

The San Diego Coal Company: An Early Mormon Enterprise on Point Loma

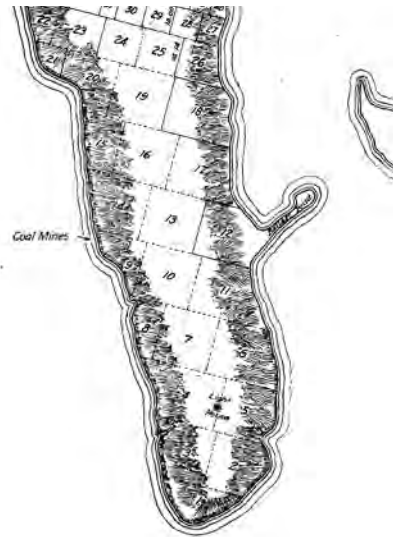
By

Bradley Hill

The San Diego Coal Company went into business with modest fanfare—but with no lack of fervor—in November 1855. The company excavated a mine shaft on the western slope of Point Loma, about a mile and a half north of the Lighthouse. The mine consumed thousands of man-hours spent in earnest labor. It also consumed thousands of investor dollars. Near the close of its first year in business, the company was within a few vertical feet of exposing and exploiting a proven and potentially profitable coal reserve. Toward the end of the second year, however, the company's activities came to an abrupt standstill, and most of the original entrepreneurs and laborers abandoned the operation.

Since then, historians, journalists, and even geologists have occasionally written about this mid-century mining episode. Their articles and papers usually focus on the mine itself, relying on scant contemporary documents and speculation to account for the actual men and motives that energized the original enterprise. Little has been written about the human drama that drove the digging. Today, 154 years since its incorporation, few people have even heard of the San Diego Coal Company. Many San Diegans, though, are aware of a folk legend about a "Mormon Mine" or "Mormon Well" somewhere on Point Loma.

One version of the legend holds that members of the Mormon Battalion initiated the mine while garrisoned in Old Town as early as 1847, just after the U.S. Mexican war ended in California.¹ A more popular and fanciful version claims that an unidentified boy living in Utah had a revelation in a dream that



Map of Pueblo Lands of San Diego, James Pascoe City Engineer, dated May 1870 showing location of the coal mine. ©SDHC research archives.

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This photograph taken in 1934 shows John and Winifred Davidson inspecting the open shaft of the Mormon Coal Mine. The latter told author Herbert Lockwood that she had found a patch of wild oats at the shaft. "Oats had been used to feed the miners' horses," she said, "and over the years they had continually reseeded themselves."
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coal could be found near the southernmost point of California's Pacific coast. In response to this dream, members of the Mormon Church, officially The Church of Jesus Christ of Latter-day Saints (LDS), journeyed to San Diego. One variation of this version of the legend attests that they searched for the envisioned coal on Point Loma, but found none.² Another version allows that coal was found, but that it was inferior in quality and therefore unprofitable. An alternate version tells how sizeable quantities were sold as fuel to coastal steamers before the hasty abandonment of the mine in 1857.³

Legends often have their basis in threads of fact. This article identifies some of those threads that tell the story behind the legend. It also attempts to identify the men and motives behind the mine.

The Mormon Battalion Connection

The Mormon Battalion, consisting originally of about 500 members, marched from Iowa to California's southern coast in support of General Stephen Watts Kearny's Army of the West during the War with Mexico.⁴ The war was essentially over when the Battalion arrived in San Diego in January 1847 so the members of the Battalion served out their one-year enlistments performing garrison and civic duties in and around the coastal settlements of San Diego and Los Angeles. Ephraim Green was a member of Company B, which was assigned to San Diego. He would later claim to have noticed coal on the Point Loma Peninsula sometime prior to his discharge in July 1847.⁵

Once mustered out of the U.S. Army, Green left San Diego to search for the main body of Latter-day Saints, which at that time had just arrived in the Salt Lake Valley.

He followed the California coast north to the San Francisco Bay Area and spent the winter of 1847-48 there, gathering funds and supplies for his journey east over the Sierra Nevada and on to Utah. He was one of the contract laborers working on John Sutter's saw mill when gold was discovered in the mill race on January 24, 1848. Later that year he completed his arduous trek to Salt Lake.⁶

Some seven years later, in 1855, Green was again in California gathering provisions for another trek to Salt Lake Valley. He had been serving as a missionary in Hawaii, and was heading home after his release from that mission. This time he planned to follow the "Mormon Corridor," departing from San Bernardino and following the route that traced through Las Vegas to Salt Lake.⁷ During his layover in San Bernardino, then a thriving Mormon colony, he mentioned the Point Loma coal to some of the

colonists. A few of them became very enthusiastic about the possibilities for coal in the southern California region. They pressed Green to show them his find. Apostle Charles C. Rich, the ranking LDS official at the colony, approved the endeavor. As a result, Green, age 48, delayed his return to the Salt Lake Valley and to his family in order to offer his talents and leadership to the enterprise of prospecting for coal for the benefit of San Diego, San Bernardino, and the LDS Church.

Green led interested individuals to the site where he had first seen the coal. The mine that was opened to exploit that site was situated just north of where the Point Loma Wastewater Treatment Plant is now.⁸



*Statue of Mormon Battalion Soldier in Presidio Park.
Photo by Iris Engstrand.*

The Founders of the San Diego Coal Company



*Sketch of Sam Brannan, ca. 1850.
©SDHC PA 71.*

Three other men of the Mormon faith joined Green in forming the San Diego Coal Company. Those men were George Warren Surrine and Harvey Chester ("H.C.") Ladd, both in their mid thirties, and Seth Benjamin Tanner, age 28. One week after the first lighting of the then new Point Loma Lighthouse in November 1855, they petitioned the City of San Diego for a fifteen-year lease of forty acres on a western slope approximately a mile and a half north of the lighthouse.

George Surrine, a New Englander like his three associates on the company board, had arrived in San Francisco in 1846 aboard the ship *Brooklyn*

under the leadership of Sam Brannan.⁹ He was one of 238 “Water Pioneers” sent to *Yerba Buena* by Brigham Young, president of the LDS Church. Their mission was to establish a cultural and financial base to support the land pioneers who would head west from Iowa the following year. Serrine prospered as a gold miner and businessman in northern California, then ventured south to assess his prospects in other parts of the state. He had a reputation for his skills as a mechanic and millwright, as well as for his honesty. He is listed on the 1850 census as residing in San Diego, though he still had family and business interests in northern California. The following year Serrine, one of the early developers of San Bernardino, became the person charged in 1851 to deliver thousands of dollars collected in the Bay Area toward the purchase of the Lugo Ranch, which would become the center of the San Bernardino Mormon Colony.¹⁰ He was a major financier of the Point Loma mine and participated with his labor and mechanical expertise.¹¹

H.C. Ladd and his family came west to Salt Lake Valley with a pioneer wagon train during the fall of 1852.¹² He served briefly in the Mormon “Iron Mission” in southern Utah, where he may have gained some experience in coal mining.¹³ Ladd moved to San Diego in late 1853. Of the four principles in the San Diego Coal Company, he was the most committed to making California his permanent home, despite the untimely deaths of his wife and daughter in 1855 and 1857, respectively.

Ladd was an energetic advocate for the economic development of San Diego and San Bernardino. Six days distant by wagon, San Bernardino had been part of San Diego County until 1853, when it became a separate county. The rapid colonization of San Bernardino in the early 1850s by the Mormons, many of whom were experienced farmers and tradesmen, had made it a potentially significant resource for food, timber, and skilled labor. Ladd lobbied enthusiastically for strengthening the lines of communication between the two counties.

Ladd served in several elected and appointed civic positions in the city and county of San Diego.¹⁴ There is evidence that he experimented with agricultural cash crops, likely looking for ways to prosper personally, but possibly also looking for ways to encourage other people to move to this part of California.¹⁵ He was a bricklayer of record in the construction of at least the tower portion of the 1855 San Diego Lighthouse.¹⁶ Ladd was listed as a member of the Pioneer Association of San Francisco, an honorary society, in 1890. This suggests he took some satisfaction in his role as an early developer of the Golden State.¹⁷

Seth Tanner also came to the Salt Lake Valley with a wagon train from the east.¹⁸ Once there, he served with Ephraim Green in the 1849 “Southern Expedition” that studied the native people, terrain and



Seth Tanner, Mormon scout, became a homesteader along the Little Colorado River, a prospector and miner within Grand Canyon, and in later years, a guide in northeastern Arizona. Grand Canyon Museum Collection, Catalog #GRCA 7060A.

resources of southern Utah, mapped the area, and noted its possibilities for future colonization.¹⁹ Young and adventurous, he proceeded from Salt Lake City on to the gold fields of northern California in 1850.²⁰ There he did well as a miner and horse trader before relocating to San Bernardino. The youngest of the miners, he was known for his physical strength and his sense of adventure.²¹ He and George Sirrine would later gain enduring renown as early explorers and settlers in Arizona.²²

Through Green's *Diary* entries, we gain an appreciation for the warm relationship between Ephraim Green and H.C. Ladd. They both resided in San Diego—maybe even in the same household—and had regular interaction with each other, while the other two partners spent much of their time in San Bernardino. We know little about how the four entrepreneurs interacted during their association with the Company. We get a glimpse from Green's entry for Sunday, October 28, 1855, which places three of the partners together on what we would call today a team-building field trip. The short entry helps evoke the impression that these men got along well together. Green's comments would have especially pleased Ladd the mason, if he read them: "This morning Bro Lad and Bro Taner and myself walked out and visited the lite house. this is a splendid building situated on point Loma in 27 degrees north latitude."

Other individuals associated with the mining company included Frank Ames, cousin of *San Diego Herald* editor, John Judson Ames.²³ Also associated with them was a "Mr. Parker," apparently an experienced coal miner, who may have been one of the "practical colliers from England," referred to by Dr. George R. Ghiselin in his 1882 historical report to the *San Diego Union*.²⁴ This Mr. Parker might also have been the "Mr. Parkes" referred to in Ephraim Green's diary, who became "Brother Parkes" during the course of his association with the miners.²⁵ Members of the LDS Church commonly referred to each other as "brother" or "sister." Brother Ware appears in Green's diary as a traveling companion during trips made for mine business, as do Brother Hanks and Brother W.M. Matthews. Reference is made in various sources to unnamed individuals and groups who were likely employed for specific tasks. For example, Cahuilla Indians from the San Bernardino area were evidently engaged as laborers.²⁶

The Motivation

The latter half of the nineteenth century was a period of great hope and speculation in San Diego. The whaling and leather industries were providing growth revenue for the community. New people with new ideas were streaming to this area of the nation's newest state. Statehood itself was fostering a flurry of political and civic activity. Risk taking, including business venturing and prospecting for minerals, was not uncommon, and the weekly *San Diego Herald* optimistically promoted the exciting developments in the young municipality. Among the Point Loma miners, it is not hard to imagine that there existed at least a glimmer of hope for wonderful returns.

Coal could have put San Diego on the map in the mid-1850s. These were the waning years of the great California Gold Rush, and San Diego's founding fathers were eager to exploit any resource that might help San Diego compete with her sister cities to the north. A local coal reserve would have reduced her dependence upon expensive coal shipped in from elsewhere. Further, readily available coal

would have made San Diego a lucrative coaling station for steamships and for the railroads that speculators hoped would eventually connect San Diego with Texas and the Mississippi River, while competing with San Francisco and Los Angeles for commerce and for transshipping revenue in California.²⁷

The Coal

California is not known for its coal reserves; if anything, it is noted for its scarcity of coal. Nonetheless, after the incorporation of the San Diego Coal Company, coal deposits were also reported in the Rose Canyon and Soledad areas.²⁸ More coal specimens were found near the tide line at Torrey Pines a few decades later.²⁹ It is not known what initially called Green's attention to the presence of coal in 1847, except that his interest in 1855 was focused on the base of the cliffs north and west of the lighthouse. Whether he noticed specimens strewn on the beach, or outcroppings from the cliffs or among the intertidal rocks, he does not say. The *Herald* reported that several small veins of coal were visible in the cliff face itself.³⁰ Regardless of how he came to first notice the coal, even after the nine intervening years since leaving San Diego, it took Green just two days of searching before he was satisfied that he had found the right spot. There he began exploratory digging.

Green and at least one other person, likely Seth Tanner, initially made small lateral holes in the cliff using hand tools: "We have bin (sic) trying to drift in the bank in sum (sic) small way..."³¹ Between the 1st and the 19th of November 1855, they accumulated "nearly a bushel" of coal, which they took to a local blacksmith for testing on the 20th. The results were favorable, and on the 21st, the four officers of the just-incorporated San Diego Coal Company began two days of haggling with



The mineshaft on Point Loma was "discovered" numerous times in the early twentieth century, 1954. ©SDHC OP #16635.



View into the old Mormon Coal Mine, Point Loma, 1954. ©SDHC OP #16635-1.

the “city of seers” (city officers) of San Diego: “We have labored all day today to bring them to terms and half of the knight (sic)...and found them rather hard in the mouth.”³² Negotiations ultimately resulted in a fifteen-year lease of forty acres “to open and work a Coal mine.”³³

The coal itself was of an acceptable quality for its intended purposes, and it offered hope for financial profit, according to analysis at the time.³⁴ Subsequent professional analyses were conducted in 1882, and finally as late as 1964. Even with increasingly sophisticated standards of evaluation, the quality of the coal was felt to have merited the mining venture.³⁵

The Mine Site

Today there is limited access to the site of the mining operation. The area was graded for construction of the now-abandoned Convair Static Missile Site complex sometime prior to 1964, and the main shaft of the mine was reportedly filled in and sealed under a parking lot.³⁶ The mine opening was on a bluff above the coastal cliffs, no more than 200 feet east of the high tide mark at the base of the cliffs.³⁷ The elevation at the opening would have been roughly 100 feet above sea level.³⁸

Contemporary physical descriptions of the actual mine are lacking, so we rely on observations made by visitors many decades later.³⁹ The mine entrance was a seven-by-nine foot rectangular hole sunk into the ground and shored with plank-ing. The main shaft was 168 feet deep originally.⁴⁰ In the 1930s a visitor reported the mine to be 125 feet deep, but water-filled.⁴¹ In 1947, the superintendent of Cabrillo National Monument, Donald Robinson, was able to descend forty feet, where he reportedly reached the “bottom.”⁴² At that point he found several lateral tunnels leading away from the main shaft. Additional reports on the lengths of these lateral tunnels gave estimates of about 75 feet for one, and several hundred feet for another that eventually angled downward and submerged in water.⁴³

Twentieth-century passers-by reported finding square-headed nails, timber

beams, belt buckles, carbide lamps, and rusted machinery scattered about. They also reported seeing a hollowed-out area in the brush where uneaten hay and grain for mules and horses had taken seed and were growing wild.⁴⁴

Curiously, several common objects were *not* reported. Typical equipment usually associated with mines in the 1850s would include a forge for sharpening tools and mending broken equipment, and a wooden or metal locker for storing explosives. These objects were often mounted on stone or brick foundations, as were boilers and steam engines. There was no discussion of a forge or an explosives locker in the contemporary accounts, and later visitors did not mention seeing ruins of such stations, or any stone or brick foundations at all. Similarly, there was no mention of mining carts or rails for transporting discarded earth and stone along the laterals and away from the entrance. For that matter, no one commented on any excavated dirt and rock that would have accumulated in the vicinity. The company may have used alternative mining systems to cut costs or meet its particular needs, and perhaps these methods did not leave the usual traces. Given the availability of state-of-the-art mining technology and equipment throughout the state, this is unlikely. More likely, the equipment was sold or spirited off to other mining operations, down even to the bricks. It is also possible that these items were present, but were merely taken for granted and not mentioned.

Mine Operations

Having obtained the lease for the mining site, Green and Tanner set up camping tents above the cliffs, dug steps into the cliff side in order to facilitate movement of materials.⁴⁵ They began boring a test hole near the high tide line with what Green called an “auger.” This auger may not have been the drill-like instrument of today that advances as it is continuously rotated. It was more likely a bit, fixed to a rod that could be hammered. As boring progressed, extension rods could be added. The device was used in conjunction with a gin pole, which is a simple tripod-like crane used for lifting. A heavy weight could be elevated and then dropped on the rod to drive the bit deeper. Archeologists Moriarty and Mahnken speculate that the men employed a steam driven “donkey engine” to do the work.⁴⁶ Green’s record, sparse as it is, leaves open the possibility that much of the work might actually have been done by hand.

After nearly ninety days of drilling—omitting Sundays and any days lost for equipment repair—the test hole reached eighty-two feet in depth.⁴⁷ Arriving at that depth on March 1, 1856, the drillers found evidence of a coal vein about four and a half feet thick. Confident that they now had a worthy target, they sold their boring device and commenced digging the main vertical shaft. They calculated that the shaft would need to be 190 feet deep to reach the wide coal seam.⁴⁸ This estimate allowed for the increased elevation of the dig site and for the inland downward slant of Point Loma’s geological strata.⁴⁹

The four original lessees collaborated in management of the mine, apportioning their time and expertise as they saw best. Undoubtedly they contracted supervisors to run the mine when they were not personally on site. The board members seem to have stayed active in their personal, professional and civic affairs while overseeing company matters. Sirrine and Tanner were in San Bernardino much of the time. Ladd served in San Diego as justice of the peace and sat on the county

board of supervisors during portions of his tenure with the San Diego Coal Company. He was active in selling mine shares and in making personal real estate investments around San Diego.⁵⁰ Ephraim Green did odd jobs in Old Town, served on jury duty, and helped Ladd considerably with his farming and home improvements. Green wrote that he had episodes of illness that incapacitated him for days at a time, and that workdays were lost while he nursed Brother Ladd through a critical illness following the death of Sister Ladd.⁵¹ Ladd recovered, and when the exploratory boring was finished in March 1856, it befell Ladd to supervise the digging of the actual mineshaft.⁵²

During the excavation of the shaft, Green made an extended trip to San Bernardino. There he considered withdrawing from the mining operation altogether and continuing on to Salt Lake: "I have put the coal minds (sic) into Bro Riches hands and I am agoing to return to the vally (sic)."⁵³ Rich counseled him to return to "San-deago," likely because of his work ethic and the spiritual example he provided to other Mormons involved in the operation. "...[P]eople in this place are not in no way inclined to be religious," Green wrote one Sunday in his journal.⁵⁴ Calling upon the same faith that sustained him while marching with the Battalion, exploring with the Southern Expedition, and proselytizing in the Hawaiian Mission, he obeyed Apostle Rich and returned to serve awhile longer with the San Diego Cool Company.

Between March 10 and May 20, Ladd's crew had dug to 60 feet, employing blasting powder and hand tools to loosen the dirt and rock, and then engaging a bucket of some sort to extract it. There were two serious accidents involving this bucket. Toward the end of July, and again on August 30, the bucket fell clear down the shaft, injuring laborers on each occasion.⁵⁵ The Company had engineered a homemade manual or horse-powered windlass to lift and lower the bucket. Why it failed on these occasions is unknown, except that it was due to "the breaking of some of the machinery."

The exact number of miners, engineers, and laborers involved in the operation is not known, but would probably be measured in dozens over the two years of its existence, and surely included more than just Mormons. Investors may also have numbered in the dozens. Most of them would have been local, but interest in the mine did spread somewhat throughout California and parts of the southwest. H.C. Ladd began selling the first twenty public shares of Company stock in March 1856 for \$100 each.⁵⁶ The *Herald* reported that as of June 20, 1857, the company was solvent enough to promptly pay all its bills, suggesting that the board officers must have had an adequate pool of investors to augment their own personal contributions.



In 1954, the mineshaft on the western slope of Point Loma remained exposed. ©SDHC, Union-Tribune Collection, UT #84:30301-1.



Visitors stand above at the old Mormon Coal Mine on Point Loma, 1954. ©SDHC, OP #12685-2.

The Tide Turns

Ground water is the nemesis of many underground mining operations. By June 23, 1856, water seepage was already a problem at the Point Loma shaft. The work pace at the mine slowed and sometimes even stopped. Then it accelerated as a concerted effort was made to keep the shaft clear enough for digging. The Cahuilla laborers were enlisted in this effort.⁵⁷ By the end of August, despite the water, the miners had reached the 160-foot mark.⁵⁸

At times, the work pace at the site was animated day and night, as when the Cahuilla Indians were contracted to help keep the shaft clear of water in July 1856, and when a large group of colonists from San Bernardino made a surge to man the operation in August 1857.⁵⁹ At other times, the labor force was probably greatly reduced in response to situational setbacks. In June 1857, for instance, work was suspended for nearly a month “for want of good experienced miners.”⁶⁰

To vacate water from the shaft more effectively, the Company bought a pump, with associated steam engine and boiler, from an unnamed party in San Francisco. Because the Great California Gold Rush was in its decline, there were likely many surplus, abandoned, or faulty pieces of mining equipment available for purchase in northern California. Whether it was new, surplus, or abandoned, we do not know, but several sources inform us that there was something faulty about the purchase.

In the first place, the pump arrived late. It was expected by August 10. In fact, George Sirrine came down from San Bernardino on that date, expecting to find the apparatus in place and ready to be fired up.⁶¹ But it was not until the middle of October that the pump’s much-anticipated arrival in San Diego was noted in the *Herald*.⁶²

In the second place, the mass and dimensions of the machine, particularly its boiler, were incompatible with the wagons and roads of rustic San Diego and even-more-rustic Point Loma. It took nearly three months to get the boiler from the ship to the mine site. It was Seth Tanner, along with a man thought to be Frank Ames,

cousin of the *Herald* editor, who finally devised a way to muscle the equipment to its destination.⁶³

Finally—and fatally for the San Diego Coal Company—the pump itself was faulty.⁶⁴ Whether it was deficient, ill-matched to the task, or both, the pump did not keep the shaft sufficiently clear for the miners to advance safely in their labors, and months were lost before smaller replacement pumps were brought on line.⁶⁵ It could be argued that if a successful pump had been brought on line earlier, coal extraction would have begun, and the momentum of production might have propelled the San Diego Coal Company through the events that led to its demise just a few months later.

An additional blow to the company was the loss of one of its founders during the wait for the pump. Ephraim Green appears to have been focused on the functional rather than the speculative aspects of the mining venture. From his journal entries he seems also to have had a prevailing concern for his own spirituality and for the welfare of the men he worked with, and was likely a father figure within the company. By September 1856, however, he again departed for San Bernardino, and this time resumed his journey to Utah, having delivered on his commitment to get the mine going.⁶⁶ His journal suggests that he was becoming discouraged with some aspects of the project, especially the delays, though one could assume that he was also increasingly anxious to reunite with his family in the (Salt Lake) *Valley*, as he referred to it. Brother Parker, the original project collier, journeyed with him. Although the company must have made adjustments to these two losses, it seems to have floundered a bit at this juncture.

As with many ventures, initial prospects for prosperity were very good for the San Diego Coal Company when balanced against the cost of the coaling operation and the motivation of the miners. In time, as we have seen, this balance evened up and then began to reverse itself. During the exploratory boring, equipment was destroyed or floated away with the tide.⁶⁷ While digging the shaft, men were injured by falling objects. From time to time, illness led to down time for some of the miners, as did long waits for materials ordered from distant suppliers. Roads and conveyances, which had been suitable for the construction of the lighthouse, failed to support the larger machinery brought in for mining. Water constantly seeped into the lower levels of the shaft, inhibiting progress and posing a danger to personnel, and when at last the expensive pumps purchased in good faith did arrive, they failed to perform as promised.

All these challenges, however, were surmountable as long as enthusiasm and capital held out. Similar challenges had been overcome by the very successful coastal mining operations in Cornwall, England. Indeed, five months after the departures of Green and Parker, optimism reigned again in San Diego when George Sirrine was installed as chief engineer and the pumping situation finally appeared to be solved. The remaining miners were optimistic that the problem could be overcome.⁶⁸ Nevertheless, exactly two years after its incorporation, when the San Diego Coal Company was within only twenty-three feet of reaching the wide coal seam that might have paid the bills, the *San Diego Herald* announced that there had been a change of heart among the hard-working Mormon miners, and that they, likely in company with their Cahuilla associates, were abandoning San Diego.⁶⁹ By the middle of the following year, H.C. Ladd was the only original member of the board of directors remaining in San Diego. The company was sold to Frank Ames.⁷⁰

The Exodus

The flight of the LDS mining contingency was in response to a directive from Brigham Young, the president of the LDS Church in Salt Lake. In early November 1857, the ecclesiastical leaders in San Bernardino received Young's instructions to "forward the Saints to the (Utah) valleys as soon as possible in wisdom."⁷¹ Young was, in effect, circling the wagons in anticipation of the potential threat posed by an army of 2,500 U.S. soldiers who were marching toward Utah from the east. "Johnston's Army" was escorting federal appointees to replace LDS authorities then governing the Utah Territory.⁷²

Not all of the San Bernardino colonists withdrew to Utah, but the exodus clearly depleted the work force and eliminated the bulk of investment capital for the coalmine. George Sirrine alone had invested \$10,000 of his San Bernardino earnings in the mine.⁷³ The miners' devotion to their church and to their families was apparently more profound than their loyalty to an uncertain business venture.

Ames, the new owner, made considerable efforts to continue the project, but by the end of the year 1857 he was quoted in his cousin's newspaper as saying in defeat, "we couldn't lick the sea."⁷⁴

The Legacy

The mine and the men who first worked it were soon all but forgotten by most San Diegans, though the mine itself was reevaluated for possible reopening a quarter of a century later. The "Mormon Mine" has been revisited in the press from time to time as a quaint, if not quirky, anecdote in San Diego's history.⁷⁵ Typically, one of the versions of the legend is included for color. The terms "amusing" and "misguided" have appeared as epitaphs to the aspirations of the miners.

In reality, though, the San Diego Coal Company represented the enthusiasm, optimism, and industry that abounded in San Diego during California's first decade of statehood, and was founded upon reasonable and scientific-based expectations. The investors, administrators, engineers, and laborers who devoted themselves to the endeavor are deserving of a dignified place in California's history. It is probably fortunate that the mine was not actually more successful. Extensive mining on Point Loma might have altered negatively the natural ecology of the peninsula forever. Still, the operation was at the time a legitimate, earnest effort to ensure prosperity and a brighter future for early San Diego.

The "Revelation"

The earliest documentation of the revelation legend appears to be in H.C. Hopkins' *History of San Diego* (1929). He begins the account by writing: "The story goes..." without attributing the story to any source.⁷⁶ The Church of Jesus Christ of Latter-day Saints does have a firm belief in personal revelation and in revelation to the world through prophets.⁷⁷ Perhaps time has woven this belief into the fabric of the mine legend. It is also possible that Ephraim Green is the boy or man of the legend, since he provides the only firsthand documentation of the original discovery. His casual mention of the find, however, suggests it was a coincidental discovery rather than a divine manifestation.

NOTES

1. The Capitulation of Cahuenga signed by Andrés Pico and John C. Fremont ended the war in California on January 13, 1847, a year before the official treaty.
2. H.C. Hopkins, *History of San Diego, Its Pueblo Lands and Water* (San Diego: City Printing Company, 1929), 166.
3. Herbert Lockwood, "Mormons Mined Coal 100 Years Ago On Point Loma," *Peninsula News*, February 2, 1961.
4. See Kenneth Owens, *Gold Rush Saints: California Mormons and the Great Rush for Riches* (Spokane, WA: Arthur H. Clark Company, 2004).
5. Ephraim Green, "Diary of Ephraim Green 1852-1856," carbon copy of typescript available at the Church History Library of The Church of Jesus Christ of Latter-day Saints, Salt Lake City, UT), 110. A digital copy of the original diary in Green's hand can be found online through Brigham Young University: <http://contentdm.lib.byu.edu/u?/MMD,4872> (accessed March 28, 2010). The word "copied" has been pasted on the cover of the album. That most likely refers to the fact that a transcription has been made, or that the diary has been photographed for the online project.
6. William Bagley and Ephraim Green, *A Road from El Dorado: The 1848 Trail Journal of Ephraim Green* (Salt Lake City, UT: The Prairie Dog Press, 1991).
7. Ephraim Green in 1849 was a member of the expedition that initiated this trail between Utah and southern California. William B. and Donna T. Smart, "The 1849 Southern Exploring Expedition of Parley P. Pratt," manuscript adapted from their book, *Over the Rim*, available online from Mormon Historic Sites Foundation and at http://www.mormonhistoricsitesfoundation.org/publications/nj_spring1999/NJ11.1_Smart.pdf (accessed October 8, 2009).
8. Howard Overton, former Chief Ranger at the Cabrillo National Monument, correspondence with author, August 4, 2008.
9. Originally from Maine, Brannan brought the group of Mormons safely to San Francisco by sea and eventually opened a store at Sutter's Mill. He became one of the first to publicize the discovery of gold and founded the California *Star* in January 1847, having brought a printing press with him on board the *Brooklyn*. He traveled throughout California and Mexico during his life and spent his last years in San Diego. He is buried at Mount Hope Cemetery.
10. Warren L. Serrine, "The Life of Gorge Warren Serrine" (unpublished manuscript available at the Church History Library of The Church of Jesus Christ of Latter-day Saints, undated), 4. See also, Charles Lamont Gunderson, "Soldiers and Sinners: The Mormon Experience in Early California, 1846-1847" (master's thesis, University of San Diego, 2006).
11. James H. McClintock, *Mormon Settlement in Arizona: A Record of Peaceful Conquest of the Desert* (Phoenix: The Manufacturing Stationers, Inc., 1921), 46.
12. The Church of Jesus Christ of Latter-day Saints, "Mormon Overland Pioneer Travel, 1847-1868: Isaac Bullock Company (1852)," Church History Library, <http://www.lds.org/churchhistory/library/pioneercompanysearchresults/1,15792,4017-1-78,00.html>, (accessed October 8, 2009).
13. Evelyn K. Jones, *Henry Lunt Biography* (Provo, UT: Brigham Young University Family History Copy Center, 1996), 166.
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16. Francis Ross Holland, *The Old Point Loma Lighthouse* (1968; San Diego: Cabrillo National Monument Foundation, 2007), 23.
17. C.W. Haskins, *The Argonauts of California By a Pioneer* (1890), <http://freepages.genealogy.rootsweb.ancestry.com/~npmelton/argomenu.html> (accessed March 28, 2010).
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20. Karen Bray Keeley and Sandra Shuler Bray, "Settling the West," Tanner Family, <http://www.rootcellar.us/tanndisp.htm> (accessed October, 8, 2009).
21. Teva Tanner, direct descendent of Seth Tanner, interviewed by author, August and September, 2008.
22. Jim Walsh, "Mesa History: Sistine House," *The Mesa Republic*, August 5, 2009. <http://www.azcentral.com/community/mesa/articles/2009/08/05/20090805mr-sistine0805.html> (accessed 8 October, 2009). The Tanner Trail is today a feature of significance at Grand Canyon National Park.
23. Joe Stone, "There's Still Coal in that Mine on Point Loma," *San Diego Union*, April 28, 1974, G2.
24. George R. Ghiselin, "Letter to the Editor," *San Diego Union*, May 19, 1882.
25. Green, *Diary*, 117.
26. Allen Palmer, "Coal on Point Loma: Footnote to History," *San Diego Evening Tribune*, February 11, 1972, B.
27. Donald H. Harrison, *Louis Rose: San Diego's First Jewish Settler and Entrepreneur* (San Diego: Sunbelt Publications 2005), 117.
28. *Ibid.*, 126, 130.
29. Judy Schulman, "Historrey A-Z-the letter F," *Torreyana: A Newsletter for Torrey Pines State Natural Reserve* (September 2009), <http://www.torreypine.org/Torreyana/0909.pdf> (accessed March 16, 2010).
30. "The Coal Mines," *San Diego Herald*, March 8, 1856. A black band can still be observed in a cliff face below the Point Loma Wastewater Treatment Plant; however the author was unable to safely access it. Similar-appearing strata are accessible at Sunset Cliffs, about one and a half miles to the north. The material in these bands has the appearance of compressed sand, does not combust when heated at close range with a blow torch, and is probably not coal. It is still in question, then, as to whether Green was in some way attracted by black lines in a cliff face further to the south, or whether he came across the coal by some other method.
31. Green, *Diary*, 111-112.
32. *Ibid.*
33. Minutes of the Board of City Trustees for the City of San Diego, February 5, 1856.
34. *San Diego Herald*, November 24, 1855, 2:6.
35. James R. Moriarty and Madeline Mahnken, "Scientists Look at the Mine," *The Western Explorer, Journal of the Cabrillo Historical Association* 2, no. 3 (April 1964): 20-25.
36. Palmer, "Coal on Point Loma: Footnote in History"; Lockwood, "Mormons Mined Coal." Challenging these reports is a 1974 newspaper article claiming that the mine opening was still exposed at the time of its printing. It includes a photograph, purportedly of the still-exposed mine entrance. Stone, "There's Still Coal in That Mine on Point Loma."
37. Estimates by later observers ranged between 100 to 200 feet.
38. Estimates by Green and by later observers ranged between 90 and 150 feet. Current measurements of the area show it to be in the neighborhood of 100 feet above sea level.
39. Some modifications to the site may have been made by groups that attempted to resurrect the operation in 1882 and 1891, but these are probably negligible, owing to the brief nature of their activities at the site.
40. Ghiselin, "Letter to the Editor." Observation of planking was by J.L. Hilliard, as reported in "Dreams of Coal," *Ocean Beach News*, April 9, 1947.
41. Winifred Davidson, "Old 'Well' Hides Mormons' Mine on Point Loma," *San Diego Union*, January 31, 1932.
42. "Dreams of Coal;" Lockwood, "Mormons Mined Coal." Lockwood said that Donald Robinson

reached the bottom of the shaft at forty feet, while Hilliard in the *Ocean Beach News* reported that water stood within thirty feet of the surface. It could be that Robinson's "bottom" was actually the point at which he could not go any further because he reached water himself. Allowing for human error, a ten foot difference in estimating the distance is understandable. If the water level was that high above sea level, some of it might have been accumulated rain, or drainage from an aquifer closer to the surface.

43. Vincent Dunne, "The Great 'Coal Rush,'" *Evening Tribune*, September 23, 1969; Lockwood, "Mormons Mined Coal."
44. Davidson, "Old 'Well' Hides Mormons' Mine on Point Loma"; Lockwood, "Mormons Mined Coal." Carbide lamps were not in use until after 1892, so these were probably left by later adventure seekers.
45. Green, *Diary*, 114. The cliffs have eroded considerably in the intervening years, so that these steps are no longer visible. Patrick L. Abbott and Thomas K. Rockwell, "Geologic History," in *Understanding the Life of Point Loma*, ed. Rose Houk (San Diego: Cabrillo National Monument Foundation 2004), 25-28.
46. Moriarty and Mahnken, "Scientists Look at the Mine," 23. Steam engines called "donkeys" had been in use for several decades prior to 1855 for shipboard and waterfront applications, as well as in mining. A logging version was patented in 1881. The engines were relatively small and portable compared to larger devices, but still weighed tons and would have been very difficult to lower down a 90-foot cliff.
47. Moriarty and Mahnken, "Scientists Look at the Mine," 24.
48. Green, *Diary*, 117.
49. This incline is five to fifteen degrees to the northeast. Abbott and Rockwell, "Geologic History," 16.
50. "Grantee Index to Official Records, Books 1-4 A-Z, 1848 thru 1889," *Index to Deeds - San Diego County, California*, microfilm reel A-126, 206, maintained at the San Diego County Assessor/Recorder/County Clerk Office. H.C. Ladd obtained deeds to six recorded properties in San Diego; at least two of them were obtained during his mining days
51. Green, *Diary*, 112.
52. Green, *Diary*, 121.
53. Green, *Diary*, 118.
54. Green, *Diary*, 111.
55. Green, *Diary*, 122; "The Coal Mines."
56. *San Diego Herald*, March 1, 1856.
57. Palmer, "Coal on Point Loma: Footnote to History."
58. Green, *Diary*, 122.
59. *San Diego Herald*, August 15, 1857.
60. *San Diego Herald*, June 20, 1857.
61. Green, *Diary*, 122.
62. *San Diego Herald*, October 18, 1856.
63. Stone, "There's Still Coal in that Mine on Point Loma."
64. *San Diego Herald*, February 21, 1857, 1:2; Ghiselin, "Letter to the Editor."
65. *San Diego Herald*, August 15, 1857.
66. Green, *Diary*, 125.
67. Green, *Diary*, 115.
68. "The Coal Mines."
69. *San Diego Herald*, November 21, 1857.

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70. Will Willis, "Point Loma Mine 'Found' 4 Times," *San Diego Evening Tribune*, May 3, 1954, B.
71. Eugene E. Campbell, "A History of the Church of Jesus Christ of Latter-day Saints in California, 1846-1946," Ph.D., University of Southern California, 1952, 220, as cited in Richard O. Cowan and William E. Homer, *California Saints: A 150-Year Legacy in the Golden State* (Provo: UT: Religious Studies Center, Brigham Young University, 1996), 210. This may have been a reiteration of a previous directive. Brigham Young first began writing his evacuation instructions to the Saints in San Bernardino on August 4, 1857. Everett L. Cooley, ed., *Diary of Brigham Young 1857* (Salt Lake City, UT: Tanner Trust Fund University of Utah Library, 1980), 56. <http://content.lib.utah.edu/cdm4/document.php?CISOROOT=/tanner&CISOPTR=2466> (accessed February 15, 2010).
72. University of Utah, *Utah History Encyclopedia*, Media Solutions, University of Utah Office of Information Technology, <http://www.media.utah.edu/UHE/j/JOHNSTON,ALBERT.html> (accessed March 17, 2010).
73. McClintock, *Mormon Settlement in Arizona*, 47.
74. Willis, "Point Loma Mine."
75. Herbert Lockwood, "The Mormon Coal Mine," *The Western Explorer: Journal of the Cabrillo Historical Association* 2, no. 3 (April 1964): 14-19.
76. Hopkins, *History of San Diego: Its Pueblo Lands and Water*, 165.
77. Joseph Smith Jr., "Articles of Faith," *Pearl of Great Price* (Salt Lake City, UT: Corporation of the President of The Church of Jesus Christ of Latter-day Saints, 1981), Article 9.