

Chapter 4

Jerome—A Mining Legacy in the Black Hills of Central Arizona

©1991 by Carole A. O'Brien

Introduction

One reference describes Jerome as “a mining city known worldwide”. That was over 60 years ago when Jerome was one of the largest cities in Arizona, boasting a population of 15,000. Nowadays, you ask people about Jerome and they say “Jerome - where's that?”. A statement not too surprising when you consider some students graduating these days believe that World War II was something created on the back lots in Hollywood! But perhaps we can excuse those who are not aware of Jerome and its place in history, especially the mining history of Arizona; after all, fewer than 450 people live there (the 1990 Census placed the population of Jerome at 403).

Hundreds of ghost towns throughout the west lay in silent testimony to the boom and bust existence of those early days of mining. Many prospectors did die. And overall the mining fraternity was a pretty poor lot indeed. Working long hours in atrocious conditions for precious little pay - all to excavate the rock from the earth; rock that yielded metals - copper, silver and gold. Wealth and fame for but a few, and certainly not the individual miner. The original discoverer – that solitary figure who braved the elements, and who, more often than not, made his find by accident rather than design, is often overlooked and forgotten when someone finally begins to sift through the pages of time to record the history of a particular area.

Location

Jerome is located in central Arizona, approximately 100 miles due north of Phoenix, perched on the steep eastern slope of the Black Hills. Three lava-capped mesas comprise the summit region of the Black Hills: Mingus, Hickey, and Woodchute Mountains. Altitudes in the area range from 7,844 feet on Woodchute Mountain and 7,815 feet on Mingus Mountain, to 6,050 feet at Cleopatra Hill which overlooks Jerome, to 3,318 feet along the Verde River at Cottonwood, named for the numerous cottonwood trees along the watercourse. Main Street in the town of Jerome is at an elevation of 5,175 feet.

To the southwest, the Black Hills grade into the

Bradshaw Mountains that culminate in a high range southeast of Prescott. To the south, the Black Hills fade into a landscape of low relief. And across the Verde Valley to the east, the margins of the Colorado Plateau are strikingly exposed below the Mogollon Rim, which marks the edge of the plateau.

Geology

The spectacular beauty of the Black Hills, Verde Valley and Oak Creek Canyon areas is the result of geologic processes and cataclysmic events which have occurred over a period of time that is, even for scientists, difficult to comprehend – a period of time that spans more than 1,800 million years. During that time, volcanic eruptions and massive intrusions pushed through the earth's crust to form mountain ranges. These ranges were subsequently eroded; from time to time, seas inundated the area, lakes formed, rivers meandered, and thousands of feet of varying types of sediments were transported and deposited on top of the older rocks. Cyclical periods of subsidence, uplift, erosion and deposition occurred over the millions of years of geologic history. All this, combined with compressional forces and movements within the earth's crust which folded and faulted the rocks, has produced the features we see today.

Dozens of geologists have made their way to the Jerome area; their observations and investigations have been published by a variety of scientific entities including the United States Geological Survey, Bureau of Mines, American Institute of Mining and Metallurgical Engineers, American Mineralogical Society, Society of Economic Geologists and Geological Society of America. The earliest publication dates back to 1883 - “The Mining region around Prescott, Arizona,” by J.F. Blandy, in *Transactions of the American Institute of Mining and Metallurgical Engineers*, Volume 11. After that came articles by such well known geologists and mining men as M.G. Hansen, F.L. Ransome, L.E. Reber, T.A. Rickard, and Waldemar Lingren.

The fundamental principle that underlies most of geology is simply that the present processes occurring on the earth have occurred throughout all of geologic time. Thus, ancient rocks can be interpreted in terms of present processes. Discussion and debate as to how

the basic elements combined and contributed to the formation of earth and its multitude of ore deposits have occurred since the time of Aristotle. By 1900, geologists visiting Jerome recognized that the ore deposits were as old as the rocks which surrounded them, i.e. Precambrian¹ and that the mountain building forces of that period were responsible for a weakness within the rock mass which allowed the streams of mineralized gases or solutions to invade the rocks and produce the ore deposits. As is often the case where older rocks and formations are present, especially those of Precambrian age, the geological record is extremely interesting, but complex and difficult to unravel. In a paper prepared for and originally presented in 1938 to a regional meeting of the A.I.M.M.E.² in Tucson, Arizona, Louis E. Reber, a geologist first with the United Verde Company in 1916, and later with Phelps Dodge Corporation, reported that "...practically all the Jerome district mineralization was replacement of pre-existing material by solutions." and "...that the source of the ore-bearing solutions was related to igneous rocks or inferred igneous magma reservoirs." (Reber, 1938, p. 59) This concept prevailed for over thirty years. Detailed studies of the host rocks revealed that not only were the rocks extrusive rather than intrusive, i.e. volcanic rather than plutonic, but that these volcanics had accumulated in a submarine environment. By the early 1970s, the geologic community had accumulated sufficient evidence to support the theory that the deposits had been formed by the discharge of hydrothermal solutions onto the seafloor, an event which was associated with volcanic activity. The actual observance of the exhalation of sulfide-rich solutions from submarine volcanic vents in the Red Sea and the Pacific Ocean lends considerable credence to the theory.

The deposits at Jerome are now described as syngenetic³, volcanogenic massive sulfide deposits.

Another misconception may also have prevailed in the early years of deciphering the geologic history of Jerome. Reber and many others considered the United Verde Extension deposit a downthrown fault segment of the United Verde deposit. Studies on displacements within the Verde fault and correlation of the surrounding rocks now indicate, at least to some, that the United Verde and the United Verde Extension are distinct and separate deposits which now lie on opposite sides of a major fold.

As subsequent generations of geologists view and interpret the voluminous data from the mining camps around the world, new theories evolve as to the deposits' origins and modes of emplacement. But theories or lack of them, did not deter that importunate and intractable soul who, by candle light, then carbide lamp, dug and shovelled and followed the ore to its end. Tribute should be paid to these men who were responsible for the mining successes of their day.

The Early Years

Who knows who first looked upon what was to become Jerome and recognized that the rocks which formed the hills there contained valuable metals? Centuries before the arrival of the white man, the Southwest was home to the Hohokam, the Anasazi and the Mogollon. These

people, by a.d. 1200 had developed the many storied dwelling which the Spanish called a pueblo; the people were also later referred to as Pueblo Indians. They were a peaceful people who raised crops. Their homes were built in the cliffs to protect them against attack from neighboring tribes. These Cliff Dwellers were called "the old or ancient people" by the Yavapai and Apache who also lived in the area. The Yavapai and Apache were nomadic tribes; they were hunters and gatherers of plants. The lush valley of the Verde River provided abundant game for food and clothing. Along with their Pueblo neighbors, they mined the oxidized copper ore, using the colored rock for personal adornment and as a dye for their blankets and pottery. Traces of old dumps, shafts and tunnels were found in the area, along with stone hammers and other stone implements.

During the early Spanish exploration of New Mexico and Arizona, two explorers, Antonio de Espejo and Marcos Farfan de los Godos, visited the area. Espejo was reported to have arrived in the area in 1583. Farfan, who was Captain of the Guard and of the Horses for Juan de Onate, reportedly arrived in the valley of the Verde River with eight companions and his Hopi guides on November 24, 1598. The Spanish explorers found a shaft which was three estados⁴ deep and a large dump. In search of gold, these adventurers turned their backs on the Valley's potential, although they probably claimed the land for the King of Spain before taking their leave.

Three centuries passed and perhaps other adventurers walked the hills and saw the diggings the Indians had made. It was not until the late 1800s that things really started to happen. The California Gold Rush lured thousands west in '49. The war with Mexico ended in 1848, and the United States took possession of New Mexico, which included Arizona as far south as the Gila River. The remaining lands to the south were acquired from Mexico in 1853 under the Gadsden Purchase. The most accessible areas in Arizona at this time were near Tucson and Tubac, where Spanish settlements had been established late in the 17th century. From here, hopefuls prospected in areas of the Santa Rita and Patagonia Mountains. In the 1850s, selected copper ore from Ajo was shipped to Swansea, Wales for treatment (Arizona Bureau of Mines, Bulletin 180, 1969, p.118).

The Colorado River provided access to western Arizona; barges laden with cargo and supplies could travel north as far as Ehrenberg and Parker. From Parker, prospectors traveled inland along the Bill Williams and Santa Maria Rivers. One of these expeditions in 1863 led to the discovery of the Vulture gold mine by Henry Wickenburg.

Arizona had become a Territory by this time; John N. Goodwin signed the Proclamation on December 29, 1863, as first Territorial Governor. A military camp at Del Rio Springs on Granite Creek was moved about 20 miles to the south and Fort Whipple and the town of Prescott were established. Practically one out of every four people in the Territory of Arizona in 1864 was a prospector or miner. By the end of 1864, Arizona had about 25 organized mining districts (Greeley, 1987) including the Bradshaw District southeast of Prescott.

Al Sieber and Dan O'Leary, Apache scouts with General

Crook's army, recognized the copper potential in the Black Hills. Legend has it that Al Sieber staked a claim but never had the time to file it. Many other claims and mill sites were located and filed on, but it was the "Eureka" and "Wade Hampton" claims which were to become famous.

Morris Andrew ("Andy") Ruffner was a Civil War veteran and only one of the many who abandoned their homes in the South in the aftermath of that devastating conflict and headed west. Angus MacKinnon, an adventuresome Scot, had traveled from Nova Scotia. The partners sunk a shaft, 45 feet deep, on the "Wade Hampton" claim. They were probably assisted in this undertaking by one of Angus' brothers; there were two living in the area, Roderick also known as "Rod", and John. Unfortunately, the partners did not have the finances for a large operation and they realized that if they went any deeper and ran out of ore, they would not be able to sell their claims. After five long and hard years working the ground, when word came that George Treadwell and James Douglas were coming from Prescott to examine the claims, the partners had already decided to sell. Douglas came west looking for custom ores for the Chemical Copper Company's plant in Phoenixville, Pennsylvania at which he was superintendent. He was also on the lookout for mining opportunities for the firm of Logan and Lennig of Pennsylvania. Details vary on the outcome of Douglas' evaluation, but in any event it appears that Charles Lennig ended up with an interest in at least one of the claims.

Frederick Augustus Tritle had been living in Prescott for about two years. Tritle had practiced law in Nevada and had become active in the development of several mines. Following an unsuccessful attempt to become Nevada's senator, he was encouraged by a friend, William B. Murray, to move to Arizona. At this point written reports differ on how Tritle became involved in the mining claims in the Black Hills. Some say he acquired interest in them through grubstaking the miners themselves; another report states that as Territorial Governor he hired Frederick F. Thomas to investigate the area as an investment opportunity. Regardless of how Tritle was involved, he knew what he was doing. Thomas was a mining engineer with a degree from the Yale School of Mines and twenty years of practical experience behind him in California and Nevada. The idea evolved to consolidate the better properties in the area and organize a company to develop them. After securing options, or bonds on several claims contiguous with the "Eureka" and "Wade Hampton", Thomas headed east and negotiated with Charles Lennig to acquire his interests in the area. Along with William B. Murray, an associate of Tritle's, Thomas managed to interest the others. The most prominent amongst these investors were Eugene Murray Jerome, a lawyer practicing in New York who was William Murray's cousin, and James A. MacDonald, who was an insurance executive and also interested in mining opportunities. The United Verde Copper Company was organized early in 1883 with MacDonald as President, Tritle as Vice President and Jerome as Secretary. Tritle was made vice president of

the company not so much because he owned an interest in the claims, but because the other partners felt his official position as Governor of the Arizona Territory would carry a certain amount of prestige to the undertaking.

The company had in its possession ten claims and three mill sites, including:

Claim Name	Locator(s)	Date
Venture No.1 South	John O'Dougherty John P. Kelley Josiah Riley	February 17, 1876
Venture No.1 North	Edward O'Dougherty John D. Boyd A.B. O'Dougherty	February 17, 1876
Azure Southeastern	John D. Boyd	February 19, 1876
Chrome Southeastern	Edward O'Dougherty	February 19, 1876
Azure Northwestern	Josiah Riley A.B. O'Dougherty	February 23, 1876
Chrome Northwestern	John O'Dougherty John P. Kelley	February 23, 1876
Gift	Edward O'Dougherty John O'Dougherty A.B. O'Dougherty John D. Boyd John P. Kelley G.V. Kell Josiah Riley	February 23, 1876
Eureka	S.L. Ruffner M.A. Ruffner	June 16, 1876
Wade Hampton	M.A. Ruffner Angus MacKinnon	June 18, 1876
Hermit	S.L. Ruffner M.A. Ruffner	August 1, 1876

[listing from H.V. Young's research; courtesy of the Jerome Historical Society]

Fred Thomas became Superintendent and General Manager. He also became the first Postmaster for the small community of miners who came to dig in the Black Hills at a place which would bear the name "Jerome" but would never see the man after which it was named. The Atlantic and Pacific Railroad (later the Atchison, Topeka and Santa Fe Railway Company) crossed northern Arizona in 1882. The first wagon road was built over the mountain southwestward from the mine, connecting with the military and stage road from Prescott and Fort Whipple to Fort Verde, near the present town of Dewey. The second road was built north and northwest from the mine to connect with an existing road between Prescott and Ash Fork, 60 miles away. All supplies were freighted to Jerome by mule and ox teams, including the two water-jacketed blast furnaces, plus the coal with which they were fired.

In August of 1883, the properties began producing copper. Coincidentally, Bisbee also fired up its two water-jacketed blast furnaces that same year. Seventy five men were employed at the mine and smelter. According to records at the Sharlot Hall Museum, the mine workers

may have made \$2 to \$3 a day as laborers or as much as \$6.50 a day if they had specialized skills. During these early days the town had a blacksmith's shop, a barber shop, restaurant, saloon, G.W. Hull's general store and several lodging houses.

A report by H.C. Burchard, Director of the Mint, on the production of precious metals in the United States for 1884, contained the following passage:

The mines owned by the United Verde Copper Co., at Jerome, have proved a series of surprises to the owners. The properties were purchased and worked as copper properties, but as they have been developed they are found to contain silver in large quantities - in fact, so large that the silver is sufficient to pay all the running expenses of the mine, leaving the copper as a profit to the owners.

Superintendent Thomas writes that another rich strike has been made in the Wade Hampton, one of the company's mines, on a drift from the 100-foot level 25 feet north of the last body of ore struck on the same level. The extent of it had not been ascertained, but the first samples taken assayed 20 per cent copper and rich in silver. In every direction that drifts or crosscuts have been run ore bodies have been encountered. The furnace has run up to October 1, 1884, 289 days, and Superintendent Thomas gives the product by assays at the mines 4,396,951 pounds of refined copper and 237,951 ounces of silver. Estimating the average price of copper at \$250 per ton, the gross yield of copper amounts to \$548,500, and the silver at its coining value, \$1.29 per ounce, amounts to \$307,665.

This same report stated that the United Verde Copper Company paid a dividend of \$60,000 in 1884. Total dividend disbursements were reportedly \$97,500, which sadly depleted the treasury. Copper prices plummeted and the mine closed in 1884.

Governor Tittle negotiated a lease on the property from his partners in the company and spent his own personal funds in an attempt to make good on his belief in the potential of the property. Jerome was not known for his leniency and when Tittle failed to make the required payments, the lease was quickly terminated and the partners looked elsewhere for a buyer/developer. Tittle died in Phoenix in 1906, a relatively poor man. But history should record that he was one of the most active, successful and popular governors of Arizona's territorial days (Young, 1964).

William A. Clark and the Montana Connection

All was not lost, however. One of the exhibits at the Exposition of 1885 in New Orleans included a collection of rich copper ore from the United Verde Mine. These samples caught the eye of a visitor from Montana - William Andrews Clark. It was either these specific samples or the shipments of matte⁵ extremely rich in gold and silver from the United Verde which showed up at the Port Orford Copper Company's refinery in New Jersey, controlled by Clark, which fostered an interest in the mine at Jerome.

Frederick Everest Murray, a brother to William and cousin to Eugene Jerome had been sent to act as agent to watch over the family interests. On the payroll, he was listed as "furnace tapper" at a wage of four dollars a day (Young, 1964). He was also put in charge of the properties after the shutdown. Clark made contact with Murray in 1886, either by way of correspondence or perhaps even a personal visit to the property. It has been intimated that Fred Murray did not get along well with his cousin who constantly berated him for his

efforts or lack of them. Murray described himself as "One fourth lackey, one fourth boss, and one half sucker". There is evidence that he kept his association and correspondence with Clark a secret from his cousin, at least in the beginning. But when negotiations began in December of 1887 with James A. Douglas for the acquisition of the United Verde Company, Fred Murray made every effort to win over the "Professor", as Douglas was called, and help sell the property. Several other individuals were interested in and had made offers for the property. Douglas had been associated with Phelps Dodge & Company of New York since the early 1880s when that firm had hired him to investigate several mines in Arizona, including the Atlanta claim which adjoined the Copper Queen mine at Bisbee (Graeme, 1987). Anson Green Phelps, founder of the P.D. empire had been a merchant in tinplate and hardware in 1781. His daughter, Melissa, married William E. Dodge in 1828 and Phelps Dodge & Company was established in 1834. By 1878, William Earl Dodge, Jr., and another of Anson's grandsons, Daniel William James, were the sole partners. Rather than accept cash for his consulting services to Phelps Dodge, Douglas took a 10 percent interest in the Atlanta. He later served as President of the company from 1908 to 1916.

I would hazard a guess that Douglas was negotiating for Phelps Dodge for the acquisition of the United Verde. Perhaps when word got out that Phelps Dodge was interested, the owners decided to up the asking price. But the heavy investment in the Atlanta mine precluded Phelps Dodge's participation, at least at this point in time.

William Clark stepped in and a deal was ratified by the stockholders in February, 1888. "When Clark picked up his option on January 9, 1890, he became owner of 285,821 shares. James MacDonald held 12,506 shares and George Treadwell held 673 shares" (the *Jerome Chronicle*, 1988). James MacDonald, the company's first president was the only partner who did not sell out to Clark. It was only after his death in 1929 that the Clark family acquired the outstanding shares from the MacDonald estate.

Clark arrived in Jerome in March, 1888 with his smelter supervisor, J.L. Thompson, and his mine superintendent, Joseph L. Giroux. Giroux ran the operation until 1904. Clark, perhaps uncharacteristic of his time, realized the importance of providing certain comforts for his workers, thus insuring productivity in their efforts on his behalf. He built the Montana Hotel, which was the largest stone structure in Arizona in its time; it reportedly had 200 bedrooms and a dining room which would seat 400. It was later destroyed in a fire in 1915. He also had built a four-story mercantile, hospital, and a dozen or more Victorian homes for company officials.

A new smelter was built in 1894 and in that same year, the company had a narrow gauge railroad, appropriately franchised and named the "United Verde and Pacific Railroad" joining the Santa Fe spur at Jerome Junction, north of Prescott. And Jerome was growing. Census takers in 1890 found 250 people, a decade later they counted 2,861. Unfortunately the make-shift and hastily

built dwellings to house and service the growing population were the kindling that fueled three disastrous fires between 1897 and 1899. After the fires, residents rebuilt with substantial concrete and brick buildings. Turn-of-the-century Jerome had a school, three churches, six hotels, a dozen saloons, stores of all kinds, electric lights, water works, a bank and three competing newspapers: the *Jerome Mining News*, the *Jerome Reporter* and the *Jerome Hustler*. Jerome's first newspaper, the *Chronicle*, had only survived 3 months in 1895. The *Jerome Mining News* continued to publish for over forty years.

When incorporated in March of 1899 Jerome was Arizona's fourth largest city, behind Tucson, Phoenix and Prescott. Jerome was ready to move forward with a sturdier foundation into the twentieth century. Jerome had come into its own. The population in Jerome mirrored that of any other mining boom town – a melting pot of nationalities – from Scotland, Ireland, Wales, Germany, Austria, France, Italy, Finland, Denmark and Sweden. The Italians lived in ramshackle dwellings on a hillside called "Little Italy". That area is now buried under fill from the pit. The Mexicans lived in the lower portions of Bitter Creek Gulch. And there was a Chinatown. But life was not without its unpleasant side: typhoid, smallpox and scarlet fever epidemics took their toll on young and old, rich and poor alike; the smelter used a roasting process to burn off sulfur from the sulfide ores causing a gagging stench to rise from the hill, capable of killing all vegetation, bugs, and vermin; blasting in the mines created landslides in town and frequent collapses of earth under the smelter toppled buildings and railroad cars; miners underground faced death daily; accidents frequently involved being crushed by timber and rock, or being burnt alive by the inextinguishable fires in the lower levels; and ore trains rolled and flattened the unwary in narrow haulage tunnels.

The fires underground presented an insurmountable problem to Clark. They could not be extinguished; some had burned continually since 1894. These fires were the result of the very high sulfur content in the ores, which when exposed to air, oxidized to produce hydrogen sulfide gases. The heat generated during the oxidation process plus the high flammability of the gases resulted in the spontaneous combustion of the ores in many places underground. With access to the ores underground denied, Clark looked for alternate methods. He decided to move the smelter from Jerome and mine the ore by open pit methods. The smelter was re-located below Jerome in the valley, and the town of Clarkdale was completed and the smelter began production in 1915. Clarkdale had wide paved streets with brick houses, churches and schools as fine as any in the country.

The U.V.X.

It took years, however, to remove the waste or overburden at the United Verde to access the ore. Meanwhile, across Bitter Creek Gulch, east of the United Verde, another story was unfolding.

George William Hull had begun acquiring property in Jerome in 1883, and within a few years owned most of

the ground on which Jerome was built (Young, 1964). He organized the United Verde Extension Gold, Silver & Copper Mining Company in 1899. In subsequent years, the name would appear as the United Verde Extension, or U.V.X. He also organized the Cleopatra Copper Company, the Hull Copper Company, the Consolidated King & Columbia Copper Mining Company. Cleopatra Hill derives its name from one of Hull's claims located at its southern base. Hull acquired interest in claims and mineral rights on land surrounding the United Verde property, to the west, south and east. He knew the importance of tracing the United Verde ore zone into outside ground. Visitors were not permitted underground at the United Verde and little information was available on the geology within the mine. In fact, it is reported (Rickard, 1918) that "The Senator for Montana had no liking for geologists, he did not retain a geologist on his staff, and he excluded visiting geologists." West of the Verde fault the ore outcropped; but east of the fault, no trace could be found of ore-bearing material.

J.J. Fisher was mapping and surveying in the area and noticed a small fraction of vacant ground covering 0.787 acre lying between the "March" claim on Hull's property and the "Daisy" claim belonging to the United Verde Company. He located this fraction under the name of the "Little Daisy" (Rickard, 1918), and persuaded Louis E. Whicher, originally of Boston, to take an option on the property. Whicher had previously acquired 190,000 of the original 300,000 shares of one of Hull's first mining ventures in 1899 wherein they explored the property immediately west of the United Verde. After Fisher had located the Little Daisy fraction, Whicher raised enough capital to sink a shaft 300 feet deep. The surrounding claims to the east were still held by Hull under a separate company in which Mr. Whicher held no interest. To facilitate exploration in more favorable ground to the east, Whicher and Hull negotiated a deal and the U.V.X. was reorganized in 1902. The new U.V.X. company now controlled the Little Daisy fraction plus the March, Conglomerate, Iron Carbonate and Bitter Creek claims. Mr. Whicher persisted in his prospecting and the Little Daisy shaft was extended to 800 feet. Small pockets of ore were found but overall the venture was not the success all had envisioned. After spending about \$500,000 in their efforts, exploration was discontinued on the property. In December, 1911, Major A.J. Pickrell, one of the directors of the U.V.X. company wrote to James S. Douglas and urged him to examine the property. "...what he saw impressed him so favorably that negotiations were commenced, leading to an option. This option was submitted to Phelps Dodge & Company, whose counsel at New York disapproved of the transaction on account of some fancied defect in the title, in which supposition he proved to be wrong" (Rickard, 1918, p.13). At this time, James' father, James A. Douglas, Jr., was President of Phelps Dodge & Company.

James Stuart Douglas was born at the Harvey Hill mine in Quebec in 1867, and moved to Phoenixville, Pennsylvania in 1875 where his father had been appointed superintendent of the Chemical Copper Company plant. The younger Douglas did not follow in

the mining foot steps of his illustrious father until, after an unsuccessful attempt at farming in the Sulfur Springs area in southeastern Arizona, he gained employment in the assay office at Bisbee at the age of twenty two. He and some associates bought land in the southern end of Sulfur Springs Valley and laid out a townsite which was named Douglas in honor of his father. Over the next years his travels took him to various mines and smelters in Mexico and Arizona. While at the smelter at Nacozari, in Sonora, he gained the nickname "Rawhide" because of his idea of using rawhide on the rollers of an incline

UNITED VERDE EXTENSION MINING COSTS YEAR: 1928

Tons shipped: 275,212

	<u>Cost per ton</u>
Prospecting & development	\$0.611
Extraction	\$1.710
Repairs & maintenance	\$0.260
Ventilation	\$0.068
Haulage	\$0.357
Hoisting	\$0.151
Pumping & drainage	\$0.039
Underground miscellaneous	\$0.107
Rock drills	\$0.152
Compressed air	\$0.092
Waste pit	\$0.005
Office & general	\$0.738
 TOTAL COST PER TON	 \$4.286

[D'Arcy, 1930]

to protect them from damage from the cables.

"Rawhide" Jimmy Douglas took an option on the U.V.X. property in 1912 with George E. Tener of Pittsburgh. Douglas and Tener decided to sink another shaft farther east and away from the original Daisy shaft and the Verde fault. The first shaft was named the Edith after Miss Edith Tener, and was started in June, 1913 approximately 1,720 feet almost due east of the Little Daisy shaft.

The levels in the U.V.X. mine are related to distances below the collar of the old Daisy shaft, rather than distances below the collar of the Edith. Thus the 800 level is only 575 feet below the collar of the Edith, but corresponds in elevation to the 800 level in the Little Daisy mine.

In December, 1914 a 5-ft. "vein" carrying 45 percent copper was intersected in a cross-cut off the 1,200 level south of the Edith shaft. The main ore body was discovered on the 1,400 level in 1916. The tenacity and perseverance of the owners had paid off. "During 1916 the U.V.X. produced 36,402,972 lb. of copper from 77,461 tons of

ore, an average of 23.5% copper, besides 2,570 oz. of gold and 128,468 oz. of silver, the total output being worth \$9,949,918, of which \$7,400,000 was profit. It had proved a glorious bonanza!" (Rickard, 1918, p. 17). Peak production was reached in 1917 when 63,879,506 pounds of copper were obtained from 115,064 tons of ore. The

UNITED VERDE EXTENSION PRODUCTION COSTS

YEAR: 1929

Tons produced: 358,654
Copper produced: 59,067,913 pounds
Average grade: 8.23%

	<u>Cost per pound</u>	<u>Cost per ton</u>
Mining	\$0.0268	\$4.41
Smelting	\$0.0247	\$4.06
Freight on ore	\$0.0009	\$0.15
Freight, refine & sell	\$0.0171	\$2.82
Hayden deductions	\$0.0073	\$1.19
 TOTALS	 \$0.0767	 \$12.63

[U.V.X. Records]

ore averaged about 27.5 percent copper. The Edith shaft was originally a timbered prospect shaft. Development ores were hoisted and burros packed the ore north to Hopewell where it was later loaded onto railroad cars. When the mine started to return sufficient profits, an aerial tramway was built and the ore transported a mile to the ore bins at Hopewell. Prior to completion of its own smelter, the U.V.X. sent its ores to the Copper Queen Consolidated Mining Company's smelting works at Douglas. It then became necessary to sink a second shaft. The Concrete shaft, later to become known as the Audrey, was started in 1917. During full production, the Audrey shaft was used exclusively for hoisting ore and the Edith shaft was used for transporting men and supplies in and out of the mine. The Edith shaft was later concreted in 1921.

The Clemenceau smelter was completed in 1918 (the site is now part of Cottonwood) to handle the ore from the United Verde Extension. The Little Daisy Hotel was also completed in 1918. It had 40 rooms, a billiard and pool room, spacious dining area for the employees, and it was described as one of the most attractive hotels in the Jerome area. And in that same year the Josephine tunnel was completed, running along the 1,300 level of the mine a distance of almost 2 1/2 miles to its portal. The ore was transported by rail to the smelter. On May 25, 1918, the smoke stack at the Clemenceau smelter reached 425 feet and was the highest stack in the world on that date. The ore was extremely high grade.

Unfortunately, the tonnage was small; records indicate total production from the U.V.X. was about 3,878,825 tons, at an overall average grade of 10.23 percent copper. The U.V.X. may have been small by comparison, less than one-tenth the size of the United Verde, however, it accounted for over twenty percent of the total copper production from the Verde district. By 1938 the reserves had been depleted and the smelter and mine were closed.

Full Production - The Later Years

The success of the UVX and the expansion of the United Verde inspired others to stake out the hills surrounding Jerome and initiate extensive development work. During this period more than seventy mining companies were organized, many with Jerome- or Verde-hyphenated names. With two smelters in the valley and numerous companies in operation, the Jerome district boasted more than 15,000 residents. By 1917 there were 6 producing mines in the district. The United Verde and the United Verde Extension accounted for more than ninety-nine percent of the production to the smelters. Some of the other smaller operations included the Haynes Mine, the Arkansas and Arizona Mine, the Copper Chief and Iron King Mines, the Shea Mine, and the Verde Central Mine; all were located within a four-mile radius of the United Verde and United Verde Extension properties. Complete production figures are poorly documented, except for the Verde Central which "... is reported to have produced 121,000 short tons of ore grading 2.94 percent copper" (Lindberg, 1986). Production records for 1917 show totals of 145,933,703 pounds of copper (almost half from the United Verde Extension), 36,443 ounces of gold, 1,884,673 ounces of silver and 205,817 pounds of lead; total revenues for the year were \$42,177,535, which were the highest ever recorded from the district. The late Senator Clark from Montana had certainly made his fame and fortune at Jerome. Dividends paid by the United Verde Copper Company during the period 1900 to 1924 amounted to over \$65 million; over ninety percent of this went into the personal coffers of the Clark family. By comparison, in the period from 1916 to 1938, the U.V.X. had paid over \$50 million in dividends.

Eight shafts were sunk on the United Verde property since mining operations started in the late 1880s. Shaft No.1, started in 1883, perhaps a continuation of Ruffner and MacKinnon's original shaft on the "Wade Hampton" claim, was sunk to the 500 level and used until 1894. Shaft No.2 was in operation from 1900 to 1912, ending at the 1,000-ft. level. Shaft No.3, started in 1901, reached the 1,950 level in 1917, was abandoned and then later used as a ventilation shaft. Shaft No.4 was started in 1910, reached the 1,000-ft. level in 1914, and was abandoned in 1917. The No.5 Shaft served for hoisting ore. It was started in 1915 and had reached the 3,515 level by 1931. Ore pockets were located on the 800 level and the hoist room on the 1,000 level. Shaft No.6 was a service shaft, used for hoisting men and supplies. Shaft No.7, another production shaft, had 5 compartments, all of concrete construction. It was started in 1929 and completed to the 3,000 level in 1933; its

hoist room at the 300 level, now at the surface, stands as a silent sentinel today – a reminder of the glory days of yesteryear. Shaft No.8, an internal shaft with facilities on the 3,000 level, hoisted the ore from pockets located on the 3,450; 3,750; 4,050; 4,200 and 4,500 levels. From here the ore was transported to the No.5 shaft and hoisted to the 1,000 level haulage tunnel. The Hopewell tunnel, 6,600 feet long was completed in September, 1908; ore was transported by rail through the tunnel to Hopewell and then on to the smelter at Clarkdale, over 6 miles away. Men and supplies were transported through the 500 level adit connecting the 500 level surface plant, located north of the mine, with the No.6 shaft. [Note: The elevation of the 500 level in the United Verde Mine was comparable, i.e. 5,000 feet, to the elevation at the collars of both the Edith and Audrey shafts at the U.V.X.; the elevation of the Hopewell haulage tunnel on the 1,000 level at the United Verde was equivalent to the 550 level in the U.V.X. Mine.]

Stripping of the overburden or waste rock in the United Verde pit began in 1918. A Marion 300, 8-cubic yard, full-revolving steam shovel began cutting into the slag dump in the 160 level and an Osgood Model 120, 4-cubic yard railroad-type steam shovel was used on the 300 level. Switchbacks for a standard gauge haulage railroad were constructed on the north side of the diorite hill to provide access to the south side where benches, 50 feet in height, were to be cut to establish a safe slope above the open pit (Alenius, 1968). By 1929, four 50-B, 1 3/4 cubic yard, Bucyrus-Erie alternating current electric shovels were in operation. With the increasing demand for copper that developed in the late '20s, the mining rate was increased, and 1,055,684 tons of ore were mined from the pit in 1929. These shovels loaded the ore into trucks, which dumped the ore almost 700 feet through transfer raises to ore bins on the 1,000-ft. level of the Hopewell haulage tunnel.

In June, 1929, mining operations in the pit had progressed to below the 300 surface level, and were being conducted on a 24-hour, 3-shift basis. At about 4:00 a.m. on June 30th, workmen in the pit were alarmed by very sharp noises, resembling explosions, during which time the bottom of the pit, in the section adjacent to the diorite wall, gave way and dropped as much as four feet (Alenius, 1968). At the same time, rupturing of the diorite wall occurred and a section containing approximately 25,000 tons fell into the pit. The cause was attributed in part to the heavy surface blasting in previous years, partly to weakening of the underground support by the slimes which had been pumped into the underground areas for choking off the fires and partly to weakening of support by the continued burning in certain areas. A program of monitoring the fractured area was undertaken, and this constant monitoring enabled management to predict the next and even more eventful slide, which occurred in March, 1931 when an estimated 1,000,000 tons of waste rock fell into the pit. Through 1930, a total of 8,500,000 cubic yards of waste had been excavated from the pit. And during the period 1918 through 1940, the pit yielded 9,708,923 tons of ore which averaged 3.47 percent copper, 2.06 ounces per ton

silver and 0.07 ounce per ton gold (Alenius, 1968).

Rocks were not all that fell during that time period. The great stock market crash occurred in 1929 and by 1932, the price of copper had sunk to a low of less than 6 cents per pound! The United Verde closed its mines and doused its smelter fires.

Copper prices were on the rise again in 1935 and the United Verde Mine and smelter were reopened under new management. The new owners were the Phelps Dodge Corporation. They had managed successfully, to acquire the property – lock, stock and barrel for slightly less than \$21 million. Needless to say, there were a few raised eye-brows in the mining industry. Twenty-one million dollars looked like a pig-in-a-poke, especially for a mined out deposit. But by the end of 1949, Phelps Dodge's earnings after taxes were a little over \$40 million. They had done well. However, one can only wonder about the fate of the United Verde had the Clark heirs survived. Senator Clark's sons, Charles W. and William, Jr. died in 1933 and 1934 respectively. They were preceded by Clark's grandson, William A. Clark III, who was killed tragically in a plane crash in the area in 1932.

In 1953, the doors finally closed and an end was written to the chapter on large scale mining at Jerome. However, smaller operations continued. The Big Hole Mining Company, operating under a lease from Phelps Dodge, worked the small ore shoots left in the southern and western margins of the open pit (Arizona Bureau of Mines, Bulletin 180, 1969, p.131). During the period 1954 through 1975, the Big Hole Mining Company extracted a total of over 200,000 tons containing over 25 million pounds of copper, 2,800 ounces of gold and almost 200,000 ounces of silver. This ore was shipped and treated at the Douglas smelter. Current mining rates pale in comparison to that of years gone by, but even now, direct shipping ores with values as high as 0.50 ounce per ton gold and over 5.0 ounces silver per ton have been shipped from Jerome to smelters now located as far away as New Mexico.

Beneath the small town of Jerome lay its legacy – the underground workings of the United Verde Mine alone total over 80 miles: 304,470 feet of drifts, 123,800 feet of raises, and 14,100 feet in the 8 shafts which serviced the property. The U.V.X. probably added another 20 miles of workings from its operations. Records indicate that a total of over 3,750,000,000 pounds, or 1,875,000 tons of copper have been produced from the district. In addition to this, about 1,475,000 ounces of gold, more than 54,000,000 ounces of silver and about 590,000 pounds of lead and 45,527,000 pounds of zinc have also been produced. From 1883 to 1951, the total value of recovered metals from the Verde district was about \$650 million. At today's metal prices, that figure would soar to an overwhelming total of more than \$4.5 billion.

Jerome, Clarkdale, Hull Canyon, Hull Avenue, Clark Street, Giroux Street exist to remind us of some of the men who made this area famous. The Douglas mansion, now a museum owned and operated by the State Parks Department houses the essence of Jerome's glory days in original furnishings and hundreds of photographs taken over its more than 100 year history. But tribute

must be paid to Sarah and Andy Ruffner, the MacKinnons, the O'Dougherty brothers, John Boyd, Fred Tittle, Fred Thomas, Fred Murray plus the many nameless and often forgotten others who led the way and laid the foundations for Jerome's legacy.

Herbert Young's books, *Ghosts of Cleopatra Hill* and *They Came to Jerome* chronicle the life and times of some of those men and women who lived and died on the hill. The latter book features such chapters as "Men of the Dinner Pail", "Murder, Mayhem and Marshalls", "Bars, Chips and Moonshine", "The Madam and the Girls", and "Fun, Games and Stuff". These books are highly recommended to those interested in learning more about Jerome.



Acknowledgments

I would like to say a special "thank you" to Tony Budge, for without his support over these past several years, I might have been one of the thousands who would have said "Jerome - where's that?"; and to a long lost friend, Ben F. Dickerson III, who I hope would have appreciated my efforts.

Many thanks to Nancy Smith [Jerome Historical Society] and Greg Welden [Jerome State Historical Park] who have been so helpful in answering questions and providing the essential materials and photographs for this paper.

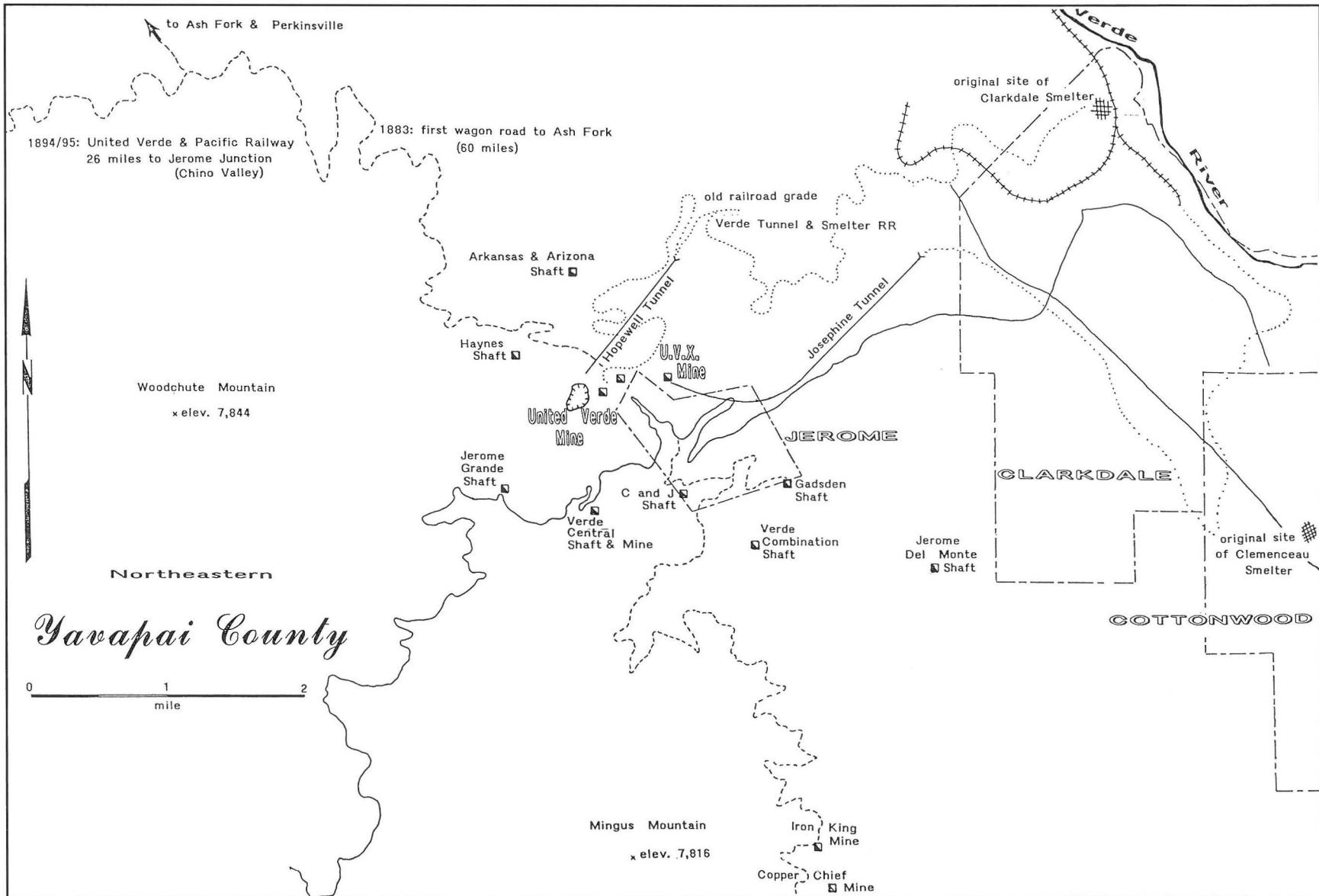
Selected Bibliography

- Alenius, E.M.J., 1968, *A Brief History of the United Verde Open Pit*, Jerome, Arizona: Arizona Bureau of Mines, Bulletin 178.
- Anderson, C.A. and Creasey, S.C., 1958, *Geology and Ore Deposits of the Jerome Area*, Yavapai County, Arizona: U.S. Geological Survey Professional Paper 308.
- Anderson, C.A. and Nash, J.T., 1972, "Geology of the Massive Sulfide Deposits at Jerome, Arizona - A Reinterpretation," *Economic Geology*, Vol. 67, No. 7, p. 845-863.
- Armstrong, D.G. and Handverger, P.A., 1966, "Recent Geological Investigations of the Jerome Massive Sulfide Camp, Verde Mining District, North Central Arizona, A Background View," *Arizona Geological Society Digest*, Vol. XVI, p. 326-329.
- Brewer, J.W., Jr., *Jerome: A Story of Mines, Men and Money*, published by Southwest Parks and Monuments Association.
- D'Arcy, R.L., 1930, *Mining Practice and Methods at the United Verde Extension Mining Company*, Jerome, Arizona: Department of Commerce - Bureau of Mines Information Circular 6250.
- Graeme, R.W. Bisbee, "Arizona's Dowager Queen of Mining Camps" in *History of Mining in Arizona*, Volume I, 1987, edited by J.M. Cantz and M. N. Greeley, published by Mining Club of the Southwest Foundation, Tucson, Arizona.
- Greeley, M.N., "Early Influence of Mining," in *History of Mining in Arizona*, Volume I, 1987, edited

- by J.M. Canty and M. N. Greeley, published by Mining Club of the Southwest Foundation, Tucson, Arizona.
- Irvin, G.W., "A Sequential History of Arizona Railroad & Mining Development - 1864-1920," in *History of Mining in Arizona*, Volume I, 1987, edited by J.M. Canty and M. N. Greeley, published by Mining Club of the Southwest Foundation, Tucson, Arizona.
- Lindberg, P.A., "A Brief Geologic History and Guide to the Jerome District, Arizona," in *Geology of Central and Northern Arizona*, Geological Society of America Rocky Mountain Section Guidebook, edited by J.D. Nations, C.M. Conway and G.A. Swann.
- Reber, L.E., Jr., 1938, "Jerome District," in *Some Arizona Ore Deposits*: Arizona Bureau of Mines, Bulletin 145, p. 41-65.
- Rickard, T.A., 1918, "The Story of the U.V.X. Bonanza," *Mining Scientific Press*, v.116, pp. 47-52.
- Young, H.V., 1964, *Ghosts of Cleopatra Hill: Men and Legends of Old Jerome*: published by the Jerome Historical Society, Jerome, Arizona, 5th printing, 1988.
- Young, H.V., 1972, *They Came To Jerome*: published by the Jerome Historical Society, Jerome, Arizona, 3rd printing, 1989.

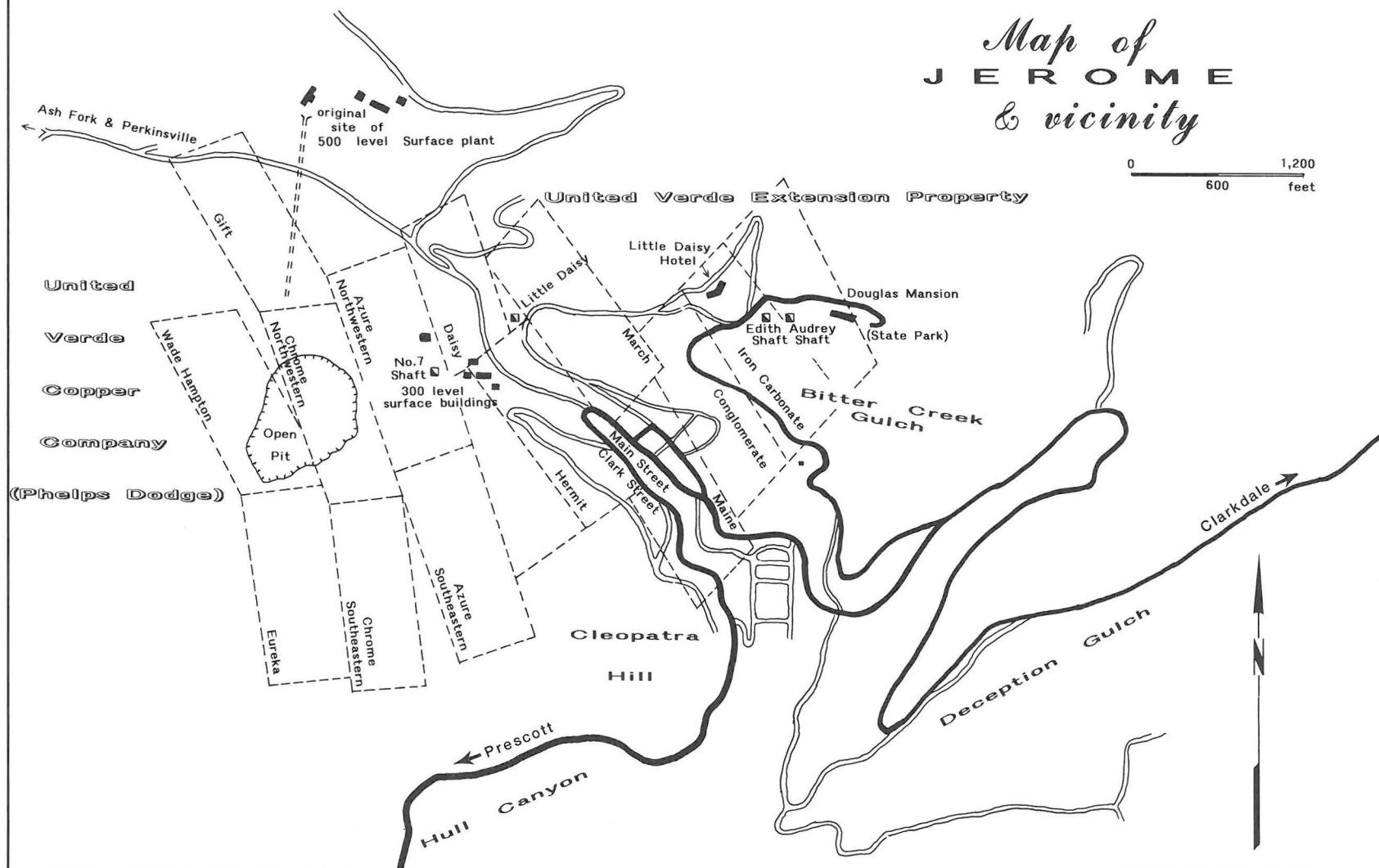
Notes

1. Precambrian. All geologic time, and its corresponding rocks, before the beginning of the Paleozoic (570 million years ago); it is equivalent to about 90 percent of geologic time. Glossary of Geology.
2. A.I.M.M.E. American Institute of Mining and Metallurgical Engineers.
3. Syngenetic [ore deposit] Said of a mineral deposit formed contemporaneously with, and by essentially the same processes as, the enclosing rocks. Glossary of Geology.
4. Estado. A unit of measurement; approximately 6 feet.
5. Matte. A metallic sulfide mixture made by melting the roasted product in smelting sulfide ores of copper, lead and nickel. ASM Glossary.



*Map of
JEROME
& vicinity*

0 600 1,200
feet

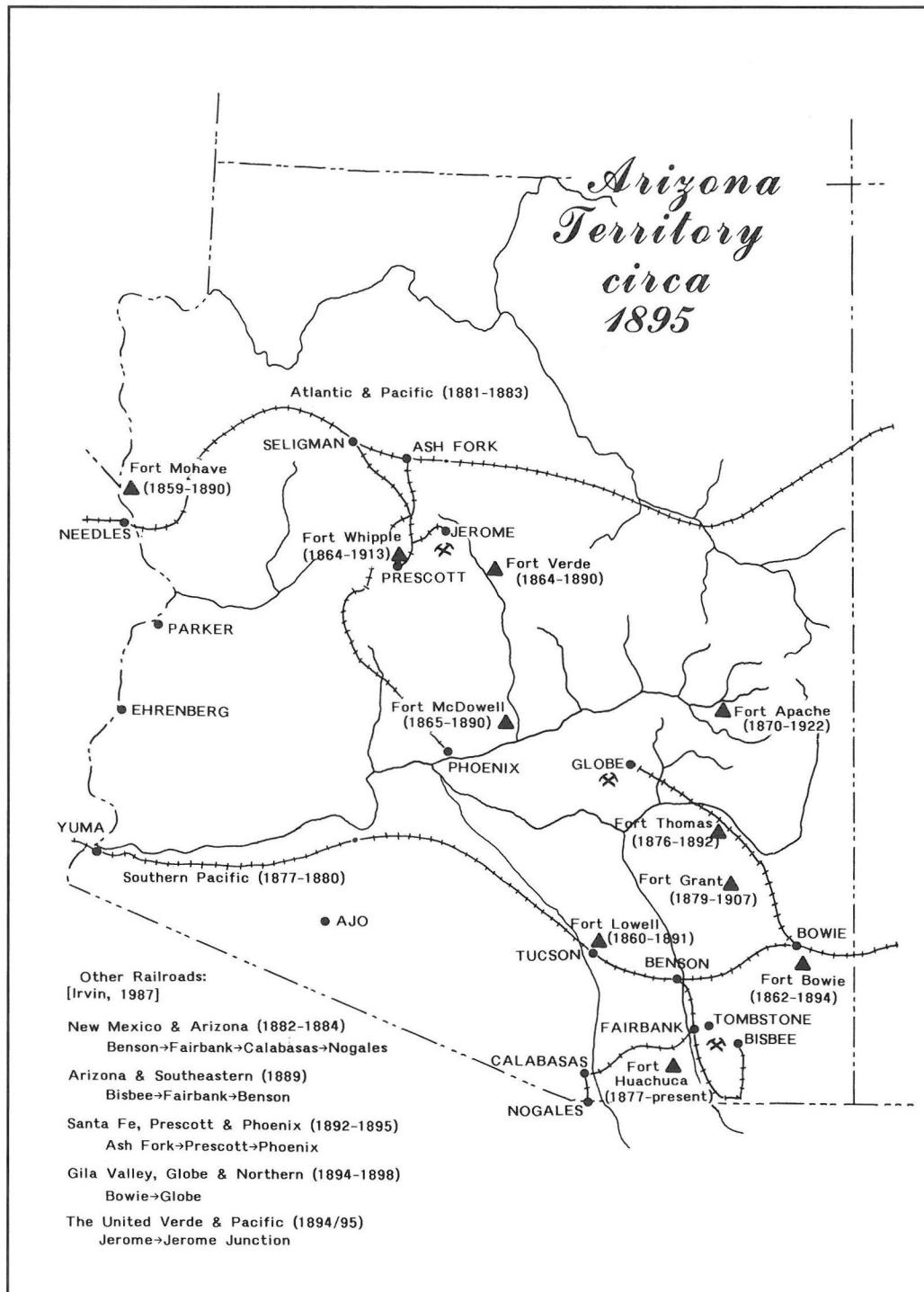


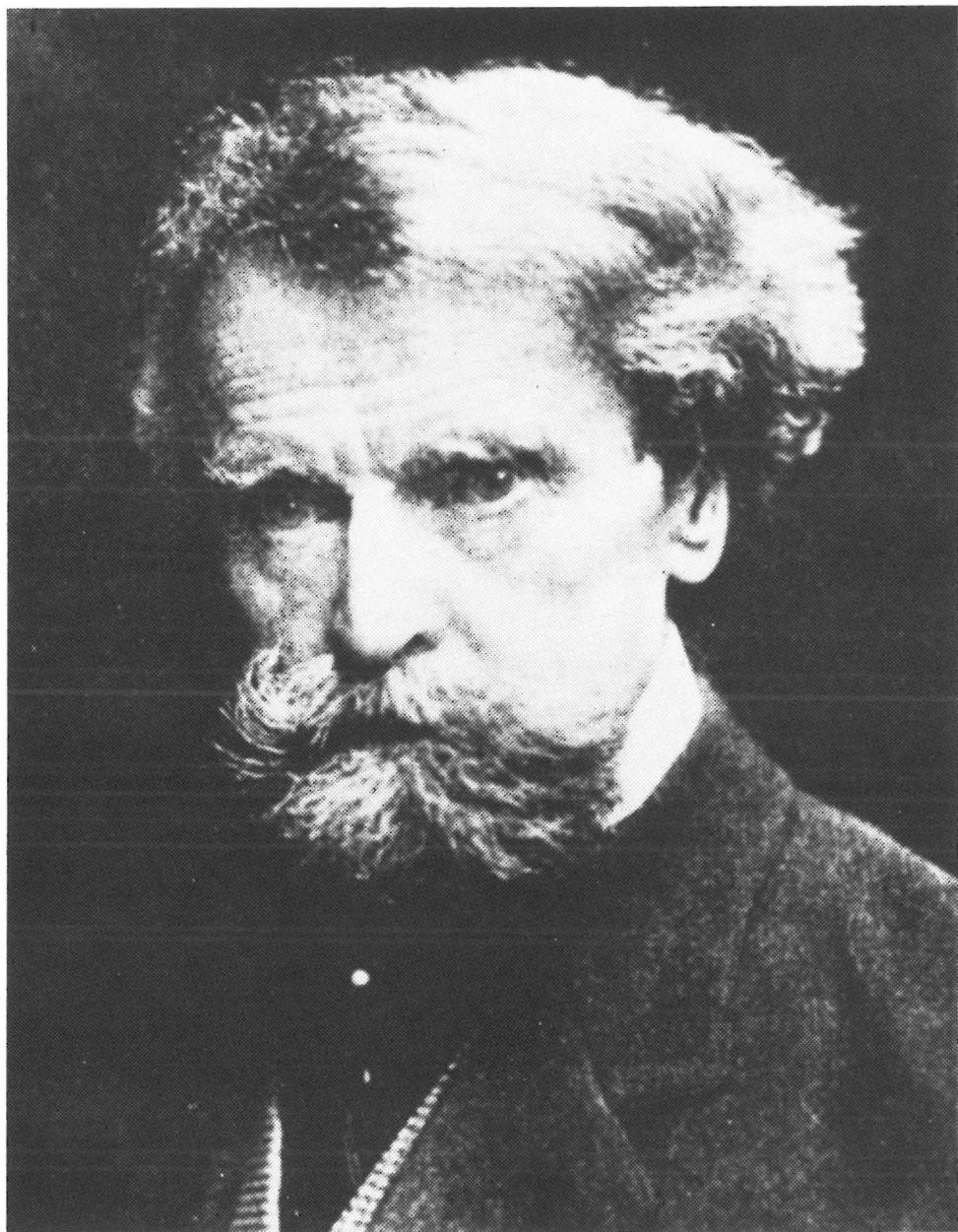
The Verde District

Production Statistics and Historic Notes

Year	Number of producing mines	Ore tons treated or sold	Copper (pounds)	Historic Notes	Average annual price		
					cents per pound	Gold (ounces)	Silver (ounces)
1883 to				Atlantic & Pacific Railroad crosses northern Arizona in 1882	16.80	4,242	323,926
1888	1	26,900 ²	6,869,075 ²	W.A. Clark purchases the United Verde Company in 1888	13.50	9,698	154,260
1889	1	10,000 ²	1,910,890 ²		15.60	n/a	423,714
1890	1	26,000 ²	5,257,421 ²		12.80	n/a	n/a
1891	1	37,000 ²	7,360,000 ²		11.60	2,443	109,878
1892	1	50,000 ²	9,845,666 ²				
1893	1	50,000 ²	9,222,141 ²		10.80	n/a	n/a
1894	1	58,900 ²	11,043,542 ²	New smelter for United Verde Company	9.50	7,779	276,258
1895	1	60,201 ²	16,522,161 ²	Verde & Pacific Railroad completed	10.70	4,628	263,080
1896	1	116,994 ²	22,366,425 ²		10.80	n/a	n/a
1897	1	151,266 ²	31,355,027 ²	1st major fire in Jerome: December 24	11.29	9,774	326,114
1898	1	219,831 ¹	42,453,316 ²	2nd major fire: September 11	12.03	n/a	n/a
1899	1	254,138 ¹	43,995,733 ²	3rd fire: May 19; Jerome incorporated	16.70	13,957	486,470
1900	1	245,352 ¹	39,888,472 ²	Clark elected to U.S. Senate (Montana).	16.19	15,943	523,723
1901	1	248,646 ¹	34,438,441 ²	1900 Census: 2,861 in Jerome	16.10	15,695	504,277
1902	1	133,219 ²	19,407,080 ²	Montana Hotel completed in 1900	11.00	9,551	306,784
1903	1	156,970 ¹	23,771,597 ²	First automobile in Jerome	13.20	15,038	450,603
1904	1	268,412 ¹	29,274,610 ²	Article in New York Sun in 1903 claims Jerome "The Wickedest City".	12.80	23,762	668,612
1905	1	273,523 ¹	32,683,951 ²		15.60	15,915	486,041
1906	1	274,161 ¹	35,886,441 ²		19.30	12,913	428,317
1907	1	253,556 ²	33,015,457 ²	13 men killed underground at mine	20.00	11,734	356,939
1908	1	241,915 ¹	36,183,089 ¹	Hopewell tunnel completed	13.20	20,335	494,574
1909	1	290,534 ¹	36,695,259 ¹		13.11	17,021	495,479
1910	2	323,569 ¹	38,663,880 ¹	1910 Census: 2,393 in Jerome	12.88	19,316	563,132
1911	4	304,949 ¹	33,167,987 ¹	Arizona becomes 48th State on February 14, 1912	12.55	15,240	461,145
1912	2	351,817 ¹	31,565,539 ¹	Jimmy Douglas options U.V.X.	16.48	15,083	480,518
1913	2	393,866 ¹	35,334,694 ¹		15.52	20,667	641,074
1914	1	397,227 ¹	32,448,170 ¹	U.V.X. "bonanza vein" on 1200 level	13.31	21,401	646,573
1915	5	491,992 ¹	50,266,821 ²	Clarkdale smelter begins operations	17.47	28,405	903,051
1916	3	694,051 ¹	103,000,000 ¹	Montana Hotel destroyed in fire, 1915	28.46	37,725	1,030,851
1917	6	949,094 ¹	145,933,703 ¹	U.S. enters World War I	29.19	36,443	1,884,673
1918	7	1,011,956 ¹	133,780,885 ¹	Little Daisy Hotel, Josephine tunnel and Clemenceau smelter completed	24.68	37,327	1,986,845
1919	4	566,445 ¹	72,332,704 ¹	Verde Tunnel & Smelter R.R. completed	18.19	21,148	949,436
1920	4	870,129 ¹	107,084,032 ¹	Highway across Mingus Mtn. completed	17.50	24,363	1,265,323
1921	3	189,474 ¹	26,567,602 ¹	1920 Census: 4,030 in Jerome	12.65	4,671	319,646
1922	3	572,246 ¹	74,793,982 ¹	Stripping in pit began in 1918	13.55	20,345	843,151
1923	4	1,465,006 ¹	140,425,401 ¹	New hospital opened in 1922	14.75	84,418	2,480,692
1924	3	1,257,714 ¹	142,238,947 ¹		13.28	52,030	1,839,844
1925	4	1,289,350 ¹	151,920,324 ¹	William A. Clark (1839 - 1925)	14.30	56,740	2,097,951
1926	2	1,285,461 ¹	150,269,756 ¹		14.05	55,538	1,971,914
1927	3	1,352,387 ¹	141,261,930 ¹		13.05	53,513	1,920,901
1928	3	1,580,312 ¹	163,312,041 ¹	Stock market crash	14.81	61,677	2,195,595
1929	4	1,800,607 ¹	211,542,611 ¹		18.35	75,404	2,749,290
1930	3	941,196 ¹	117,600,000 ¹		13.23	50,796	1,530,000
1931	2	229,789 ¹	44,100,000 ¹	United Verde mine & smelter close	8.37	18,141	1,050,000
1932	3	241,113 ¹	35,790,460 ¹	William A. Clark III killed	5.79	10,086	361,273
1933	3	243,245 ¹	33,201,565 ¹	Charles W. Clark dies	7.28	12,288	338,860
1934	1	200,754 ¹	26,147,463 ¹	William A. Clark, Jr. dies	8.66	8,065	242,632
1935	4	851,993 ¹	75,535,518 ¹	Phelps Dodge acquires United Verde	8.88	30,850	1,049,934
1936	5	1,312,012 ¹	99,157,152 ¹		9.71	64,405	1,911,774
1937	2	1,326,940 ¹	84,742,620 ¹		13.39	62,748	1,840,150
1938	3	799,564 ¹	57,863,745 ¹	U.V.X. mine & smelter close	10.22	45,541	1,144,652
1939	4	999,023 ¹	75,430,241 ¹		11.20	40,312	1,327,472
1940	6	896,727 ¹	74,459,646 ¹		11.53	24,652	1,144,028
1941	6	1,121,004 ¹	84,484,800 ¹	World War II	12.00	32,047	1,544,317
1942	6	1,242,133 ¹	87,874,000 ¹		12.00	28,429	1,532,108
1943	5	898,699 ¹	68,467,100 ¹		12.00	18,117	1,036,194
1944	5	525,263 ¹	52,429,000 ¹		12.00	8,620	589,538
1945	5	392,295 ¹	40,224,000 ¹		12.00	8,602	475,290
1946	4	350,465 ¹	32,205,600 ¹		14.04	8,132	418,578
1947	3	350,645 ¹	29,205,000 ¹		21.27	6,931	367,778
1948	4	358,491 ¹	29,087,800 ¹		22.32	11,374	408,669
1949	2	410,607 ¹	34,429,800 ¹		19.50	10,790	509,828
1950	2	361,320 ¹	26,581,400 ¹		21.58	9,412	456,254
1951	1	299,729 ¹	19,484,000 ¹		24.50	7,325	408,891
1952	1	155,642 ¹	10,475,722 ²		24.50	4,300	249,015
1953	1	29,164 ²	1,938,803 ²		29.05	1,254	49,058
1954 through		200,000	25,000,000	Big Hole Mining Company operations	2,800	200,000	
1975		35,323,000	3,781,418,000		1,478,000	54,500,000	
Totals		tons	pounds of copper		ounces	ounces	
					gold	silver	

¹ Production Statistics from U.S.G.S. Professional Paper 308, p.101² Production Statistics from other sources





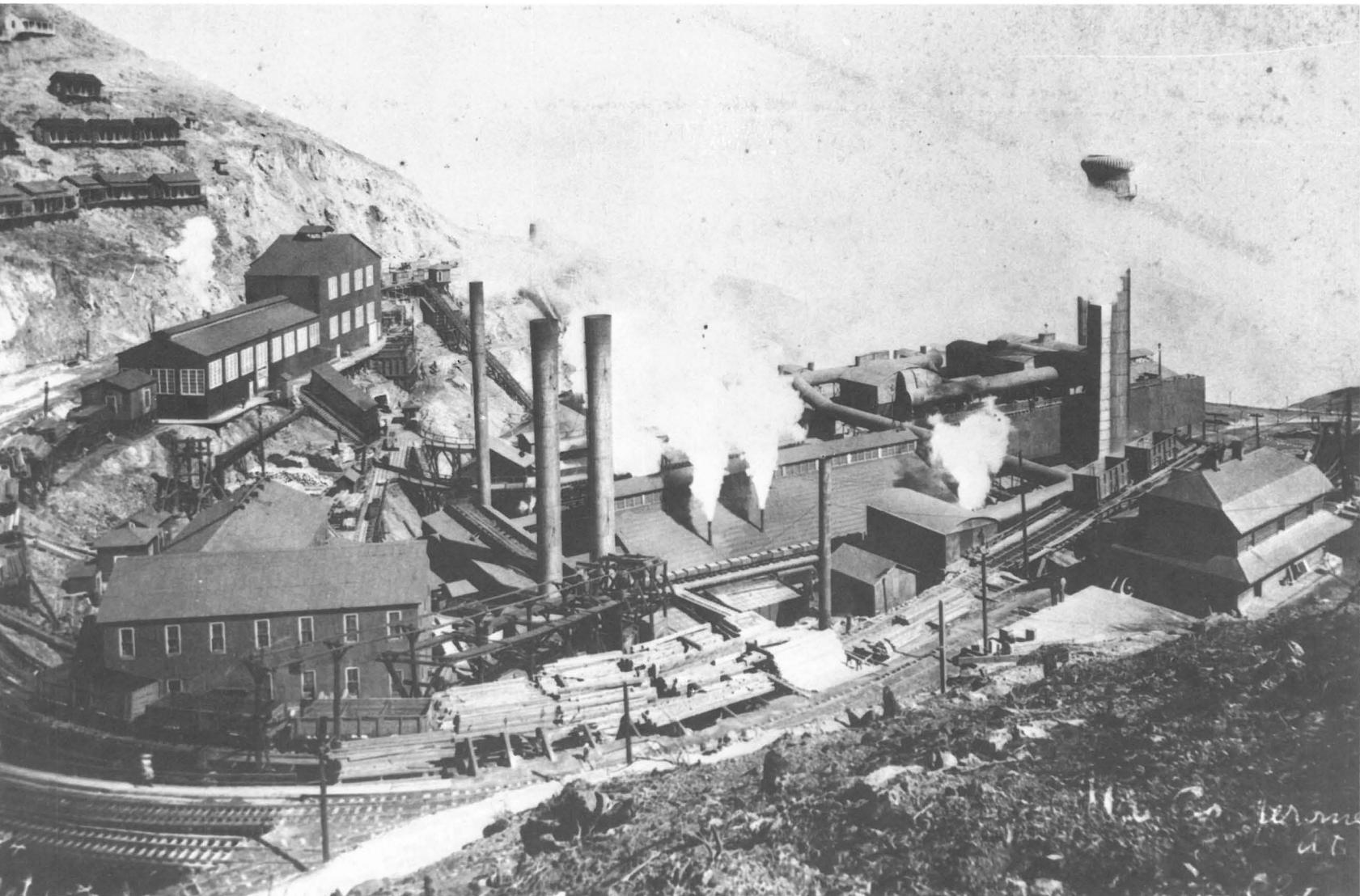
William A. Clark was one of America's "Copper Kings." He developed the United Verde Mine in Jerome beginning in 1888. The town of Clarkdale is named for him. Courtesy of Jerome State Historical Park.



United Verde Copper Company's original smelter, c. 1884. Courtesy of Sharlot Hall Museum.



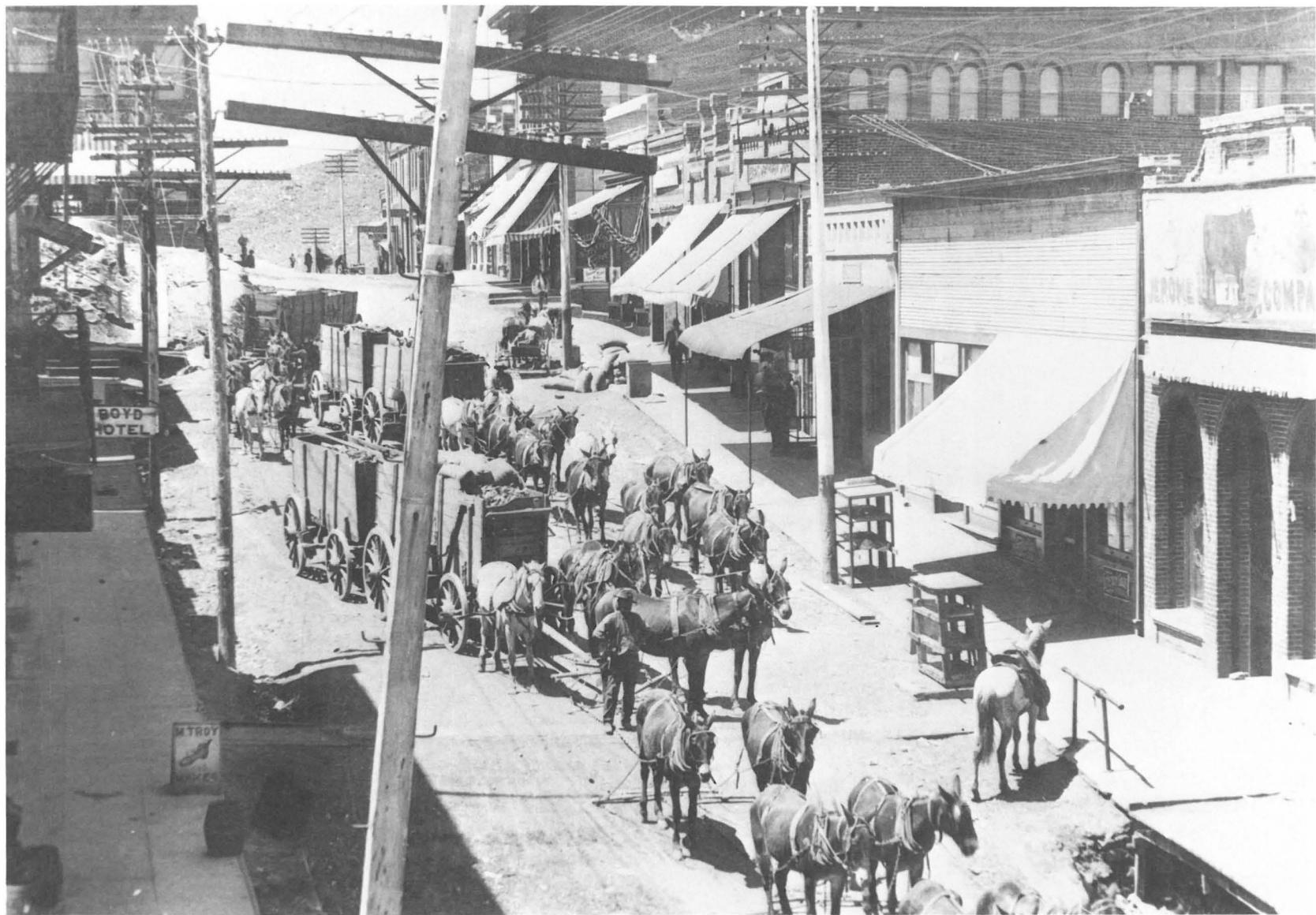
Main part of Jerome business district, 1896. Courtesy of Jerome State Historical Park.



United Verde Smelter, October, 1895. Courtesy of Jerome State Historical Park.



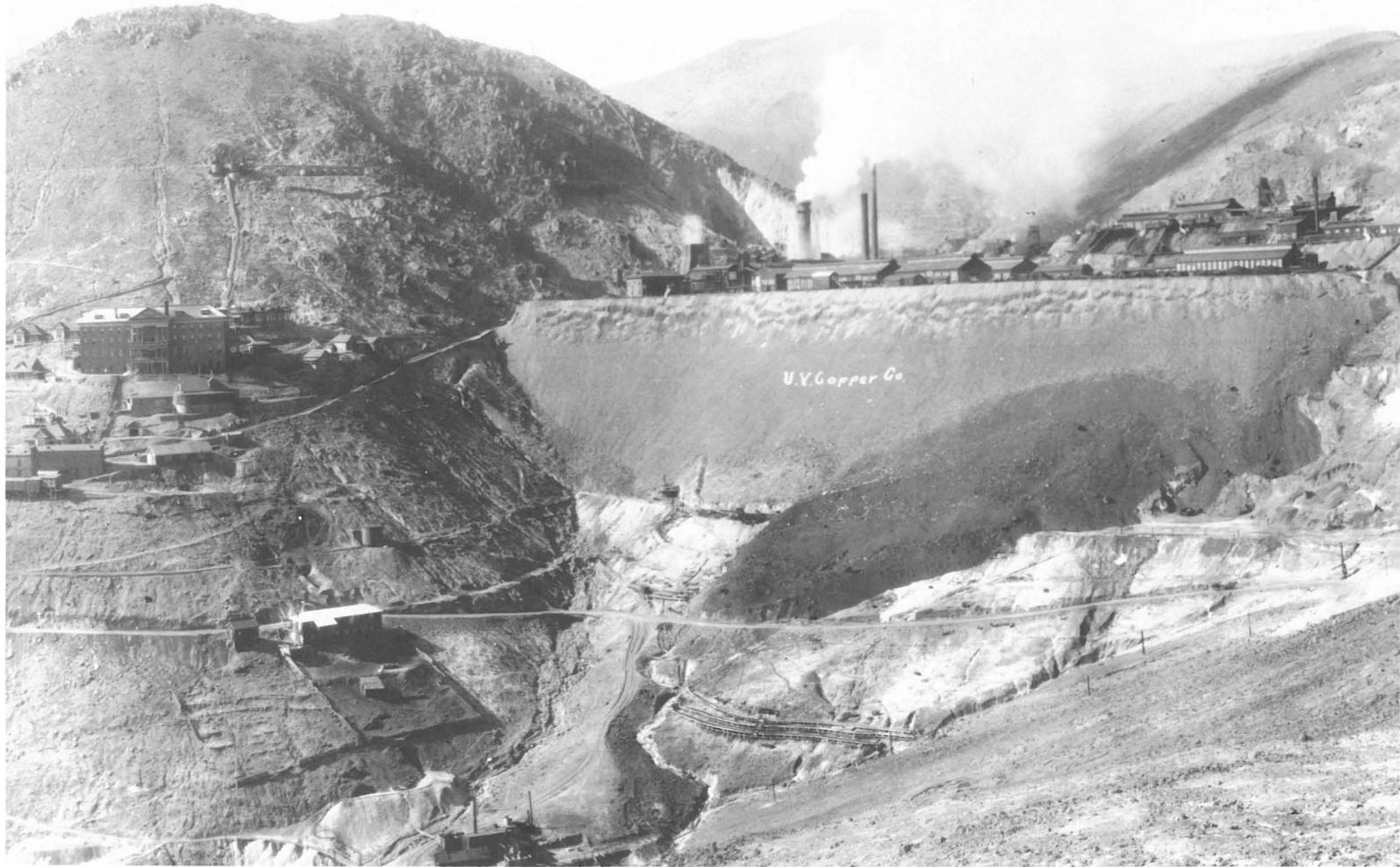
Burros hauling firewood in Jerome, c. 1900. Courtesy of Jerome State Historical Park.



Freight teams on Main Street (looking north), c. 1905. Courtesy of Jerome State Historical Park.



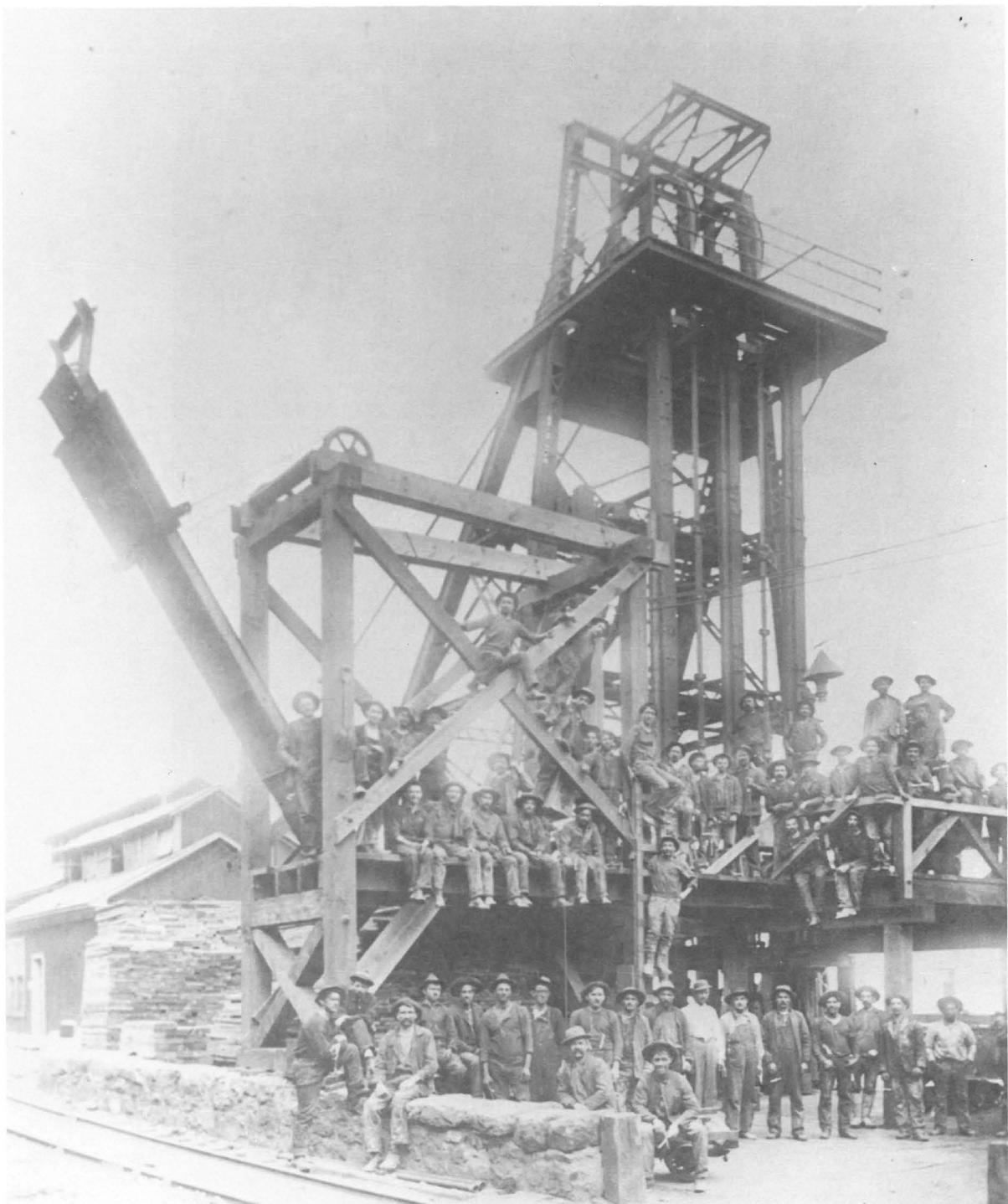
Montana Hotel, 1900. Just after completion. Courtesy of Jerome State Historical Park.



View of Jerome—March 23, 1914. The United Verde Smelter is at the far right; the Montana Hotel, center; the Little Daisy shaft and buildings are at bottom of photo. Courtesy of Jerome State Historical Park.



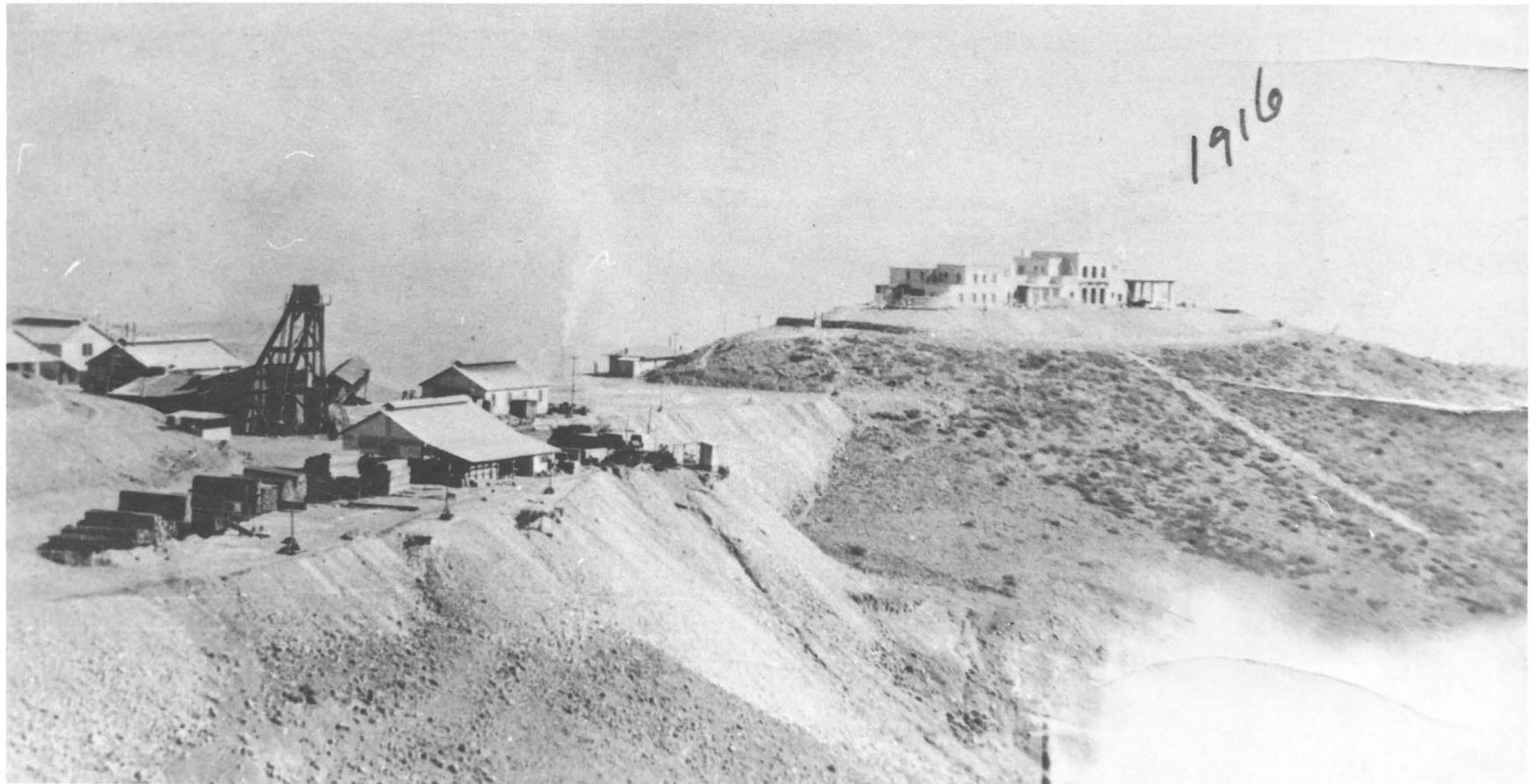
View of Jerome, c. 1914. Looking northwest from lower end of Bitter Creek Gulch. Courtesy of Jerome State Historical Park.



Miners on headframe of United Verde Company No. 3 shaft, c. 1900.
Courtesy of Jerome State Historical Park.



United Verde Extension's Edith shaft, August, 1915. Courtesy of Jerome State Historical Park.



1916

United Verde Extension buildings around Edith shaft and the Douglas mansion—1916. Courtesy of Jerome State Historical Park.



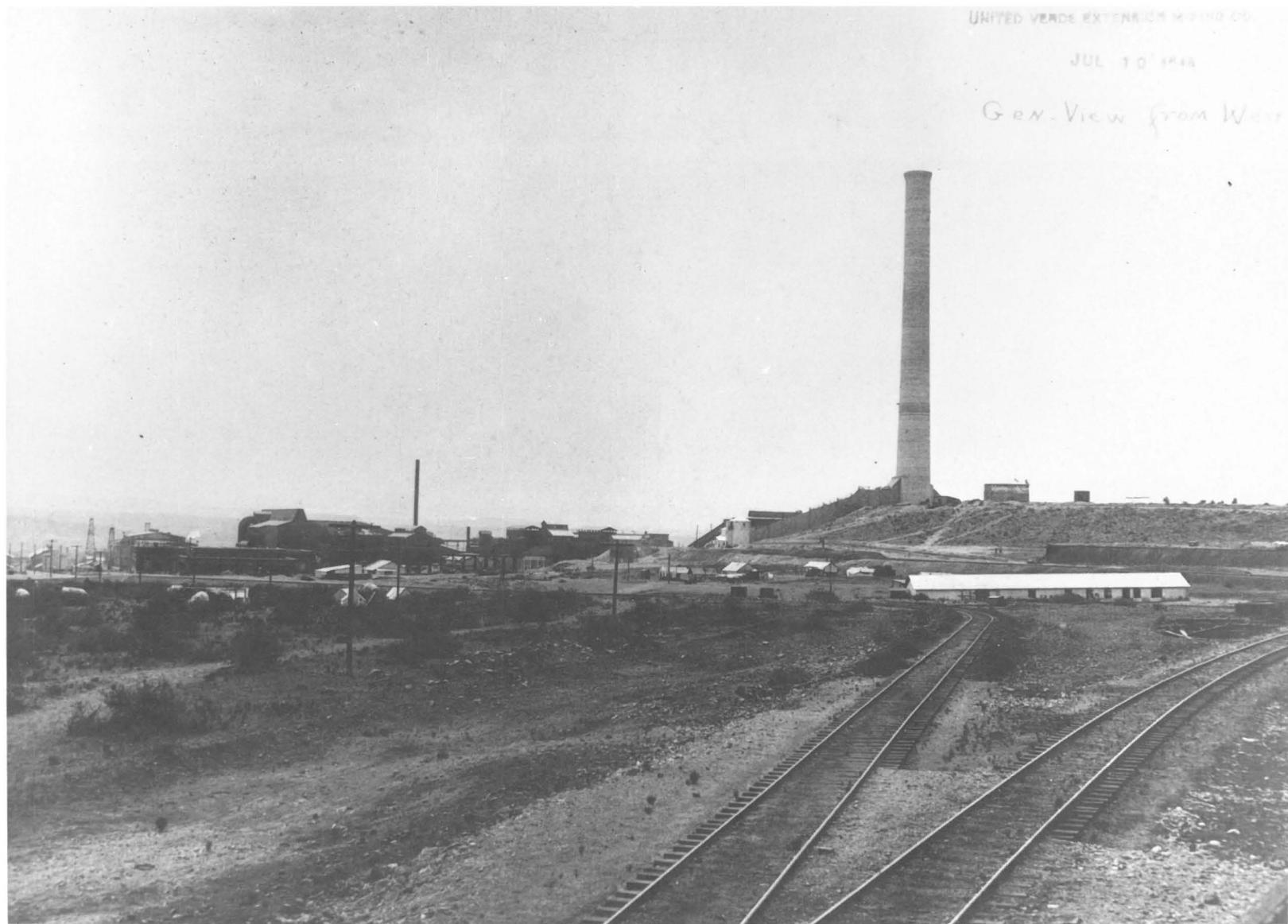
United Verde Extension property, c. 1918. Little Daisy Hotel, far left; U.V.X. Mine with Edith and Audrey shafts, center; Douglas Mansion, far right. Courtesy of Jerome State Historical Park.



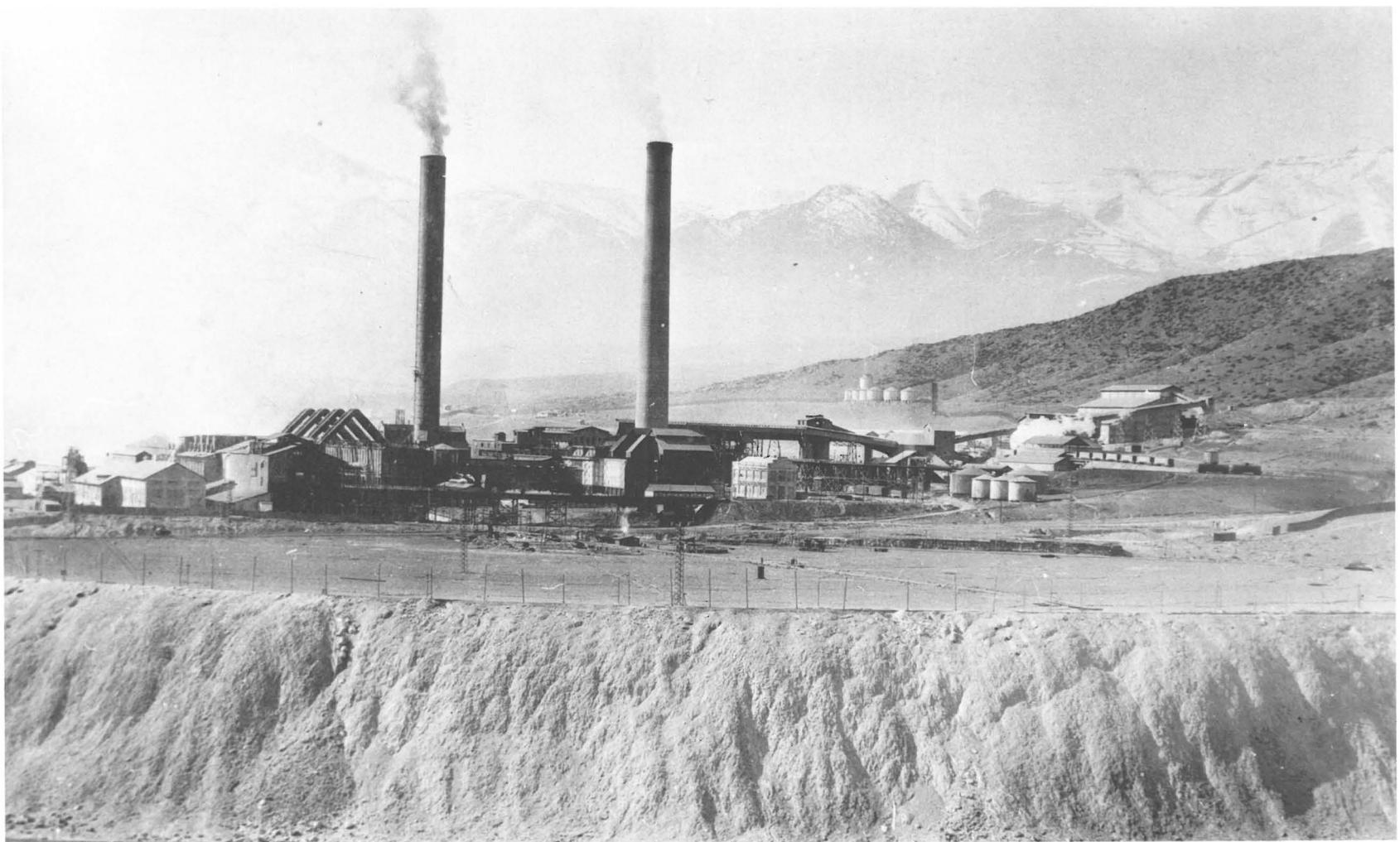
United Verde pit operations; Marion 300 steam shovel, March, 1925. Courtesy of Jerome State Historical Park.



Rock slide in United Verde pit, May 15, 1931. Courtesy of Jerome State Historical Park.



United Verde Extension's Clemenceau Smelter, 1919. Courtesy of Jerome State Historical Park.



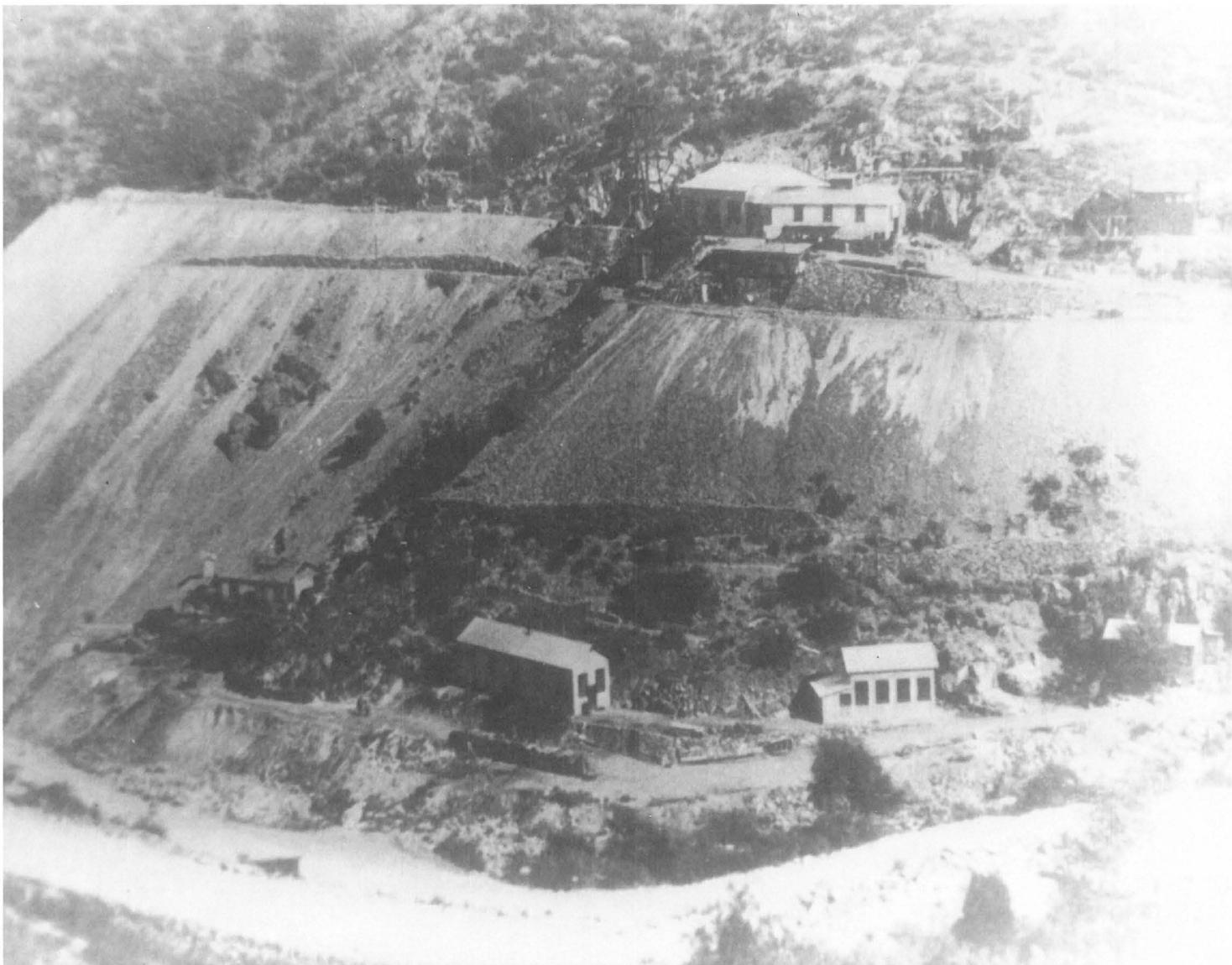
United Verde's Clarkdale Smelter, 1920. Courtesy of Jerome State Historical Park.



Haynes Mine, c. 1918. Courtesy of Jerome State Historical Park.



Arkansas and Arizona Mining Company operations, c. 1914. Courtesy of Jerome State Historical Park.



Verde Central Mine, c. 1920. Courtesy of Jerome State Historical Park.

A news item...

◆ The New Diggins.

January 9, 1889.

O.B. Bloomer, a Tombstone "rustler," has gobbled up eighteen gold claims in the Centennial district. The only bar to his locating several other sections was the Colorado river.

The Gazette extends thanks for a beautiful gold nugget—the first one taken from the gold bonanza. Gold nuggets are mighty handy things to have around a printing office.

Miss Nellie Cashman returned from the new mines yesterday, and is enthusiastic about the place, and declares that the district is one of the richest in the west. Nellie has had considerable experience in mining camps, and is competent to speak. Nellie will return to the mines and erect a boarding house. We hope the good woman will be successful.

The new gold camp has issued an edict that Chinamen will not be permitted to do business in the district. This is a copy of the order in vogue in Bisbee. So "John" had better give the camp a wide berth.—Phenix Gazette.

© Tombstone Nugget Publishing Co.

HISTORY OF MINING IN ARIZONA
VOLUME II

EDITORS
J. MICHAEL CANTY
MICHAEL N. GREELEY

PUBLISHED BY



MINING CLUB OF THE SOUTHWEST FOUNDATION
TUCSON, ARIZONA