

I S L A N D S
IN THE
D E S E R T

A HISTORY OF THE UPLANDS
OF SOUTHEASTERN ARIZONA

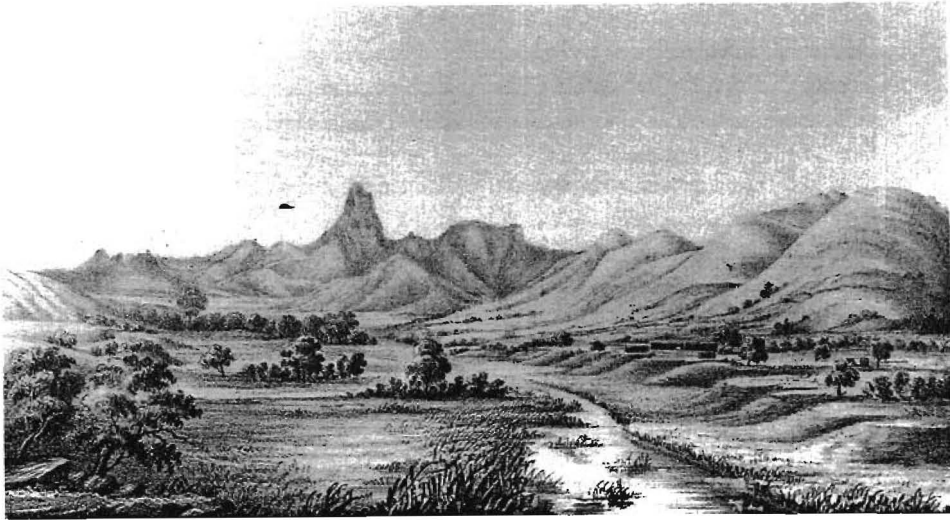
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Arivaca Valley, from a sketch by Charles Schuchard, c. 1857. (Courtesy, Rio Grande Historical Collections, New Mexico State University Library.)

Marqués de Rubí found the La Ciénega silver mine abandoned when he passed there in January of 1767, while “Neither is working being done in the little camp of El Arivaca, which lies a league to the right of the road and another league from La Ciénega, from where its ruins can be seen.”⁶⁹ Only in the nineteenth century were these mines worked again and the valley resettled. In 1893 the older residents, when asked to locate the original Spanish settlement of Arivaca, placed it 1.5 miles northwest of the modern town.⁷⁰

The marqués had mentioned a place called La Longoreña, a league and a half beyond La Ciénega. The royal inspector called Longoreña a rich silver mine. The old Longoreña mining claim, one of an alleged twenty-five silver mines in the Arivaca district, lies in a rocky canyon known as Fragueta Wash, about three miles south of present-day Arivaca. The names and rough locations for some of the other properties have survived, because they were reopened in the late 1850s.⁷¹

How the Spaniards Mined

Spanish mining technologies changed little during the colonial era and were carried over into the early American period. Ore from a mine first had to be crushed. This could be done by hand or, more efficiently, with a *molino*, or stamp mill. Next came grinding in an *arrastra*, which was a circular pit lined on the sides and bottom with flat stones carefully fitted together. One or more heavy stones were attached to a boom set on a revolving post placed in the center of the *arrastra*. Rotating the boom caused the drag-stones to crush the ore that had been placed in the pit, grinding it to a powder.

With the addition of water and mercury to the powder, the *arrastra* became an amalgamator, a small-scale version of the patio process, wherein mercury was used to combine with and extract silver or gold from its finely ground ore.⁷² After retorting or boiling away the mercury, the miner was left with a sponge of precious metal. Captain Anza mentioned that the use of quicksilver was “not established in this province of Sonora,” to everyone’s detriment. Since *arrastras* are a concomitant of the amalgamation process, we could specify when these were introduced into southern Arizona if we knew when mercury was first employed there.⁷³

In northern Sonora the more usual method of extracting silver was to smelt the ore. To accomplish this, the silver-bearing rock had to be reduced to nut-sized chunks, then hand-sorted to select the higher-grade pieces. These in turn were added to a smelting furnace, or *vaso*, together with a quantity of lead or lead ore, plus charcoal as fuel. These crude blast furnaces were largely constructed of adobe and, as with the *arrastras*, built by the miners themselves. A 1910 newspaper article briefly described the little smelters seen near the Tumacácori mission and the Patagonia Mine:

These furnaces were built on a pattern of the Mexican *vasa*, practically a combination of a reverberatory and a shaft furnace, and were adapted to the treatment of comparatively small quantities of high-grade silver ores in mixture with silver-bearing lead ores. The resulting metallic-lead, rich in silver, was cupelled with the formation of lithage [*sic*; litharge] and pure silver. Charcoal was used for fuel.⁷⁴

For the separation of argentiferous lead to take place, the furnace charge might require ores from more than a single mine. Such furnaces were high-maintenance and relatively low-production facilities that burned enormous amounts of fuel. The charcoal for even a modest smelting operation could leave the adjacent landscape denuded of trees. The advantages of these home-built smelting furnaces were simplicity and low cost. Samuel P. Heintzelman,

the president of one mining company in the early territorial period, left a rather biting account of the construction of one such furnace.⁷⁵

Most of the mines in New Spain, including some of those in southern Arizona, were evidently worked out by the earliest operators.⁷⁶ Exhaustion of the mineable ores led to the mines being abandoned or closed. This is probably what happened in the Huachucas. One mining engineer wrote that ". . . the old workings I have run across in Mexico . . . offered very little inducement for exploitation. I have examined many of the old mines and have found that they invariably were abandoned because they had been exhausted, or, to use a modern phrase, did no longer produce pay ores."⁷⁷

Raphael Pumpelly, a young mining engineer in early territorial Arizona, said that the old mines his company sought to reopen had only thin, albeit rich, veins of ore. The silver from these did not meet expenses.⁷⁸ Apaches no doubt caused some mines to be abandoned, perhaps because of the perceived threat more than by actual depredations; aside from an occasional spectacular victory, hostile natives killed relatively few miners or settlers in Pimería Alta.⁷⁹

If the veins were not exhausted, and if unfriendly Indians stayed away, another problem arose when, as often happened, the nature of the ore changed as a mine was developed. Similarly an ore that might be unsuited for reduction by itself could be mixed with other ingredients and successfully smelted.⁸⁰ The company that bought the old mines at Cerro Colorado and Arivaca prior to the Civil War met this problem and sought to resolve it by importing lead ore from other mines.⁸¹ The Spaniards a century earlier would probably have sought out argentiferous copper and galena ores, because these could be easily reduced by smelting.⁸²

The Pima Revolts, 1734–1760

Apaches were not the only natives who harassed the mines, missions, and ranches of early Arizona. After the establishment of three new missions in 1732, the neophytes sometimes became as much a danger as the roving tribes. Father Juan Grazhofer died scarcely a year after coming to Guevavi, almost surely a victim of poison. Father Philipp Segesser succeeded him and also became very sick. In the summer of 1734, the Pima converts at all three of the missions (San Xavier del Bac, Guevavi, and Santa María de Soamca) abruptly took to the hills, after first doing considerable damage to the mission property at San Xavier. The fathers talked the fugitives into returning.⁸³

The spring of 1737 witnessed a more serious disturbance, this one around

the mission of Tecoripa, several hundred miles to the south. Juan Bautista de Anza (senior) quashed this uprising, but fell a victim himself two years later, in an Apache ambush not far from Soamca.⁸⁴ It was his son who grew up to carve out a distinguished career as a frontier officer and eventually to serve as governor of New Mexico for ten years.

Luis Oacpicagigua was a Pima Indian who lived at the mission of Sáric in northwestern Sonora, where he held the rank of native governor and captain general of the Pimas. Luis led the most serious Pima uprising, which broke out on the night of November 20, 1751. This time the Indians murdered two padres and reduced the missions at Sáric and Tubutama to ashes. At least one hundred settlers and peaceful Indians fell in this bloodletting. Fathers Sedelmayr and Nentvig, besieged for two days at Tubutama, finally escaped through the mountains at night.⁸⁵

The Pimas coordinated their assaults and attacked Arivaca the same night they struck Sáric. At Arivaca they massacred the mission foreman and several families, before reducing both the visita and Don Antonio de Rivera's estancia to rubble. Don Antonio had been at Guevavi at the time looking over a gold mine, but when the news arrived, he collected a dozen citizens from the San Luis Valley and set off for Arivaca to bury the dead. Instead they were met by some two hundred Pima warriors and had to fight their way back to Guevavi.⁸⁶

Just months before this uprising, Pimería Alta had received four new Jesuit fathers. Now two of them were dead and the other two fled from their missions, lest they suffer the same fate. The new missionary at San Xavier del Bac escaped even as the rebels burned his temporary chapel, or *capilla*. At Sonoita they torched the house that served as a church. The Tubac natives set fire to their church and the father's house, while at Guevavi the villagers dashed off to join the other apostates, despite their padre's pleadings. The priests from San Xavier and Guevavi joined the stream of refugees that flowed south through the San Luis Valley and up the Santa Cruz River to Santa María de Soamca. Five leagues beyond, they found asylum at the presidio of San Felipe de Terrenate. Meanwhile a band of natives sacked the church at Guevavi; "Unhinging the doors of the Father's house they ransacked it, then began in the church, tearing, throwing down, and abusing the few santos that remained."⁸⁷

Within a week of the outbreak, Don Diego Ortiz Parrilla, Sonora's newly installed governor, gathered what troops he could collect and marched north. Ortiz Parrilla, who "seldom faced danger with a stout heart" according to a modern historian, had evidently won his spurs in the War of Jenkins' Ear.⁸⁸ He was reluctant to wage war against Luis, whom he held in high esteem.

Construction consisted of side-hill cuttings and embankments in the hilly areas, with simple grading and clearing of brush, boulders, and timber elsewhere. The result was a road eighteen feet wide on the straight sections and twenty-five feet wide on the curves. Wells, tanks, and a reservoir were constructed to reduce the length of the waterless stretches. The Leach road was completed just in time for sections of it to be used by John Butterfield's Overland Mail Company. The El Paso and Fort Yuma project nearly dissolved in financial chaos, and Leach himself, an experienced contractor, was indicted later for falsifying vouchers to defraud the government. The outbreak of the Civil War saved him from prosecution.¹³

Stage Lines Across Southern Arizona

The San Antonio and San Diego Mail Line

On June 22, 1857 James E. Birch of the California Stage Company contracted with the Post Office Department to carry the mail between San Antonio, Texas, and San Diego, California, a distance of 1,476 miles. For this he was to receive an annual subsidy of \$149,800. Within days Birch set about organizing the San Antonio and San Diego Mail Line, more popularly known as "The Jackass Mail."

The new express line was required to run on a thirty-day schedule twice a month between its terminal points in Texas and California. The first mails left San Antonio on July 9 and 24, 1857, and arrived in San Diego together on August 31st. Thereafter the dispatches were made bimonthly from both ends. The earliest record of eastbound passenger service dates to the first week of November 1857, while the sixth mail from San Antonio brought four through passengers to San Diego on October 19th. The fare from San Antonio to San Diego was \$200. Provisions for the passengers were erratic, and the firm used a variety of conveyances, including Concord stages, light-covered wagons called ambulances, and a type of light stage with a wood-framed canvas top known as a mud-wagon or celerity wagon.

Birch died at sea very early in the line's operation. Control of the firm passed to George H. Giddings, who already operated a San Antonio-to-Santa Fe stage line, and to Robert Doyle, who had been Birch's chief agent in California. Initially the company maintained regular stations only at San Antonio, El Paso, and San Diego, with a brush hut and corral at Maricopa Wells, Arizona, for a resident agent and cook. Elsewhere they used estab-

lished military posts and civilian towns or ranches as additional stops. The operation was a flexible one, and if traffic warranted, a mail dispatch might consist of two or three coaches or wagons, accompanied by armed escorts riding alongside. Until intermediate stations were added, a herd of mules driven in company with the vehicles allowed teams to be switched with this *caballada* from time to time. The stages carried food for the passengers, and at night everyone stopped and camped. The diary of Phocion Way gives a graphic view of this enterprise in operation.¹⁴

According to Silas St. John, who worked for the San Antonio and San Diego line during its first year, their stages went from Tucson via the San Xavier mission to the north point of the Whetstone range, thence to the San Pedro about seven miles above present-day Benson, and on to Dragoon Springs. East of Dragoon Springs the drivers dodged from water hole to water hole to Apache Pass and from there across the San Simon Valley to Doubtful Canyon.¹⁵

Passengers at the end of their journey were likely to be weary and out of sorts. Phocion Way, tortured by a long ride from San Antonio, instantly labeled Tucson "this God forsaken town." Nor was he any more pleased with the mail company's service: "The mail company do not run their stages farther than here, and those who paid their passage through must ride over a sandy waste on mule back and furnish the mule themselves, or stay here and get the fever and ague. This is a most rascally imposition and the company will very likely have to pay for it."¹⁶

The San Antonio and San Diego Mail Line was the first transcontinental venture in staging. It began in haste, and the proprietors never quite worked out the kinks in their operation. In October of 1858 the postmaster general terminated Gidding's contract for the section between El Paso and Fort Yuma, at the same time increasing the subsidy to \$196,488 a year for a weekly mail run over the two segments between San Antonio and El Paso and from Fort Yuma to San Diego. The line continued to carry passengers across Arizona. In the spring of 1861 an effort to reestablish service over the entire distance met with the spectacular disaster recounted at the end of the next section.¹⁷

The Butterfield Overland Mail

Few ventures were as well-publicized at the time or have captured the public imagination more than the Overland Mail Company, usually called the Butterfield Overland Mail. John Butterfield, one of the founders of the American Express Company, was a successful promoter and the owner of express firms in New York state. On September 16, 1857, Butterfield and his

associates signed a six-year contract with the postmaster general to provide a semiweekly mail service between St. Louis, Missouri, and San Francisco, for \$600,000 per year. They had one year in which to begin operations. The distance as of 1860-61 was some 2,888 miles, almost twice the length of Birch's line.¹⁸

During the year following the award of the contract, the company built 141 stations (and subsequently added about 60 more), purchased a hundred coaches, a thousand horses, five hundred mules, and recruited nearly eight hundred men. The first eastbound stage left San Francisco on September 15, 1858, and the first mail west departed St. Louis on September 16. Trips averaged from twenty-one to twenty-three days, with some requiring only nineteen. Through passengers heading east paid \$100 in gold at San Francisco, while the fare for westbound travelers was \$200. Meals came extra. Letters sent by way of the Overland Mail cost 10¢ per half-ounce.

This well-financed (\$2 million) and well-organized operation established stations at average intervals of eighteen to twenty miles. In 1860 the company advertised this table of distances across southeastern Arizona:

Tucson to Cienega	30 miles
Cienega to San Pedro	25
San Pedro to Dragoon Springs	21
Dragoon Springs to Ewell Station	25
Ewell Station to Apache Pass	15
Apache Pass to San Cimona [Simon]	18
San Cimona to Steen's [Steins] Peak ¹⁹	13

Early in the line's operation, one eastbound traveler observed that "[t]he stations, after leaving Tucson, are large square enclosures, with adobe walls. Rifles, shot-guns, revolvers and muskets, heavily charged, and at convenient places, are the objects that first strike attention, upon entering them; and the four or five men who are in attendance, appear always on the alert against the attacks of Indians."²⁰

Not all of the stations were built of adobe; at Dragoon Springs a postal inspector found a stone enclosure measuring 45 by 55 feet. Silas St. John, head of the construction crew for the Tucson-to-El Paso division, nearly lost his life there when he and six assistants remained to complete the structure, roofing the storeroom and residence portion. At midnight on September 8, 1858, St. John changed the guard, then returned to his room. About 1:00 A.M. he heard a commotion; his three Mexican laborers attacked the other three assistants and killed them, leaving St. John with his arm severed at the elbow and a deep cut in his thigh. For three days there was no help or water, until:

Mr. Archibald, correspondent for the *Memphis Avalanche*, arrived on [the San Antonio and San Diego] mail stage on way from Tucson to Rio Grande. He was left with St. John. Soon after three wagons of the Leach party approached from the east. Col. Leach, Maj. Hutton and some other veterans. They dressed the wounds and started an express for Ft. Buchanan by way of Tucson. They reached the fort on Wednesday following. Dr. B. J. D. Irwin started with escort and reached Dragoon, Friday, the 9th day after St. John was wounded. Arm was amputated at socket. Six days later St. John got into a wagon and rode to the fort.²¹

Newspapers at the time gave the incident wide publicity. Silas St. John's days with the construction crew were over, but he had an active and productive life for another sixty-one years.

"Home" stations on the Butterfield route furnished meals and did necessary maintenance, while the smaller "swing" stations provided a change of teams only. Four and six-mule teams pulled celerity wagons through the mountains. Elsewhere Spanish horses from California, wild but with great endurance, drew the coaches at speeds of up to fourteen miles per hour. The average pace was five miles an hour, with the teams being changed at every station. The stages rolled around the clock.²²

In Arizona the only significant difference between the San Antonio-to-San Diego and the Butterfield routes was the latter's elimination of a stop at San Xavier. For almost two and a half years, both lines crossed Arizona; a Butterfield passenger even commented upon the novel method that the San Diego firm used to collect its mules (sounding a gong) when both stages happened to be at the San Simon station.²³

Officially the Overland Mail Company service ended on March 2, 1861, when Congress authorized the postmaster general to discontinue the southern route and make a new contract to carry the mail over the central route through Denver, Salt Lake City, and Sacramento. Three days later Texas withdrew from the Union. The last mail to the east was made up at Tucson and left there on March 6; the last mail from the east left for San Francisco early in April. Company personnel were still moving stock and equipment to California as late as June of that year.²⁴

In April and May of 1861, George Giddings made an attempt to restore service over the southern route. He had received a contract for his San Antonio and San Diego Mail Line to carry mail once again from San Antonio to California. As he recalled it later, this was part of an elaborate scheme to restore Texas to the Union. The plan fell apart, but until his mail contract was canceled, Giddings made a serious effort to reorganize the Butterfield