ton in gold and silver. By early 1919, the Blue Bell was producing at the rate of 400 tons per day and nearing the capacity of the equipment.

The Iron King Mine was idle from 1911 to 1914, when it operated for a short time at the beginning of World War I. This was by Mr. George Colvocoresses who mined heavy sulfides for the Humboldt Smelter. By 1922 several thousand tons of ore averaging \$8.00 per ton were shipped. The Iron King Spur was not used between 1918 and 1926.

A company known as the Big Ledge Mining Company was active in the Butternut-Huron area. They acquired the Butternut Mine and Henrietta Mine in 1915. It appears that they sold 2,800,000 shares at \$6.00 per share in Boston based on these two past producers. Big Ledge also built a smelter in Mayer that operated less than one week before going broke. Production at the Henrietta ceased in 1919.

This period was not good for the mines in upper Big Bug Creek. By 1920, Providence was run down. The Poland Mine closed in 1912 and the mill closed in 1913. Total production of the Poland Mine is estimated at \$750,000 with local mines combining to equal that figure. The Poland Post Office was closed in 1913. However, the Poland Tunnel was reopened from 1916 to 1920 when ore was shipped from Lynx Creek Mines. Scheduled railroad service to Poland was discontinued in 1920.

Poland Junction saw activity in 1911 when Arizona Public Service (APS) built an electrical relay station and strung power lines from the area. In 1917 APS built two sub-stations at Poland and installed new transmission lines into Big Bug country.

1920—1950: Iron King Period

By the 1920's most of the small mines in the Big Bug District were no longer in production or had reverted to sporadic operation by lessees. The Iron King Mine was the main producer during the period. The history of the Humboldt Smelter exemplifies the fate of the smaller mines in the district.

Between 1922 and 1927 there was only intermittent operation at the Humboldt Smelter. From 1922 to 1923 the Humboldt Smelter, owned by Southwest Metals Co., took a lease on the Iron King and attempted some milling and direct smelting of the ore. The lead and zinc proved to be liabilities and much of the heavy iron had to be discarded carrying with it much of the gold and silver. When the smelter closed in 1927, approximately 700 men were employed by the smelter. The smelter was rehabilitated in October, 1929 and operations resumed at 175 tons per day in February, 1930. The smelter was closed for the final time in 1937 and the equipment was dismantled at this time. The few remaining copper mines in the district had to send their ores to either the United Verde Smelter at Clarkdale, the Magma Copper Co. at Superior, Arizona, or the A.S. & R. Smelter in Hayden, Arizona.

By 1930 the population of Humboldt had declined to 500. The last of the original smelter stacks in Humboldt were dynamited in 1955. The one remaining stack was built well into the 20th Century.

By 1921 the Blue Bell Mine was idle. Southwest Metals Company purchased the Blue Bell from Consolidated Arizona Smelting in September, 1922, and near the end of 1922 the main shaft had been deepened to 1,350 feet. Blue Bell was the largest copper producer in the Big Bug District in 1922 with a 250-ton per day mill processing 3% copper ore. Production began to wind down in 1924. By 1925 the main shaft at Blue Bell reached its final depth of 1,500 feet. Only two ore bodies had been discovered and they were severely broken up due to a major fault. Underground work ceased and the pumps were turned off at the end of 1926. This ended large company production and began an era of "lessor-type" operations at the Blue Bell. Production at the Blue Bell to this point totaled 1,200,000 tons of crude ore which averaged 3% copper, 1.5 ounces per ton silver and 0.06 ounces per ton gold.

Between 1938 and 1943 the Blue Bell Mine was completely idle. World War II brought renewed economic interest in the Blue Bell. A Mr. Farnhan extracted 545,000 pounds of pure copper, 175 ounces of gold and 8,600 ounces of silver between 1945 and 1947. Aside from minor surface quarrying of the schist at the mine in 1947 and infrequent promotional activities, there has been no recent work at the Blue Bell Mine.

Work on the smaller mines of the district was minimal during this period in the upper Big Bug area (i.e., Poland-Providence). Poland recorded minor production in 1926 and again from 1930 to 1931. Mr. Fred Gibbs investigated the Poland Mine in 1934 and determined that further mineral potential was fruitless. The Poland Branch of the Prescott and Eastern Railroad began abandonment in 1932 beginning on the Poland end. The final rails were removed in the Poland Junction end in 1939.

Mines along the lower Big Bug (i.e., Huron-Boggs-Butternut-Henrietta) had sporadic work with some limited production.

The Henrietta and Butternut mines were re-organized in 1923 as the Huron Copper Mining Company, but the attempt was not successful. The Post Office in Huron was closed 1928. Small production was recorded from the Henrietta in 1923, 1926 and 1935. The Henrietta Spur was removed in 1939.

An entrepreneur purchased the exhausted mining claims in and around Poland in 1940 and sub-divided the property into lots. The community was renamed Breezy Pines.

Between 1943 and 1947, 10,400 tons of copper-gold ore was shipped to the Iron King Mill from the Boggs Mine. This was done by the Liberty Mining Company, operators of the Alvarado Mine near Yarnell, Arizona. New Jersey Zinc drilled several holes on the Boggs in 1953, but failed to encounter any significant values.

Northwest of McCabe, the parallel vein systems of Union and Lelan-Dividend had numerous operators. From 1932 to 1933 a company called Southern Exploration built a 100-ton flotation mill, but produced only minimal ore. Recorded production of the Lelan-Dividend is placed at \$700,000 primarily in gold, silver and copper. Production of the

Union Mine to 1920 is estimated at \$150,000 in gold.

This period of time in the Big Bug District belongs to the Iron King Mine which far out-produced the combined total of all other mines in the Big Bug District.

The following story of the Iron King Mine was taken from a 1974 interview with Mr. Fred Gibbs (Rice, 1974), a well-known mining engineer from Prescott, Arizona, who began his career in 1917 in British Guiana working for the Aluminum Company of America. Mr. Gibbs arrived in Arizona in 1921 and for the next decade worked and explored many of the mines in the Big Bug District, including the Boggs, Poland, Hackberry and Arizona National Mines. He alone was instrumental in reviving the Iron King Mine and making it the major producer it was to become.

Beginning in 1921, three New York men, Mr. Bell, Mr. Doht and Mr. Runyan, owned the Iron King. How they obtained ownership is unknown. In 1922, the Southwest Metals Company, owners of the Humboldt Smelter, took a lease on the Iron King. The Pittman Act passed by the U.S. Government in 1922 stimulated the silver mining industry, especially at the Iron King. This act obligated the Government to purchase 200,000,000 ounces of silver at \$1.00 per ounce, twice the prevailing rate.

During 1922, the rich oxide ore at the Iron King was extracted. The Pittman Act was short lived as it was repealed in 1923 and the Iron King was again idled.

In 1929, Boggs had exhausted the ore at the Hackberry and terminated his lease. He acquired a lease on the Poland Mine late in 1929. In the early 30's the price of gold was increased from \$20.67 to \$35.00 per ounce. The increase in the gold price brought Gibbs back to the Iron King. He dropped his lease on the Poland Mine in 1934 and tried to contact the owners of the Iron King in New York. His initial inquiries were fruitless.

Late in 1934 the delinquent property taxes on the Iron King amounted to \$5,500. Mr. Gibbs knew that he could not offer over \$1,000. He notified the County Supervisor that he wanted the property put up for sale and gave the County Treasurer a good faith check for \$300. Gibbs ended up getting the Iron King for \$100 at the advice of the County Treasurer. A man by the name of Kenyon Trengrove was late for the tax sale and he had been prepared to pay the full \$5,500 to purchase the Iron King.

When Gibbs had first leased the Hackberry Mine he had tried to interest other companies in the high grade sulfide ore at the Iron King. He had earlier met a Mr. Howard Fields who had been a classmate and fraternity brother at Michigan. Mr. Fields was an ore buyer for American Smelting & Refining Company of El Paso, Texas. With the help of Mr. Fields, Fred Gibbs was introduced to Mr. Rod Burnham, son of Major Burnham. When Gibbs had first attempted to sell the lease and option, his price had been \$50,000. However, by the time of the visit from the Burnham's consultant, Gibbs had dropped the price to \$30,000.

In 1937 the Burnhams took the deal and called the new syndicate the Iron King Mining Company. They invested \$100,000 to install a mine plant and selective flotation

system capable of 100 tons per day. A bulk flotation plant was installed in 1938 capable of 140 tons per day. Another change occurred at the mill again in 1939 when it was converted to differential flotation.

Apparently the Burnhams encountered business problems and after five years of operating the Iron King they decided to find a buyer. The Shattuck-Denn Mining Company was approached. The Shattuck-Denn Mining Company was founded by Mr. Lem Shattuck and Mr. Maurice Denn. The men had mines in the Bisbee area that were consolidated in 1918, forming the Shattuck-Denn Mining Company. The Shattuck-Denn Mining Company was running out of ore at their Bisbee mine and decided to purchase the Iron King in 1942.

During the Shattuck-Denn years (1942-1969) at the Iron King over 5,700,000 tons of ore were mined. The overall grade of the ore mined was 0.123 ounces per ton gold, 3.69 ounces per ton silver, 2.50% lead, 7.34% zinc and 0.19% copper. According to Mr. Walter Statler, who worked at the Iron King Mine from 1938 as a general laborer and later as chief assayer from 1952 until the mine closed in 1969, the Iron King had 350 people on the payroll in the early 60's when the production was at 1,100 tons per day. Mr. Statler stated that the lead concentrate carried the gold and silver, with values of 30-35% lead, less than one oz. gold and 15 oz. silver. The zinc was sent to A.S. & R. in Amarillo, Texas, while the lead concentrate was shipped to A.S. & R. in El Paso, Texas. When the mine was at its peak, one carload of zinc concentrates and three-fourths of a carload of lead concentrates were filled each day.

The final years at the Iron King are best told by Mr. Fred Gibbs (Rice, 1974). During the mid-sixties, management at the Iron King changed. Mr. Thomas Bardon, president of Shattuck-Denn, died, and long-time manager of the Iron King, Mr. Hap Mills, had a heart attack and was forced to retire. The new management, under the direction of Mr. LaMorte, spent treasury money on gold mining promotions. Money needed to develop new ore reserves was not available. As a result, production decreased and within a short time the mine had to be shut down.

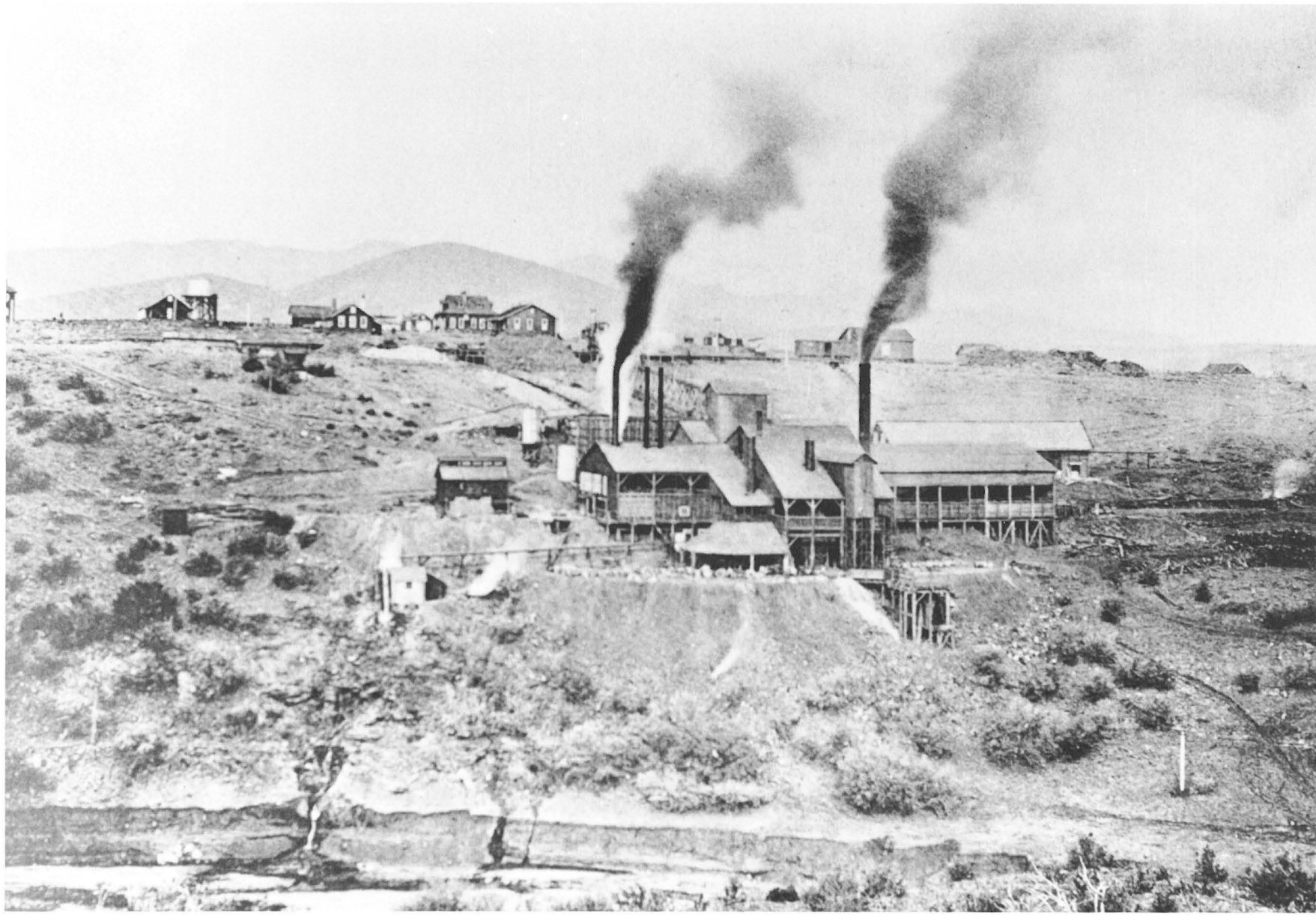
In 1969 all underground equipment was removed and all mill and mining equipment was sold at auction. There has been no work on the massive sulfide ores at the Iron King since. Some people, such as Mr. Walter Statler, believe that considerable ore remains underground at the Iron King. However, until the price of lead and zinc rise substantially, these remaining ore blocks will remain.

Numerous attempts were made in the late seventies and early eighties to recover the gold; it doesn't appear that this will take place.

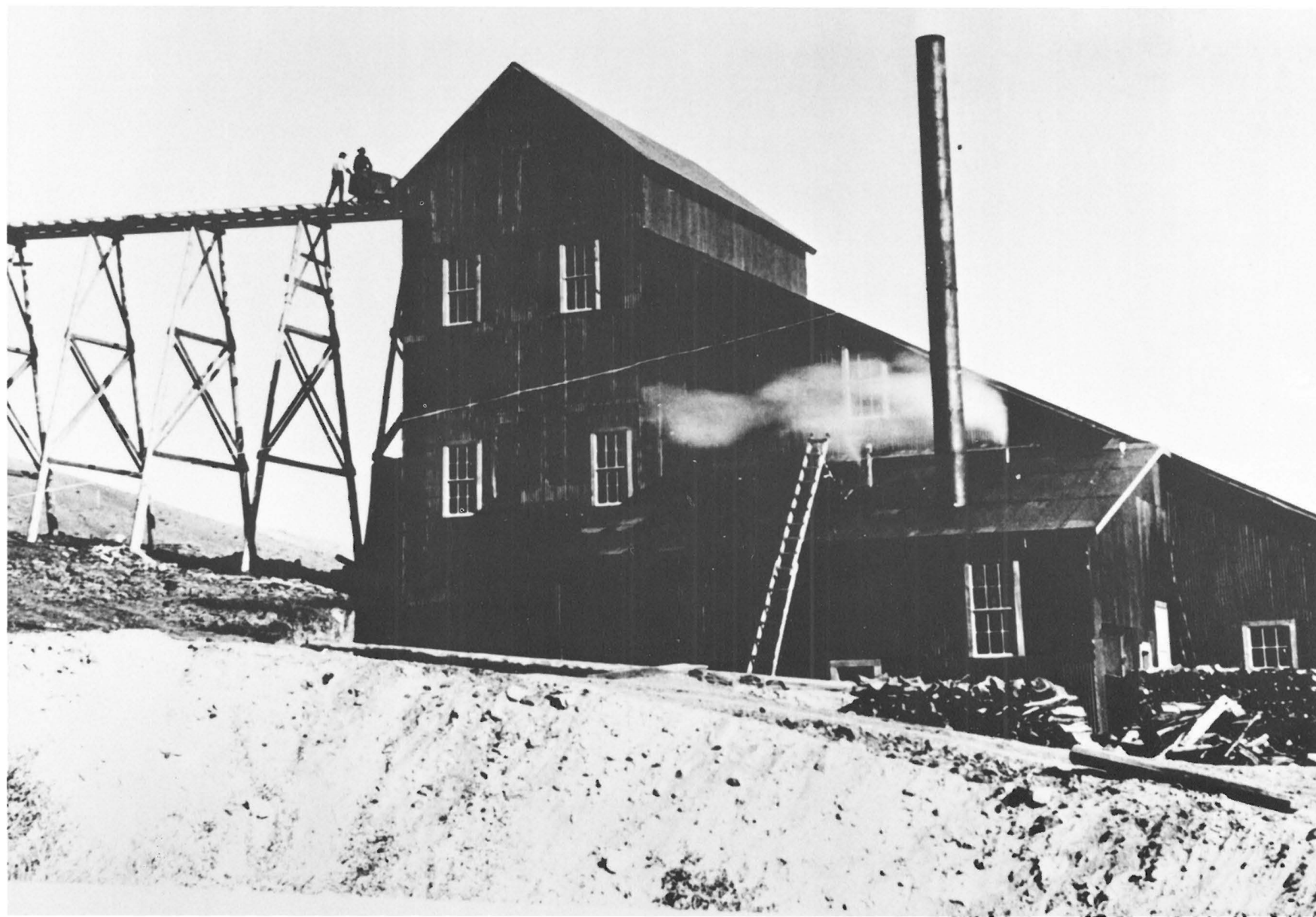
On August 5, 1987, Mr. Fred Gibbs passed away in Prescott, Arizona. Like those that preceded him in the Big Bug area, such as Mr. Murphy, Mr. Boggs and Mr. Mayer, Fred Gibbs will become an integral part of the area's history and success. Certainly all of nature's mineral treasures in the Big Bug District that have not been discovered wait for men with foresight and persistence such as Mr. Fred Gibbs to develop them.

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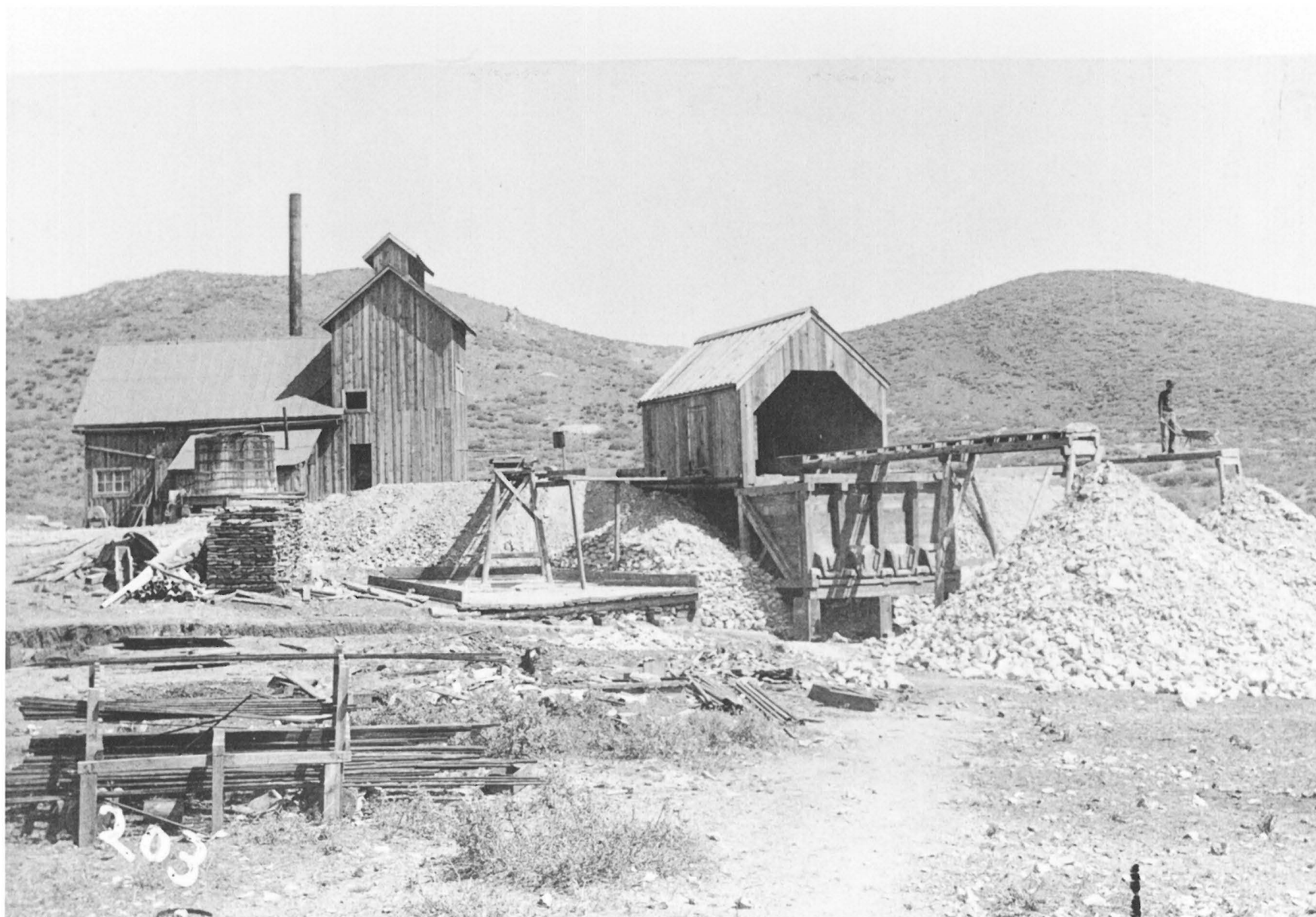
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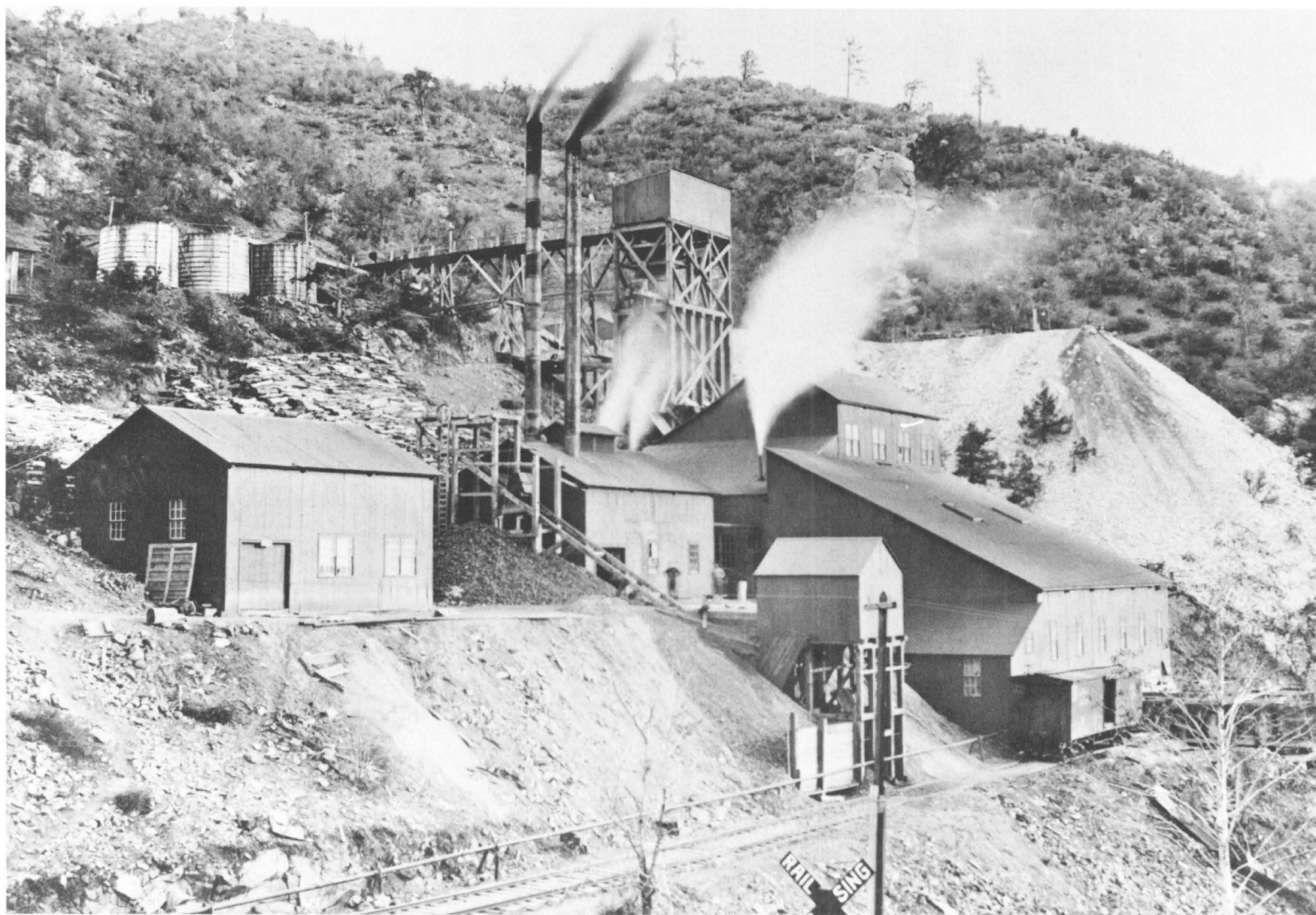
Val Verde Smelter with Iron King in distance, 1903. Courtesy of Sharlot Hall Museum.



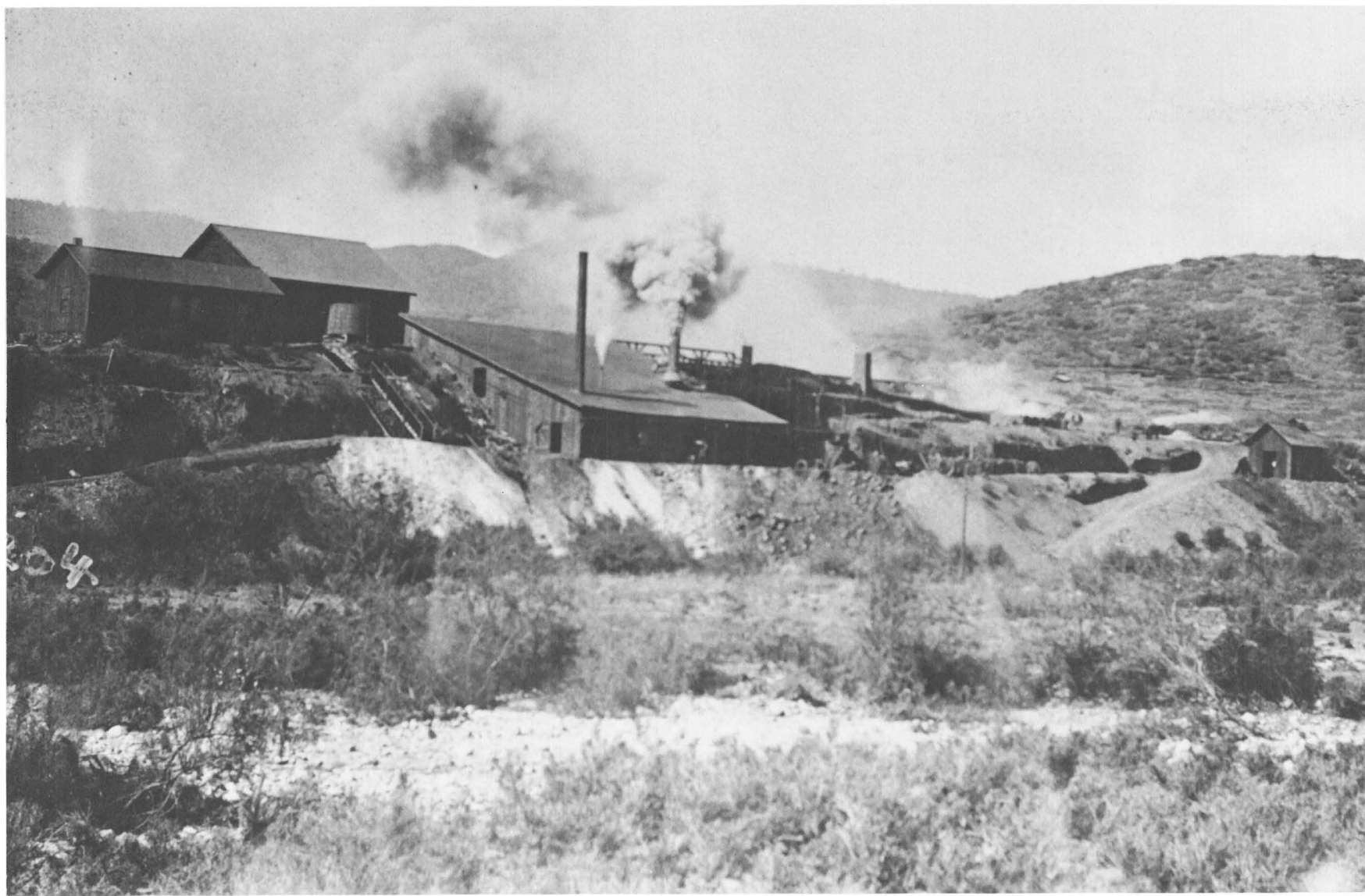
Henrietta (Big Bug) Mill, 1892. Courtesy of Sharlot Hall Museum.



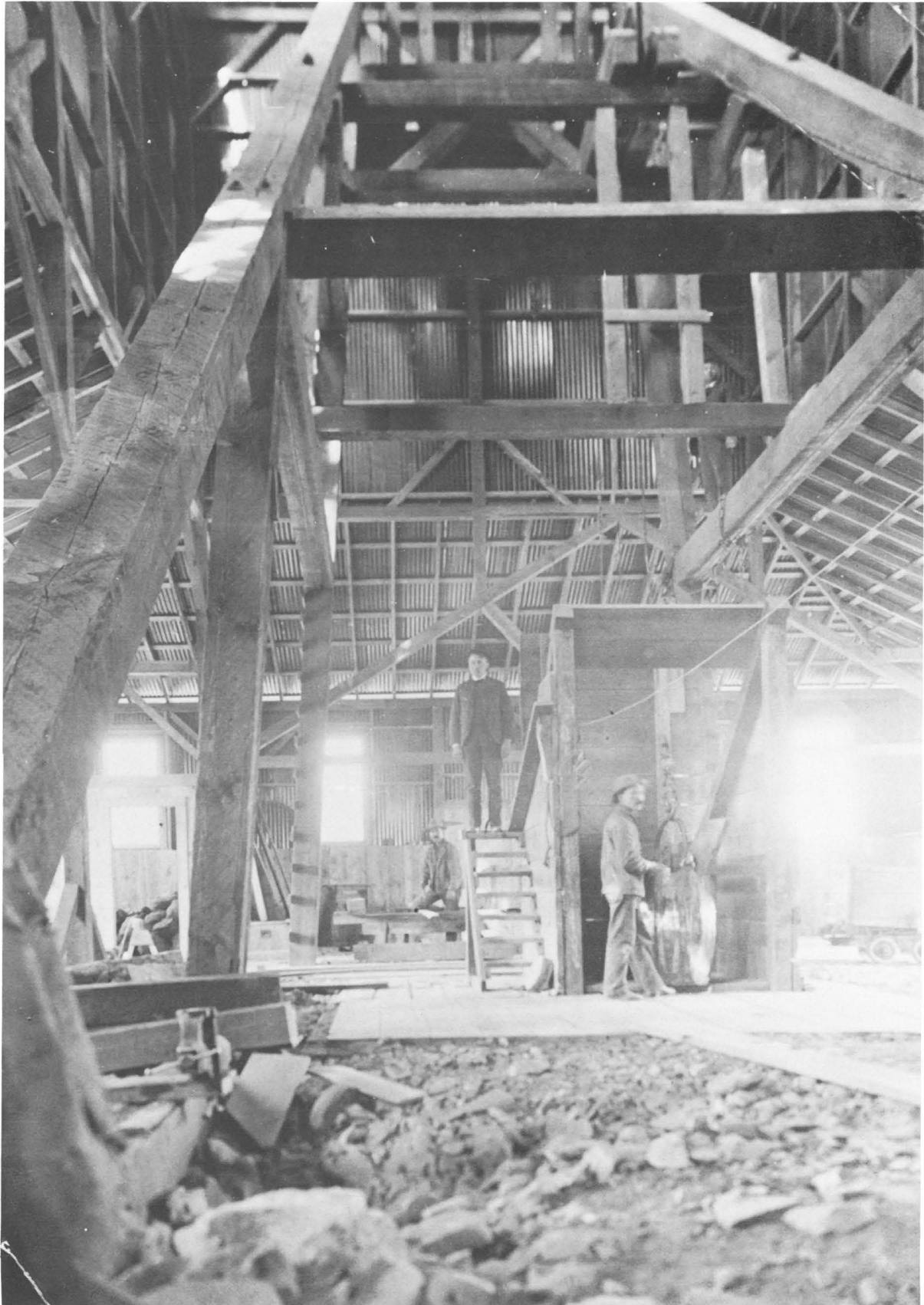
Boggs Mine, 1890's. Courtesy of Sharlot Hall Museum.



Poland Mine and Mill, 1902. Courtesy of Sharlot Hall Museum.



Boggs Smelter, 1905. Courtesy of Sharlot Hall Museum.



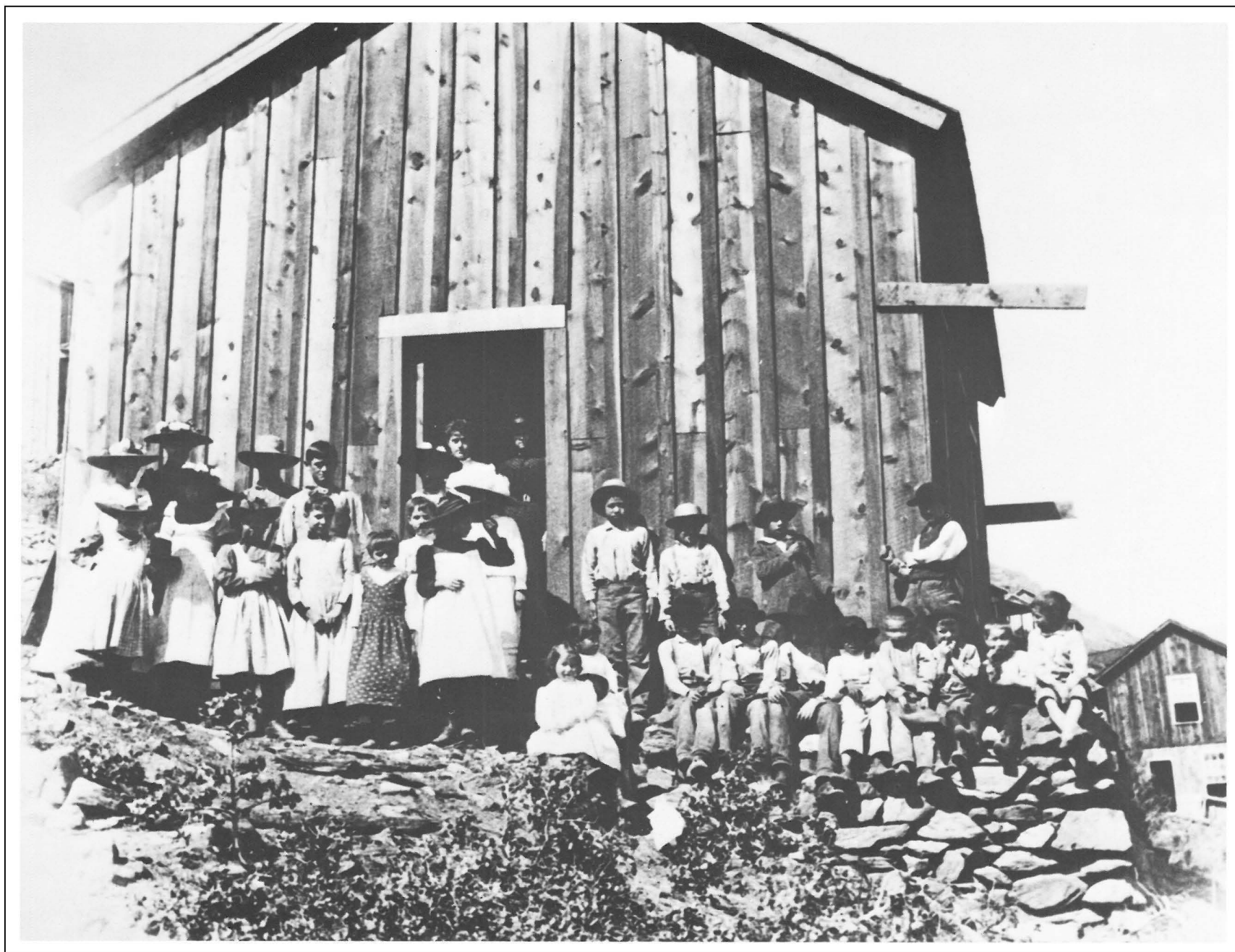
Interior of headframe and hoisthouse—Iron King Mine, 1920's. Courtesy of Sharlot Hall Museum.



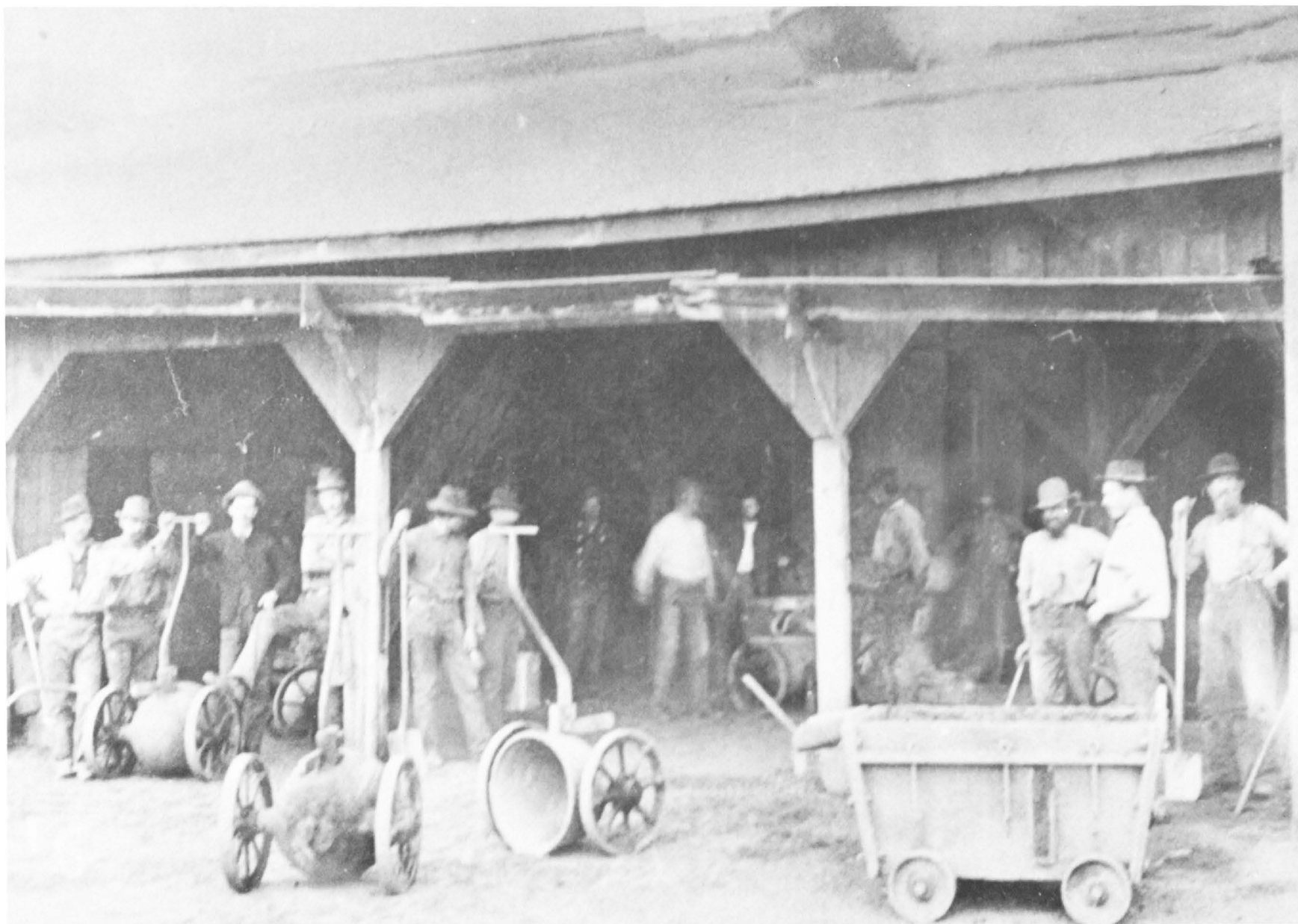
Aerial view of Iron King Mine, 1955, looking east. Courtesy of Sharlot Hall Museum.



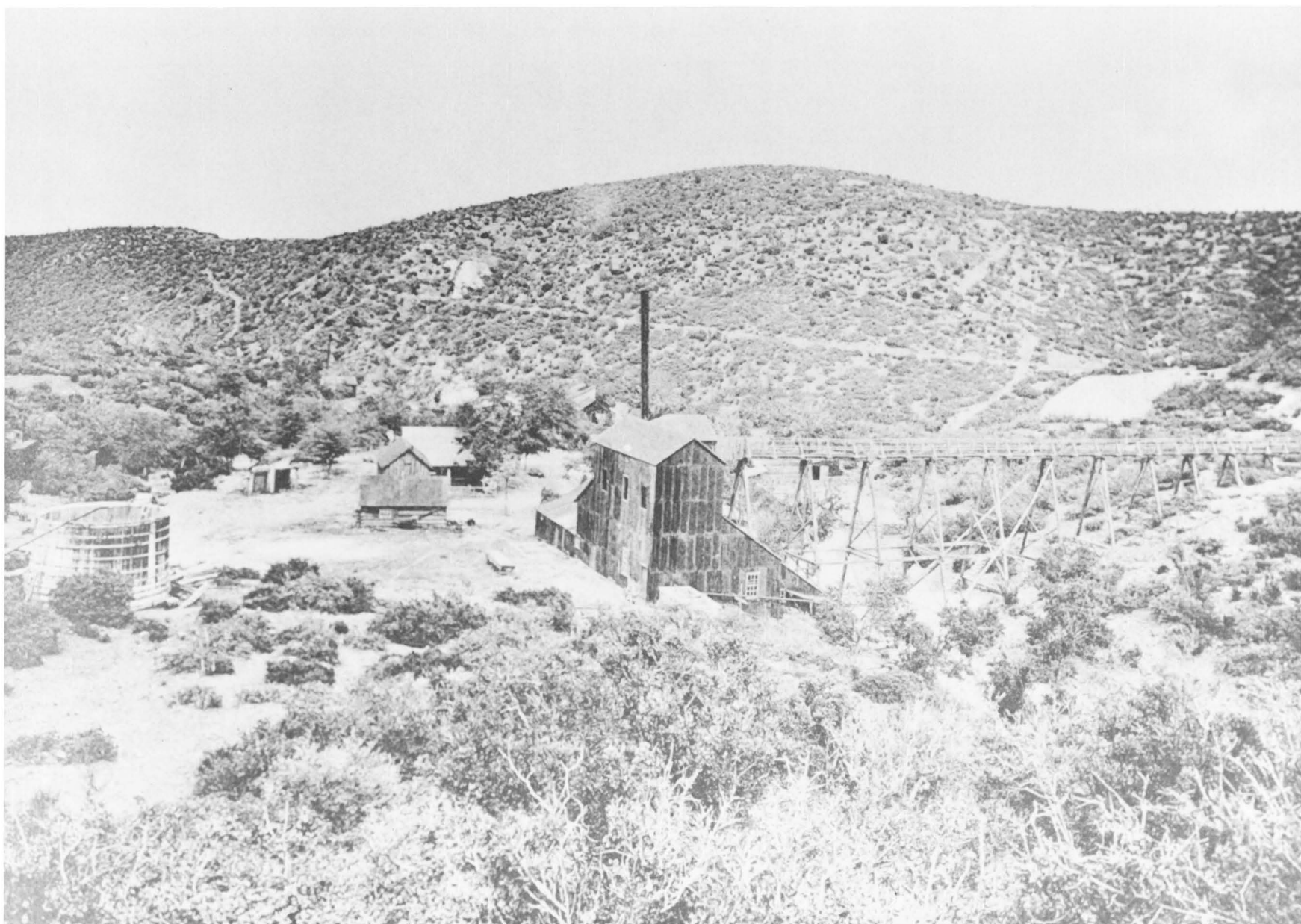
McCabe Mill, 1905, looking northeast along Galena Gulch. *Courtesy of Sharlot Hall Museum.*



One-room schoolhouse at Mayer, 1890's. Courtesy of the Arizona Historical Society/Tucson.



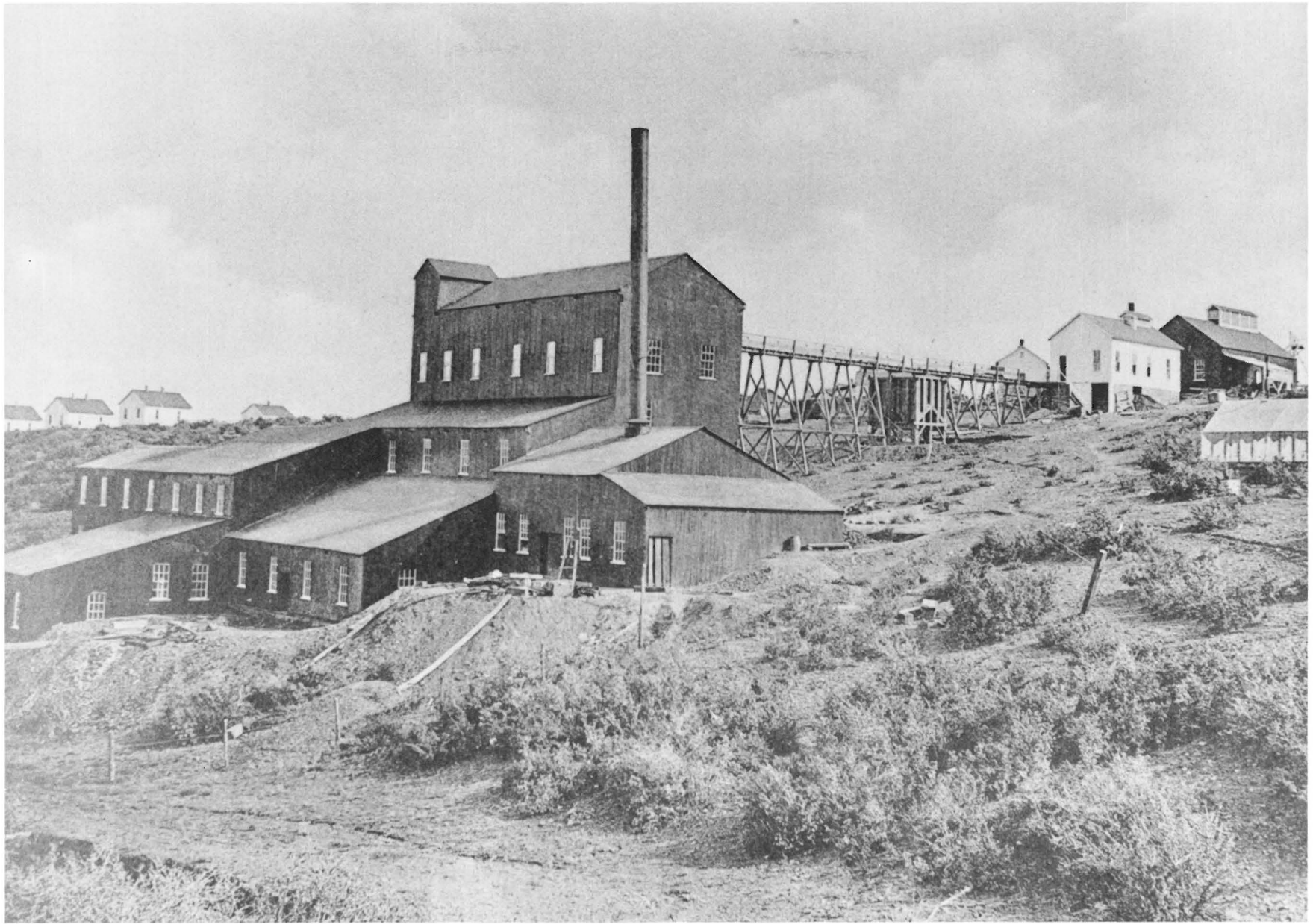
Boggs Smelter workers, c 1905, north of Mayer, Arizona. Courtesy of Sharlot Hall Museum.



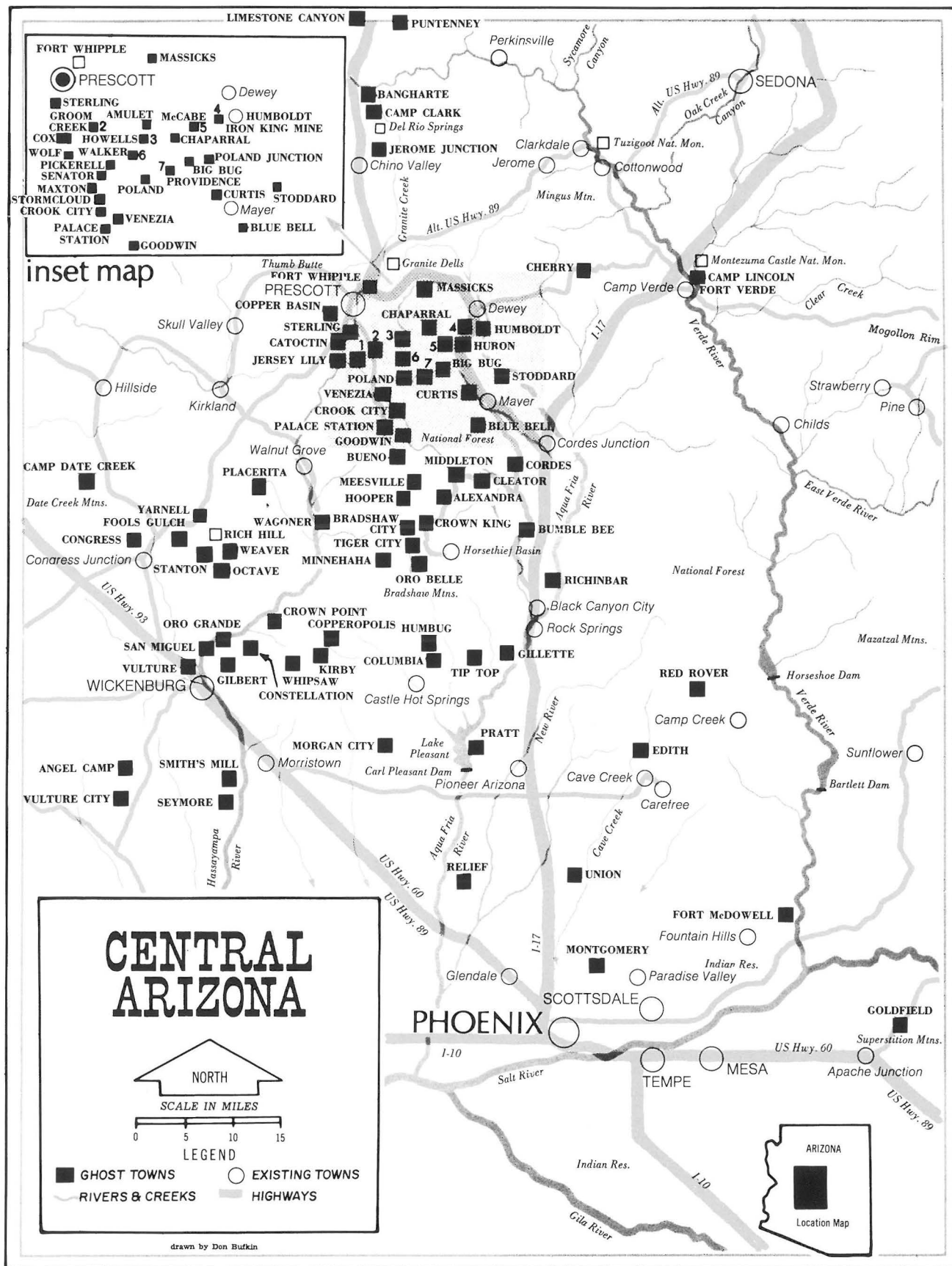
Little Jessie Mining Co., 10 stamp mill. Courtesy of Sharlot Hall Museum.



Galena Shaft, Lehan Mine, Mount Elliott Consolidated Mining Company, Chaparral Area, c. 1905. Courtesy of Sharlot Hall Museum.



Iron King, American Copper Company—12 single motor stamps, amalgamating, concentrating and cyaniding. Courtesy of Sharlot Hall Museum.



Courtesy of Nevada Publications.

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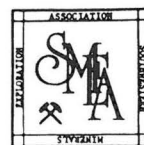


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