

HISTORY OF THE EMPIRE RANCH

by

Gregory Paul Dowell

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HARWOOD PERRY HINTON
Professor of History

Date

PREFACE

Ranching in southern Arizona assumed a measure of permanence in the 1870s. With the slackening of the Apache threat, a number of cattle growers filtered into the valleys south of Tucson to start ranches and supply beef to mining camps and military detachments. Realists in every way, these pioneer ranchers struggled with harsh climate, fluctuating beef prices, and capital shortages. By 1876, Arizona ranching began to appear as less of a speculative venture and more as an industry with a bright future. Into this setting rode an inexperienced young Easterner named Walter

L. Vail, who purchased the "Empire Ranch," a small spread in Cienega Valley, southeast of Tucson, and set about to develop a major livestock operation in the region.

Within a decade, Vail and his partners transformed the Empire into a lucrative stockraising enterprise. Much of the credit for their success was due to Vail's calculated adjustments to changing and often adverse conditions affecting the industry. These developments, occasioned primarily by the coming of the railroad, included the opening of outside markets, overstocking, drought and range deterioration, and the introduction of high grade livestock.

Vail conducted ranch affairs as a farsighted businessman. Believing that the influx of settlers would put an end to the open range, he secured all available acreage in Cienega Valley that controlled water, and thereby controlled the range. When the home markets collapsed in 1886, and drought struck in the early nineties, Vail exploited the new rail link and found markets outside the territory. To increase efficiency and profits, the Empire also began shipping livestock to pastures outside the territory for fattening--a trend that most of Arizona's cattlemen were following by the late 1890s. In these and other activities, Vail's management of the Empire Ranch provided an undistorted picture of capital accumulation, physical growth, and range control in the early cattle business.

Operations at the Empire Ranch were both typical and atypical of other livestock concerns of the period. Regarding ranch finances, the Empire was an anomaly among Arizona cattle ventures. While many outfits were financed by Eastern capital, early investment in the Empire originated with Walter's wealthy California uncle, Nathan R. Vail. While most ranches were limited to a singular source of revenue--- cattle sales---from which to finance expansion, the Empire drew upon substantial mining profits from the Vail-controlled Total Wreck mine to extend its range and improve its herds. Although a number of large ranches are incorporated in the late eighties in the hope of generating additional working capital, few followed the course of extreme diversification that the Empire chose.

The Empire Ranch also differed from other cattle concerns in that owner-manager Walter Vail became actively involved in the legal and financial issues affecting the industry at large. In whatever he did, whether in the legislature or the business world, Vail championed the cause of Arizona's stockraisers. As president of the Livestock Ranchman's Association, he authored livestock regulations to curb cattle rustling as well as halt the spread of infectious diseases. As a legislator, he fostered passage of a fencing ordinance favoring the cattleman. As a Pima County Supervisor, he endorsed measures designed to reduce the county tax burden borne by the stockman. To protest the Southern Pacific Railroad's oppressive freight costs, he organized and drove a herd of cattle to California in 1890. Unlike those ranchers who rarely left their immediate day-to-day ranch operations, Walter Vail was indeed visible and influential, shaping the conditions under which the livestock trade developed.

The history of the Empire Ranch and the story of Walter Vail are one and the same. Imaginative management, innovation in the face of adversity, and bold operations conditioned the Empire for three decades of successful breeding and cattle sales. At its apogee, the Empire was a highly efficient land and cattle company, controlling several hundred thousand acres and running close to forty thousand blooded cattle. At the turn of the century, when the California real estate market posed an opportunity for faster investment growth than the Arizona livestock trade, Vail--the businessman--readily diverted Empire assets into a variety of West Coast enterprises. Corporate revenues underwrote resort developments, racehorse breeding, oil exploration, and Los Angeles real estate investments. Every aspect of Empire Land and Cattle Company operations bore Walter Vail's imprint. Following his death in 1906, and until final sale of the ranch in 1928, Walter Vail's heirs continued the established formulas that had brought the Empire to corporate prominence.

I would like to thank Dr. Harwood P. Hinton for his continuing direction and enthusiasm throughout this thesis. His suggestions on sources, composition, and interpretation have saved me such effort and embarrassment. I am also grateful to Don Powell and the Special Collections staff at The University of Arizona, who logged countless miles between the reading room and the manuscripts vault on my behalf. I am equally indebted to the library staff of the Arizona Historical Society for their tireless efforts in searching out the Empire story. A special thanks is in order to Western historian emeritus Dr. Raymond F. Billington, who graciously allowed me to mine the research treasures of the Henry E. Huntington Library. For their continued courage and suggestions, I wish to thank Gerald Thompson and George Webb. To Garland Rathel, whose example and support sustained me throughout my graduate program, I owe special thanks. My final, most important debt is to Judith Gordon-Hart. Her loving patience, enthusiasm, and support kept me dedicated to this project. Without her the "History of the Empire Ranch" would remain unwritten. It is to her I dedicate this thesis.

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ABSTRACT

Between 1876 and 1906, the Empire Ranch became one of Arizona's largest and most influential livestock operations. Success was largely due to the supervision of its owner-manager, Walter L. Vail, who readily adjusted the range size, breeding patterns, and sales to meet changing needs within the cattle industry. Stretching from the Rincon Mountains, east of Tucson, forty-five miles south to the Huachuca Mountains, the Empire controlled ample watered rangeland on which to build a thriving livestock trade.

In the 1880s, Vail exploited profits from the Total Wreck Mine to underwrite expansion and herd improvement. In 1886, the ranch was incorporated as the Empire Land and Cattle Company, with California entrepreneur Carroll W. Gates buying half-interest in 1889. The Empire management searched out new markets in Kansas City and Los Angeles when the home market collapsed in the mid-eighties. Vail and Gates bought or leased additional grasslands in Texas, Oklahoma, Kansas, and California during drought years of the early nineties. While furthering his own business, Vail argued prominently for cattlemen's interests as a legislator, county supervisor, and president of the Livestock Ranchman's Association

By 1898, the Empire ran nearly forty thousand cattle (mostly Herefords) on their combined ranges. Vail and Gates converted the home ranch fully to "breeder-feeder" operations, with Arizona-bred cattle shipped outside the territory to fatten. Beginning in 1902, they siphoned corporate assets into lucrative real estate, horse raising, and resort investments on the West Coast. For a time, California endeavors profited Vail and Gates more so than the Arizona ranch. Although Walter Vail died in 1906, his heirs operated the Empire Ranch by the same, successful principles Walter had used, until its final sale in 1928.

CHAPTER 1 WALTER VAIL AND THE FOUNDING OF THE EMPIRE

On July 13, 1876, two youthful adventurers stepped off a stage at Tucson, Arizona Territory. Walter Lennox Vail and Herbert R. Hislop had known one another for less than a month. Although they had no experience in livestock, they invested in a small ranch fifty-two miles southeast of Tucson. The novice stockmen quickly turned their energies to building a herd, locating markets for beef, and seeking new acreage with adequate water. At a time when other Pioneer ranchers failed to adapt to marauding Apaches, tight finances, and the harsh climate, Vail and Hislop successfully established the foundations for a great cattle empire.

The grasslands bordering the valleys of southeastern Arizona were well-suited for cattle raising. Heavy stands of grama, sacaton, and salt grasses formed a near-continuous covering along the mesas, draws, and foothills. The region also was covered with a scattered growth of mesquite, palo verde, and prickly pear cactus, all of which served as additional forage during dry seasons.¹

Of the three primary valleys in the area, the Cienega was the smallest and the last to be used for ranching. This valley occupies a broad rolling tract bounded on the north by the Rincon Mountains on the south by the Huachucas, on the east by the Whetstone mountains, and on the west by the Santa Rita range. Cienega Creek ran north through the vast basin, emptying into Pantano Wash at the foot of the Rincons. The land was watered by seasonal rainfall and springs along the base of the Santa Ritas. Scattered natural reservoirs in the foothills trapped additional water after infrequent rains. The valley sloped gently downward from an elevation of 4,500 feet near the Huachucas to 3,200 feet at Pantano Wash. Like the Santa Cruz and San Pedro valleys, to the east and west respectively, the Cienega's stands of perennial and seasonal foliage provided ample year-round forage for the support of livestock.²

Beginning with their earliest explorations, the Spaniards had been impressed with the stock raising potential of this region. Between 1687 to 1710, Eusebio Francisco Kino, a Jesuit missionary explorer, drove herds into the valleys and founded a cattle industry here among the Piman speaking natives. With Mission Dolores as a base of operations, he supplied beef for exploration and missionary outposts as far north as the Gila River. From these seminal herds, a network of thriving rancherías (stock ranches) were established under Kino's supervision at the villages of Quiburi, Tumacacori, San Xavier del Bac, Guebavi, Sonoita, and elsewhere. In 1699, Kino delivered 150 head of cattle from the Dolores herd to the ranchería Sonoita, located near the headwaters of Cienega Creek. In the course of his six trips through the region of the Pimas, Father Kino directed the movement of over six thousand cattle to the patchwork of Jesuit missions and the ranches that supported them. Following Kino's death in 1711 cattle-raising languished.³

¹ J. J. Thornber, The Grazing Ranges of Arizona (Tucson: University of Arizona Agricultural Experiment Station, Bulletin 65, 1910), pp. 265, 268, 270, 275, 334.

² J. J. Wagoner, History of the Cattle Industry in Southern Arizona (Tucson: University of Arizona, 1952), p. 41.

³ Wagoner, Cattle Industry, 10, 24; Herbert Eugene Bolton, Kino's Historical Memoir of the Pimeria Alta (2 vols., Cleveland: The Arthur H. Clark Company, 1919), I, p. 57.

Despite the establishment of military garrisons at Tubac (1752) and Tucson (1776), attempts at stockraising in the southern valleys were unsuccessful until the early 1780s. The resumption of ranching followed vigorous military efforts to control hostile Indians. The relative peace that ensued encouraged a wave of mining, and Spaniards entered the Santa Cruz, Cienega, and San Pedro Valleys to raise beef for the miners. Stock raisers petitioned the crown for vast tracts of land; and by 1785, thousands of hardy Andalusian cattle roamed on these royal grants.⁴

However, several decades of peace and ranching prosperity on the frontier ended during the Mexican drive for independence from Spain, in the 1820s. Apache raiding caused ranchers to abandon their herds and flee to Tucson and Tubac for safety. Despite the danger of attack, several ranchers revived their operations and others started new ventures on Mexican land grants. Prominent among these haciendas were the San Rafael de la Zanja near Tubac, the San Ignacio del Babocomari in Cienega Valley. From 1831 to 1850, however, Apache raiding escalated and ranchers moved away. Abandoned cattle scattered along the valleys and reverted to a wild state. As late as 1846, wild herds roamed in large numbers. In December, the Mormon Battalion, marching from Santa Fe to California, battled several bulls who attacked their wagons in the San Pedro Valley near present-day Charleston.⁵

When the California Gold Rush drew emigrant parties through the Southwest, they found few ranches operating in the southern valleys. Booming prices in California prompted a number of trail drives from Texas, but the drovers passed quickly through Apache country. When the region passed into American hands with the Gadsden Purchase in 1854, only a few Mexican families had cattle, most of which were clustered near Tubac. Ranching picked up in 1857, when the army stationed troops at Fort Buchanan on Sonoita Creek to protect the new mining activity near Tubac. Families located in the Cienega Valley and Santa Cruz Valley to supply beef to the garrison. William C. Wordsworth ran a small ranch seven miles north of Fort Buchanan, carrying on a lucrative trade with the army and nearby mining encampments. In 1859, William S. Grant received the government contract to supply beef to all the troops in Arizona, but the outbreak of the Civil War caused him to go bankrupt.⁶

The Civil War brought temporary ruin to the cattle trade. In 1861 the army withdrew all federal troops from Arizona; and ranchers abandoned the Sonoita, San Pedro and Santa Cruz valleys. However, with the arrival of the California Volunteers, small scale ranching sprung to life in the southern valleys. With the establishment of a garrison at Fort Crittenden (near old Buchanan), operators located on the Sonoita again to supply fresh beef.⁷

⁴ Hubert Howe Bancroft, History of Arizona and New Mexico, 1530-1888 (San Francisco: The History Company, 1889) , p. 382; Richard J. Morrissey, "History of the Cattle Industry in Arizona" (M.A. thesis, University of California, 1941) , p. 12; Rufus Kay Wyllys, Arizona: The History of a Frontier State (Phoenix: Hobson & Herr, 1950) , p. 62.

⁵ Bert Haskett, "Early History of the Cattle Industry," Arizona Historical Review [AHR], VI (October 1935), p. 6; Richard J. Morrissey, "The Early Range Cattle Industry in Arizona," Agricultural History XXIV (July 1950) , p. 151; Wagoner, Cattle Industry, pp. 24-29.

⁶ Richard H. Williams, "History of Livestock in Arizona," Arizona, VI (September 1916), pp. 6, 15; Morrissey, "History of the Cattle Industry," pp. 19, 26, 27; Wagoner, Cattle Industry, p. 31; Gilbert J. Pederson, "A Yankee in Arizona: The Misfortunes of William S. Grant, 1860-1861," Journal of Arizona History [JAH], XVI (Summer 1975) , pp. 127, 132; Constance Wynn Alsthuler, Latest From Arizona: The Hesperian Letters, 1859—1861 (Tucson: Arizona Pioneers Historical Society, 1969), p. 121.

⁷ Haskett, "Cattle Industry," AHR, VI, p.12; Wyllys, Arizona, pp. 149, 158.

After the Civil War, several factors favored the establishment of permanent ranches south of Tucson. Drovers from California and Texas trailed large herds into the region to supply the military. One drover, Thomas Hughes, started his Pennsylvania Ranch in 1869 near Camp Crittenden in the southern extreme of Cienega Valley. Tully & Ochoa located herds south of the Rincons, near Pantano Wash. At the same time, the federal government sought to resolve local Indian problems. By executive order, President Grant on December 14, 1872, created a reservation for the Chiricahua Apaches east of the Dragoon Mountains. This stimulated a large demand for beef. Although small renegade bands continued to prey on settlers, the Apache threat appeared ended. Coupled with these events, the Southern Pacific Railroad began laying track east from Los Angeles in 1874 toward Yuma, intent upon tapping the mineral resources of Arizona. News of the railroad raised the prospect of economic prosperity and induced more settlers to try their hand at ranching in the southern part of tile territory.⁸

Cienega Valley soon showed signs of extensive settlement. L. A. Hardin, of the Tucson cattle firm of Hardin & Martin, located five thousand head at the mouth of the Cienega near the Rincons. A few miles to the south, D. A. Sanford ran a substantial herd of sheep and cattle on his Meadow Valley Ranch. Tucson merchant, E. N. Fish, also maintained a herd on the Cienega, twelve miles north of Camp Crittenden. Since profits seemed assured by the heavy government demand for beef, Arizona's cattle industry drew widespread attention.⁹

Walter L. Vail, an Easterner, was one of many attracted to the burgeoning livestock trade in the Southwest. Born in Liverpool, Nova Scotia, on May 15, 1852, Vail spent most of his childhood on the family's 160-acre farm near Plainfield, New Jersey. At the age of twenty-two, he left home for a more vigorous life on the frontier. In May of 1875, he boarded a train for the booming mining town of Virginia City, Nevada. He carried a letter of introduction to a friend or his father, J. M. Requa, whose brother I. L. was general manager and a large stockholder in the Comstock Mines. The following month, I. L. Requa found Vail a job as timekeeper for the California Mine. However, California bank failures in 1875 restricted the flow of capital into Nevada, which in turn curbed mining investment. Believing his job to be in jeopardy, Walter visited his Uncle Nathan Randolph Vail that fall in Los Angeles to discuss the possibility of a new occupation.¹⁰

Nathan Vail had arrived in southern California in 1875 in search of better health and was interested in real estate and mining ventures throughout the region. He assured his nephew that one of his business contacts might be interested in investing in some speculative enterprise. From favorable reports filtering out of Arizona, Nathan suggested that Waiter look into the emerging ranching picture there. In October of 1875, Nathan introduced his nephew to a man called McCarthy, who expressed an interest in putting money into a ranch. The following month Walter Vail and McCarthy departed by stage for the "new El Dorado."¹¹

⁸ Wagoner, Cattle Industry, pp. 33-34; Harry G. Cramer III, "Tom Jeffords--Indian Agent," JAH, XVII (Autumm 1976), pp. 265-267; David F. Myrick, Railroads of Arizona, Vol. 1: The Southern Roads (Berkeley: Howell-North Books, 1975), p. 16. Construction of Camp Crittenden was authorized on March 4, 1868, to replace the unhealthy and poorly located Fort Buchanan. Constance W. Alsthuler, "The Naming of Camp Crittenden," JAH, VII (Summer 1967), p. 141.

⁹ Tucson Citizen, May 23, August 22, 1974; Wagoner, Cattle Industry, p. 38; Haskett, "Cattle Industry," AHR, VI, pp.25-26; A.P.K. Safford, "Message of the Governor to the Eighth Legislative Assembly," Journals of the Eighth Legislative of the Territory of Arizona (Tucson Office of the Arizona Citizen, 1875) , pp. 37-38.

¹⁰ Edward L. Vail, "Walter L. Vail: A Homebuilder in the West," Box 4, Edward L. Vail Papers [Vail Papers], Arizona Historical Society [AHS] , Tucson; Tucson Citizen, December 13, 1931; Walter Vail to Edward Vail, June 1, September 11, 1875, Box 2, Vail Papers, AHS.

¹¹ Edward L. Vail, "Reminiscences on the Empire Ranch" [Edward Vail Reminiscences], compiled by Mrs. George T. Kitt (1932), Folder 7, Box 1, Vail Papers, AHS. Nathan Vail operated a mercantile firm in New Jersey before moving

Upon reaching Tucson, the territorial capital, Vail found that McCarthy was terrified at the threat of Apaches and would not leave town to inspect prospective ranches. Vail made inquiries on his own. Although they purchased no property, Vail returned to Virginia City impressed with the prospects of a 160-acre ranch in Cienega Valley owned by Fish and Silverberg of Tucson. In a letter to his brother, Edward "Ned" Vail, on November 23, he expressed great optimism over the ranching potential of southern Arizona.

I feel positive from all I hear that there is as fine grass land in this territory as there is in the world. I think myself that it is destined to be one of the richest states in the Union. It will never be a very good farming country but when they get capital enough to work the mines then will be the time when things will pick up and everything will take a start.¹²

Walter Vail returned to Nevada and obtained employment as a carpenter in the Comstock Mine, hoping to raise enough money to buy the ranch. He returned to California in May of 1876, convinced that McCarthy would never do as a partner, and equally certain that he could not earn sufficient funds on his own to buy a ranch. At Walter's request, Nathan arranged for him to meet three prospective partners in Los Angeles. Walter took an immediate liking to one of the three, an Englishman named Herbert R. Hislop.¹³

Hislop was born in 1853 in Brixton Hill, London, and grew up amidst wealth and culture. He had met Nathan Vail in London sometime during 1875 when Vail was supervising construction of London's first streetcar system. Vail described the climate in the Southwest and spoke of a cattle venture in Arizona. Because of his frail health, Hislop decided to investigate ranching possibilities in the Southwest and sailed from England in May of 1876. He travelled by train from New York City to Chicago, where he met Nathan Vail, and together they continued west to California. Soon after meeting Walter Vail, they planned a trip to Arizona.¹⁴

Vail and Hislop left Los Angeles by stage on July 5, 1876, and arrived in Tucson eight days later. They presented a letter of introduction from Nathan Vail to a family friend, Governor Anson P. K. Safford, who advised them about various ranches for sale around Tucson. Vail and Hislop spent a month visiting local ranches, including the Fish and Silverberg holdings Walter had seen the previous year. They narrowed the choice down to three attractive properties: Fish and Silverberg's ranch along Empire Gulch in Cienega Valley, the Rincon Ranch owned by

to England in 1864. There he became interested in promoting tramway systems for Dublin, London, Glasgow, and Liverpool. To persuade the cities to accept his trolley plans, he patented and produced a rail to lie flush with the pavement. An attack of sciatica drove him to southern California in 1875, where he took up permanent residence the following year. He subsequently invested in such varied enterprises as coal, iron, and steel companies, a New York State railroad, a Nova Scotia bank, and an English cigar machine company. John Boyd Weir v. Nathan Randolph Vail, Supreme Court of the State of California, March 24, 1883, pp. 58, 100-106, 140, Supreme Court Records, California State Archives, Sacramento. Inventory and Appraisal, Estate of Nathan Vail, File 7504, First Probate Series, Probate Records, Superior Court, County of Los Angeles.

¹² "Edward Vail Reminiscences," Folder 7, Box 1; Walter Vail to Edward Vail, November 23, 1875, Box 2, Vail Papers, AHS.

¹³ Walter Vail to Edward Vail, January 23, February 9, April 15, 1876, Box 2, Vail Papers, AHS. Walter's wages dropped to \$3.50 per day at the mines.

¹⁴ Edward Vail, "Ranch Reminiscences," manuscript of a speech presented at the Pioneers' Meeting, December 29, 1926, Tucson, Folder 7, Box 1, Vail Papers, AHS; Herbert A. Hislop to Amy Hislop, July 31, 1876, in Bernard A. Fontana (ed.), An Englishman's Arizona: The Ranching Letters of Herbert R. Hislop, 1876-1878 (Tucson: The Overland Press, 1965), p. 13. Fontana provides a wealth of information on Herbert Hislop's family background, based on information from Mrs. John H. Hislop, the widow of Herbert's son.

Joaquin Tellez, and Charley Paige's Happy Valley Ranch on the eastern slope of the Rincon Mountains.¹⁵

On August 22 Vail and Hislop purchased Fish and Silverberg's Empire Ranch and its 612 head of cattle. E. N. Fish, a Tucson hardware merchant and land promoter, and his business partner Simon Silverberg, acquired the 160-acre tract only two months earlier from Fish's brother-in-law, William Wakefield, at a price of \$500. The merchants wanted \$3,800 for the ranch and cattle; but to expedite the sale, they settled on a considerably lower price of \$1,174. Walter Vail asked Nathan for a loan to pay his half of the investment.¹⁶

The Empire lay fifty-two miles southeast of Tucson on the eastern slope of the Santa Rita Mountains. The property overlooked a shallow depression called Empire Gulch, through which a spring-fed rivulet bordered by cottonwoods coursed eastward to Cienega Creek. Included were meadows thickly covered with sacaton and salt grass, a dependable water supply, a thick-walled adobe ranchouse to ward off the harsh Arizona climate, and a large corral with a heavy gate to protect against "Apaches or other horse thieves." Writing to Nathan Vail on July 18, Hislop expressed enthusiasm over the ranch:

I like it very much; it reminds me of Brighton Downs, as it is very much the same sort of country and there seems to be plenty of water about it. The house might be made very comfortable indeed with laying out a little money on it. It is nicely situated on an elevation, *and has a very nice corral.*¹⁷

The origin of the name Empire Ranch remains unclear. Edward Vail claimed that Walter re-named the Fish holdings after their purchase in 1876, claiming "he would make an Empire of it someday." However, in writing to his sister on November 25 of that year, Herbert Hislop stated: "...it was called the Empire Ranch before we bought it and we have not altered the name." Other accounts suggest that either Fish called the quarter-section spread "the Empire" in a promotional flurry to make it more attractive, or that Wakefield named the ranch after the nearby Empire Mountains. Certainly, the evidence weighs against Edward Vail's romanticized version.¹⁸

The ranch house hardly resembled a structure befitting the title "Empire." The four-room adobe building lacked windows and doors, had no furnishings, and was in need of plastering when Vail and Hislop moved in. During their first four months there, they undertook nearly all improvements themselves in order to avoid the high wages demanded by Tucson's carpenters.

They did, however, hire two Indians to plaster the thick adobe walls of the corral and ranchhouse. The sturdy corral enclosed a 100-square foot area and was connected to the rear of the ranch building. An entry way eighteen-feet wide ran between the four rooms of the house

¹⁵ Herbert R. Hislop to Amy Hislop, July 3, September 23, 1876; Herbert P. Hislop to Edith Hislop, August 7, 1876, in Fontana (ed.), An Englishman's Arizona, pp. 17, 27-30, 35.

¹⁶ William Wakefield to Edward N. Fish and Simon Silverberg, June 19, 1876, Real Estate Deeds, Book 2, pp. 502-503, Pima County Recorder's Office, Tucson; E.N. Fish and Simon Silverberg to Walter L. Vail and Herbert R. Hislop [sic], August 22, 1876 (deed), Folder 1, Box 1, Empire Ranch Papers [ERP], Special Collections, University of Arizona Library [UAL]; Herbert R. Hislop to Nathan Vail, July 18, 1876, Box 2, Vail Papers, AHS.

¹⁷ Herbert R. Hislop to Nathan Vail, July 18, 1876, Box 2; Edward Vail, "Empire Story," Folder 7, Box 1, Vail Papers, AHS.

¹⁸ Edward Vail, "Empire Story," Folder 7, Box 1, Vail Papers, AHS; Herbert Hislop to Amy Hislop, November 25, 1876, in Fontana (ed.), An Englishman's Arizona, pp. x, 45; Will C. Barnes, Arizona Place Names (Tucson: University of Arizona, 1935), p. 146.

and provided the only access to the corral. A heavy gate at the end of the corridor secured their horses from Apache thievery. Vail and Hislop well-understood the value of good riding stock to range management, and that recurring losses could mean the difference between success and failure. Consequently, they rounded up their horses nightly and kept them locked in the corral.¹⁹

¹⁹ Herbert Hislop to Amy Hislop, August 7, September 23, October 22, 1876, In Fontana (ed.), An Englishman's Arizona, pp. 28-29, 37-39, 43, 46; Edward Vail, "Empire Story," Folder 7, Box 1; Walter Vail to Edward Vail, March 24, 1877, Box 2, Vail Papers, AHS; Harry B. Heffner to Charles U. Pickrell, typescript interview, June 4, 1960, Special Collections, UAL.

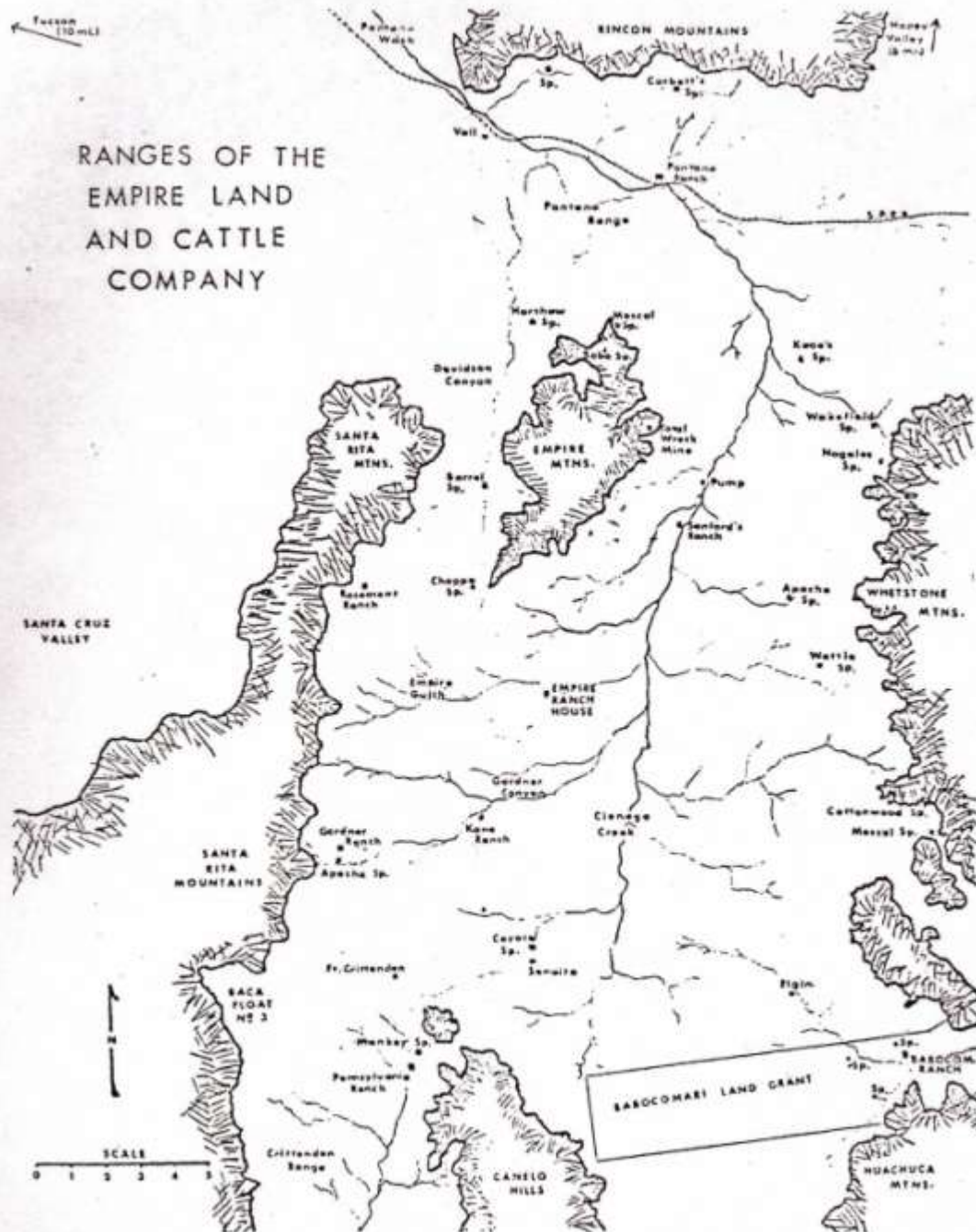


Fig. 1. Ranges of the Empire Land and Cattle Company

The most attractive asset of the ranch was the dependable watercourse through the property. Near the western perimeter of the property, several large springs poured a constant flow of fresh water into Empire Gulch. Wishing to “claim” the pasture and foothills lying back of the stream, Vail and Hislop, like other ranchers, “appropriated” the ranges adjoining their watered tract. Federal livestock agent H. M. Taylor, a contemporary, explained the practice:²⁰

Range cattlemen have generally secured titles to all of the lands controlling the permanent water on their ranges, and as the mesa or highlands which generally predominates outside of water-courses in the arid regions cannot be utilized except by owning of the water...the ownership of the watering places gives the tenure to contiguous ranges.²¹

By controlling the stream flowing through Empire Gulch, Vail and Hislop commanded the use of nearly fifteen hundred acres of rangeland surrounding their 160-acre tract. The availability of permanent water sources determined their selection of the Fish property and became a major consideration in later selections of additional acreage for the Empire.

Vail and Hislop quickly sought to expand their holdings. Although short of money, they realized a successful cattle venture in Arizona could not last unless conducted on a broad scale. The aridity of climate had defeated too many small operations. As Hislop explained on August 7, 1876, to his sister: “... we must do all in our power to get all the land we can as I easily see a stock ranch cannot be carried on in a limited space, but needs any amount of land.”²²

The opportunity to extend the Empire range came in September. Henry Kemp, a neighboring rancher located east of the Empire, became ill and decided to sell his quarter-section ranch and 620 sheep. Vail and Hislop paid the ailing rancher one dollar per head for the flock and \$554 for his rich tract of bottom land near Cienega Creek. They hired a Mexican sheepherder and his wife to tend the flock but were forced to assume the unwelcome chore themselves when the sheepherder became ill two months later. With improvements underway on the ranchhouse, the owners could spare little time on watching sheep. In early November, they hired a twelve-year-old Mexican boy and a Scottish cowhand to supervise the livestock. The boy drew thirty-five cents per day plus food and board for his labors, while the older vaquero earned four times that amount.²³


Vail and Hislop hoped to increase their herd of cattle to about five thousand head. To underwrite expansion and help meet their debts, they took in a third partner in October. Another Englishman, John N. Harvey, had heard about the ranch through Nathan Vail. Nathan Vail had been a friend and one-time business partner of Harvey’s uncle in England. Learning that John Harvey had money to invest, Nathan had encouraged him to visit Tucson and the Empire Ranch, which he did in the early weeks of October. The wealthy Englishman, although inexperienced at ranching, saw strong potential for the small ranching venture and joined the partnership. The firm changed its name to Vail, Hislop, and Harvey. The neighboring cattlemen

²⁰ H. M. Taylor, “Condition of the Cattle Range Industry,” Report, Bureau of the Animal Industry (Washington, 1887), p. 110; Edward Vail, “Empire Story,” Folder 7, Box 1, Vail Papers, AHS.

²¹ H. M. Taylor, “Importance of the Range Industry,” Report, Bureau of the Animal Industry (Washington, 1835), p. 316.

²² Herbert Hislop to Amy Hislop, August 7, 1877, in Fontana (ed.), *Englishman’s Arizona*, p. 61.

²³ Edward Vail, “Empire Story,” Folder 7, Box 1, Vail Papers, AHS; Herbert Hislop to Amy Hislop, September 23, November 25, 1876, in Fontana (ed.), *An Englishman’s Arizona*, pp. 38, 47; Henry M. Kemp to Walter Vail and Herbert Hislop, September 9, 1876 (deed), Folder 1, Box 1, ERP, UAL.

called them the “English Boys’ Outfit.” To keep pace with its new identity, the Empire changed horse brands from “V” to “VH” but kept the familiar “” brand on cattle.²⁴

The Apache was an ever-present threat to their ranching operations. The Chiricahua Apaches, who had been moved to the San Carlos Reservation in June of 1876, became restless and fled south to their old haunts in the Whetstone and Chiricahua Mountains. Roving bands raided ranches throughout the Cienega Valley, escaping to the nearby hills with a prized booty of horses. Ranchers who sought to retrieve their stock often came back empty--handed—or failed to return at all. In the face of increasing raids, several ranchers near the Empire abandoned their holding and moved to Tucson. When Vail and Hislop bought the ranch in August of 1876, they were willing to “shoot the renegades on sight.”²⁵

The Empire’s isolation and its herd of workhorses made it a likely target for attack. The ranch lay a full day’s ride by horseback from Tucson. The only major ranch in the vicinity was Don Sanford’s Stock Valley Ranch, located five miles northeast. Vail and Hislop knew that help would not be forthcoming in the event of a raid. The horses had to be constantly guarded. During the day, the riding stock, which numbered nine saddle horses, twenty brood mares, and twelve colts, grazed in a large fenced-in pasture six hundred feet from the ranch house. At night, they corralled their stock in the adobe enclosure attached to the house. The possibility of a devastating loss of riding stock remained foremost in their thoughts, as Hislop reflected: “How long we shall keep them out of Apaches’ hands I do not know, as I suspect we being the only owners of any number of horses around here, that they will pay us a visit.”²⁶

The Indian activity prompted the military to action. Writing to Edward Vail on January 20, 1876, Walter reported that “this last outbreak has made so much talk that the Government is going to establish a fort 25 miles south of our place, which I hope will put a stop to Indian trouble in this part of the country.” As anticipated, the army established Camp Huachuca on March 3, 1877. However, the camp was too distant to provide protection for the Cienega Valley.²⁷

Vail and his partners refused to be terrorized by the Apaches. They instructed their vaqueros to ride the range well-armed and never alone. Even when renegades were reported in the vicinity, the cattlemen would not curtail ranch activities. As Edward Vail related: “. . . the Indians were supposed to be out, but we never stayed home on that account, as it was necessary to keep working.”²⁸

The youthful cattlemen did not suffer greatly from the Indians. The Apaches struck repeatedly in the vicinity but made off with only two horses of the “VH” brand. In a series of raids between August of 1876 and February of the following year, they stole several herds of livestock and killed three ranchers immediately south of the Empire--but each time skirted the “English

²⁴ Herbert Hislop to Amy Hislop, October 22, 1876, in Fontana (ed.), *An Englishman’s Arizona*, pp. 42-43; Edward Vail, “Empire Story,” Folder 7, Box 1; Walter Vail to Edward Vail, October 24, 1876, Box 2, Vail Papers AHS; Harry L. Heffner to Mary Boice, February 5, 1954, Harry Landon Heffner Papers, UAL.

²⁵ *Tucson Weekly Citizen*, September 25, 1876; Walter Vail to Edward Vail, August 23, 1876, Box 2, Vail Papers, AHS.

²⁶ Walter Vail to Edward Vail, December 3, 1876, Box 2, Vail Papers, AHS; Herbert Hislop to Amy Hislop, November 25, 1876, May 6, 1877, in Fontana (ed.), *An Englishman’s Arizona*, pp. 48, 56-57. The exact date when Don A. Sanford began ranching in Cienega Valley is uncertain. However, newspaper accounts indicate that his ranch predated the Empire. *Tucson Citizen*, June 6, September 1, 1874; January 2, 1875.

²⁷ Walter Vail to Edward Vail, January 20, 1877, Box 2, Vail Papers, AHS; Patricia Louise Lage, “History of Fort Huachuca, 1877-1913” (M. A. thesis, University of Arizona, 1949), p. 1; Wagoner, *Cattle Industry*, p. 34.

²⁸ Edward Vail, “Empire Story,” Folder 7, Box 1, Vail Papers, AHS.

Boys” property. Yet not until Geronimo’s renegades surrendered to General Nelson A. Miles on September 4, 1886, did the owners of the Empire completely relax.²⁹

An opportunity to build the Empire herd came in January of 1877. The three cattlemen, hoping to avoid the expense and trouble of driving herds from distant ranges, had made inquiries about other cattle in southern Arizona. In the latter part of January, they learned that S. S. “Yankee” Miller, foreman for John Chisum’s ranch on the San Pedro River near St. David, had driven a large herd of Durhams, Herefords, and longhorns from New Mexico to the vicinity of Benson. Vail visited Miller at his Benson encampment and purchased 793 cattle at fourteen dollars per head. In the same exchange, Vail disposed of the 620 sheep that the Empire had previously bought from Kemp. The flock had been a constant nuisance; and Vail gladly parted with them, even at a loss of forty cents per head.³⁰

The transaction was not without incident. Before Vail could remove the herd, a band of Chiricahua Apaches silently approached Miller’s compound and crept away with all their horses under cover of darkness. Vail awoke before dawn to discover the loss. Several of the trail crew set out on foot to pursue the thieves south to the Whetstone Mountains but en route dropped the plan for fear the Apaches might outnumber them in their mountain stronghold. They swung back by the Empire and picked up enough horses to enable them to safely drive the cattle from the Chisum range to the Empire. In this incident, the Empire’s closest scrape with Apaches, Vail had been fortunate; he had lost only one horse, none of the cattle, and no one had been hurt.³¹

In the late spring, Vail, Hislop, and Harvey decided to introduce better bred beeves into their herd. In April, Walter Vail rode east with Miller and a Chisum trail outfit to John Chisum’s Long Rail Ranch on the Pecos River in New Mexico. Here, Vail purchased forty Durham bulls from the renowned cattle king but injured his knee before he could start back to Arizona. Leaving the cattle, he went to a cousin’s home in Netawaka, Kansas, and spent five painful months recuperating. In the fall, Vail and several Chisum trailhands drove the blooded bulls through Apache-controlled territory to the Empire Ranch.³²

During Vail’s absence, Hislop and Harvey had had problems with an impetuous sheepherder settling adjacent to the Empire. The neighbor refused to contain his flock on his own range and arrogantly drove them onto Empire land to water. When the sheep crowded along Cienega Creek, cattle were forced to scatter and move away from the water. The situation infuriated Hislop, who warned the trespasser to stay clear of their land or they would stampepe his sheep. The sheepman ignored Hislop’s warnings, and the prospect of range warfare loomed. On February 4, 1878, Hislop told his sister about the dangerous state of affairs:³³

... it seems to me nothing but trouble the whole time, how things are going to turn out time alone will prove. I only hope that no shooting will occur . . . but I do not intend to talk to him again on the subject of his sheep. My partner Vail has just returned ... and is very

²⁹ Ibid.; Walter Vail to Edward Vail, August 23, December 3, 1876; January 20, 1877, Box 2, Vail Papers, AHS; Herbert Hislop to Amy Hislop, February 25, 1877, in Fontana (ed.), *An Englishman’s Arizona*, p.53.

³⁰ Walter Vail to Edward Vail, January 20, 1877, Box 2; “Edward Vail Reminiscences,” Folder 7, Box 1, Vail Papers, AHS; S. S. Miller to Vail, Hislop, and Harvey, February 2, 1877 (bill of sale), Folder 1, Box 1, ERP, UAL.

³¹ Walter Vail to Edward Vail, August 23, 1876, January 20, 1877, Box 2, Vail Papers, AHS.

³² Walter Vail to Edward Vail, March 24, April 23, May 4, May 5, June 7, 1877, Box 2; “Edward Vail Reminiscences,” Folder 7, Box 1, Vail Papers, AHS.

³³ Herbert Hislop to Amy Hislop, May 25, 1877, in Fontana (ed.), *An Englishman’s Arizona*, p. 60.

hostile on the subject. I think it needs an American to talk to another American and he means war to the knife.³⁴

Although the dispute never erupted into conflict, it was a decisive factor in Hislop's decision to give up ranching and return to England. The long hours of tedious work with few comforts had never suited the Englishman's refined tastes. By March of 1878, he became annoyed at Vail and Harvey's reluctance to market livestock and recoup their initial investment costs. The partners wanted to delay sales until their herds had produced several calf crops. The troublesome neighbor only reinforced Hislop's distaste for the entire ranching venture. Vail urged him to reconsider, but Hislop would not be swayed. Walter borrowed \$6,850 from his Aunt Anna, Nathan's wife, and bought Hislop's interest in the ranch. Upon his departure, Hislop announced that he would never return to "this bloody country again."³⁵

Despite their disappointment over Hislop's departure, Vail and Harvey found reason to be pleased with improving conditions at the ranch. Abundant rains throughout 1878 produced a heavy crop of sacaton and salt grass in Cienega Valley. Because of the plentiful feed, Vail and Harvey avoided the heavy expense of buying additional hay to carry their herds, now numbering fifteen hundred head, through the winter. The cattle fattened well under such favorable conditions.³⁶

Within a year of Hislop's departure, Vail and Harvey welcomed a new partner, Walter's older brother Edward. Edward "Ned" Vail had corresponded with Walter since 1876 and shared his brother's belief that the cattle trade would soon be a large and prosperous industry in Arizona. Ned had been brought up on the family farm in New Jersey and then worked seven years in a ship chandler's store in New York City. Like Walter, Ned had no experience in ranching when he arrived at the Empire on May 14, 1879. Walter immediately put him to work on the range, thereby forcing Edward to acquire a cattleman's skill and carry his weight at the ranch.³⁷

In 1879 the Empire began seeking local markets for its beef. The herd was now large enough to draw on for marketing, and the first major cattle sales were made that year. To the southeast, Vail found a ready demand for beef in the Tombstone mining district. The mining community would buy all the beef the Empire could raise, regardless of the quality. Consequently, the partners carried on a lucrative trade in inferior Mexican breeds, most of which were three-or-four-year-olds. Initially, they sold to the Ely & Everhardy slaughterhouse in Tombstone but later switched to Lang & Storm, an even larger concern. Brisk sales enabled Walter Vail to repay a number of promissory notes to his Aunt Anna and make plans for further expansion.³⁸

With an encouraging market, the firm--called Vail, Harvey and Company--steadily expanded its cattle operations. It routinely made local purchases of yearling calves which were fattened on the range for two to three years before selling. In two instances, the firm bought two

³⁴ Herbert Hislop to Amy Hislop, February 4, 1878, in Fontana (ed.), *An Englishman's Arizona*, p. 70.

³⁵ Herbert Hislop to Amy Hislop, December 15, 1877, March 12, 1879, in in Fontana (ed.), *An Englishman's Arizona*, pp. 66—67, 71; Promissory Notes, Walter Vail to Anna Vail, May 27, 1878, Folder 1, Box 1, ERP, UAL; *Tucson Weekly Star*, May 9, 1878; "Edward Vail Reminiscences," Folder 7, Box 1, Vail Papers, AHS. Despite his oath to the contrary, Hislop returned to the Empire fifty-one years later, in March of 1929. Fontana (ed.), *An Englishman's Arizona*, p. xv.

³⁶ *Tucson Weekly Star*, February 28, April 11, 1878; *Tucson Citizen*, October 26, 1878.

³⁷ Edward L. Vail Biographical Sketch, Folder 4, Box 2, Vail Papers, AHS; *Tucson Citizen*, May 16, 1879

³⁸ *Tucson Weekly Citizen*, January 19, 1881; *Tombstone Weekly Epitaph*, December 26, 1881; Edward Vail, "Living With Cattle, 1879 and 1880," Box 5, Vail Papers, AHS.

hundred of yearling calves from Feliz Ruelas for sixteen hundred dollars and two hundred head of mixed Mexican breeds at thirty dollars apiece from Vickery and Hines of Altar Valley, Sonora. By the end of 1879, Empire herds numbered in excess of twenty-two hundred cattle.³⁹

With the Empire settled into a routine operation, Walter Vail turned his attention to other activities. In the fall of 1878, he ran for the Arizona Assembly from Pima County and was elected to the Tenth Territorial Legislature. At twenty-seven years of age, he was the youngest delegate to serve in that body. During his single term Walter introduced two measures which had lasting significance to Arizona. The first proposed the creation of Apache County in the northeastern corner of the Territory, while the other provided for the repeal and replacement of a Pima County fencing ordinance.

As a cattleman, Vail was acutely interested in the latter measure. The fencing of patented grazing land was not only expensive, but it could cut off ranchers from free range privileges on adjacent non-watered tracts. Vail's proposal repealed the old statute and, in effect, severely restricted the spread of agriculture in Pima County by imposing stringent new fencing regulations on farmers. The ordinance required all cultivated land to be enclosed by a legal fence, four and one-half feet in height if made of stone and five and one-half feet if built with rails. The prohibitive cost of lumber and labor in Pima County made it impractical for farmers to enclose their tracts with fences as high as those stipulated by the new ordinance. In an ironical twist, Vail turned the restrictive fencing law in the cattleman's favor.

In three years Walter Vail and his partners laid the foundations for a major ranching operation in southeastern Arizona. They had worked hard, survived harsh frontier conditions, and turned a speculative enterprise into an established and profitable business. Seizing on a booming market in Tombstone, they cautiously expanded their holdings. Despite limited working capital, they parlayed the original 160-acre venture into an efficient operation befitting the name of "Empire." Few Arizona ranches of the late 1870s fared so well.⁴⁰

³⁹ Feliz Ruelas to Vail. Harvey & Company, February 21, 1880 (deed), Folder 3, Box 6; Vickery & Hines to Vail, Harvey & Company, December 3, 1880 (deed), Folder 1, Box 6, ERP, UAL; Tucson Citizen, May 7, 1880.

⁴⁰ Tucson Weekly Citizen, November 21, 1878; Record of the Tenth Territorial Legislature; Assembly, 1879 (Prescott: Office of the Arizona Miner, 1879), pp. 3-4, 113-114. Although Vail and other ranchers were concerned over fencing disputes with farmers, fences never caused the controversy in Arizona that they did to the east and north. By the time the agricultural frontier reached Arizona, stockmen were firmly entrenched on all valuable water claims. Agriculture could not gain sufficient footholds in the arid southern ranges to pose a problem for cattlemen. Clarence W. Gordon et al., "Report on Cattle, Sheep and Swine, Supplementary to Enumeration of Livestock on Farms in 1880," Tenth Census of the United States, 1880, p. 1047.

CHAPTER 2

A NEW SOURCE OF CAPITAL: THE TOTAL WRECK MINE

While Vail and his partners were readying their first cattle for market, a silver discovery was made near the Empire Ranch which vitally affected its destiny. An itinerant prospector named John T. Dillon, in January of 1879, located three mining claims on the boulder-strewn eastern slope of the Empire Mountains. "The whole damned hill is a total wreck," Dillon remarked to co-claimants Walter L. Vail and John A. Harvey. Vail and Harvey liked the description and christened one of the three sites the "Total Wreck." Legal entanglements prevented immediate exploitation of the claim; but when the court re-affirmed their title, the owners incorporated the operation as the Total Wreck Mining and Milling Company. In 1881, Walter and Nathan Vail secured full control of the corporation, sold shares of the company in New York City, and launched a large-scale development at the Total Wreck. Two years later, its production rivaled that of the most prosperous mines in the Territory. However, the depression in silver prices in 1884 crippled the operation, and the Vails closed it three years later when ore yields fell too low for profit. Although the Total Wreck prospered for a brief period, it produced over \$500,000 in revenue which contributed significantly to the expansion and development of the Empire Ranch during the eighties.

The Empire Mountains were not explored extensively during the Spanish and Mexican periods in Arizona. Jesuit and Franciscan missionaries probably used Indians to open shallow trench mines along exposed surface veins, but fear of Apache attacks delayed serious prospecting of the area until the American period of occupation. Following the Gadsden Purchase of 1853 the Santa Rita Mining Company and several small Mexican-owned ventures established camps along the northern foothills of the Santa Ritas, but poor management and Apache raids prevented sustained production. When American troops were withdrawn from the region in 1861, mining in the area came to a standstill.⁴¹

During the late 1860s, higher silver prices and the return of troops stimulated a wave of prospecting in southern Arizona. One of the prospectors attracted by the Arizona "silver rush" was John Dillon. Dillon had worked as a freighter in eastern Colorado but had been drawn into the mines during that state's mining recovery of the late 1860s. He prospected throughout Colorado and western New Mexico and in 1877 migrated to southeastern Arizona along with a fellow miner, William H. Green. During the year Dillon and Green worked as cowhands at Don

⁴¹ Manuel N. Mayuga, "The Geology of the Empire Peak Area, Pima County, Arizona" (M. A. thesis, University of Arizona, 1940), p. 64; Sylvester Mowry, Arizona and Sonora: The Geography, History and Resources of the Silver Region of North America (New York: Harper & Brothers, 1864), pp. 59- 60; Bancroft, History of Arizona and New Mexico, p. 400; Charles H. Dunning and Edward H. Peplow, Jr., Rocks to Riches: The Story of American Mining . . . Past, Present and Future . . . as reflected in the colorful History of Mining in Arizona, The Nation's Greatest Bonanza (Pasadena: Hicks Publishing Corporation, 1966), pp. 45, 53.

Sanford's Ranch in Cienega Valley, six miles north of the Empire; they filed many location notices on promising claims. Employed by Vail and Harvey in 1878, the two men continued to mix prospecting with their daily duties on the range.⁴²

On January 16, 1879, Dillon rode out with Vail and Harvey to inspect the Empire's northern pastures. As they crossed the Empire Mountains, Dillon pointed to several granite and quartz formations that appeared to carry light silver deposits. The three men inspected the formation and posted location notices on three sites, naming them the Khyber, the Justice, and--on Harvey's insistence--the Total Wreck. After they had registered the claims in the Pima County Recorder's Office in Tucson, Vail and Harvey hired two local prospectors, John Madden and Pat Sullivan to do one hundred dollars worth of work on each property in order to maintain the claims.⁴³

Only the Total Wreck claim proved valuable. From August until the following February, Madden and Sullivan widened an opening to about fifteen feet, then sunk a shallow shaft along the incline of the mineral ledge. The first thirty feet revealed only moderate quantities of silver. The ore carried so much iron oxide that Harvey recommended converting the Total Wreck into a paint mine. However, as the workers sunk the shaft deeper, they encountered large concentrations of horn silver, and the true value of the mine became apparent.⁴⁴

Preliminary assays indicated over forty ounces of silver to a ton of ore, but without a cheap means of transport the owners could not market large tonnages at a profit. Vail and his partners faced two options. First, they could build their own mill and reduction plant and ship only the finished silver bars to market. Such development meant a sizeable financial investment. Dillon flatly opposed the idea. On the other hand, they could postpone expansion at the Total Wreck and carry out minimal improvements to raise the property value above the five hundred dollar level required for a federal land patent. The delay would give the owners time to map out a plan of development, secure financial backing, and take advantage of the Southern Pacific Railroad which was building across Arizona and would pass north of the Empire range. As it turned out, they were given little choice on the matter, since legal entanglements over ownership of the Total Wreck claim blocked further development.⁴⁵

⁴² Dunning and Peplow, Rocks to Riches, p. 69; Edward Vail, "The Story of a Mine," p. 1, Folder 7, Box 1; "Jerry Dillon and Green," Folder 3, Box 2, Vail Papers, AHS.

⁴³ Mining Deeds, Book D, pp. 693-695, Pima County Recorder's Office, Tucson. The Khyber claim did not produce, and the Justice vein pinched out after a brief run of rich silver ore. Edward Vail, "Story of a Mine," pp. 1-2, Folder 7, Box 1, Vail Papers, AHS; Certificate of Assay, October 11, 1879, Folder 7, Box 11, ERP, UAL.

⁴⁴ Edward Vail, "Story of a Mine," pp. 2, 7-8, Folder 7, Box 1, Vail Papers, AHS; Benjamin Morgan, "W. B. Horton-Is He A Perjurer?" p. 5, pamphlet (1882), AHS; Walter L. Vail, John A. Harvey and John Dillon V. W. Johnson, C. H. Webber, E. J. Smith, James Vaughn, J. C. Hoskins, J. D. Richmond, B.A. Hoskins, John Stiles, John Doe Mercer, John Doe, John Roe, George Ray, Stephen Ray Richard Fen and James Fen, First District Court of Arizona Territory, Case 373, in Superior Court Records, Pima County.

⁴⁵ Tucson Weekly Citizen, November 13, 1881; Edward Vail, "Story of a Mine," p. 8, Folder 7, Box 1, Vail Papers, AHS. According to the mining act of May 10, 1872, a citizen could purchase mineral-bearing public domain at \$5.00 per acre if the claim was plainly marked, a notice posted at the nearest federal land office, \$500 worth of work was

As news of a silver strike at the Total Wreck spread, Vail, Dillon, and Harvey suddenly faced a rash of lawsuits challenging their ownership. Beginning in 1880, several combinations of prospectors and lawyers petitioned the First District Court, in Tucson, to “quiet claim” in their favor on the Total Wreck property. The underlying motivation appeared to be blackmail: if any doubt existed over the Total Wreck’s legality, the plaintiffs anticipated that ample out-of-court settlements could be reached. It seemed more than mere coincidence that Tucson attorney, Thomas “The Silver Tongued Orator” Fitch, represented each group of plaintiffs, that all of the cases hinged on undocumented claims of “prior location,” and that requests for generous out-of-court settlements characterized each litigation.⁴⁶

The initial legal actions, filed in December of 1880, precipitated rapid changes in both ownership and activity at the Total Wreck. In the course of the litigation, Dillon found that he could not meet his share of the legal expenses. He therefore deeded one-third share in the Total Wreck to their attorney Benjamin Morgan “in consideration of legal services,” and two months later sold another one-third of his share to Nathan Vail’s wife Anna. With Anna Vail as part-owner, Nathan Vail assumed a major role in managing the Total Wreck.⁴⁷

Nathan Vail well-understood the need for investment capital to open the mine. As an outspoken proponent of Arizona mining, he openly admonished California capitalists for their reluctance to support Arizona ventures. In spring of 1881, he put together a plan for expanding and financing the mine. Southern Pacific tracks had reached Pantano, five miles north of the Total Wreck, nearly a year earlier on April 24, 1880. Nathan personally financed construction of a wagon road from the mine to the railhead to assure access to a shipping point. The Vails operated it as a toll-road for freighters, and immediately exploited its value as an alternate income source for the Total Wreck. By November, J. Ingram & Company ran a daily stage service along the route, with stops at Total Wreck, Harshaw Camp, and the Empire ranch house. The steady traffic helped defray much of Vails’ expenditure on the road.⁴⁸

At the same time, Nathan Vail organized the Total Wreck Mining and Milling Company which was incorporated in the State of New York on February 21, 1881. The mine owners exchanged their partnership shares for equivalent shares in the new corporation. Nathan Vail acquired the Dillon and Morgan stock; and by the summer, Harvey sold his share in both the

done on the claim, and no adverse claims were filed against the patent application. United States Statutes at Large XVII, sees. 4-6, p. 91.

⁴⁶ B. A. Hoskins, J. C. Hoskins, J. D. Richmond, James Vaughn, and the ‘Rescued From Total Wreck mining Co.’ v. Walter L. Vail, John A. Harvey, Jerry Dillon and the Total Wreck Mining and Milling Company, First District Court of Arizona Territory, Case 599; James Stewart, B. Salazar and H. C. Huges v. Walter L. Vail, Benjamin Morgan and John W. Moore, First District Court of Arizona Territory, Case 749; The Rescued From Total Wreck Company v. The Total Wreck Mining Company, First District Court of Arizona Territory, Case 598; Walter L. Vail, et al. v. W. Johnson, et al., Case 373, in Superior Court Records, Pima County. Vail, Harvey and Dillon initiated the last of these actions, forcing the defendants to prove their purported ownership, which they could not. Tucson Weekly Citizen, February 5, 1882.

⁴⁷ B. A. Hoskins, et al. v. W. L. Vail, et al., First District Court of Arizona Territory, Case 599, in Superior Court Records, Pima County; J. T. Dillon to Benjamin Morgan, October 28, 1880 (deed), Folder 7, Box 11, ERP, UAL.

⁴⁸ David F. Myrick, Railroads of Arizona, p. 57; Tucson Weekly Citizen, November 13, 1881; Notice of Intent to Build, May 10, 1881, Miscellaneous Deeds, Book 1, p. 634, Pima County Recorder’s Office, Tucson. The Total Wreck toll-road was the shortest route between Benson and Nogales and bore much of the freight business between the two points. Lucienda Cota, tape interview by Brenda Zollar (1977), in private files of Harwood P. Hinton, Tucson; The Los Angeles Commercial, cited in Tucson Star, May 22, 1879.

mine and the Empire Ranch to Walter Vail and moved to New York City. With Nathan and Walter owning all the company stock, they sought to peddle shares in the East. Nathan approached a wealthy friend and mining entrepreneur, James M. Requa of New York City, for assistance. A prominent member of the New York Produce Exchange, Requa persuaded a number of his fellow exchange members to buy nearly half the stock issue. The Vails, however, retained control of a majority of the company stock. With fresh capital, the Vails turned their attention to the pesterous litigation over ownership of the site.⁴⁹

The most bitter confrontations began in August of 1881. Four individuals--B. A. Hoskins, J. C. Hoskins, J. D. Richmond, and James Vaughn--had organized the Rescued From Total Wreck Mining Company to press their case. In characteristic fashion, the plaintiffs claimed that local prospectors, Richmond and Vaughn, had located and marked a mining claim on the Total Wreck property in November of 1878, and that three months later the Vail interests had obliterated their markings and moved the location notice to an adjacent site. The plaintiffs testified that a number of unavoidable delays prevented them from filing their claim in Tucson until February of 1879, by which time Vail, Harvey, and Dillon had removed the markers and filed on the Total Wreck.

Concurrently, the same plaintiffs pressed a second suit against the recently formed Total Wreck Mining and Milling Company, using the collective identity of the Rescued From Total Wreck Mining Company throughout the case. The plaintiffs petitioned the court for full title to the Total Wreck, possession of all improvements on the property, and an injunction to stop mining by the pretended owners." Under cross-examination by Benjamin Morgan, the Vails' lawyer, the plaintiffs quickly revealed inconsistencies in their testimony. Both parties traded sharp invectives from the stand, with repeated accusations of "fraud, wanton deception, conspiracy, and perjury." With their testimony discredited and no hope of an out-of-court settlement, the plaintiffs withdrew charges in both cases in December of 1881.⁵⁰

With an apparent end to legal disputes, the Vails pushed development at the mine. They believed they could cut expenses and increase production by operating their own mill at the site. If the plan was to succeed, an honest assayer and superintendent was sorely needed. Nathan requested his 31-year-old nephew, Edward Vail, to leave his job as a cowhand on the Empire and assume the position. Edward's early interest in mining and assaying made him the logical choice. During his youth, he had worked in a New York City shop adjacent to Thomas B. Stillman's Wall Street assay office. He spent nearly all his spare time in Stillman's laboratory, helping pulverize and sort ore samples. With his fascination for assay work, Edward eagerly accepted Nathan's suggestion. As he later recalled: "My uncle, N. R. Vail, found I was the only

⁴⁹ Articles of Incorporation, The Total Wreck Mining and Milling Company, Retired Corporation Files, Office of the Secretary of State, Albany, New York, obtained courtesy of Mario A. Mamone to Gregory Dowell, April 7, 1977; Walter L. Vail, Charles Silent, and John Vail to the Total Wreck Mining and Milling Company, December 27, 1882, Real Estate Deeds, Book 12, p. 224, Pima County Recorder's Office, Tucson; Tucson Citizen, February 5, 1882.

⁵⁰ B. A. Hoskins, et al. v. W. L. Vail, et al. ; The Rescued From Total Wreck Company v. The Total Wreck Mining Company , First District Court of Arizona Territory, in Superior Court Records, Pima County; Tucson Weekly Star, August 11, 1881.

one in the family who was interested in mining, so he said to me, 'I want you to learn assaying. We want someone we can trust in the assay office.' That suited me all right."⁵¹

Nathan Vail referred his nephew to Sy White, superintendent of the Contention Mine at Tombstone. White sent Edward to the mine's chief assayer, Robert Wade, who put him and two other young men to work in his office. For several months, Edward had only menial responsibilities. Wade felt practical experience far outweighed "book-learned assaying," and assigned Edward to routine tasks of sorting and reducing ore samples. Later, he taught Edward the more technical chemical aspects of the trade. After six months of training, Wade dismissed Edward, saying: "You can do anything we are doing here and you might as well save your hotel bill."⁵²

Meanwhile, Nathan and Walter Vail had pushed the main shaft at the Total Wreck into richer ore deposits at lower levels of the mine. The shaft now ran 330 feet into the mountain, with three levels opening underground. Workmen hauled out fifty tons of ore per day and by February of 1882, three thousand tons of ore had accumulated on the dump. In a mining report on February 26, the Tucson Arizona Weekly Citizen stated that "there is no room to doubt that the Total Wreck Mine is second only to the bonanza mines in Tombstone and bids fair to rank with the best of them when developed to the same extent."⁵³

With Edward's return, the Vails hurried construction on the mine. They started foundations for a crushing mill and hoist works and ran a 600-foot tramway from the mine to the millsite. In March of 1882, workmen installed a massive thirty horsepower steam hoist above the main shaft and began operating a one-ton ore car between the surface and underground levels. Increased activity at the mine attracted prospective workers, who in turn provided the Vails with an opportunity to speculate in lots at the bustling camp. Edward Vail laid out a platted townsite south of the mine and supervised an active trade in town lots. Commenting on this development, the Tucson Citizen noted: "The surface ground is proving a bonanza whether one ever found below or not."⁵⁴

As growing activity at the Total Wreck attracted widespread attention, the Vails once again faced a challenge to their ownership of the site. In May of 1882, the Star Lode and Company, owned by prospector James Stewart, B. Salazar, and H. C. Hughes petitioned the district court to recognize their priority of claim at the Total Wreck site. Again, Thomas Fitch served as attorney for the plaintiffs. Despite their success in earlier litigation, Nathan Vail now opted for an out-of-court settlement. The Total Wreck Company's investment in the mine had been substantial, and he did not want to risk losing the property and expensive improvements. Rather than jeopardize stockholder investments, Nathan bitterly agreed to the legal blackmail.

⁵¹ Edward Vail, "Story of a Mine," pp. 8-9, Folder 7, Box 1, Vail Papers, AHS; Tucson Star, November 11, 1930; October 16, 1936

⁵² Edward Vail, "Story of a Mine," pp. 9-11, Folder 7, Box 1, Vail Papers, ABS.

⁵³ Engineering and Mining Journal (New York), February 18, 1882, p. 90; Tucson Weekly Citizen, February 26, 1882.

⁵⁴ James Brand Tenney, "History of Mining in Arizona," ms., p. 268, UAL; Edward Vail, "Story of a Mine," p. 8, Folder 7, Box 1, Vail Collection, AHS; Tucson Weekly Citizen, May 21, 1882. Edward Vail plotted seventy-one town lots in a gridwork on his Manhattan claimsite, three hundred yards southeast of the main shaft. Total Wreck City Map, n.d., Map Collection, AHS.

Upon payment of an undisclosed sum, the Star Lode and Company dropped charges which cleared the way for final patent approval on the site.⁵⁵

Although the Vails increased production at the mine, little could be done with the ore until completion of the mill, which lagged behind schedule. Unexpected delays hampered its construction. The major setback involved the Vails' difficulty in securing an abundant water supply for milling operations. A Pennsylvania-based mining company held the lease to a spring one mile east of the Total Wreck and resisted the Vails' efforts to buy their property. In October of 1882, Nathan sent Edward Vail to Oil City, Pennsylvania, to negotiate for the leasehold—but quickly called him back. Walter and Nathan Vail had turned to an alternate scheme that would benefit both the Total Wreck and the Empire Ranch.⁵⁶

On November 10, Walter Vail purchased the nearby Meadow Valley Ranch from Don A. Sanford for eighty thousand dollars. The purchase extended the Empire's cattle range five miles farther north along Cienega Creek and doubled the size of the ranch. They installed a powerful forty horsepower pump on Cienega Creek, two miles southeast of the Total Wreck and ran a six-inch iron pipeline from the pump to an elevated area east of the mining camp. Here, the company erected two fifty thousand gallon redwood tanks, which furnished ample water for both the mill and the camp.⁵⁷

As the water system neared completion, the mining camp enjoyed a boom. The company extended a tunnel from the 200-foot level to the surface on the side of the hill nearest the mill. Workers sunk the main shaft to 350 feet and started on three new levels in the mine. Aboveground, Edward Vail directed construction of a two-room assay office adjacent to the mill. The company laid several hundred feet of track from the new mine opening to the mill, and on it placed a mule-drawn five-ton ore car. Population at the mining camp swelled to over three hundred residents in anticipation of new jobs.⁵⁸

When the Total Wreck mill began full operation on February 14, 1883, local papers heralded it as "second to none on the Pacific Coast." Equipped with twenty 950-pound stamps and fourteen amalgamation pans, the mill could process between sixty-five and seventy tons of ore per day. Within a month the Total Wreck's production equalled that of the major mining camps in Arizona Territory. Its first ore shipment to New York, on March 19, included seven 150- pound silver bars, ninety degrees fine and valued at a total of twenty thousand dollars. Enthusiastic newspapermen predicted an eventual production of three million dollars, and professional mining journals for the first time devoted regular coverage to Total Wreck

⁵⁵ James Stewart, et al. v. V. L. Vail, et al., First District Court of Arizona Territory, in Superior Court Records, Pima County; Edward Vail, "Story of a Mine," p. 14, Folder 7, Box 1, Vail Papers, AHS.

⁵⁶ Edward Vail, "Story of a Mine," pp. 8-9, Folder 7, Box 1, Vail Papers, AHS; Mining and Scientific Press (San Francisco), October 14, 1882, p. 245; Tucson Weekly Citizen, May 21, 1882. Prior to completion of the pipeline from Cienega Creek, all of Total Wreck Camp's water needs were served by a mule-drawn tank wagon, driven by Edward Vail's boyhood friend Philip Moore. Edward Vail, "Story of a Mine," p. 13, Folder 7, Box 1, Vail Papers, AHS.

⁵⁷ Tombstone Weekly Epitaph, November 13, 1882; Tucson Weekly Citizen, November 13, 1882; Edward Vail, "Story of a Mine," pp. 8—3, Folder 7, Box 1, Vail Papers, AHS.

⁵⁸ Mining and Scientific Press, April 28, 1883, p. 300; Tucson Weekly Citizen, May 21, 1882; February 18, 1883; Edward Vail "Story of a Mine," p. 8, Folder 7, Box 1, Vail Papers, AHS.

activities.⁵⁹

In part, the Total Wreck's success stemmed from Nathan Vail's willingness to innovate. In early March, a California millwright named Mahlon P. Boss persuaded him to test a new milling process he had devised. He assured Vail that the process could cut labor costs and increase overall efficiency, but he needed a chance to test the invention. Vail agreed with some reluctance to give the Boss process a trial run. Claims to "revolutionary new processes" were common in Western mining camps, and few ever lived up to expectations. The seasoned capitalist gambled that Boss' calculations were correct.

With minor alterations, the Vails converted half of the mill operation to the "Boss Continuous Process." By the old process, called the "tank system" crushed ore ran from the stamps into a number of large wooden tanks. Here, workers shoveled the ore pulp into shallow troughs, then dumped it into settling tanks to complete the amalgamation process. By the Boss system, a continuous stream of finely crushed ore passed from the stamps through a long series of mercury-filled sluices and eventually dumped into deep settling pans to complete amalgamation. To compare their efficiency, mill manager W. H. Armstrong operated both systems at full capacity over a test period of forty-four days.⁶⁰

The Boss system outperformed the tank process in almost every respect. Most of the dirt that filled the air in the old system disappeared, along with the tank shovelers who caused it. The continuous process decreased the number of panmen and carmen needed for milling and reduced quicksilver loss by over ten percent. Mill productivity improved, with average assay yields increasing from 84.12 percent to 86.35 percent. In his report on the test, Armstrong stated with enthusiasm:

The large saving in labor and fuel, the cleanliness, the reduced wear and tear because of the steadiness of the load, together with a great many other favorable points, should make the 'continuous' system of pan amalgamation a favorite one for the millman and mill owner.⁶¹

Clearly, Nathan Vail's gamble had been worthwhile.

Following full conversion to the Boss process, the Vails operated the Total Wreck mill without interruption twenty-four hours per day. With production costs stable at six dollars per ton, company profits ranged from \$3,900 to \$4,100 each day. To reduce labor costs, the Vails employed a large number of Mexican workers both in the mine and the mill. The tremendous rate of production between March and early May encouraged the company to declare a dividend

⁵⁹ Engineering and Mining Journal, August 18, 1883, p 94, Tombstone Weekly Epitaph, September 9, 1882, Mining and Scientific Press, April 28, 1883, p. 300; Edward Vail, "Story of a Mine," p. 10, Folder 7, Box 1, Vail Papers, AHS. The only mine to show production in excess of the Total Wreck was the Contention Mine near Tombstone.

⁶⁰ Edward Vail, "Story of a Mine" p. 10, Folder 7, Box 1, Vail Papers, AHS; Engineering and Mining Journal, August 18, 1883, p. 94.

⁶¹ Richard P. Rothwell (ed.), Engineering and Mining Journal: Statistical Supplement (New York: The Scientific Publishing Company, 1895), p. 352; Engineering and Mining Journal, August 18, 1883, p. 94.

of fifty thousand dollars on May 10, over half of which went to the Vails.⁶²

Success at the mine turned Total Wreck Camp into a thriving business and social center for the Empire District. Throughout 1883, the camp boasted over fifty houses, three hotels, a brewery, four saloon, and several Chinese laundries. Walter Vail supplied his brother Edward's butcher shop with beef from the Empire Ranch and operated the bank, lumber yard and a large bunkhouse in the three hundred resident mining town. Liquor and excitement drew miners from throughout the district to Total Wreck Camp. As Edward Vail later recalled:⁶³

The Total Wreck was a good little camp, notwithstanding its name, and a very healthy one. [There were] quite a number of prospectors in the Empire District, who had located mining claims and did their trading and drinking and gambling there. All towns were wide open at that time, but it was an orderly camp, and to my knowledge no one was ever killed in a gunfight there, although there were several narrow escapes from such tragedies.⁶⁴

The prosperity at Total Wreck Camp came to an abrupt halt in early June of 1883. Rumors were that the silver vein had pinched out--and in most respects the rumors were correct. Although silver precipitates were at in abundance, large deposits of horn silver characteristic of the mine's earlier production were no longer in evidence. The mine still yielded over sixty thousand dollar worth of bullion during the month of June, but a long shadow fell over its future. Nathan and Walter Vails' repeated assurances failed to calm the fears of their New York stockholders who scrambled to divest themselves of their "worthless" stock. In two weeks, the value of Total Wreck shares plummeted from ten dollars to one dollar.⁶⁵

Nathan, Walter, and their New York friend James Requia took advantage at the sudden availability of a large block of depreciated shares. By August, the Vails had bought up almost the entire stock issue of the Total Wreck Mining and Milling Company, with minor interest held by Requia. Thus, the company again became a private, closed corporation. The two years that Total Wreck stock had been on the public market had been fruitful. New York investors had received substantial dividends, and the stock issue had generated enough capital for the Vails to expand and purchase expensive equipment, initiate large scale production, and exploit the mine's potential wealth.⁶⁶

⁶² Patrick Hamilton, The Resources of Arizona: Its Mineral, Farming, Grazing and Timber Lands; Its History, Climate, Productions, Civil and Military Government, Pre Historic Ruins, Early Missionaries, Indian Tribes, Pioneer Days, Etc., Etc., (3rd ed., San Francisco: A. L. Bancroft & Co., 1884), p. 232; Tucson Weekly Citizen, May 12, 1883.

⁶³ Tucson Star, June 17, 1883; Picture 44538, Total Wreck Folder, Pima County Mines, Photograph File, AHS; Edward Vail, "Story of a Mine," p. 12, Folder 7, Box 1, Vail Papers, AHS.

⁶⁴ Edward Vail, "Story of a Mine," p. 12, Folder 7, Box 1, Vail Papers, AHS.

⁶⁵ Tucson Weekly Citizen, June 16, July 6, 1883; W. B. Benson to Thomas Cordis, June 30, 1883, Folder 6, Thomas Cordis Collection, AHS.

⁶⁶ Tucson Weekly Citizen, June 16, 1883. Shortly after the purchase of the New York stock, Nathan Vail sold a small portion of his interest in the Total Wreck to a prominent Los Angeles investor, Colonel Thomas Godfrey. Tucson Weekly Citizen, September 15, 1883.

In the first week of August of 1883, the Vails halted work to assess conditions at the mine. Expectations ran high that full operations soon would be resumed. On September 15, Nathan Vail ordered workers back into the mine. However, operations halted again two months later. In late December, the company sent an exploratory crew to examine the lower levels for richer ore. After three weeks of unrewarding effort, the crew uncovered a rich vein of ore carrying large concentrations of horn silver at the 325-foot level. Once again, the Total Wreck lurched into operation. Activity at the mine quickly resumed the feverish pace of the previous year. The company maintained twenty-seven workers below the surface and another ninety laborers above. The mill churned away day and night. Profits again accumulated at a staggering rate for the small group of stockholders.⁶⁷

To Walter Vail, in the midst of herd improvement and major expansion at the Empire Ranch, the lucrative mineral production carried special significance. Mining profits enabled him to keep pace with the recent trend in Arizona's cattle industry toward bigger holdings and higher grade livestock. Indeed, these profits not only expanded Walter's revenues, but they provided his major financier for ranch development--Nathan Vail--with a greater reserve of funds to lend the Empire. For the Empire Ranch, the eventual production of over \$500,000 worth of bullion at the Total Wreck proved to be of major importance. While the problem of capital formation held most of Arizona's cattlemen in check during the early eighties, mineral profits offered enough financial flexibility for Vail to underwrite continuing expansion on the Empire.⁶⁸

Prosperity at Total Wreck Camp lasted until the end of 1884. Windfall profits declined by fall, as the first stages of a twenty-year depression in silver prices began. Prices tumbled from \$1.14 per ounce in 1882 to \$1.06 per ounce in 1885, and by May of the following year silver commanded only \$.98 per ounce on the New York market. Prices plummeted at a dizzying rate as fear mounted over the possible demonetization of silver. The Total Wreck responded with drastic labor cutbacks and a redoubled effort to find additional ore pockets.⁶⁹

The search for more ore proved expensive and unproductive. As Superintendent John O. Daugherty directed diggings below the 350-foot level, higher concentrations of lead carbonate, copper, magnesium, and iron oxide appeared. The silver content decreased markedly with the greater depth. As long as silver prices held above one dollar an ounce, the Vails shipped this lower grade ore to a special smelter at Benson which treated ores with high lead content. In early 1887, when silver prices dropped even lower, the Benson shipments became unprofitable and were discontinued.⁷⁰

Throughout 1887, Nathan and Walter Vail resisted closing do the Total Wreck. They hired a number of experienced Tombstone miners in June and made renewed efforts to work

⁶⁷ Tucson Weekly Citizen, August 4. September 15, 1883; April 4, 1884; Tombstone Weekly Epitaph, December 29, 1883; January 19, 1884

⁶⁸ Edward Vail, "Story of a Mine," p. 10, Folder 7, Box 1, Vail Papers, AHS; William H. Lyon, "The Corporate Frontier in Arizona," JAH, IX (Spring 1968), p. 2.

⁶⁹ Dunning and Peplow, Rocks to Riches, pp. 99-100; Charles H. Dunning and Edward H. Peplow, Silver: From Spanish Missions . . . To Space Age Missiles (Pasadena: Hicks Publishing Corporation, 1966), p. 185; Tombstone Epitaph, May 26, 1886.

⁷⁰ Eldred D. Wilson, et al., "Arizona Zinc and Lead Deposits," University of Arizona Bulletin, no. 158 (Tucson, 1951), p. 53; Edward Vail, "Story of a Mine " p. 10, Folder 7, Box 1, Vail Papers, AHS

the lower levels. Through August, Superintendent Daugherty operated a work crew of seventeen miners at the 450-foot level. The Tombstone Weekly Epitaph of August 6, 1887, reported with optimism: "The Total Wreck mine is opening up in a very satisfactory manner, and no doubt will prove to be a handsome property." That optimism crumbled in September with another dip in silver prices, this time to ninety-four cents per ounce. Nathan and Walter Vail closed the mine at the end of 1887.⁷¹

Although the Vails saw no future for the Total Wreck, James Requa clung to a hope that new strikes might be made. Requa bought out his fellow stockholders in the mine and hired John Daugherty to keep probing the lower levels. But the mine and mill never re-opened. In response to the mine's tax assessment for 1889, Daugherty informed the Pima County Board of Supervisors that the Total Wreck was a perfect example "of a dead mining enterprise with its costly works and improvements..."⁷²

Population quickly drifted away from the Total Wreck Camp; and in November of 1890, the government discontinued postal service to the town. With the Total Wreck's closure, most of the miners packed their belongings and moved to the prosperous copper mines at Bisbee, Clifton, and Morenci. When county elections were held in October of 1890, registrar Edward Vail dissolved the Total Wreck Election District because only two or three registered voters had remained in the area. That same year the Total Wreck Mining and Milling Company fell into insolvency and failed to meet property taxes. The following April Walter Vail bought the property at a delinquent tax sale for \$630.24.⁷³

From 1879 to 1887, ranchers Walter and Nathan Vail gleaned over a half-million dollars profit from the Total Wreck Mine. Throughout that period, they were willing to innovate and invest on a grand scale and through such maneuvers overcame the limitations in processing that had hampered development of the mine. Their calculated investment set a firm foundation for two years of peak production which rivaled that of the Territory's most successful mines. Although productivity fell off sharply after 1884, profits from the Total Wreck supplied Walter Vail with much-needed revenue for capital improvements at the Empire Ranch during the eighties.

⁷¹ Tombstone Epitaph, June 7, July 9, 1887; Dunning and Peplow, Silver, p. 186.

⁷² John O. Daugherty to Pima County Board of Supervisors, July 17, 1889, Pima County Arizona: Original Records, Vol. 17, UAL. Although silver operations ceased at the Total Wreck in 1887, Edward Vail returned in 1917 to mine wulfenite lead molybdate at the site for his brother's heirs. The Vail Company built a small reverberatory furnace that year to process ore into wulfenite concentrates, but closed the plant two years later when the wartime demand for wulfenite ended. The last report work at Total Wreck was in 1928, when several thousand tons of old trailings containing six percent lead were processed. Eldred D. Wilson, et al., "Arizona Zinc and Lead Deposits," University of Arizona Bulletin, no. 158, p. 52; Edward Vail to George H. Bolin, January 20, 1920, Box 3, Vail Papers, AHS.

⁷³ United States Patented Mine Total Wreck, Delinquent Taxes Register, Book 1, p. 91, Pima County Recorder's Office, Tucson; Edward L. Vail to Pima County Board of Supervisors, October 31, 1890, Pima County, Arizona: Original Records, Vol. 18, UAL; John Theobald and Lillian Theobald, Arizona Territory: Post Offices and Postmasters (Phoenix: Arizona Historical Foundation, 1961), p. 132. By July of 1889, only four frame buildings and the mill remained at Total Wreck Camp. T. A. Judd to John O. Daugherty, July 25, 1889, Pima County, Arizona: Original Records, Vol. 22, UAL.

CHAPTER 3 INCORPORATION AND EXPANSION

The completion of the Southern Pacific Railroad through Arizona in 1880 introduced a turbulent year of changing range conditions and cattle markets. Along with other cattlemen, the Vails recognized that the railroad--hailed as the emancipator of Arizona stockmen--could be a mixed blessing: rail service presented new outlets for territorial beef production; but it also encouraged overstocking, introduction of diseased cattle, and depressed beef prices. In adjusting operations to meet the changing circumstances, the partners sought outside markets, upgraded bloodlines, expanded range holdings, and increased cattle production. To underwrite such heavy investment the Empire was reorganized as a corporation. Through these innovative responses to the changing ranching picture, the Vails established a successful multi-state grazing operation that emerged from the 1880s in a position of strength and prosperity.

Change was in the air in 1880. In the spring, the Southern Pacific Railroad reached Tucson on a route east from Los Angeles. During the summer, the railroad laid track toward New Mexico and an eventual terminus in El Paso. A year later (March 7, 1881) the Santa Fe Railroad completed its western connection to Deming, New Mexico, forging a tie with the Southern Pacific and opening a valuable link with stockyards at Kansas City, St. Louis, and Chicago. While the home market absorbed local beef production until 1885, the prospect of future sales to Eastern buyers caused ranchers to begin improving their herds and occupying the remaining open range, stocking it with increasingly large numbers of cattle. The completion of these rail connections had a profound effect on the Arizona stock industry.⁷⁴

The Empire shared in this burst of optimism and expansion. Beef sales at Tombstone were good; but the small, steady profit precluded a major development of the ranch. Because there was little investment capital available in Arizona, Vail and Harvey turned again to Nathan and Anna Vail for short-term loans. However, Nathan injected a new twist into the traditional money arrangements. He suggested the formation of a new partnership which would include himself, his wife, and his son John, as well as Walter and Edward Vail, and John Harvey. The arrangement would serve several purposes. As new part owners, Nathan, his wife, and John Vail would now share directly in ranch profits. Their personal financial assets would be available for immediate investment in new property and livestock. Of equal importance, Nathan Vail planned to come to Arizona to supervise development of the Total Wreck Mine and could devote part of his time to overseeing his livestock investment. With his entrepreneurial skills and managerial abilities, he was confident that the ranching enterprise would make handsome profits.

The new partnership--still called Vail, Harvey and Company--accomplished far less than Nathan Vail expected. Extensive development at the Total Wreck Mine engrossed most of his time and money. In its short existence, the partnership purchased only one small ranch. In March of 1881, primarily for its abundant water supply, they bought Tom Gardner's 160-acre Apache Spring Ranch, located seven miles southwest of the Empire in Gardner Canyon. On

⁷⁴ Jay J. Wagoner, *Arizona Territory, 1863—1912: A Political History* (Arizona Press, 1970), p. 309; David Myrick, *Railroads of Arizona*, pp. 54-55, 61; Morrissey, "Early Range Cattle Industry in Arizona," *Agricultural History*, XXIV, p. 133; Patrick Hamilton, *The Resources of Arizona* (Prescott: 1881), pp. 88-89.

August 1, Margaret Newhall Vail, Walter's new bride, purchased the Harvey and Anna Vail interests in the Empire for ten thousand dollars. Harvey left for New York City and never returned to ranching again. Nathan and John Vail gradually divested themselves of their remaining partnership interests within two years.⁷⁵

Nathan's wife, Anna, remained involved in the ranch despite her formal withdrawal from the partnership. Indeed, by the end of 1881, she had extended an additional eighteen thousand dollars in loans and short-term mortgages to the Empire. Walter Vail met payments on the loans with no difficulty, partly because cattle sales were up that year. He had received government contracts to furnish beef to Fort Huachuca and the San Carlos Indian agency and enjoyed continued sales at Tombstone. Altogether, the Empire grossed nearly twenty-five thousand dollars in 1881. The largest delivery of the year was to Lang & Storm's slaughterhouse, at Tombstone which accepted a consignment of one thousand head of three-and-four-year-old steers. Despite these profits, Walter Vail found it to his advantage to continue the loan arrangement with his Aunt Anna.⁷⁶

When Walter's bride arrived from New Jersey in the summer of 1881, Vail undertook a variety of improvements on the Empire ranch house. Up to that time, Walter Vail had added only a kitchen, pantry, cook's room, and business office to the original four-room structure--just enough to accommodate the additional cowhands employed on the ranch. However, Vail's new wife was unaccustomed to the rustic lifestyle afforded by such spartan ranch surroundings. Shortly after her arrival, Walter built his bride a sumptuous eight-room addition to the earlier dwelling, including two bedrooms, a living room, a dining area and a covered porch. The imposing structure boasted twelve-foot high ceilings, three stone fireplaces for heating, and a fashionable half-hexagon bay window opening off the living room. The Empire became a showplace ranch house in southern Arizona. The red-shingled adobe ranch house proved so attractive that, contrary to the common practice among territorial ranch families, Margaret Vail chose to live on the ranch instead of at a separate residence in Tucson.⁷⁷

Beginning in 1881, Walter Vail concentrated as much on range control as on developing the Empire herds. He knew that range tenure depended upon control of water sources, especially the springs which dotted the Empire and Santa Rita Mountains. When an intrusion of small ranchers into Cienega Valley gave him cause for concern, Vail filed on all available springs and seeps to retain grazing rights on the adjacent public domain. These filings were grouped in two locations. On the east slope of the Santa Ritas around Enzenberg Canyon, Vail located five mining and millsite claims on springs feeding into Empire Gulch. All but one cost simply a dollar filing fee. The other water claims were farther north, near Hilton's Ranch in the Empire Mountains. Filings there on the Trinidad, Michigan Bay, and Red Rock millsites

⁷⁵ N. Harvey, et al. to Margaret M. Vail, August 1, 1881, Deed Book X p. 603, Pima County Recorder's Office, Tucson. John Harvey returned to New York City, built an imposing house in a wealthy suburb, and squandered his money away. According to Edward Vail, Harvey "was pushing an ore car for W. S. Edwards in a mine in California" at the time of his death. "Edward Vail Reminiscences," Folder 7, Box 1, Vail Papers, AHS.

⁷⁶ Promissory Notes, August 1, 1881, Folder 5, Box 6., ERP, UAL; Tucson Weekly Citizen, January 19, 1884; Tombstone Weekly Epitaph, December 26, 1881

⁷⁷ Harry L. Heffner to Mary Boice, February 5, 1954, Harry Landon Heffner Papers, UAL; Janet Ann Stewart, Arizona Ranch Houses: Southern Territorial Styles, 1867-1900 (Tucson: Arizona Historical Society, 1974) , p. 52. Margaret Russell Newhall Vail was born in Cincinnati in 1855 but had moved to Plainfield, New Jersey, where she met Walter Vail during one of his business trips home. Heffner incorrectly puts her marriage date and arrival in Arizona at 1884. Tucson Star, December 24, 1937.

insured control of the entire range from the Empire Mountains east to Don Sanford's Meadow Valley Ranch.⁷⁸

In December of 1882, Walter Vail further strengthened his control over nearby range through two land and cattle deals. On December 13 he paid Charley and Agnes Paige eleven thousand dollars for their Happy Valley Ranch, a 360-acre spread on the eastern slope of the Rincon Mountains. Nestled in a sheltered valley, this well-watered ranch site gave the Vails claim to over 3,500 acres of public range to the south and east. The ranch seemed perfectly suited for breeding blooded stock. Two weeks later, Vail doubled the patented acreage of the Empire through his purchase of Don A. Sanford's Meadow Valley Ranch, sometimes called the Stock Valley Ranch. Sanford's Ranch extended five miles north from the Empire, ending at a point adjacent to the Total Wreck Mine. Located along both sides of Cienega Creek, it conferred control over twenty-eight square miles of grassland between the Whetstone and Empire Mountains. The purchase also provided an abundant source of water for the Vails' Total Wreck Mine and Mill. These two purchases cost over thirty-two thousand dollars, but the strategic importance of both properties easily outweighed the expenditures.⁷⁹

With these transactions, Vail also acquired a large number of livestock; enough that the Empire suspended cattle purchases until some of the surplus could be sold. The Paige herd included 802 blooded shorthorns and cost the Empire \$14,736. Over three thousand head of mixed breeds roamed the Sanford range at the time of purchase. With nearly ten thousand head on his combined ranges, Walter Vail initiated an immediate disposal of surplus livestock. As no Arizona cattlemen had effectively tested markets outside of the Territory, the Empire sold the surplus locally. But prices could not hold indefinitely on the crowded domestic scene. Despite his professed confidence in a stable local market, Vail's conservative decision to unload a significant portion of the herd belied his uneasiness over tightening conditions at home. With his calf-crop running well over two thousand head in 1883, Vail reasoned that further growth would involve unnecessary risks.⁸⁰

In January of 1883, Walter Vail considered changing the Empire's financial structure. Even though cattle sales again grossed twenty-five thousand in 1882, he was indebted to Nathan, Anna, and John Vail for \$40,800 in promissory notes. Recent diggings at the Total Wreck Mine indicated that substantial mining profits were near at hand; but as of January, the Vails had as yet to realize sufficient mining revenue to reinvest in the ranch. As ranching expenses continued to mount, Walter proposed to drop the partnership arrangement and consolidate all of the Empire ranch holdings into a single corporate structure. With incorporation,

⁷⁸ Mining Deed Book 11, p. 573; Book 12, pp. 231, 602; Book 14, pp. 125, 220-223, 227, 273, 275, Pima County Recorder's Office, Tucson.

⁷⁹ Charley Paige and Agnes Paige to Walter Vail, December 13, 1882, Deed Book 8, p. 2; Don A. Sanford to Walter Vail and John Vail, December 27, 1882, Deed Book 8, p. 76, Pima County Recorder's Office, Tucson; Tombstone Weekly Epitaph, November 13, 1882. Vail's purchase of the Sanford property eliminated from the Empire's northern range a long-suspected rustler in the person of Don A. Sanford. Two years earlier, the Empire had lodged the serious accusations that Sanford had stolen several Heart cattle and altered the brand marks. Vail's suspicions were never proven, as Grand Jury charges against Sanford in the controversial rustling case were dropped after an inconclusive series of preliminary hearings in December of 1880. Tucson Citizen, December 2, 4, 1880.

⁸⁰ Charles Paige and Agnes Paige to Walter Vail and John Vail, December 13, 1882 (deed), Folder 1, Box 6, ERP, UAL; Tucson Weekly Citizen, January 19, 1884. Although Vail adjusted herd management to a tightening market, most cattlemen continued stocking at an ever-increasing rate. As prominent rancher Colin Cameron later reflected: "In 1883, it was believed, and this belief continued for a number of years . . . that the production of beef was below the actual demand for consumption--that is, that the percentage of population was increasing faster than the percentage of beef. Prices fell, however, in spite of theories, and continued to fall." Cameron, "Report on Cattle," cited in Report to the Secretary of the Interior (Washington, 1896), p. 28.

he could sell common stock to investment syndicates or individuals, and thereby create a capital reserve for the ranch. Two years earlier, Nathan and Walter Vail had incorporated the Total Wreck Mining and Milling Company with great success. Walter was confident the corporate formula could work again.⁸¹

Walter Vail asked W. B. Benson, a New York banking agent, to contact prospective investors who might be interested in the Empire operation. In early February, Vail travelled to New York City to meet the managing partners of Lounsbery and Haggin, Ltd., a London investments firm. They drew up a plan to capitalize the corporation at \$200,000, with Vail's ranches and cattle forming the basis of the capitalization. Vail would retain majority control of the stock issue as well as full management privileges, with the remainder of the shares going to Benson and the London firm.⁸²

The incorporation plans soon fell through. In an effort to guarantee that the scheme would be legal in every respect, Vail had retained Judge Charles Silent, presiding over the First Judicial District in Tucson, to oversee the paperwork. But by the time that Silent could free himself from his judicial obligations, the value of Empire cattle had declined from the agreed-upon price of thirty dollars per head to about twenty-two dollars. Benson tried to modify the proposal to account for the fallen beef prices but drew a lukewarm response from both Vail and the British investors. By June cattle prices again tumbled, and the entire undertaking was abandoned. In a letter to Thomas Cordis, the Internal Revenue Agent in Tucson and a confidant of Benson's, the New York banker blamed Vail for being "too slow" and Silent "too overcautious" in the deal.⁸³

Walter Vail did not drop the idea of incorporation, however. He and Silent continued to discuss the idea through the remainder of 1883. Although beef prices rebounded in September, they knew that outside investors would be wary of the cattle business in Arizona. They decided to seek money within the territory.

On December 10, Walter and Edward Vail, together with Judge Silent, drew up articles of incorporation for the Empire Land and Cattle Company. They set capitalization of the organization at \$250,000, with Walter Vail owning all but two of the twenty-five hundred shares. In return for this stock, Walter signed over to the corporation his holdings in the Empire and Stock Valley ranches--which included twelve thousand cattle and four hundred horses. The corporation agreed to pay off the existing \$100,000 indebtedness on the ranches as soon as first mortgage bonds could be approved and issued. The bonds represented the most important feature of the new corporate structure. If the company could market \$100,000 in bonds, it could pay existing short-term loans, mortgages, and liabilities in place of which a long-term bonded indebtedness would be incurred. By spreading liabilities over a ten-year period, Vail could free more capital for ranch expansion.⁸⁴

The bonding scheme broke down when, after two months of searching, no investors could be found. On February 26, 1884, Walter Vail, the major stockholder, released the corporation from its obligation to pay outstanding ranch liabilities and accepted the \$100,000 in

⁸¹ Tucson Weekly Citizen, January 19, 1887; Receipts, Walter Vail to Nathan Vail, Anna Vail, and John Vail, August 4, 1884, Folder 3, Box 6, ERP, UAL.

⁸² W.B. Benson to Thomas Cordis, February 4, March 5, 19, 1883, Thomas Cordis Papers, AHS.

⁸³ Benson to Cordis, April 9, June 18, June 30, 1883, Cordis Papers, AHS. When they called off the deal, cattle prices had dropped to eighteen dollars per head.

⁸⁴ Minutes, Board of Directors, Empire Land and Cattle Company, Vol. I, pp. 2, 4, 27-28, Box 9, ERP, UAL.

bonds as payment for the balance of the purchase price for his property. After setting up the corporation, Vail enjoyed none of the advantages that he expected incorporation would bring and remained obligated to pay the short-term liabilities. He had simply given his ranch holdings a corporate identity.⁸⁵

In the spring of 1884, climbing beef prices plus windfall profits from the Total Wreck mine provided Vail with the necessary investment revenue that the incorporation scheme had failed to produce. Although local markets quickly filled, prices on two-year-old steers held between thirty and thirty-five dollars per head and stimulated widespread expansion and improvement of herds throughout the territory. Walter Vail responded to the unprecedented high returns on livestock investments by renewing heavy purchases of blooded stock. Vail bought two thousand steers of Durham and Hereford mix from the John Chisum ranch north of Benson and shipped in two heard of Shorthorns from the John H. Slaughter ranch in the San Bernadino Valley. The Empire acquired its most valuable bulls from Dan Murphy's ranch near Mammoth, in Pinal County, paying one hundred dollars per head. Murphy's Durham and Devon bulls, when crossed with Texas Breeds on the ranch, calved a fine stock of Reds and Roans. A carload of Polled Angus, purchased in Kentucky, failed to meet with Vail's expectations. They were excellent stock, but their long hair caused them to lose weight in the Arizona heat. Following this experience with Polled Angus, the Empire concentrated entirely on buying more resilient Durham and Hereford breeds.⁸⁶

Vail did not begin his stocking operations until he had devised a reasonable plan to insure the availability of markets . Eastern consumption had always posed an inviting outlet for Arizona's cattle industry; but the railroad charges, attendance and yardage fees, and losses in transit cut too deeply into the profits for ranchers to sell outside the territory. However, several cattlemen in isolated areas of the West had begun marketing meat dressed on the range and shipped frozen to Eastern markets. The success of those experiments impressed Vail. As Arizona's market neared saturation, he announced in the Tucson Citizen in January of 1884 his plans to build a large meat packing operation:⁸⁷

My idea is that we will refrigerate our beef that is not consumed. I am at present trying to make arrangements with the Southern Pacific Railroad company for refrigerating cars. I will build my own cars if the railroad will allow me special rates. If they will do so I will invest twenty thousand dollars in refrigerating cars. We will put our own slaughter houses along the line of the railroad, slaughter our own beef, pack it in ice, and ship it to New York.⁸⁸

Vail's inability to capitalize the Empire in 1884 through bond sales caused him to postpone action on the refrigerator plant until the following year.

In August of 1885, Vail conferred with Southern Pacific officials in San Francisco. The rail road management balked at the suggestion of rate concessions, even if the Empire built its own equipment. This was Walter Vail's first taste of Southern Pacific intransigence on the

⁸⁵ Ibid., Vol. I, p. 59, Box 9, ERP, UAL.

⁸⁶ Tucson Weekly Citizen, January 19, 1884; Edward Vail, "Ranch Reminiscences," Folder 7, Box 1, Vail Papers, AHS; "Cameron, Report on Cattle," in Governor's Report, 1896, p. 26; Wagoner, Cattle Industry, p. 44.

⁸⁷ H. M. Taylor, "Condition of the Cattle Range Industry," Report, Bureau of Animal Industry (Washington, 1887) , p.113.

⁸⁸ Tucson Weekly Citizen, January 19, 1884.

matter of shipping rates. It would not be his last. In disgust, he returned to Arizona and shelved plans for the project.⁸⁹

In 1884 the Empire added a new dimension to its livestock operations. The Vails built a stable to accommodate the breeding of race horses. "This is number one horse country," Vail declared in the Tucson Citizen. "I think that with the proper stock to breed from, as good horses can be raised here as in Missouri or Kentucky" In early January, he unloaded a shipment of registered horses from New York that included two stallions sired by the champion trotter Hambletonian 10. Later, a second shipment of trotters, this time from New Jersey, arrived at the Empire. Among them, Vail took particular pride in Sir Richard, the son of Sultan and Lennon, sired by Le Grande. Although profitable, race horses were primarily a sidelight of Vail's ranch operations.⁹⁰

On July 16, 1884, Walter Vail concluded a cattle partnership agreement separate from the Empire Land and Cattle Company. He contracted to operate the 2,700-acre Pantano Ranch with John Selah Vosburg, a Tucson merchant. The ranch straddled both sides of Pantano Wash from Rincon Valley east to Mescal Arroyo and controlled all the range between Sanford's Ranch and the base of the Rincons. The Southern Pacific Railroad crossed the property, with a major station at the Pantano Ranch house. Vosburg had acquired clear title to the land for twenty-five thousand dollars, and Walter Vail stocked the ranch with the equivalent value in cattle. By agreement, the Empire cattleman would conduct the partnership business with profits divided evenly. Vail and Vosburg secured full control of the adjoining public rangeland. by filing on four millsites at Mescal, Bobo, Barrel, and Crowley Springs on the north slope of the Empire Mountains.⁹¹

The Pantano Ranch was an important link in Walter Vail's ranching properties. It connected his continuous system of range control in Cienega Valley with the previously isolated Happy Valley Ranch to the north. Because of their close proximity and ample forage, Vail moved his best herds onto the Pantano and Happy Valley ranges. He shipped in additional shorthorns, Devons, and Durhams from California and bought up another herd from John Slaughter's ranch in Cochise County. Walter appointed Edward Vail foreman of the important blooded stock operation. With the purchase of the Pantano, the Empire's property extended twenty-one miles from Gardner Canyon to the Rincons.⁹²

In 1884 Walter Vail won election to the Board of Supervisors for Pima County. Twice before (1880, 1882) he had run unsuccessfully for supervisor on the Republican ticket with supporters touting him as "the cattlemen's candidate" who would insure fiscal responsibility in taxation and the expenditure of public funds. In 1884 party propaganda added a new twist to his campaign image. Vail ran as a reform candidate, sworn to clear up the rumored corrupt bonding schemes of past county supervisors. He made good on his pledge. The new board suspended interest payments on \$150,000 in county bonds which the Tucson, Globe, and Northern Railroad had secured the previous year. The action pleased local cattlemen, as they were spared higher tax valuations to pay the bond interest. However, Vail's tenure on the board was

⁸⁹ Willcox Southwestern Stockman (Arizona) , August 15, 1885.

⁹⁰ Arizona and Its Resources (Phoenix: Reuck and Rich, 1899), pp. 53-54; Tucson Weekly Citizen, January 19, 1884.

⁹¹ Partnership Agreement, July 16, 1884, Folder 6, Box 10, ERP, UAL John Selah Vosburg File, AHS, Tucson; Mining Deed Book 12, p. 133; Book 17, p. 544; Book 18, p. 162, Pima County Recorder's Office, Tucson.

⁹² Edward L. Vail, "Ranch Reminiscences"; "Edward Vail Reminiscences," Folder 7, Box 1, AHS; Tucson Citizen, April 2, 1922.

brief. On July 8, 1884, Walter Vail resigned as Supervisor, explaining that too much of his time had to be devoted to personal business matters for him to serve on that body.⁹³

Vail's prominent position among Southern Arizona stockraisers was particularly apparent in his activities with the Arizona Stock Growers Association. As early as 1880, Pima County ranchers banded together to police local markets for stolen cattle--an arrangement that folded within a year. County cattlemen revived the idea in 1884, this time calling itself the Arizona Livestock Ranchmen's Association. Vail and Colin Cameron, the secretary, agreed that the county organization would have to be expanded into a territorial organization to be effective. On December 23, 1884, delegates from all the county livestock associations in Arizona met in Tucson and created the Arizona Stock Growers Association, with Walter Vail as president. The purpose of the new organization was to formulate legislative proposals to protect the livestock industry of Arizona.⁹⁴

For two weeks Vail and the executive committee worked on a quarantine and anti-rustling proposal for presentation to the legislative Assembly. The bill, which was approved at a cattleman's convention in Prescott in late January of 1885 provided strong controls in a variety of areas. It suggested that ranchers record their cattle brands and earmarks with county recorders; that the governor appoint a special livestock sanitary commission to establish quarantines on infectious diseases; that a heavy fine be levied for introducing diseased cattle into the territory; that range tenure on public land through the control of water sources be given statutory recognition; and that a better trespass law be written.⁹⁵

The cattlemen's proposals received enthusiastic support in the legislature and from the governor. On February 27, 1885, the assembly approved the association's recommendations with minor revisions. Governor Fredrick A. Tritle signed the livestock regulatory program into law the following day. Because Vail and a handful of leading cattlemen took the initiative in protecting their interests, Arizona was spared the catastrophic diseases that soon plagued stockraisers across the nation.⁹⁶

Vail's term as president of the Arizona Stock Growers Association lasted through the end of 1886. His role as industry spokesman diminished after the regulatory laws were passed, but he continued to actively campaign for ranchers' interests both within and outside the territory. His advice was sought in selecting territorial livestock inspectors who would insure that Arizona's livestock regulations would be followed. In September of 1885 Vail travelled to Kansas City to lobby for reduced shipping rates on the Atchinson, Topeka, and Santa Fe Railroad. His

⁹³ Tombstone Epitaph, November 17, 1880; Tucson Weekly Citizen, November 5, 1882; Wagoner, Arizona Territory, pp. 369-71; Tucson Weekly Star, July 6, 1884. Though he enjoyed popular acclaim for his actions, Walter Vail's efforts at fiscal responsibility ran amiss when territorial bond holders sued for repayment of principal and interest. For twenty-three years, the suit and subsequent appeals dragged through the courts at Pima County taxpayers' expense. Finally, in 1907 (a year after Vail's death) the United States Supreme Court decided against Pima County in Vail v. Territory of Arizona, United States Supreme Court, 207 U. S., pp. 201-205.

⁹⁴ Tucson Citizen, December 2, 1880; Willcox Southwestern Stockman, January 10, 1885; Bert Haskett, "Cattle Industry in Arizona," AHR, VI, p. 40.

⁹⁵ Jane Abigail Wayland, "Experiment on the Santa Cruz: Colin Cameron's San Rafael Cattle Company, 1882-1893" (M. A. thesis, University of Arizona, 1964), p. 24; Acts, Resolutions and Memorials adopted by the Thirteenth Legislative Assembly of the Territory of Arizona (Prescott: Prescott Courier Print, 1885), pp. 30, 34-35.

⁹⁶ Tucson Citizen, February 27, 1885.

active commitment to ranching interests won him recognition as one of the leading cattlemen of the territory.⁹⁷

The long-expected saturation of Arizona's home markets became a reality in fall of 1885. An increasing influx of Texas cattle after the completion of the Southern Pacific had been only part of the problem. With beef prices at three and one-half to four cents per pound on the home markets, local ranchers had retained all of their female stock and held all steers until they matured, fattened, and could command a higher price. The holding of older cattle on the range, plus new calf crops, caused a downward trend in prices that gained momentum by November of 1885. Prices soon plummeted from thirty dollars a head to less than ten dollars.⁹⁸

The collapse of home markets caused dismay among territorial stock growers. Cattlemen looked desperately for new outlets in the Midwest and in California. In the six month period between January and June of 1886, stockraisers dumped virtually every four-year-old steer in the territory on the Arizona and California markets. While prices were still high in California, Vail shipped a trainload of his fattest stock from the Chisum purchase to San Francisco. The twelve hundred pound steers drew four and one-half cents on the hoof. However, the pressure of dumping from Arizona soon caused prices to fall drastically in California as well. By the end of 1885, Vail and other Arizona cattlemen began to direct their marketing activities toward Kansas City.⁹⁹

Walter Vail changed the range pattern for Empire cattle. Believing that alfalfa-fed stock fattened faster and better, he shipped several carloads of three-year-old range-fed steers to "finish" on alfalfa in the Salt River Valley, leasing pastures from the Stinton, Pritt, Lewis, and Luise ranches near Tempe. As the cattle picture worsened in Arizona after 1886, Vail also looked outside the territory for pastures. He briefly placed cattle on John Wolfskill's Ranch north of Los Angeles but soon turned to pastures nearer to the Midwestern markets. In 1886, the Empire leased grassland in Kansas from the Jones Nelson Pasture Company of Strong City and from Abbot Holmes of Ellinwood. Shipping costs to Kansas were high, but Vail fared well because the Heart cattle survived the final trip to market with only minor weight losses. Finished steers shrank between five and seven percent of their finished weight en route from Arizona but dropped only a few pounds on the short, 125-mile trip from Strong City to Kansas City.¹⁰⁰

By 1887, Arizona's ranges began to show evidence of a more serious problem, overgrazing. Stockmen noted a deterioration of the groundcover in southern counties, but they

⁹⁷ Willcox Southwestern Stockman, September 12, 1885. In February of 1893, Governor N. O. Murphy honored Walter Vail for his dedicated efforts on behalf of the cattle industry. He appointed Vail to the Territorial Livestock Sanitary Commission to fill out the uncompleted term of Commissioner I. N. Towne. Certificate of Appointment, February 15, 1893, Folder 2, Box 1, ERP, UAL.

⁹⁸ Cameron, "Report on Cattle," in Governor's Report, 1896, p. 22; Wagoner, Cattle Industry, p. 45; Morrissey, "Early Range Cattle Industry in Arizona," Agricultural History, XXIV, p. 152.

⁹⁹ Cameron, "Report on Cattle," in Governor's Report, 1896, p. 22; Edward Vail, "Living with Cattle, 1879 and 1880," Box 5; "Ranch Reminiscences," Folder 7, Box 1, Vail Papers, AHS; Tucson Citizen, November 9, 1885; Tucson Star, October 1, 1887.

¹⁰⁰ Tombstone Prospector, December 28, 1888; Edward Vail, "Living with Cattle," Box 5, Vail Papers, AHS; Wagoner, Cattle Industry, p. 49; Charles U. Pickrell, "1899-1900," Folder 10, Box 4, p. 33, Charles U. Pickrell Papers, UAL; J. B. Grinnell, "Cattle Interests West of the Mississippi River," Report, Bureau of Animal Industry (Washington, 1884), p. 241; The Clifton Clarion (Arizona), on December 16, 1886, reported shipping rates per freight car from Pantano as follows: to Kansas City, \$151.50; to St. Louis, \$181.50; and to Chicago, \$196.30.

hesitated to lighten herds for fear that other operators would take over their ranges on the public domain. The practice of retaining she-stock complicated already dangerous conditions since fertile cows continued to produce until about fifteen years of age. Despite the inadequacy of home markets, Arizona's cattle production nearly doubled between 1884 and 1887. Cattlemen either had to find new rangeland, to reduce grazing loads, or face further deterioration and perhaps outright destruction of their ranges.¹⁰¹

Walter Vail tried to ease crowded conditions on the Empire by expanding onto new ranges east of the Whetstones and farther south in Cienega Valley. On July 28, 1886, Vail, Rollin R. Richardson, and T. L. Stiles incorporated the Whetstone and San Pedro Land and Cattle Company with 640 patented acres of range previously held by Richardson south of Benson on the San Pedro River. The following year, Richardson sold his interest to another prominent rancher, Oscar T. Ashburn. Together, Vail and Ashburn placed several thousand Empire yearlings on this eastern range, then sold them as three-year-old steers to feeder operations in Montana. Besides acquiring the Whetstone and San Pedro range, Vail, on March 21, 1887, purchased the Mary Kane Ranch located four miles southwest of the Empire. The Kane property completed Vail's control over the remaining pastureland between Empire Gulch and Old Camp Crittenden to the south.¹⁰²

Although newly acquired land helped forestall the effects of overstocking, Vail needed further relief if the Empire range was to be preserved. The fragile groundcover could not continue to support his twenty-three thousand cattle, especially if calve production remained at four thousand per year. Range crowding became so bad that a flash flood in July of 1887 drowned over one hundred cattle that could not escape the flood-swollen Cienega Wash. Vail stepped up shipments to pastures in the Salt River Valley, but this expedient still did not provide enough acreage for Empire herds.¹⁰³

Vail decided to look for a large tract of grassland in southern California where a recent collapse in the real estate market had opened many acres to ranching. He sought help from the Los Angeles real estate firm of Pomeroy & Gates. One of the partners, an ambitious young businessman named Carroll W. Gates, became impressed with the bold scope and profit

¹⁰¹ Tucson Star, September 6, 1887; James A. Wilson, "Cattle and Politics in Arizona, 1886-1941," (Ph.D. dissertation, University of Arizona, 1967), pp. 67-68; Cameron, "Report on Cattle," in Governor's Report, 1896, p. 24; Bert Haskett, in "Cattle Industry in Arizona," AHR, VI, lists the following numbers and valuations of cattle in Arizona according to tax rolls:

Year	Number	Value
1883	168,973	\$2,397,956
1884	242,688	3,185,999
1885	267,899	4,238,225
1886	383,745	4,608,604
1887	446,838	5,691,467
1888	512,333	5,720,526
1889	720,940	5,970,587

¹⁰² Articles of Incorporation, Whetstone and San Pedro Land and Cattle Company, Pima County Recorder's Office, Tucson; Harry L. Heffner to Mary Boice, February 5, 1954, Heffner Papers, UAL; Arizona and Its Resources, p. 53; "Edward Vail Reminiscences," Folder 7, Box 1, Vail Papers, AHS. Richardson arrived in Arizona in 1880 and engaged in mining in Cochise County. He later turned to ranching on the Santa Cruz River, acquiring the Rancho San Rafael de la Zanja land grant. Oscar F. Ashburn came from Ohio in 1874 and operated the Salero Ranch on Sonoita Creek. In 1884 he relocated on the San Pedro River, below Benson. "Autobiography of Rollin Richardson," AHS.

¹⁰³ Tombstone Epitaph, July 3, 1887; Tucson Star, June 19, December 19, 1888.

potential of Vail's cattle enterprise and persuaded the Arizona rancher--who desperately needed investment capital--to include him as a partner in his projected California venture. In October of 1888 Vail and Gates leased the 26,700-acre Warner Ranch in San Diego County from ex-governor John C. Downey.¹⁰⁴

The cattle business was new to Carroll Gates. Born in Oneida County, New York, he had moved to California in 1862 and attended his father's San Jose Institute. From 1880 to 1887 Gates worked as manager, bookkeeper, and general agent for David Jack's Pacific Grove Resort at Monterey. Confident in his business expertise, he then moved to Los Angeles in 1887 to deal in real estate with A. E. Pomeroy. Although he lacked ranching experience when he joined Vail, Gates' sound business background and managerial skills more than made up for his lacking of ranching knowledge.¹⁰⁵

Gates advised Vail to untangle his structure of ranching partnerships and corporations. Although he fully controlled the Empire Land and Cattle Company and the separate Gardner and Kane Ranches, Vail's half-interest in the Pantano venture, the Warner lease, and the Whetstone and San Pedro operation, and their respective stocking arrangements impaired his management responsibilities. Consolidation was the answer.

Walter Vail re-ordered his convoluted cattle empire through three transactions. In partial payment for J. S. Vosburg's share in the Pantano ranch, Vail drew up a promissory note on April 10, 1889, for \$33,739. When Vail and Vosburg formally dissolved the partnership the following April, they settled on the balance of the Pantano's price through \$77,550 in long-term notes. In the second organizational transaction--conducted purely "on paper"--Vail conveyed to the Empire Land and Cattle Company a full interest to all land, cattle, and property that he previously held separate from the Empire. This transferral included the Kane and Gardner Ranches, as well as sundry water-controlling tracts bought between 1884 and 1889 from Perry M. Hilton, Daniel Johnston, Michael Fagen, Tully & Ochoa, William Everts, and others.¹⁰⁶

The final transaction, arranged on September 21, 1889, brought Carroll Gates' Warner lease and Gates himself into the Empire structure. The California businessman purchased half of the capital stock in the Empire and one-sixth of the Whetstone and San Pedro operation all for \$175,000 in ten-year notes. In their partnership agreement, Vail and Gates suspended stock dividends until the Empire's \$150,000 indebtedness had been paid. With the continuing depression in beef prices, the time had arrived for more stringent financial management and careful planning.¹⁰⁷

In their first month together, Vail and Gates sought an additional range for their improved herds of Herefords. At that time Herefords were drawing considerably higher prices as feeders than any other breed. Anxious to supply that market, the Empire had expanded its blooded herds almost to full capacity at the Happy Valley and Pantano ranches. Vail and Gates became

¹⁰⁴ Joseph J. Hill, The History of Warner's Ranch and Its Environs (Los Angeles: Privately Printed, 1927), pp. 169-170; indenture, C. W. Gates to Empire Land and Cattle Company, January 21, 1910, Folder 3, Box 10, ERP, UAL.

¹⁰⁵ "Harry L. Heffner Reminiscences," p. 60, Heffner Papers, UAL; Who's Who in the Pacific Southwest (Los Angeles: The Times-Mirror Printing and Binding House, 1913), pp. 154-155, Los Angeles Times, October 26, 1920.

¹⁰⁶¹⁰⁶ Walter L. Vail to John Selah Vosburg, April 10, 1889, Mortgage Book 8, p. 242; Vosburg to Walter L. Vail, April 10, 1889, Deed Book 21, p. 112; Walter Vail and Margaret Vail to Empire Land and Cattle Company, January 24, 1890—Deed Book 21, p. 378, all in Pima County Recorder's Office, Tucson; Dissolution of Partnership, April 5, 1890, Folder 6, Box 10, ERP, UAL

¹⁰⁷ Partnership Agreement, September 21, 1889, Folder 5, Box 11, ERP, UAL.

interested in the old Whitbeck Land and Cattle Company's range in Cochise County. The owner, J. V. Vickers of Los Angeles, offered a half-interest in the 157,000 acres of fenced range for \$42,250. With the lucrative market for Herefords, they could easily justify the inconvenience of another partnership. For a decade, Vickers' range, called the Turkey Track ranch, served as Vail and Gates' central breeding operation for blooded cattle.¹⁰⁸

Between 1880 and 1890, Walter Vail had expanded the Empire Ranch in many ways--acquiring new ranges, new markets, new management, and partnerships. This transformation from local cattle-raising to a multi-faceted corporate ranching enterprise reflected a maturity that the changing livestock industry demanded. The completion of the Southern Pacific Railroad propelled territorial ranchers into both "boom" and "bust" times in the eighties. Vail's innovative response to those conditions produced continual expansion and prosperity for the Empire Ranch. By the end of the decade, he had clearly emerged as a leading rancher, political figure, and spokesman for the territory's livestock interests. In the years of drought and recovery to come, Vail and his new associate, Carroll Gates, would continue to exercise the same boldness, innovation, and leadership.

¹⁰⁸ Wagoner, Cattle Industry, p. 50; Arizona and Its Resources, p. 53.

CHAPTER 4 THE RISE TO CORPORATE MATURITY

A serious drought gripped southern Arizona during the early 1890s, forcing the owners of the Empire Ranch to make heroic decisions concerning their breeding and marketing operations. In an attempt to preserve thinning range-cover, Vail and Gates shipped additional cattle by rail to leased pastures in California. As the drought worsened, deteriorating ranges hastened the Empire's final shift to a breeder operation, sending its young stock to fatten outside the Territory. When the Southern Pacific raised its rates, Vail and Gates defied the railroad's presumed monopoly over livestock transit by conducting a successful trail drive to San Diego. To guard dwindling financial reserves and secure more acreage, the Empire joined with another Arizona ranch, the Chiricahua Cattle Company, in organizing a subsidiary cattle company for the purpose of obtaining rangeland in Oklahoma and the Panhandle of Texas. By 1897, when Vail and Gates moved their business headquarters to the financial centers of Los Angeles and Kansas City, the Empire Land and Cattle Company had achieved corporate maturity.

As overstocking increased in the late 1880s, Vail and Gates had begun shipping more yearlings and two-year-olds to leaselands on Warner's Ranch near San Diego. They knew this arrangement would make them heavily dependent on the Southern Pacific Railroad: a thought that neither relished. Vail had grown progressively hostile toward the railroad since his 1885 rebuff over the refrigerator cars. When the Empire stepped up stock shipments to San Diego County in 1889, he displayed little patience with the railroad's failure to respond to his damage claims on cattle killed in transit. This was aggravated when his petition for \$160 to compensate for four steers crushed during August shipment prompted C. F. Smurr, the assistant freight agent, to send the curt reply: "So far as the [Southern Pacific's] investigation can ascertain, the \$7.50 above mentioned is the only sum for which you are entitled to recover from this company." Smurr's dictum, combined with another incident five days earlier in which forty-one Empire head perished, convinced Vail that the railroad had no interest in safeguarding his livestock.¹⁰⁹

In fall of 1889, just before the larger ranchers commenced their annual shipments of stock to winter pastures outside Arizona, the Southern Pacific raised its rates to various points in California. Company officials in San Francisco believed Arizona cattlegrowers could afford a twenty-five percent increase, and would have no alternative but to accept it. Because cattle prices were low, the rate increase cut into already slim profit margins. The stock-raisers complained vigorously, but the railroad refused to compromise.

The sharp increase altered Vail and Gates' plans to ship nine hundred cattle to the lush Warner range. At the urging of Tom Turner, the foreman at the Empire Ranch, Edward Vail suggested to his brother a bold plan to avoid the rate hike. In earlier years, Turner had trailed cattle from southern Texas to Dodge City, Kansas, and felt that with a properly equipped crew

¹⁰⁹ C. F. Smurr to Walter L. Vail, June 13, August 28, 1889, Folder 3, Box 1, ERP, UAL; Tucson Star, August 23, 1889.

he could move Empire steers on the hoof to California. Similar drives into New Mexico earlier that year had induced the Southern Pacific to rescind its steep eastbound rates. After some discussion with Carroll Gates, Walter Vail consented to the plan.¹¹⁰

On January 29, 1890, Turner, Edward Vail, and eight Mexican ranchhands gathered 917 steers at Sanford's Ranch for the drive. They moved the cattle west along Rillito Creek to the Santa Cruz River, then north to the Florence Canal near Casa Grande. On February 6, as they passed the Sweetwater stage station outside of Casa Grande, part of the herd stampeded north. Vail, Turner, and several trailhands pursued forty-one steer to Maricopa Wells, within the boundaries of the Gila Indian Reservation. The peaceful natives offered no resistance to the embarrassed cattlemen, who watered and rested their fugitive cattle near the Maricopa railroad station. They rejoined the main herd two days later at Gila Bend, only to discover that 110 cattle had wandered off in their absence. Vail and Turner located all but eleven of the lost cattle; and on February 12, they resumed the drive toward Yuma.¹¹¹

Most of the way they followed the tracks of the Southern Pacific, watering their herd in shallow tanks the railroad had built during construction of the line. At Rattlesnake Station, sixty miles east of Yuma, Walter Vail and Carroll Gates joined the drive briefly to check on its progress but returned to Tucson the following day with Turner's assurance that no additional trailhands were needed. On March 15, they reached the Colorado River, drove and ferried the steers across, then plodded west across the dry Colorado Basin toward San Diego.¹¹²

Two weeks west from Yuma, a four-man posse led by Sheriff W. T. Gray of Maricopa County overtook the cattle column. They were looking for two outlaws from Phoenix, Bill and Frank Fox, who had joined the Empire drive near Yuma. When the posse approached, Frank Fox opened fire on the lawmen and tried to flee. In the ensuing crossfire, a deputy killed the fleeing man with a shot through the heart. The other fugitive surrendered without resistance and was returned to Phoenix for trial. Unnerved by the violent turn of events, Vail and Turner resolved not to include any more unfamiliar faces in their trail crew.¹¹³

The remainder of the drive proved uneventful. After seventy-one days on the trail, they arrived on April 5 at Warner's Ranch. Although thirty head of cattle had been lost along the route, the drive netted Vail and Gates an average of four dollars per head more than if they had shipped by rail. Pleased with the undertaking, Vail and Gates gave their trailhands a week to celebrate in Los Angeles before returning to Arizona.¹¹⁴

¹¹⁰ Edward Vail, "Diary of a Desert Trail," n.d., Folder 7, Box 1, Vail Papers, AHS. The manuscript, in edited form, appeared in later publications: "The Diary of a Desert Trail," Texasland--The Pioneer Magazine, VI (May 1926), pp. 2-17, and "Cattle Drive to Warner's Ranch," High Country, No. 27 (Winter 1973), pp. 24-32; No. 28 (Spring 1974), pp. 42-47; No. 29 (Summer 1974), pp. 19-25; and No. 30 (Autumn 1974), pp. 9-10; Tucson Star, March 29, April 10, 14, 1889. Harry L. Heffner, a later foreman at the Empire, attributed Vail's ultimate approval for the drive to his extreme distaste for J. C. Stubbs, the General Freight and Traffic Manager of the Southern Pacific, "whose creed was 'Charge Them All the Traffic Will Bear.'" Harry L. Heffner to Charles U. Pickrell, typescript interview, p. 11, June 4, 1960, UAL.

¹¹¹ Edward Vail, Trail Log, entries for January 29, 31, February 1, 4-11 1890, UAL.

¹¹² Edward Vail, Trail Log, entries for March 1, 15, 1890, UAL.

¹¹³ Edward Vail, Trail Log, entry for March 30, 1890, UAL; Phoenix Arizona Gazette, April 2, 1890. Bill and Frank Fox were wanted for stealing horses from H. B. Crouch's ranch in Pleasant Valley, northeast of Phoenix.

¹¹⁴ Edward Vail, Trail Log, entry for April 10, 1890, UAL; Wagoner, Cattle Industry, p. 46.

Vail and Gates' defiance of the Southern Pacific inspired other ranchers to conduct their own trail drives (generally shorter) rather than deal with the railroad. With the continued success of such drives, the Tucson Star on March 15, 1890, proposed the establishment of a permanent cattle trail to California.¹¹⁵

Such a trail would be the means of getting thousands of feeders to California that at present crowd our ranges, on account of the cost of getting cattle to market by rail. The recent successful drives of cattle shows the proposition feasible. The fording of the Colorado River was accomplished by Mr. Vail's large herd with the insignificant loss of 3 head.¹¹⁶

Prominent southern Arizona cattlemen met at Tucson in late fall of 1890 to consider the trail proposal. Walter and Edward Vail detailed its feasibility and sketched out a rough plan for upgrading wells and watering facilities along the route. The Tucson agent for the Southern Pacific R. Burkhalter, also attended the meeting. Impressed with the ranchers' seriousness, he advised his superiors in San Francisco to rescind the rate increase or lose the bulk of Arizona's freight shipments. The response came almost immediately: if the stockraisers would make no more drives, the railroad would restore the old freight rate on stock cattle. The decision met with overwhelming approval from the ranchers. Plans for the cattle trail were dropped and shipping by rail was resumed. The Empire had given Arizona ranchers a voice, and the Southern Pacific had listened.¹¹⁷

Keenly aware that their ranges were near full capacity, Vail and Gates renewed their search for available pastures outside Arizona. By late December of 1890, they were making heavy cattle shipments to southern California. Part of the livestock went to Los Angeles for sale to local feedlots, while the remainder went to their newly acquired one thousand-acre range at Laguna Ranch, five miles southeast of Los Angeles. Additional shipments were made during the following spring, with forty carloads travelling west to Warner's Ranch.¹¹⁸

As late as July of 1891, Vail, Gates, and most Arizona stockraisers were optimistic that range conditions would improve with summer rains. They retained their breeding stock, fattened older steers in anticipation of better prices, and sold only part of the yearlings. Despite little precipitation and the heaviest calf crop in the history of the Territory, ranchers continued to carry a constant, if not heavier, load on the ranges.¹¹⁹

Rains hit the Empire in early August of 1891, but they were confined mostly to the Pantano and Happy Valley ranges. Edward Vail reported a fair cover of grass returning to these breeder spreads and predicted it would soon bring the cattle into shape for market. However, range conditions farther to the south were much dryer, and the livestock showed visible signs of

¹¹⁵ Phoenix Herald, November 24, 1890.

¹¹⁶ Tucson Star, March 15, 1890.

¹¹⁷ Tucson Citizen, December 3, 1890; Edward Vail, "Cattle Drive to Warner's Ranch," High Country, No. 29 (Summer 1974), p. 25

¹¹⁸ Tucson Citizen, December 22, 1890; April 16, 1891; Sam Hicks, "The Trail of Vail," High Country, No. 13 (Summer 1970), p. 10; Cameron, "Report on Cattle," in Governor's Report, 1896, p. 22.

¹¹⁹ Cameron, "Report on Cattle," in Governor's Report, 1896, p. 22; Tucson Citizen, July 24, 1891

deterioration. A heavy downpour on August 6 offered little relief to the parched and overgrazed rangeland near the home ranch. Vail and Gates concluded that to avoid losses they must ship out some of their thirteen thousand graziers.¹²⁰

Richard Gird, an Arizona pioneer who had turned to California ranching, offered the Empire a unique proposal to solve their grazing dilemma. In mid-August, he opened the Chino Beet Sugar Factory on his forty-seven thousand-acre Rancho del Chino, east of Los Angeles. The sugar refining process turned out a useless beet pulp by-product which Gird suggested might be used as cattle feed, if the Empire wished to lease his pastures. Vail and Gates agreed to experiment with the pulp in combination with other conventional feeds. If it failed to show results within a few months, Gird agreed to turn the Empire stock loose on the abundant hay at the Chino farm to make up whatever weight they lost. Either way, the Chino pastures offered a better feed prospect than the dry Pima County range.¹²¹

The first Empire shipment to the Chino Ranch rolled out of Pantano Station on October 20, 1891. Within two weeks, 3,250 more feeders followed to Gird's ranch. When no rains fell by mid-November, Walter Vail decided to remove more cattle from the Empire before the traditionally dry winter months arrived. He drove 2,400 steers onto Frank Procter's Santa Rosa Ranch, south of Tucson, where he paid a dollar per head to range them through the winter. Several trainloads of stockers were dispatched to southern California in late December and January for sale. By the beginning of 1892, the Empire pastures were carrying only half the cattle of the year before.¹²²

The Empire cattle in southern California fattened well through the winter of 1891, especially on Chino Ranch. Gird's newspaper, the Chino Valley Champion, commented on the Vail and Gates stock:

The cattle Mr. Gird has fattened on beet pulp have turned out most satisfactory. The beef is as juicy and tender as any of the boasted eastern stall fed, and is coming into great demand. Simon Mayer of Los Angeles has just bought sixty head for his slaughter house and Los Angeles people may expect some fine steaks hereafter.¹²³

Vail and Gates used California ranges as long as drought conditions persisted in southern Arizona. For the purpose of holding cattle on the range year-round, they found that it was cheaper to move feeders to California than to lease pastures near Kansas City. Until drought conditions hit the Pacific Coast early in 1894, Vail and Gates directed nearly all their stock shipments to California.¹²⁴

¹²⁰ Tucson Citizen, July 30, August 6, 1891; Pima County Supervisors to Empire. Land and Cattle Company, July 2, 1891, Letterbook, Vol. 24, Pima County, Arizona: Original Records, UAL. Vail and Gates were among the first to respond to the impending failure of Arizona's rangeland. Colin Cameron noted that, despite the late rainfall of 1891, most of the larger ranchers "made no effort to sell or remove even a part of their stock, but continued on in the even tenor of their way . . ." Cameron, "Report on Cattle," in Governor's Report, 1896, p. 22.

¹²¹ L. A. Ingersoll, Ingersoll's Century Annals of San Bernardino County, 1769 to 1904 (Los Angeles: L. A. Ingersoll, 1904), pp. 593, 597. Richard Gird was prominent in early Arizona mining and financial development. He led a surveying and assaying team into the Territory in 1861, and in 1864 received a legislative commission to compile the official map of Arizona. In 1878 Gird and a Cochise County miner, Ed Schieffelin, located and developed the Tombstone mines. He sold out his mining interests in 1881, returned to California and developed the ranching and farming interests around his Chino townsite.

¹²² Chino Valley Champion (California), November 6, 1891; Tucson Citizen, October 20, 27, November 21, December 12, 31, 1891; January 18, 21, 1892

¹²³ Chino Valley Champion, as cited in Tucson Citizen, December 30, 1891.

¹²⁴ Heffner to Pickrell, pp. 21-22, June 4, 1960, UAL.

On March 22, 1892, Walter Vail leased Catalina Island, a forty-eight thousand-acre tract off the coast of Los Angeles, for grazing purposes. He planned to establish a permanent stock ranch on its grassy slopes and possibly incorporate a cattle and sheep company in conjunction with the island's owner, Hancock Banning, and a resident shepherd, F. P. Whitley. Vail had no desire to deal in sheep on a major scale, but he wished to control the pasturing there so as to insure sufficient grass for his cattle. By August the Empire had moved twenty-five hundred head onto Catalina from the parched Pantano range.¹²⁵

No relief came for Arizona ranchers, and by the end of June cattle began to die on the southern ranges. When July and August passed without rain, other ranchers followed the Empire's example, moving heavy shipments to pastures outside Arizona. Judicious range management the previous year minimized Empire losses; but in the absence of rain, Vail and Gates' herds devoured the existing forage quickly. More cattle had to be removed. A well-timed sale of thirty-five hundred stockers to Montana ranchers emptied the beleaguered Whetstone and San Pedro range. In late fall and early winter sixteen hundred more head went west from the Pantano range to feed on Gird's beet pulp. Vail and Gates even sold four thousand wild horses from the Empire range, getting two dollars per head from an East Coast wholesaler named Gallagher. By June of 1893, the Empire carried only two thousand cattle on its home range.¹²⁶

When light rains returned in May of 1893, range losses on the Empire leveled off at about five hundred head. Heavy rains set in around July 1, and at month's end, six inches of grass carpeted the range in Cienega Valley. Compared to other Pima County ranchers--some of whom lost their entire herds--the drought cost Vail and Gates relatively few cattle. Ironically, more Empire cattle perished outside of the Territory than on the Arizona range. The worst toll occurred on Catalina Island, where dry seasons withered the grass through most of 1892 and 1893. Over one thousand head died before Vail removed the stock, in April of 1893, to leased pastures at Strong City, Kansas. While fattening at Strong City, a grasshopper blight devastated the Empire's supply of feed; and the cattle had to be thrown on the market despite their emaciated condition. The surviving Catalina steers, which had cost the Empire forty-nine dollars apiece to maintain, brought only eighteen dollars.¹²⁷

Though the drought had broken, the Empire faced a variety of drought-related problems. The rush to unload Arizona cattle on the Los Angeles market helped drive beef prices sharply downward in October of 1893. Until prices recovered, Vail and Gates held much of their California livestock on ranges there. Although dry conditions lingered in southern California, shipping costs ran too high to return most of their herds to the home ranch, especially after the

¹²⁵ Walter Vail to Captain William Banning, January 17, 1893; Lease Agreement, Walter Vail and F. P. Whitley, March 22, 1892, Folder 2, Box 5, Banning Company Collection, Henry E. Huntington Library and Art Gallery, San Marino, California; Heffner to Pickrell, pp. 48-49, June 4, 1960, UAL. Despite his distaste for sheep ranching, Walter Vail's dealings with Catalina sheep brought him considerable returns on wool and meat sales. In 1895 alone, Vail grossed over two thousand dollars in wool sales and eight thousand dollars for sheep slaughtered at the Avalon butcher shop on the island's west shore. Empire Land and Cattle Company Ledger, II, p. 255, ERP, UAL.

¹²⁶ Cameron, "Report on Sheep," in Governor's Report, 1896, p. 22; Tucson Citizen, May 28, 1892; June 9, 1893; Chino Chino Valley Champion, October 28, November 4, 1892; February 3, 1893; Heffner to Pickrell, p. 49, June 4, 1960, UAL. In an uncharacteristic spirit of cooperation, Pima County Supervisors and the Southern Pacific Railroad responded to the cattlemen's emergency needs. In July of 1892, Pima County lowered tax assessments on ranching land by fifty percent. Four months later, the railroad solicited the stockgrowers' advice and established a "starvation rate" for cattle shipped outside the Territory. Tucson Citizen, July 28, September 26, November 2, 1892.

¹²⁷ Tucson Citizen, May 22, June 9, July 21, 1893; Heffner to Pickrell, pp. 1-2, 48-49, June 4, 1960, UAL.

financial drain caused by earlier drought shipments. Only a selected trainload of bulls and cows were moved from Warner's Ranch to Arizona.¹²⁸

The drought left the Empire nearly devoid of bulls, and this cut the calf crop for 1893 to almost nothing. To help reinvigorate calf production, Vail and Gates concentrated most of their 1894 cattle purchasing on acquiring bulls. They brought in over 270, mostly Herefords, from suppliers in Texas. The remainder of their bull acquisitions came from western Missouri and from Henry C. Hooker's Sierra Bonita herds north of Willcox. With an abundant grass crop and successful spring breeding, Empire herds returned to their normal annual productivity within a year.¹²⁹

The drought, combined with depressed economic conditions, greatly burdened the Vail family fortunes--which until then had provided a regular reserve of working capital for the Empire. Unexpected shipping costs, out-of-state pasture fees, livestock losses, and a downturn in cattle prices put a strain on the ranch's finances. When southern California failed to get rain during the spring of 1894, Empire feeders there began to suffer; but Vail and Gates lacked the money to lease new pastures. As a partial solution to their dilemma, they decided to join the neighboring Chiricahua Cattle Company in investing in Oklahoma and Texas range-land.¹³⁰

The Chiricahua Cattle Company, which operated to the east of the Empire in the Sulphur Springs Valley, had also been hard hit by the drought. Although the company owned one thousand acres of rich alfalfa land in the Gila River Valley, the dry years forced a curtailment of farming operations to only 222 irrigated acres. The company was in dire need of more feed and new rangeland for its livestock. J. V. Vickers, who had previously joined Vail and Gates in the Turkey Track Ranch partnership, owned the controlling interest in the Chiricahua Company. Vickers met with the Empire's owners to work out a mutually beneficial solution to their range problems.¹³¹

In March of 1894, Vail and Gates joined Vickers in setting up a third cattle company, the Panhandle Pasture Company, with each Arizona livestock interest owning fifty percent of the subsidiary operation. The Panhandle Pasture Company bought seven thousand acres of grassland in Sherman County, Texas, and an equal amount across the line in Beaver County, Indian Territory [later Oklahoma). The purpose of the new company was to hold cattle on the range until properly fattened for market. The Empire and the Chiricahua each shipped their stock as yearlings and two-year-olds to the Panhandle, ranged them from one to two years, then sold the fattened steers direct to slaughterhouses. Each of the Arizona companies conducted its business transactions separately, kept separate financial records, and operated as autonomous cattie companies using mutual rangeland.¹³²

¹²⁸ Phoenix Herald, October 14, 1893; Heffner to Pickrell, pp. 2, 4, June 4, 1960, UAL. In November of 1893, the Empire sold nineteen carloads of stock cattle to Manuel Baca, of Chino. However, Vail and Gates sent none of their own graziers to California until after the dry years ended. Chino Chino Valley Champion, November 24, 1893, Tucson Citizen, November 22, 1893

¹²⁹ Cameron, "Report on Cattle," in Governor's Report, 1896, p. 23; Empire Land and Cattle Company Ledger, III, pp. 66, 269-70, UAL; Heffner to Pickrell, p. 22, June 4, 1960, UAL.

¹³⁰ Tucson Citizen, March 17, 1894. Heffner described the Empire's stoic response to drought as follows: "Droughts hurt more than [just] prices because you had to borrow money to move your cattle. You had to borrow money to get new grass and new water somewhere. The usual practice was to rustle around and do the best you could. Lose a few, that's all. Just lose a few." Heffner to Pickrell, p. 63, June 4, 1960, UAL.

¹³¹ Tombstone Epitaph, May 21, 1887; Chiricahua Cattle Company Journal-Day Book, XVII, p. 151, ERP, UAL.

¹³² Sherman County Tax Rolls, 1899, p. 2, copy obtained courtesy of Marilyn I. Albert, Tax Assessor and Collector, Sherman County, Texas, to Gregory Dowell, February 4, 1977. Even though the companies functioned as

During the post-drought years, Vail and Gates altered the format of their financial operations. Beginning around 1890, the company gradually turned from family financing in favor of loans, mortgages, and cash advances from banks and livestock commissions. The Empire took out its last major loan from Anna Vail and her husband Nathan's estate in 1892. Afterwards, Vail and Gates dealt primarily with banks, which necessitated changes in their traditional pattern of operations. In the previous decade, Walter Vail had occasionally drawn on local banking institutions for limited loans; but in the post-drought period, the capital accumulation in Arizona was insufficient for his expanded needs. Consequently, Vail and Gates shifted the focus of financial activities to the mature marketing and financial centers of Los Angeles and Kansas City. The Empire's branch office in Los Angeles, which opened in spring of 1890, became the corporate headquarters in 1894.¹³³

The Empire also began drawing upon livestock commission firms for financial services. Commission houses served a dual function as financial and marketing agencies for the cattle trade in major cities. For a fixed commission, these companies bought, fed and sold livestock, helped secure mortgages on fattening herds, and supplied ranchers with cash advances on future cattle sales. During the first two years of the Panhandle operation, Vail and Gates relied heavily on the George Barse Livestock Commission Company of Kansas City for sales and short-term notes. In 1895 the Barse Company bought 2,470 Empire cattle for its own slaughter facilities at Alma, Kansas, sold four thousand three-year-olds for fifty cents per head commission and secured \$55,240 in notes for winter feed and capital improvements on the Panhandle pasture. Vail and Gates also dealt on a limited scale with the Kansas City Livestock Commission Company and the Zeb F. Crider Commission Company. From 1895 to 1906, when the Empire reached its peak operation, these commission Companies provided the Empire with sufficient financial flexibility to weather the economic fluctuations, unstable markets, and unfavorable climatic conditions which plagued the industry.¹³⁴

By 1895 Vail and Gates had nearly completed the transformation of their Empire range from a self-contained ranching unit into a breeder operation. In that year, rains were good, the valleys thick with grass, and enough yearlings ranged along the Cienega to renew large-scale shipments from the Empire. In early June, 2,313 yearlings and two-year-olds rolled out of Pantano destined for the Panhandle pastures. Another 834 two-year-olds went to Warner's Ranch to start a breeder herd there. Eighteen carloads were sent to pastures on Richard Gird's Chino Ranch, and three hundred more feeders went to J. S. Purdy's cattle outfit near San

autonomous units, Vail and Gates exercised some control over Chiricahua Cattle Company operations in their capacity as corporate stockholders. The Empire bought one thousand shares of Chiricahua capital stock on March 17, 1894, and increased it to 8,686 shares (or half the total issue) over the next four years. Chiricahua Cattle Company Stock Transfer Book XX, p. 69, ERP, UAL.

¹³³ Minutes, Empire Land and Cattle Company Board of Directors Meeting, II, pp. 11-12, Box 9, ERP, UAL; Checks memorandum, December 8, 1892, Folder 3, Box 6, ERP, UAL; Mortgage Memorandum, March 13, 1895, Folder 3, Box 6, ERP, UAL. A clear picture of Vail and Gates' borrowing pattern emerges from the bank notes, receipts, and interest notices of miscellaneous Kansas City- and Los Angeles-area banks from 1880 to 1890. See Folder 6, Box 6, ERP, UAL. Nathan R. Vail died in a boating mishap in 1889.

¹³⁴ James Cox, Historical and Biographical Record of the Cattle Industry and the Cattlemen of Texas and Adjacent Territory (St. Louis: Woodward & Tiernan Printing Co., 1895), pp. 727, 729; Empire Land and Cattle Company Ledger, II, pp. 224-225, 331, 335, 448. It appears likely that Vail and Gates relied principally on the Barse Company for commission services because of their long-established reputation. George Barse had operated commission houses in Kansas City since 1870, whereas the Zeb F. Crider firm had been operating only eight years. Cuthbert Powell, Twenty Years of Kansas City's Livestock Trade and Traders (Kansas City: Pear Printing Company, 1893), pp. 201, 204, 291, 293.

Bernardino. In the largest shipment that year, Vail received ten dollars per head from Colin Cameron of the San Rafael Cattle Company, near Nogales, for 2,700 young steers and heifers.¹³⁵

Vail and Gates speculated in Sonoran cattle in 1895. They purchased several large shipments of Mexican feeders, placing 1,989 of them on a pasture near Strong City, Kansas. Their stock, bought principally from William Barnett's Hermosillo Ranch, proved to be a wise investment. When marketed the next summer, they sold for nearly twice the purchase price of eleven dollars per head. Similar Sonoran purchases were made in 1896. However, Vail discontinued this lucrative trade in November of 1896, when an outbreak of southern [Texas] fever surfaced in several herds of Sonoran cattle.¹³⁶

The Empire began marketing cattle from its Panhandle feeder range in 1896. Vail received between \$24.50 and \$26.50 per head on the Kansas City market for 1,935 steers fattened in Texas and Oklahoma. The Barse Commission Company handled all the transactions for the nominal charge of \$1,259, exclusive of yardage fees, freight, and feed costs. In May and June the Empire shipped several trainloads of the Mexican cattle to restock the Panhandle pastures. Vail and Gates leased additional pastures near Alma, Kansas, to accommodate the heavy load of Empire and Mexican stockers, which numbered over seven thousand head by November.¹³⁷

California sales more than equalled those of the Panhandle region. Between July and October, Vail and Gates sold to Los Angeles butcher Julius Hauser 1,030 three-year-old steers for slaughter at twenty-five dollars per head. They moved fifteen hundred Chino feeders onto the market in early autumn, grossing almost thirty-three thousand dollars from the sales. The bumper sales of 1896 helped recoup some Empire losses sustained during the drought and at the same time proved beyond question the profitability of Vail and Gates' "breeder-feeder" formula for the Empire, Panhandle, and California ranges. The basic pattern of shipping cattle outside of Arizona to fatten, which Vail initiated ten years earlier as a temporary solution to overcrowded conditions, became the fixed pattern for all future Empire operations.¹³⁸

Walter Vail moved to Los Angeles in the summer of 1896, leaving his Arizona ranch holdings under the management of foreman Harry J. McFaddin. Vail in no manner abandoned interest in the Empire Ranch: he continued to oversee buying, breeding, and sales activities for both the Arizona and California ranches. However, his increased involvement in California real estate, horse raising, and other projects demanded his personal supervision. The move to Los Angeles proved equally efficacious from the standpoint of efficient corporate management of the Empire's holdings, since all the company's financial records were kept at the Los Angeles headquarters. Walter Vail and Carroll Gates were ill-disposed to allow anyone other than

¹³⁵ Empire Land and Cattle Company Ledger, II, pp. 236, 304, 408, ERP, UAL; Carroll Gates to Walter Vail, April 26, 1899, Carroll Gates Letterbook, Box 1, ERP, UAL; Ingersoll, *Century Annals*, p. 593. Cohn Cameron describes this trend toward breeder concerns as basic to most Arizona ranching operations after 1896. Cameron, "Report on Cattle," in *Governor's Report, 1896*, p. 23.

¹³⁶ Empire Land and Cattle Company Ledger, II, p. 401, 428, ERP, UAL; Heffner to Pickrell, p. 24, June 4, 1960, UAL. Vail and other prominent Arizona ranchers became alarmed when a Texas drover named D. H. Snyder inadvertently drove several infected Sonoran herds into Arizona. Although no infectious outbreak occurred, the ranchmen's aversion to further imports appeared to be well-advised, given the highly communicable and deadly nature of southern fever. Walter Vail to Cohn Cameron, Folder 3, Early Records of the Livestock Sanitary Board, 1885-1912, manuscript, in the Office of the Arizona State Livestock Sanitary Commission, Phoenix

¹³⁷ Empire Land and Cattle Company Ledger, II, pp. 304, 335, 444, ERP, UAL

¹³⁸ Empire Land and Cattle Company Ledger, II, pp. 427, 431, 435, 437, ERP, UAL

themselves manage their vast corporate holdings. Therefore, Vail's move to Los Angeles seemed the best course of action.¹³⁹

A similar rationale prompted Vail's partner, Carroll Gates, to move to Kansas City in March of 1897. Gates believed their Panhandle interests could be supervised more efficiently if the accounts, stockbooks, and financial records rested at a centralized location and under competent management. Upon his arrival in Kansas City, he personally began sorting out the confused company records scattered between Kansas City, Alma, Strong City, and the Panhandle ranch house. Gates' presence in Kansas City also meant that the Empire relied far less on the services of the Barse Commission Company. Gates personally floated loans, secured chattel mortgages, arranged for feedlots, pastures, and shipping. However, in the absence of prior experience with the Kansas City market, the Empire continued to use the livestock commission firms for most of their cattle sales through the end of 1897.¹⁴⁰

By 1897, when the focus of Vail and Gates' activities shifted outside of Arizona, the Empire had been transformed into an efficient and extensive breeder operation. The refinements in financing, range management, and marketing necessary to sustain the Empire's vast corporate dealings were in part the outgrowth of Vail and Gates' solutions to drought-related problems of the early nineties. Capital shortages, overstocked pastures, and the aggravation of oppressive railroad rates tested their characteristic responsiveness to developments in the changing cattle industry. Their success in dealing with such difficulties established an effective and extensive base of operations for their stockraising activities. The sound operational format the Empire employed in 1897 enabled the corporation to survive intact the crisis of overspeculation that followed.

¹³⁹ Heffner to Pickrell, p. 14, June 4, 1960, UAL; Minutes, Empire Land and Cattle Company Board of Directors Meeting, II, p. 12, Box 9, ERP, UAL; Tucson Citizen, May 1, 1897. Vail and Gates' most important investment involved their minority interest in the Chino Ranch Company, incorporated January 22, 1895. The company bought and subdivided twenty thousand acres of Gird's Chino Ranch into ten-acre farms, which they leased or sold to stocker outfits. They put the unused pasture to seed in alfalfa and sugar beets, which they later sold to the ranchers for feed. Chino Chino Valley Champion, January 25, September 13, 1895

¹⁴⁰ Empire Land and Cattle Company Ledger, II, pp. 56, 91, 213, 216, 356, ERP, UAL.

CHAPTER 5 THE END OF THE VAIL ERA

Beginning in 1897 Vail and Gates entered a hectic period of expansion in their ranching operations and business activities. Enjoying prosperous market conditions, they built up stock herds on all the Empire pastures, only to be deeply shaken when a temporary collapse of the Kansas City livestock trade in 1898 paralyzed the industry. The dilemma left a permanent imprint on the scope of future Empire dealings. They retreated to more conservative stock-loads and added additional pastures in both Arizona and California. They tried unsuccessfully to restrict company business to California alone, hoping to sell off all Empire holdings in Arizona, Kansas, Texas, and Oklahoma. At the same time, Vail and Gates committed a large portion of their corporate assets to a wide variety of West Coast investments. Although Walter Vail died in 1906, the Vail family maintained control over his many investment projects, among them being the Empire Ranch. Adhering to stockraising practices that Walter had perfected, they directed Empire operations as an efficient management team for over two decades, at which time the story of the Empire as a pioneer ranch came to an end.

Arizona ranchers regarded 1897 as a boom year. Record prices and heavy summer rains produced the healthiest livestock conditions the Arizona cattle industry had enjoyed since the boom of the mid-1880s. Empire breeders produced so well that Vail and Gates purchased less than 350 cattle to replenish their herds, despite total shipments of twenty-eight hundred stockers to the Panhandle and Chino Valley pastures. Between April and October, they sold twenty-seven hundred Empire steers in Kansas City at an average price of \$25.25. Another 809 yearlings and heifers sold to feeders at Chino. Despite very dry conditions even their breeder herd at Warner thrived in 1897, with an unprecedented calf drop of twelve hundred head. Optimism prevailed at the Empire.¹⁴¹

Vail and Gates translated their expectations for another bumper year into calculated speculation in one-and-two-year-old stockers, as well as investment in additional pastures. They completed a key purchase of real estate in June of 1898, acquiring 2,520 acres of rich grassland on the San Ignazio del Babocomari land grant, twelve miles south of the home ranch. The parcel controlled a variety of springs near the head of Elgin Draw and extended Vail and Gates' effective control of rangeland into the southeastern extreme of Cienega Valley. With the additional acreage and prime range conditions, they held most of their Arizona steers at home to fatten, hoping to cash in on the continued trend toward better prices. The Empire also made heavy purchases from Midwestern cattlemen. Gates obtained eight thousand stockers from Kansas and Texas breeders to augment the Empire's forty-two hundred holdovers on the Panhandle pasture. In November he marketed half of the 4,767 heifers bought from the Cass Land and Cattle Company and readied forty-seven hundred cattle bought from the JA Ranch in Texas for sale in late autumn to a Texas buyer named James T. Gillette.¹⁴²

¹⁴¹ Report of the Governor of Arizona to the Secretary of the Interior (Washington, 1897), p. 43; Wagoner, *Cattle Industry*, p. 54; Empire Land and Cattle Company Ledger, II, pp. 70-71, 236, 305, ERP, UAL; Panhandle Pasture Company Stockbook, XXIII, p. 2, ERP, UAL.

¹⁴² Edward Vail to Horace Dunlap, June 19, 1898, Edward L. Vail Letterbook, Box 1, ERP, UAL; Accounting of Livestock, p. 78, Gates Letterbook, Box 1, ERP, UAL; Panhandle Pasture Company Stockbook, XXIII, p. 70, ERP, UAL; Gates to Walter Vail, December 1, 1898, Gates Letterbook, Box 1, ERP, UAL; Byron Waters to Walter L. Vail, June 20, 1898, Real Estate Deed Book 29, p. 282, Pima County Recorder's Office, Tucson.

In November of 1898, Gillette's cattle company unexpectedly declared bankruptcy which temporarily caused chaos on the Kansas City market and threatened the Empire's financial stability. Vail and Gates held a \$16,217 chattel mortgage on the JA herd and had expected to pay it off after their sale. By early December Gates began worrying about their financial predicament. The Empire needed immediate cash to settle outstanding debts, On December 1, Gates wrote his partner:

... owing to the condition of the market just now, on account of so many cattle being thrown on at once, it is very seriously demoralized, and we may be compelled to feed these cattle out and put more money into them . . . instead of getting \$25,000 out of them as we had expected to do, as soon as the cattle were delivered.¹⁴³

Vail and Gates' financial quandry deepened when banks in Kansas City and the East closed their doors to cattle loans. The bankers' confidence in stockraisers had been severely shaken by the Gillette failure, and for several months no cattle paper could be floated anywhere east of the Rocky Mountains. Had sales been good, the Empire could have weathered tight credit conditions with relative ease; but buyers hesitated to touch cattle tainted by any connection with Gillette, especially the JA herd.¹⁴⁴

Vail and Gates' options were limited: either winter the twenty-two thousand Panhandle cattle at heavy expense in the Midwest or incur comparable losses freighting the livestock to Empire ranges in Arizona and California. Severe drought in California and the fully stocked pastures in Arizona could mean substantial losses through overstocking if the cattle came west. Vail and Gates decided to feed the cattle through the winter on pastures and feedlots in the Panhandle region. Gates instructed Walter Vail to scour the financial districts in Los Angeles and San Francisco for loans to pay for pasture rental and feedlot costs.¹⁴⁵

While Vail searched for capital, Gates busied himself in Kansas City locating grain and enough available pastures to carry the cattle. With winter approaching, most of the cheap pastures had already been leased to other cattlemen. As a result, he had to rely on expensive feedlots at a cost of one to three dollars per head per month for the bulk of the livestock. Although most of the feedlots were centralized in Dickinson County near Kansas City, a great many cattle had to be shipped from the Panhandle Pasture Company pastures to lots scattered throughout Oklahoma, north Texas, and as far west as Kit Carson, Colorado.¹⁴⁶

The logistics of supervising such widely scattered operations put Carroll Gates' stamina to the test. By the first week of January, 1899, he displayed a growing annoyance with the many complications caused by the Empire's overspeculation the previous year. The fierce winter in the Midwest had done away with what small profits they may have salvaged after figuring in feed costs. Frozen rain and snow dropped one hundred pounds per animal off Empire cattle in western Kansas. The physical rigors, without significant financial return, convinced Gates that their expansive operations had been a serious mistake. In a letter to Walter Vail on January 8,

¹⁴³ Gates to Walter Vail, December 1, 1898, Gates Letterbook, Box 1, ERP, UAL.

¹⁴⁴ Gates to Walter Vail, December 1, 3, 1898; to T. C. Shoemaker, December 13, 1898, Gates Letterbook, Box 1, ERP, UAL.

¹⁴⁵ Hazel Adele Pulling, "A History of California's Range Cattle Industry, 1770-1918," (Ph.D. dissertation, University of Southern California, 1944), pp. 227—228.

¹⁴⁶ Gates to Walter Vail, December 21, 1898, Letterbook, Box 1, ERP, UAL.

Gates broached the matter of reducing the scope of Empire investments.¹⁴⁷

I am in favor of getting our business cleaned up in shape [sic] so that we both will not have to work as we have. I know that I cannot stand the strain that I have been under for the past two years, and I feel that if we can get our business closed up and in good shape, we will both have plenty to keep us for the rest of our lives and we can have a little pleasure as we go along.¹⁴⁸

An opportunity to sell a large part of the Empire's operations at a handsome profit arose several weeks later. A California ranching associate referred Gates to the Chicago investment firm of Patton and Fischer, which conducted extensive business with financial syndicate in England. With Vail's permission, Gates proposed the sale of all Empire land, cattle, and improvements in Arizona, Kansas, Oklahoma, and the Panhandle. Patton and Fischer responded favorably to Gates' proposal, set a tentative price of three million dollars and ask for detailed maps, sales figures, and abstracts of land from which an investments package could be fashioned.¹⁴⁹

The proposal reflected Gates' intention to reduce the Empire to only its California holdings. The Empire Land and Cattle Company had grown too large for Vail and Gates to oversee in a relaxed manner. A professional managerial staff was needed, but Vail and Gates were loathe to delegate control of their corporate affairs. Consequently, a reduction of their immense holdings or a severe cutback in their livestock transactions offered the only respite to their exhaustive workload. The prospect of massive divestiture appealed to Gates who had been unable to return home to California for over two years. Writing to Walter Vail on January 25, Gates revealed his preference to concentrate on California investments.¹⁵⁰

We might be able to make a combination of whatever we had that we would like to dispose of and get a good price out of it . . . and we might be able to get very close to a million dollars, net, which, if we could, I would be decidedly in favor of as I know we could be able to do all the business in California that we would want to if we had that amount of money out of them.¹⁵¹

The plan hit a snag when W. W. Fischer, of Patton and Fischer, proposed that Vail and Gates take out a million dollar mortgage on their property and buy one-third interest in the British investment syndicate. He suggested that such a commitment would allay any British investor's fears over the financial stability of the ranching concern and would allow Vail and Gates to continue full management of their properties under the syndicate's direction. Vail and Gates had no intention of retaining a substantial interest in their holdings if a sale could be made. Besides, any arrangement that bound Vail and Gates to managerial duties defeated the purpose of the sale. Gates refused to agree to anything but a cash settlement free of all additional obligations. When Fischer reasserted the part-ownership idea, Gates withdrew the

¹⁴⁷ Gates to Walter Vail, December 24, 1898; January 3, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁴⁸ Gates to Walter Vail, January 8, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁴⁹ Gates to W. W. Fischer, January 24, May 22, 1899, Gates Letterbook, Box 1, ERP, UAL. The specific proposal, as detailed in an April 3, 1899, letter from Gates to Fischer, listed the ranches as the Empire Ranch, Stock Valley Ranch, Pantano Ranch, Happy Valley Ranch, Turkey Track Ranch, Babocomari Ranch of twenty-five hundred acres, Panhandle Pasture Company Ranch, Gila Valley Alfalfa Farms, and three additional ranches the Empire intended to buy if the sale went through.

¹⁵⁰ Gates to Walter Vail, January 3, 1899; to W. W. Fischer, May 29, August 17, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁵¹ Gates to Walter Vail, January 25, 1899, Gates Letterbook, Box 1, ERP, UAL.

proposal.¹⁵²

Vail and Gates faced what proved to be one of the harshest winters on record in the Midwest. The temperature plummeted as low as -32° F., and heavy snows continued to fall through the second week of April. Despite frigid conditions, Panhandle losses remained light. Gates estimated only one percent of the herd perished and credited the light loss to the fifteen windmills they had installed “in which the water was warm and kept open through all of the cold weather and storms when all of the streams were frozen solid.” Of the Empire’s Panhandle stock, those held near Hill City fared the worst, with nearly twenty percent of the cattle frozen to death on the range.¹⁵³

Although few cattle perished the harsh winter left the Empire livestock too thin to market. The bulk of their cattle were kept on feed until May. By then the market, depressed by an early rush to dump thin cattle, had begun to recover. Gates negotiated a small sale of Empire two-year-olds in May; but preferred to make no more sales until prices advanced further. His decision proved to be a wise one: in October and November, he sold 3,090 Empire steers to Hall Brothers of Kansas City for \$34.50 per head. Vail and Gates rid themselves of the cursed JA steers at \$4.55 per hundred pounds and unloaded the last of their 869 Colorado three-and-four-year-olds.¹⁵⁴

Vail and Gates used the profits from these sales to cover the plethora of cattle paper outstanding on their herds. However, the high cost of feed and pastures from the previous winter still left a heavy burden of mortgages. In a December letter to a Kansas City loan agency, Gates lamented over their critical financial condition:

We have so many cattle that we are carrying that it is a constant drain all the time and we have been compelled to borrow money to carry them . . . it is keeping me turning in every direction to be able to meet the demands I am compelled to meet . Money is very tight now; the panics in the East and the war are making it extremely hard for me to raise enough to meet our running expenses.¹⁵⁵

The financial pinch caused Vail and Gates to suspend further cattle purchases. There would be no more speculation in stockers until they could reduce existing herds to a more manageable level.¹⁵⁶

The only major investment Vail and Gates made during this period of tight finances was in government land in Arizona under the Forest Reserve Lieu Act of 1897. They took this step in an effort to further their program of local range control at minimal expense. According to the act, an owner of private land within the newly-created Sierra Forest Reserve could turn in his

¹⁵² Gate to J. V. Vickers, March 25, 1899; to W. W. Fischer, August 16, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁵³ Gates to Walter Vail, February 23, April 12, 1899; to Edward Vail, February 8, 1899; to Jno. Kuykendall, April 28, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁵⁴ Gates to Lee Howard, March 30, 1899; to W. W. Fischer, September 11, 1899; to Walter Vail, November 23, 1899, Gates Letterbook, Box 1, ERP, UAL; Edward Vail to G. L. Thompson, November 5, 1899, Edward L. Vail Letterbook, Box 1, ERP, UAL; Panhandle Pasture Company Stockbook, XXIII, p. 70, ERP, UAL.

¹⁵⁵ Gates to Walter Vail, May 6, 1899; to John Bundy, December 19, 1899, Gates Letterbook, Box 1, ERP, UAL.

¹⁵⁶ Empire Land and Cattle Company Ledger, IV, p. 146, ERP, UAL. Vail and Gates’ financial burden might have eased had one of their largest California buyers, Simon Maier, not gone bankrupt in the spring of 1899. In the five years prior to his failure, receipts from Maier had totalled in excess of \$42,500. Gates to Walter Vail, March 1, 1899, Gates Letterbook, Box 1, ERP, UAL. Empire Land and Cattle Company Ledger II, pp. 433, 463, ERP, UAL.

patents for government scrip which entitled him to select equal acreage on the public domain. Private land brokerage firms would commonly buy and sell the scrip like securities. On March 23, 1898, Vail and Gates had bought one thousand acres of Sierra Forest Reserve scrip at \$4.25 per acre from the legal firm of Hannah and Miller. After holding the scrip over a year, the cattlemen filed lieu selections on a large area of the Cienega range southeast of the home ranch. They also made lieu filings along the north slope of the Empire Mountains at Bobo, Apache, and Mescal springs. These filings gave them control to almost thirty-six hundred more acres of desert grasslands below Pantano. This timely move also provided the last watered tracts that joined the Empire property north of the town of Sonoita.¹⁵⁷

The Empire recovered financially in 1900. Heavy yearling sales during the fall permitted Vail and Gates to retire most of their cattle paper. Nearly half of the ninety-seven hundred yearlings and two-year-olds they sold went to feeder outfits in San Bernardino County. The cattlemen resumed stocking the Panhandle pastures that year, but at a far more conservative rate than before. The carrying capacity for the Texas and Oklahoma range improved because of new windmills, a good Kansas corn crop in 1899, and their recent cultivation of several hundred acres of sorghum and alfalfa on the Panhandle holdings. However, the mistakes of 1898 remained foremost in their thinking. Despite better feed and water, they decided against any appreciable expansion of their stock herd in Arizona and scaled down yearling shipments east to correspond to the size of Panhandle sales, which in 1900 amounted to 2,142 head. With the calmer pace of operations, Carroll Gates was able to return to California, leaving business matters in the Midwest in the hands of Panhandle ranch foreman Carl Nation. For Vail and Gates, the basic pattern of matching stock levels to sales in the Midwest, begun in 1900, formed the core of the Empire's Panhandle policy for the decade to come.¹⁵⁸

The configuration of the Empire range changed greatly during the following year. The change reflected both a trend toward consolidation of ranch property and an increased commitment to diverse investment projects in southern California. In June of 1901, Vail, Gates, and J. V. Vickers sold the Turkey Track Ranch arid, ten thousand cattle to Cochise County businessmen B. A. Packard and William C. Greene. The fenced-in Turkey Track range, once essential to Empire breeder operations, had become a burden since the poor cattle market of 1898. The partners had found it difficult to convince Midwestern buyers that Arizona stockers from the border range were high quality and not Mexican steers. Moreover, it had been troublesome and expensive to manage the Turkey Track, which adjoined neither the Empire nor Chiricahua property. The cattlemen welcomed Packard and Greene's offer of \$991,000 for the land, cattle, and improvements.¹⁵⁹

Vail and Gates reinvested a part of that payment in a large purchase of land and water rights along the southeast perimeter of their Cienega range. Together with Oscar F. Ashburn--their partner in the Whetstone and San Pedro operation--the Empire bought the Crittenden Land

¹⁵⁷ Empire Land and Cattle Company Ledger, II, p. 79, ERP, UAL; Forest Reserve Lieu Patents, Folder 3, Box 11, ERP, UAL. Between 1899 and 1903, Vail and Gates acquired several hundred additional acres of lieu scrip for four dollars per acre. They received the discount in return for representing Hannah and Miller in similar transactions with large Midwestern land promoters. Empire Land and Cattle Company Ledger, IV, p. 250-251, 279, ERP, UAL.

¹⁵⁸ Empire Land and Cattle Company Ledger, IV, p. 146, ERP, UAL; Panhandle Pasture Company Stockbook, XXIII, p. 70, ERP, UAL; Phoenix Arizona Republic, January 19, 1900; Gates to Walter Vail, May 20, 1899, Gates Letterbook, Box 1, ERP, UAL; Edward Vail to Walter Vail, August 29, 1900, Edward L. Vail Letterbook, Box 1, ERP, UAL.

¹⁵⁹ Tucson Citizen, June 20, December 19, 1901; Willcox Southwestern Stockman, November 8, December 6, 1901; Gates to Walter Vail, January 30, 1899; to Dendy & Peck, March 30, 1899; to J. V. Vickers, June 2, 1899, Gates Letterbook, Box 1, ERP, UAL.

and Cattle Company on September 7, 1901, from pioneer rancher Rollin R. Richardson. The Crittenden property encompassed 5,280 acres of patented rangeland which included Richardson's well-watered Pennsylvania Ranch in Monkey Springs Canyon. Vail, Gates, and Ashburn conveyed the Crittenden property to the Whetstone and San Pedro Cattle Company, which ran the Crittenden as a thoroughbred Hereford range, supplying feeders to Vail and Gates. The ranch, managed by Ashburn, was incorporated two years later as the Crittenden Cattle Company, with headquarters in Los Angeles. Although the company operated under a new name, its ties to the Empire as well as its breeding and sales patterns remained the same. With control of the Crittenden, Vail and Gates could operate their Arizona livestock interests as a compact ranching unit and with greater efficiency than the prior Turkey Track arrangement had allowed.¹⁶⁰

During 1901 Vail and Gates extended the Empire Land and Cattle Company's investments beyond the livestock business. They were aware of the entrepreneurial possibilities of a wide variety of interests in the Los Angeles area, especially those posed by the real estate market. The Los Angeles land boom that collapsed in 1888 had regained momentum by the turn of the century, and those with money to invest were realizing handsome profits at little risk. Between September and November of 1901, Vail and Gates invested over forty thousand dollars of Empire funds in a diverse selection of lots and buildings throughout Los Angeles. At the same time the Empire owned Laguna Land and Water Company broke ground on a pumping station south of the city. The pump, when completed, supplied fresh water to residents in a new highlands division Vail and Gates promoted in the Laguna area. Additional Empire dollars went into the drilling of oil wells along the coastal marshlands. Although the livestock trade remained the central concern of the Empire, the focus of corporate activities had clearly been diversified. Beginning in 1901 Vail and Gates drew frequently on the Empire's assets for a wide variety of investments in southern California.¹⁶¹

Despite generally dry condition in 1901, the Empire's ranching operations in Arizona enjoyed a profitable year. Heavy rains during the summer months kept the ranges thick with grass, and breeding and sales continued active. Profits from major cattle sales (exclusive of the Turkey Track deal) went into a new venture which Vail and Vickers launched in California. In an investment that Carroll Gates chose to bypass, they bought Santa Rosa and Santa Cruz islands, off the Coast of Los Angeles, for a stocker operation. The Empire stocked the islands with 1,891 yearlings. priced at \$9.67 per head.¹⁶²

Again in 1902 the Empire followed a similar pattern of breeder sales, corporate diversification, and California investment. Their sales of 4,307 Empire yearlings, 1,403 Chino feeders, and 2,618 steers from the Panhandle range absorbed a solid herd increase from a

¹⁶⁰ Rollin R. Richardson to Oscar Ashburn, Walter Vail, and Carrol Gates, September 7, 1901 (deed), Folder 2, Box 2, ERP, UAL; Willcox Southwestern Stockman, November 8, December 6, 1901; Artisan Leslie Peck, "In Memory of a Man," manuscript, p. 238, UAL; Crittenden Land and Cattle Company to Whetstone and San Pedro Land and Cattle Company, October 30, 1901 (deed), Miscellaneous File, Book 2, p 168, Santa Cruz County Recorder's Office, Nogales; Articles of Incorporation, Crittenden Cattle Company, March 28, 1903, Corporation Files Book 3, p. 370, Pima County Recorder's Office, Tucson.

¹⁶¹ John S. McGroarty, History of Los Angeles County (3 vols., Chicago: The American Historical Society, 1923), I, pp. 206, 216; Thomas B. Talbert (ed.), The Historical Volume and Reference Works: Covering Costa Mesa, Dana Point, Huntington Beach, Laguna Beach, Newport Beach, Orange, San Clemente, San Juan Capistrano, Seal Beach, Villa Park and Westminster (4 vols., Whittier, California: Historical Publishers, 1963), II, pp. 245-246; Empire Land and Cattle Company Ledger IV, pp. 205, 207, 209-210, 257, ERP, UAL.

¹⁶² Empire Land and Cattle Company Ledger, IV, p. 147, ERP, UAL; Willcox Southwestern Stockman, July 19, 1901; Tombstone Epitaph, July 21, 1901; Tucson Citizen, August 18, 1901; Peck, "In Memory of a Man," p. 319, UAL.

heavy calf crop, keeping cattle on hand at a near constant level. Vail and Gates channeled a large part of the cattle proceeds into California projects unrelated to their Arizona ranching enterprises. Most of these proceeds went into real estate, hydroelectric, and resort developments along the California coast. For example, the Empire bought a controlling interest in the West Coast Land and Water Company in 1902, re-incorporated it as the Huntington Beach Company a year later, and developed a townsite, pier, and resort center by the same name at a remote frontage along Shell Beach.¹⁶³

By 1902 Walter Vail and Carroll Gates were absorbed largely by California affairs. From the standpoint of management, the Empire Ranch entered into a static period of operations, with no significant changes in approach to regular breeding and sales. For the most part, ranch foreman Harry L. Heffner oversaw the affairs of the home ranch in Arizona, selecting which ranges to stock and which cattle to market. Vail and Gates determined where and at what prices the livestock sold.

Between 1902 and 1904, the only major operational adjustment on the Empire Ranch was in the volume of cattle sold. The size of shipments correlated directly with climatic conditions on the home range. Heavy rainfall and calf crops boosted sales in excess of fifty-three hundred head for 1902 and 1903. By the fall of the latter year, over twelve thousand cattle roamed the Cienega Valley. However Arizona's climate reversed itself during the winter and spring, and by June of 1904, ranchers suffered drought-related losses on all the southern ranges.. Empire shipments plummeted to seventeen hundred head for the year, with 1,593 being sent to the Panhandle in late May. Only heavy rains in July and August prevented the Empire from losing a major portion of its breeder herds. The effects of the brief drought, however, were clearly felt the following year. The mortality rate among calves had been so high in 1904 that the Empire's yearling shipments for 1905 dipped below one thousand head for the first time in over a decade.¹⁶⁴

Vail and Gates continued to concentrate on California investments during 1904 and 1905, but in a manner that had important implications on the Empire Ranch's operations. In 1904 they pieced together parts of four Mexican land grants--Pauba Rancho, Temecula Rancho, Santa Rosa Rancho, and Little Temecula Rancho--which together comprised 87,500 acres of watered highland meadows in Riverside County. When negotiations on the purchase were completed in 1905, Vail and Gates incorporated the Pauba Ranch Company to manage the property. The Pauba Ranch Company operated as a vertically integrated corporate enterprise, controlling all of Vail and Gates' wholesale activities in cattle, hogs, alfalfa, grain, sheep, hay, and dairy products in southern California. They created an additional legal entity,

¹⁶³ Empire Land and Cattle Company Ledger, IV, pp. 242, 327, 336-337, ER?, UAL; Ed Ingram to Walter Vail, December 10, 24, 1902, Folder 3, Box 1, ERP, UAL; Talbert (ed.), The Historical Volumes, pp. 215-217 Articles of Incorporation, Huntington Beach Company, Inactive Corporation Records, File 37707, California Archives, Sacramento. Between 1901 and 1905, Vail and Gates also bought the water rights along the San Luis Rey River near San Diego. They incorporated the Monarch Power Company and proposed to build a dam and • reservoir at Warner's Ranch to supply water to dry lowlands and generate hydroelectric power for an intended extension of the Pacific Electric Railway to San Diego. Ed Fletcher, Memoirs of Ed Fletcher (San Diego: Pioneer Printers, 1952), pp. 93, 101-107; Empire Land and Cattle Company Ledger, IV, pp. 278, 309, ERP, UAL.

¹⁶⁴ Wagoner, Cattle Industry, p. 35; Edward Vail to Lyman Wakefield, August 2, 1902; Harry Heffner to Alexander Mills, February 7, 1903; Oscar T. Ashburn to Vail and Gates, July 23, 1904, Folder 3, Box 1, ERP, UAL; Empire Land and Cattle Company Ledger, IV, pp. 148-149, 242—243; Willcox Southwestern Stockman-Farmer, June 12, 1903; Tucson Star, July 9, 1904. J. J. Thornber reports that over 7.5 inches of rain fell at the Empire in July and August of 1904. Thornber, Grazing Ranges of Arizona, p. 259.

called the Vail Trust Company, to coordinate financial and physical management of Pauba and the entire framework of California investments.¹⁶⁵

The formation of the Pauba Ranch Company and the Vail Trust Company severed southern California livestock operations from the Arizona and Midwestern branches of the Empire. Vail and Gates discontinued shipments from the Empire to the Chino Valley and Los Angeles markets, served by Pauba. Beginning in 1905 they directed that all Arizona production go east to the Panhandle.

The Empire remained prosperous throughout 1906. An unexpectedly large calf crop the previous season prompted the renewal of expansive Panhandle shipments. Early sales in Kansas City were brisk. Taking advantage of inflated beef prices resulting from a serious livestock shortage in the Midwest, Vail and Gates sold fourteen hundred of their rangiest four-year-old steers to W. M. Ferguson's slaughterhouse for twenty-eight dollars per head. In subsequent months, another 3,764 head from the Panhandle went to buyers in Colorado and Kansas. If prices held stable, the next year promised even greater profits.¹⁶⁶

Walter Vail did not live to see the new year. On November 30, 1906, while returning from a visit to Rancho Sausel Redondo, he alighted from a streetcar in downtown Los Angeles and was struck in the back by a streetcar passing the opposite direction. The accident pinned him between the cars, causing severe internal injuries. Vail showed signs of improvement the following morning, but by late afternoon his condition had worsened. Walter's oldest son, Nathan, telegraphed Edward Vail to come to Los Angeles at once. Walter lapsed in and out of sleep throughout the night, talking mostly about business during his conscious moments. At 8:00 a.m. on December 2, 1906, Walter Vail--pioneer cattleman, civic leader, and frontier capitalist--died at the age of fifty-four.¹⁶⁷

In the months following Vail's sudden death, Carroll Gates took over as general manager of the Empire Land and Cattle Company, the Pauba Ranch Company, and other miscellaneous investments previously held in partnership with Vail. The burden of overseeing such diverse holdings had seemed overwhelming before Vail's death, but until probate could be completed and the legal strictures against redistribution of corporate property lifted, Gates had to assume all management duties alone. Even at a salary of ten thousand dollars a year, he did not relish his new responsibilities. His health had suffered under the strain of corporate affairs during the overspeculation crisis of 1898. The rigorous workload of managing Vail and Gates' extensive investments portended further difficulties with his ulcerated condition. Gates knew that the vast framework of investments would have to be dismantled to be manageable and efficient.¹⁶⁸

Several potentially troublesome aspects of the probate procedure were avoided by

¹⁶⁵ Sam Hicks, "The Trail of Vail," *High Country*, No. 13 (Summer 1970), p. 11; Phillip S. Rush, "The Vail Ranch," *Southern California Rancher* (January/February 1965), p. 18; Peck, "In Memory of a Man," p. 319, UAL; Articles of Incorporation, Walter L. Vail Trust Company, Inactive Corporation Records, File 41807, California Archives, Sacramento.

¹⁶⁶ Gates to W. M. Ferguson, January 31, 1906, Folder 3, Box 1, ERP, UAL; Harry L. Heffner to Mary Boice, February 5, 1954, Heffner Papers, UAL; Panhandle Pasture Company Stockbook, XXIII, p. 75, ERP, UAL.

¹⁶⁷ Alex Mills to Edward Vail, December 1, 1906, Folder 3, Box 1, ERP, UAL; N. R. Vail to Edward Vail, December 1, 1906 (telegram), Folder 4, Box 2, Vail Papers, AHS.

¹⁶⁸ Minutes, Empire Land and Cattle Company Board of Directors Meeting, August 10, 1909, III, Box 9, ERP, UAL; Gates to Walter Vail, March 1, 1899, Gates Letterbook, Box 1, ERP, UAL.

careful attention to legal formalities during their earlier operations together. On December 21, 1895, Vail and Gates had transferred in writing all personal property to the Empire Land and Cattle Company, stating:

...that in all the operations of said parties under the name of Vail & Gates they, the said parties are acting as trustees of the Empire Land and Cattle Company, and that all of the property so owned by them under the name of Vail & Gates is really the property of the Empire Land and Cattle Company.¹⁶⁹

Consequently, the inventory and appraisal of Walter Vail's estate did not require a time-consuming itemization of all land, livestock, and improvements on the Empire; only a determination of the total interest of the deceased in that corporation. Administrator Walter L. Vail, Jr., reported Vail's net worth to be \$517,294.65, based exclusively on the par value of his stock in the Empire, the Chiricahua Cattle Company, the Crittenden Cattle Company, and the Huntington Beach Company. As a reflection of his true worth, the appraisal was deceptive in the extreme but entirely legal. For example, it contained no reference to the value of nearly 180 square miles of rangeland under Empire control between the Santa Rita, Rincon, Whetstone, and Huachuca Mountains, nor of the nearly seven thousand blooded Herefords that grazed in that extensive valley.¹⁷⁰

The only major impediment to an expeditious settlement of the Vail probate arose from the ten-month process time defined by territorial probate law. Not until May 25, 1908, did the court direct a final disbursement of the estate. Because Walter Vail left no will, one-half part passed to his wife, Margaret N. Vail, and one-fourteenth part each to his seven children: Nathan Russell, Mary E., Walter L., Jr., William Banning, Mahlon, Edward N., and Margaret R. Vail.¹⁷¹

The estate settlement cleared the way for Gates' withdrawal from the Empire. Plans to divide Vail and Gates' diverse partnership holdings took tentative form by March of 1909. Carroll Gates and Vail's heirs came to a formal agreement on property division eight months later, on November 15. In an amicable settlement, Gates deeded to the Vail heirs his interest in the Empire Land and Cattle Company, the Pauba Ranch Company, all land scrip in the name of Vail and Gates, his one-fourth part of the Crittenden Cattle Company, all interest in Warner's Ranch, and half-ownership of a California land development company. In exchange, the Vails gave Gates their 4,034 shares of the Chiricahua Cattle Company stock, all interest in the Panhandle Pasture lands extensive real estate holdings in Kings, Kern, Fresno, and Los Angeles Counties, all 52,556 of the Vail shares in the Huntington Beach Company, and a cash settlement of \$64,375. In all, the Vail family acquired nearly six million dollars in ranching

¹⁶⁹ Vail and Gates to the Empire Land and Cattle Company. January 21, 1895 (deed), Folder 5, Box 11, ERP, UAL; Deed of Judgement, September 29, 1908, Book 430, p. 311, San Bernardino County Recorder's Office, San Bernardino, California.

¹⁷⁰ First and Final Account, Estate of Walter L. Vail, Probate Court of Pima County, Territory of Arizona, Case 1616, in Superior Court Records, Pima County, Tucson; Harry L. Heffner, quoted in Peck, "In Memory of a Man," p. 318, UAL; Charles R. Howe to Alex Mills, August 3, 1907; Harry J. Saxon to the Empire Land and Cattle Company, August 7, 1907; John W. Bogan to Vail and Gates, August 14, 1907, Folder 3, Box 1, ERP, UAL.

¹⁷¹ Affidavit of Final Disbursement, Estate of Walter L. Vail, Probate Court of Pima County, Territory of Arizona, Case 1616, in Superior Court Records, Pima County, Tucson; The Revised Statutes of Arizona Territory, Title XVII, Section 511. The probate of Vail's California property took considerably longer. Claims against the estate amounted to \$612,115.61, all of which represented mortgages on California property. The Vails sold the Rancho Sausel Redondo in auction on November 8, 1909, to settle estate liabilities. First and Final Account, Estate of Walter L. Vail, Probate Records, Superior Court of Los Angeles County, File 10666.

property through the exchange. The only major concession with immediate ramifications for their cattle operations involved relinquishment of the Midwestern pasture lands. Necessarily, Vail's heirs shifted the ranging and fattening of Empire breeders back into southern California.¹⁷²

Gates stayed on as director for the Empire only two months after the property settlement .On January 25, 1910, he relinquished his directorship to Nathan Russell Vail and returned to his expanding investments in California. During the subsequent decade he occupied a prominent position among the financial entrepreneurs of the Southwest. He served as president of the Huntington Beach Company and the Gates Investment Company, vice-president of the Fresno Suburban Homes Company, a director of the First National Bank of Los Angeles, the Assets Realization Company, and the Tulare Land Development Company, and controlled a multitude of real estate ventures in the Los Angeles area. Gates did not end his involvement in Arizona stockraising: as half-owner of the Chiricahua Cattle Company--later renamed the Boice, Gates, and Johnson Cattle Company--he continued to direct extensive breeding and ranging activities in Pima, Cochise, and Graham Counties in Arizona, and on the former Panhandle Pasture Company lands in Texas and Oklahoma. In all affairs, business and personal, Carroll Gates remained a close friend of the Vail family until his death on October 24, 1920.¹⁷³

Under the Vail heirs, the Empire Ranch continued to be a breeding range, as it had been under the previous partnership. High-grade Herefords ranged the Cienega Valley, producing feeders for sale in California or for fattening on the Vails' own West Coast ranchland. With six adult owners, the herculean responsibilities of running the operation were distributed in a less burdensome fashion than Vail and Gates' personal directorship had allowed. Nathan, Mary, and Margaret N. Vail formed the board of directors for the Empire Land and Cattle Company and maintained full managerial control over corporate policy and sales. William Banning Vail took over as ranch foreman and superintendent for all Arizona property while his brother Mahlon did the same at Pauba Ranch. Walter L. Vail, Jr. handled all livestock and supplies acquisitions as the corporate purchasing agent. The family intended to profit from their cattle investment without the mental and physical fatigue their predecessors had endured. As a management team, they were eminently successful.¹⁷⁴

In December of 1912 the Vails streamlined control of the ranches by forming a trusteeship to administer their property. The trustees, known collectively as the Vail Company, were the same Vails that controlled the Empire corporation. However, the trustee arrangement offered several built-in features allowing them far greater efficiency in ranch management. It created the position of managing trustee, who could carry out the entire range of administrative functions the board of directors regularly handled without the cumbersome procedure of

¹⁷² Agreement, Carroll W. Gates and Margaret N. Vail, Nathan Russell Vail and Mary E. Vail, March 9, 1909, Folder 5, Box 11, ERP, UAL; Agreement, Empire Land and Cattle Company to Carroll Gates and Egbert Gates, November 15, 1909, Folder 5, Box 11, ERP, UAL; Chiricahua Cattle Company Stock Transfer Book, XX, pp. 74, 75, 79, 81, 82, ERP, UAL; Nogales Border Vidette (Arizona), January 15, 1910; Biographical Sketch, Heffner Papers, UAL.

¹⁷³ Minutes, Empire Land and Cattle Company Board of Directors Meeting, January 25, 1910, III, Box 9, ERP, UAL; Who's Who in the Pacific Southwest: A Compilation of Authentic Biographical Sketches of Citizens of Southern California and Arizona (Los Angeles: The Times-Mirror Printing and Binding House, 1913), pp. 154-155; Los Angeles Times, October 26, 1920. Harry L. Heffner, a long-time ranch foreman for Vail and Gates, took over full management of Gates' stockraising enterprise following his death. Heffner's intimate familiarity with the Cienega Valley and his ongoing friendship with the Vails figured prominently in the Chiricahua Company's decision to buy the Empire Ranch in 1928. Bertha S. Heffner, "Events in the Lives of Harry L. Heffner and Bertha S. Heffner," typescript, Heffner Papers, UAL.

¹⁷⁴ Minutes, Empire Land and Cattle Company Board of Directors Meeting, March 2, 1912, III, Box 9, ERP, UAL.

convening board meetings for the approval of transactions. Nathan Vail, president of the board of directors, assumed the important position. The trusteeship also precluded any possible divisiveness among stockholding members of the Vail family. It granted the trustees the authority to vote all the corporate stock of the Empire and Pauba companies, so as to best execute the stockraising and merchandising purposes of the corporations. Annual profits were distributed or reinvested at the discretion of the trustees. In essence, the trust arrangement preserved all the legal protections of the corporate organizations as well as maximized the management's autonomy and efficiency.¹⁷⁵

Beginning in 1916 beef prices followed a general upward trend. Empire yearlings sold at thirty dollars per head, thirty-five dollars for two-year-olds, and forty dollars or more for fattened three-year-olds. In 1917 the wartime beef demand had less of an effect on Empire sales than the Arizona climate. Spring and autumn feeder shipments to Santa Rosa Island kept up at the usual pace, but steers from the dry Crittenden range had to be held off the market because they were too thin. Dry conditions persisted through autumn of 1918, and by early December general manager William Banning Vail began to scour the Southwest for unoccupied rangeland on which to relocate part of the Empire herd.¹⁷⁶

Banning Vail found the needed acreage in Arizona, California, and Sonora. He secured a five-year lease on the north half of the Baca Float #3 land grant in Santa Cruz County, paying twelve thousand dollars per year for the 5,760 acres. In March of 1919, he shipped a herd of steers to California to fatten on leaseland in the Imperial Valley, and an additional herd to Bakersfield for sale to a local cattle dealer, F. C. Rhodes. In a rare departure from established procedures, the Vail Company shipped several thousand cattle into Sonora to feed through the drought. Never before had Empire herds grazed south of the border. The cattle fared well, but shipping costs were substantial. When another drought set in during 1925, the Vail Company drove a large herd to Mexico rather than pay the Southern Pacific's freight costs. In the last major cattle drive in Arizona's history, the Vail Company trailed over seven thousand Empire steers south along the Santa Cruz River to the Mascarenas Ranches near the international line in Sonora.¹⁷⁷

In 1928, over a half-century after Walter Vail settled the original 160-acre tract, the Vail family sold the Empire Ranch to the Chiricahua Ranches Company. The Chiricahua, under Frank Boice's directorship, had been ordered to remove twenty thousand cattle from leased rangeland on the San Carlos Indian Reservation. Rather than liquidate their herds, Boice decided to extend his range holdings in the southern part of the state. On February 15, 1928, the Chiricahua bought title to the Crittenden range from the Vails and the estate of Oscar Ashburn for ninety thousand dollars. Three months later the Vail Company sold Boice the entire Empire range in Pima County for fifteen dollars per acre. By agreement, they left their eight

¹⁷⁵ Empire Land and Cattle Company to Margaret N. Vail, Nathan R. Vail, Walter L. Vail, Jr., Mary E. Vail, and William Banning Vail, December 31, 1912, Real Estate Deed Book 52, p. 521, Pima County Recorder's Office, Tucson.

¹⁷⁶ Wagoner, Cattle Industry, pp. 56-57; Edward L. Vail to W. J. Cox & Company, April 24, 1916; William Banning Vail to Edward Vail, September 12, 1916, Folder 1, Box 1, Vail Papers, AHS; The Nogales (?) Santa Cruz Patagonian, cited in the Tucson Arizona Cattleman, March 16, 1917; Tucson Arizona Cattleman, July 9, October 8, 1917; November 18, 1918.

¹⁷⁷ Tucson Arizona Cattleman, December 2, 1918; March 31, April 14, October 6, 1919; Wagoner, Cattle Industry, p. 58; Nogales Border Vidette, February 13, 1926; Lease Agreement, Baca Float Mining and Cattle Company to Vail and Ashburn, October 14, 1920, Folder 9, Box 10, ERP, UAL; Fay Ewell Parker, tape interview by E. F. Schaaf (1973), UAL.

thousand Hereford stock to fatten on the range until July 15, 1929, at which time the bulk of the herds were transferred to Pauba. The heritage of Vail family stockraising on the Empire had come to an end.¹⁷⁸

The crisis of over speculation in 1898 had prompted Vail and Gates to diminish the scope of livestock dealings while they retreated to the lucrative domain of California investments. Although Walter Vail died in 1906, the Empire Land and Cattle Company reflected his imaginative and successful designs until nearly 1930. Under Carroll Gates, and later the Vail Company, breeding and feeding activities proceeded with few innovative refinements. The company adhered to those same established formulas that had brought the Empire to corporate maturity, with one major exception: Vail's family conducted ranch affairs as an efficient and relaxed management team, free from the overwhelming responsibilities Vail and Gates had endured in their single-handed management of the corporation. It was, then, a period of conservative operations. In the face of physical expansion and greater sophistication among other cattle companies, the Empire held fast to old methods. For the Empire Ranch--so long an esteemed leader of the state's livestock industry--the final years had passed without notice by Arizona's new generation of cattlemen.

The growth of Walter Vail's Empire Ranch from an insignificant cattle outfit to a massive and diversified corporate livestock venture occurred during a period of rapid change in the Arizona livestock industry. Stockraising operations at the Empire reflected both changing times and new methods of cattle production. Like many other ranchers of the period, Vail practiced range control and herd improvement; exploited new markets and outside pastures; and endured severe climatic reversals. In other respects, however, the story of the Empire differed significantly from that of most Arizona cattle outfits. Where Eastern investment financed much of the early territorial livestock trade, Empire capital flowed from California until nearly 1892. Unlike other cattlemen, Vail also drew on profits from the Total Wreck Mine to underwrite expansion and herd improvement in the eighties.

Vail's corporate endeavors also defied the methods of the Arizona cattle industry at large. With the ranch as a base, Walter Vail diverted Empire capital into a broad range of lucrative investment opportunities—cattle-related and otherwise. Indeed, resort centers, hydroelectric projects, oil exploration, and Los Angeles real estate were not the common fare of most livestock companies. Yet despite the scope of their investments, Walter Vail and Carroll Gates refused to hire a professional management staff to oversee their diverse interests. The thought of delegating responsibility was anathema, regardless of the physical rigors they endured to maintain personal supervision of their holdings. While other Southwestern stockmen enjoyed more leisurely lifestyles, Vail and Gates never sought out professional assistance.

Vail and Gates were quick to innovate in the face of adverse conditions in the Arizona cattle industry. Short of capital and in need of more pastures, they combined assets with the Chiricahua Cattle Company to form a subsidiary feeder operation in the Midwest, benefiting both companies. As southern Arizona's ranges became crowded in the late eighties, they experimented with alfalfa and sugar beet feeds near Tempe and in Chino Valley, California. In defiance of unduly steep railroad rates, Vail boldly drove cattle overland to San Diego and laid

¹⁷⁸ Richard G. Schaus, "Hereford Tradition of Arizona's Boices Is Deeply Rooted," *American Hereford Journal*, (July 1, 1959) , pp. 532—730; Petition for Confirmation of Contract, Estate of Oscar F. Ashburn, Probate Records, Superior Court of Santa Cruz County, Case 606; Margaret R. Vail, Nathan R. Vail, Mary E. Vail, Mahlon Vail, and William B. Vail to Chiricahua Ranches Company, August 19, 1929, Real Estate Deed Book 137, p. 344, Pima County Recorder's Office, Tucson; Chiricahua Ranches Company Ledger, XXVIII, P. 12, ERP, UAL

the groundwork for a permanent cattle trail to West Coast markets.

Walter Vail also; manifested a public-spirited concern for the cattle industry at large. His role as a legislator, county supervisor, president of the Livestock Ranchman's Association, and as a livestock sanitary commissioner reflects Vail's interest and influence in shaping the destiny of the livestock trade. For thirty years Walter Vail championed the interests of Arizona's cattlemen: as an author of livestock sanitary regulations, as a proponent of lower taxes and range tenure for the stockraiser, and as a representative of the cattlemen to the major railroad companies.

The growth of the Empire Ranch depicts the full sweep of Arizona ranch development from 1876 to 1928. The rugged individualism of pioneer stockraisers, the transformation of an industry from open range ranching to select "breeder-feeder" operations, the rise of corporation livestock investment, the sophistication and diversification of territorial cattle interests, and the crucial role of a few energetic livestock leaders in shaping the industry were all clearly mirrored in the history of the Empire Ranch. No other Arizona cattle venture survived the half-century of changing markets, methods, and range conditions with such prosperity. From its modest beginnings in 1876 to its inglorious sale in 1928, the pulse beat of an industry in transition could be heard in the activities of Walter Vail's Empire Ranch.

SELECTED BIBLIOGRAPHY

Primary Sources

Manuscript Collections:

Arizona Bureau of Mines, University of Arizona, Tucson, Arizona.
Miscellaneous File on Total Wreck Company

Arizona Historical Society, Tucson, Arizona.
E. A. Pike Interview
Edward L. Vail Collection
John Selah Vosburg Collection
Map Collection
Pima County Mines Photograph File
Rolin Rice Richardson Biographical File
Thomas Cordis Collection

Arizona State Livestock Commission, Phoenix, Arizona.
Records of the Territorial Livestock Sanitary Board, 1885-1912.

California State Archives, Sacramento, California.
Inactive Corporation Files
Records of the Supreme Court of California

Cochise County Records, Bisbee, Arizona.
Real Estate Deeds
Miscellaneous Deeds

Department of Library and Archives, Arizona State Capital, Phoenix, Arizona.
Inactive Corporation Records

Harwood P. Hinton Private Collection, Tucson, Arizona.
Lucienda Cota Interview, 1977
Moore, Lamar. "Cattle Trails and the Men Who Drove Them," manuscript, 1968.

Henry E. Huntington Library and Art Gallery, San Marino, California.
Banning Company Papers

Los Angeles County Records, Los Angeles, California.
Estate of Nathan Vail, First Probate Series, File 7504.
Estate of Walter L. Vail, Second Probate Series, File 1066.

Pima County Records, Tucson, Arizona.
Delinquent Taxes Register
Incorporation Deeds
Land Claims
Mining Deeds
Miscellaneous Deeds

Real Estate Deeds

Records of the Superior Court

B. A. Hoskins, J. C. Hoskins, J. D. Richmond, James Vaughn, and the 'Rescued From Total Wreck Mining Company' v. Walter L. Vail, John A. Harvey, Jerry Dillon and the Total Wreck Mining and Milling Company. First District Court of Arizona Territory, Docket 599

Estate of Walter L. Vail, Probate Records; File 1616.

James Stewart, B. Salazar and H. C. Hughes v. Walter L. Vail, Benjamin Morgan, and John W. Moore, First District Court of Arizona Territory, Docket 749.

The Rescued From Total Wreck Company v. The Total Wreck Mining Company, First District Court of Arizona Territory, Docket 598.

Walter L. Vail, John A. Harvey, and Jerry Dillon v. C. H. Webber, E. J. Smith, James Vaughn, J. C. Hoskins, J. D. Richmond, B. A. Hoskin, John Stiles, John Doe Mercer, John Doe, John Roe, George Ray, Stephen Ray, Richard Fen, and James Fen, First District Court of Arizona Territory, Docket 373.

San Bernardino County Records, San Bernardino, California.

Real Estate Deeds

Santa Cruz County Records, Nogales, Arizona.

Estate of Oscar F. Ashburn, Probate Records, File 606.

Miscellaneous Deeds

Real Estate Deeds

Sherman County Records, Stratford, Texas.

Records of the County Assessor

University of Arizona, Tucson, Arizona: Special Collections, University Library.

Edward Vail Trail Log (Diary)

Empire Ranch Papers

Harry Landon Heffner Interview

Harry Landon Heffner Papers

Fay Ewell Parker Interview, 1973

Pima County, Arizona: Original Records

Selim Franklin Collection

Government Publications:

Acts, Resolutions and Memorials Adopted by the Thirteenth Legislative Assembly of the Territory of Arizona. Prescott, Arizona: Prescott Courier Print, 1885.

"Arms For Arizona." House Miscellaneous Documents, No. 19, 38th Congress, 2d Session (Serial 1232)

Gordon, Clarence W., et al. "Report on Cattle, Sheep and Swine, Supplementary to Enumeration of Livestock on Farms in 1880." Tenth Census of the United States, 1880. Washington: Government Printing Office, 1880.

Grinnell, J. B. "Cattle Interests West of the Mississippi River." Report, Bureau of Animal Industry, Department of Agriculture, 1884. Washington: Government Printing Office, 1884.

Mining Properties Act. Statutes at Large, XVII (1872).

- Journal of the Tenth Legislative Assembly of the Territory of Arizona. Prescott, Arizona: Arizona Miner, 1879.
- “Protection From Hostile Indians.” House Miscellaneous Documents, No. 16, 42d. Congress, 1st Session (Serial. 1472).
- Reports of the Governor of Arizona to the Secretary of the Interior, 1885, 1886, 1892-96. Washington: Government Printing Office, 1885, 1886, 1892-96.
- Revised Statutes of Arizona, 1887. Prescott, Arizona Prescott Courier Print, 1897.
- Revised Statutes of Arizona, 1901. Columbia, Missouri: Press of E. W. Stephens, 1901.
- Safford, A. P. K. “Message of the Governor to the Eighth Legislative Assembly.” Journals of the Eighth Legislative Assembly of the Territory of Arizona. (Tucson: Office of the Arizona Citizen, 1875).
- Taylor, H. M. “Importance of the Range Industry.” Report, Bureau of Animal Industry, Department of Agriculture, 1885. Washington: Government Printing Office, 1885.
- _____. “Condition of the Cattle Range Industry.” Report, Bureau of Animal Industry, Department of Agriculture, 1887. Washington: Government Printing Office, 1887.
- Twelfth Census of the United States, 1900, Agriculture, V, Pt. 1. Washington: Government Printing Office, 1900.
- Vail v. Territory of Arizona. United States Supreme Court. 207 U. S., 201-205.
- “War Against the Apaches.” House Miscellaneous Documents. No. 18, 38th Congress, 2d Session (Serial 1232).
- Books and Articles:
- Alsthuler, Constance Wynn (ed.). Latest from Arizona: The Hesperian Letters, 1859-1861. Tucson: Arizona Pioneers Historical society, 1969.
- Bolton, Herbert Eugene (ed.). Kino’s Historical Memoir of the Pimeria Alta: A Contemporary Account of the Beginnings of California, Sonora, and Arizona, by Father Eusebio Francisco Kino, S. J., Pioneer Missionary, Explorer, Cartographer and Ranchman, 1683-1711. Cleveland: The Arthur H. Clark Company, 1919, 2 vols.
- Fletcher, Ed. Memoirs of Ed Fletcher. San Diego: Pioneer Printers, 1952.
- Fontana, Bernard L. (ed.). An Englishman’s Arizona: The Ranching Letters of Herbert R. Hislop: 1876—1878. Tucson: The Overland Press, 1965.
- Morgan, Ben. W. B. Horton--Is He A Perjurer? Tucson: Privately Printed, 1882.
- Mowry, Sylvester. Arizona and Sonora: The Geography, History and Resources of the Silver Region of North America. New York: Harper & Brother, 1864.
- Pumpelley, Raphael. “Mineralogical Sketch of the Silver Mines of Arizona.” California Academy Proceedings, II. (1863), 127-139.
- Rothwell, Richard P. (ed.). Engineering and Mining Journal, Statistical Supplement. New York: The Scientific Publishing Co., 1895.

Talbert, T. B. My Sixty Years in California: Memoirs of Pioneer Days of Long Beach; Drainage of Talbert District and the Lower Santa Ana Valley; Develop men of Orange County Institutions; County Farm and Hospital; Irvine Park, Highway System; Orange County Coast; Bolsa Chica, Huntington Beach and Newport Harbor. Huntington Beach: Huntington Beach News Press, 1952.

Vail, Edward L. "Diary of a Desert Trail." Texasland--The Pioneer Magazine, IV. (May 1926), 2-17.

_____. "Cattle Drive to Warner's Ranch." High Country. no. 27 (Winter 1973), 24-32; no. 28 (Spring, 1974), 42-47; no. 29 (Summer 1974), 19-25; no. 30 (Autumn 1974), 9-10.

Newspapers:

Chino Chino Valley Champion (California), 1891—95.

Clifton Clarion (Arizona), 1886.

Los Angeles Times (California), 1906, 1920.

New York Engineering and Mining Journal (New York), 1882-95.

Nogales Border Vidette (Arizona), 1910, 1926.

Phoenix Arizona and Its Resources (Arizona), 1899.

Phoenix Arizona Republican (Arizona), 1900.

Phoenix Daily Herald (Arizona), 1893.

Phoenix Southwestern Stockman, Farmer and Feeder (Arizona), 1901-03.

San Francisco Mining and Scientific Press (California), 1882-93

Tombstone Epitaph (Arizona), 1880-92, 1901-06.

Tombstone Prospector (Arizona), 1888.

Tucson Arizona Cattleman (Arizona), 1918-29.

Tucson Arizona Citizen (Arizona) , 1881-97, 1901-03.

Tucson Arizona Star (Arizona), 1877, 1882-1906.

Tucson Citizen (Arizona), 1903-29.

Willcox Southwestetn Stockman (Arizona), 1885.

Yuma Arizona Sentinal (Arizona), 1886-90.

Secondary Sources

Books:

Bancroft, Hubert Howe. History of Arizona and New Mexico, 1530-1888. San Francisco: The History Company, 1889.

Barnes, Will C. Arizona Place Names. University of Arizona General Bulletin No. 2, VI, no. 1. Tucson: University of Arizona, 1935.

Cox, James. Historical and Biographical Record of the Cattle Industry and the Cattlemen of Texas and Adjacent Territory. St. Louis: Woodward & Tiernan Printing Co., 1895.

Dunning, Charles H., and Edward H. Peplow, Jr. Rocks to Riches: The Story of American Mining . . . Past, Present and Future . . . as reflected in the colorful History of Mining in Arizona, The Nation's Greatest Bonanza. Pasadena: Hicks Publishing Corporation, 1966.

_____. Silver: From Spanish Missions . . . To Space Age Missiles. Pasadena: Hicks Publishing Corporation, 1966.

Gressley, Gene M. Bankers and Cattlemen. Lincoln: University of Nebraska Press, 1966.

Hamilton, Patrick. The Resources of Arizona: Its Mineral, Farming, and Grazing Lands, Towns and Mining Camps; Its Rivers, Mountains, Plains and Mesas; with a Brief Summary of Its Indian Tribes, Early History, Ancient Ruins, Climate, Etc., Etc.. Prescott, Arizona: 1881.

_____. The Resources of Arizona: Its Mineral, Farming, Grazing and Timber Lands; Its History, Climate, Productions, Civil and Military Government, Pre-Historic Ruins, Early Missionaries, Indian Tribes, Pioneer Days, Etc., Etc.. San Francisco: A. L. Bancroft & Company, 1884.

Hill, Joseph J. The History of Warner's Ranch and Its Environs. Los Angeles: Privately Printed, 1927.

Ingersoll, L. A. Ingersoll's Century Annals of San Bernardino County, 1769 to 1904. Los Angeles: L. A. Ingersoll, 1904.

Keith, Stanton B. Index of Mining Properties in Pima County, Arizona. Tucson: Arizona Bureau of Mines, Bulletin 189, 1974.

Kelly, George H. Legislative History: Arizona, 1864-1912. Phoenix: The Manufacturing Stationers, Inc., 1926.

Lockwood, Frank C. Arizona Characters. Los Angeles: The Times-Mirror Press, 1928.

McClintock, James H. Arizona: Prehisotric--Aboriginal-Pioneer—Modern. Chicago: The S. J. Clark Publishing Company, 1916, 3 vols.

McGroarty, John Steven. History of Los Angeles County. Chicago: The American Historical Society, Inc., 1923, 3 vols.

Myrick, David F. New Mexico's Railroads---An Historical Survey. Golden: Colorado Railroad Historical Foundation, 1970.

_____. Railroads of Arizona, Vol. 1: The Southern Roads. Berkeley: Howell-North Books, 1975.

Peplow, Edward H., Jr. History of Arizona. New York: Lewis Historical Publishing Company, 1958, 2 vols.

Stewart, Janet Ann. Arizona Ranch Houses: Southern Territorial Styles, 1867-1900. Tucson: Arizona Historical Society, 1974.

Talbert, Thomas B. (ed.). The Historical Volume and Reference Works: Covering Costa Mesa, Dana Point, Huntington Beach, Laguna Beach, Newport Beach, Orange, San Clemente, San Juan Capistrano, Seal Beach, Villa Park and Westminster. Whittier, California: Historical Publishers, 1963, 3 vols.

Theobald, John, and Lillian Theobald. Arizona Territory: Post Offices and Postmasters. Phoenix: Historical Foundation, 1961.

Thornber, J. J. The Grazing Ranges of Arizona. Tucson: University of Arizona Agricultural Inspection Station, Bulletin 65, 1910.

Wagoner, Jay J. History of the Cattle Industry in Southern Arizona, 1540-1940. Tucson: University of Arizona, 1952.

_____. Arizona Territory, 1863—1912: A Political History. Tucson: University of Arizona Press, 1970.

Who's Who in the Pacific Southwest: A Compilation of Authentic Biographical Sketches of Citizens of Southern California and Arizona. Los Angeles: The Times-Mirror Printing and Binding House, 1913.

Articles:

Alsthuler, Constance Wynn. "The Naming of Camp Crittenden." Journal of Arizona History, VIII (Summer 1967): 137-142.

Cramer, Harry G., III. "Tom Jeffords--Indian Agent." Journal of Arizona History, XVII (Autumn 1976) : 265-300.

Forrest, Earle R. "The Fabulous Sierra Bonita." Journal of Arizona History, VI (Autumn 1965): 133-148.

Haskett, Bert. "Early History of the Cattle Industry in Arizona." Arizona Historical Review VI (October 1935): 1-42.

Hicks, Sam. "The Trail of Vail." High Country, no. 13 (Summer 1970) : 6-12.

Lamar, Howard R. "Carpetbaggers Full of Dreams: A Functional View of the Arizona Pioneer Politician." Arizona and the West, VII (Autumn 1965): 187-206.

- Lyon, William H. "The Corporate Frontier in Arizona." Journal of Arizona History, IX (Spring 1968): 1-17.
- Morrissey, Richard J. "The Early Range Cattle Industry in Arizona." Agricultural History, XXIV (Autumn 1950): 151-156.
- Paul, Rodman Wilson. "Mining Frontiers As a Measure of Western Historical Writing." Pacific Historical Review, XXXIII (February 1964) 25-34.
- Pedersen, Gilbert J. "A Yankee in Arizona: The Misfortunes of William S. Grant, 1860—1861." Journal of Arizona History, XVI (Summer 1975): 127-144.
- Rush, Phillip S. "The Vail Ranches." Southern California Rancher, (January/February 1965): 18.
Sacks, B. "The Origins of Fort Buchanan; Myth and Fact." Arizona and the West, VII (Autumn 1965): 207-26.
- Schaus, Richard C. "Hereford Tradition of Arizona's Boice's Is Deeply Rooted." American Hereford Journal, L (July 1959): 240-256, 724-736.
- Wagoner, J. J. "Overstocking of the Ranges in Southern Arizona During the 1870s and 1880s." Arizoniana, II (Spring 1961) : 23—27.
- Williams, Richard H. "The History of Livestock in Arizona." Arizona, VI (September 1916): 1-6, 15, 16.
- Wilson, James A. "West Texas Influence on the Early Cattle Industry of Arizona." Southwestern Historical Quarterly. LXXI (July 1967) ; 2630.

Theses and Dissertations:

- Bridenstine, Don C. "Commercial Banking in Arizona--Past and Present." Ph.D. dissertation, University of Southern California, 1958.
- Lage, Patricia Louise. "History of Fort Huachuca, 1877-1913." M. A. thesis, University of Arizona, 1949.
- Mayuga, Manuel N. "The Geology of the Empire Peak Area, Pima County, Arizona." M. A. thesis, University of Arizona, 1940.
- Morrissey, Richard J. "History of the Cattle Industry in Arizona." M. A. thesis, University of California, 1941.
- Pulling, Hazel Adele. "A History of California's Range--Cattle Industry, 1770-1918." Ph.D. dissertation, University of Southern California, 1944.
- Wagoner, J. J. "History of the Cattle Industry in Southern Arizona, 1540-1940." M. A. thesis, University of Arizona, 1949.
- Wayland, Jane Abigail. "Experiment on the Santa Cruz: Colin Cameron's San Rafael Cattle Company, 1882-1893." M. A. thesis, University of Arizona, 1964.
- Wilson, James A. "Cattle and Politics in Arizona, 1886-1941." Ph.D. dissertaton, University of Arizona, 1967.

Correspondence:

Albert, Marilyn I. Tax Assessor of Sherman County, Texas, to Gregory Dowell, February 4, 1977.

Mamone, Mario A. Office of New York Secretary of State, to Gregory Dowell, April 7, 1977.