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THE HISTORY OF THE NEW ALMADEN MERCURY MINES

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PREFACE

The New Almaden Mines are located in California and once produced quicksilver, or what is also called mercury. In this essay, a different aspect is viewed by the reader because when one reads any information about the mines, it is usually about the quicksilver in itself. But, in the following pages, the New Almaden Quicksilver Mines are presented from a different side. The essay will take three men, each who had a part in the promotion of the mines, and review them separately. These men were the first three men, written about in consecutive order to have any part in the New Almaden Mines. Different problems and how each man solved them in relation to mining quicksilver are expressed within the text of this essay.

THE HISTORY OF THE NEW ALMADEN MERCURY MINES

"The surest thing there is is we are riders,
And though none too successful at it, guiders,
Through everything presented, land and tide
And now the very air, of what we ride.

What is this talked-of mystery of birth
But being mounted bareback on the earth?
We can just see the infant up astride,
His small fist buried in the bushy hide.

There is our wildest mount-a headless horse.
But though it runs unbridled off its course,
And all our blandishments would seem defied,
We have ideas yet that we haven't tried."

This poem by Robert Frost expresses how three different men felt about the commencement of a project. The project was that of the promotion and management of the New Almaden Quicksilver Mines. Their feelings were similar to what the poem expresses because each one of them knew that there existed many new ways to make the mines successful, but they had not been tested. The quicksilver mines of New Almaden in California are a subject with a fabulous and unique history. The actual discoverer of the Cinnabar Mines is Andres Castellero, a captain of the military service of Mexico. After the Cinnibar Hills were discovered, the mines were then initiated and promoted as the first organized mining operation of California by Alexander Forbes. But, with the departure of the Barron, Forbes Company, and the immediate

possession of the Quicksilver Mining Company, a complete reorganization plan became the primary objective in the resumption of operations. The plan was headed by Samual F. Butterworth, the first president of the Quicksilver Mining Company.

Andres Castellero was a captain in the military service of Mexico who discovered the mercury ore, cinnabar, in 1845. He was the man that began the quicksilver days of New Almaden. Before Castellero discovered the mercury, he was quite observant of the reddish color he often saw in the hills during his journies. He made a return visit to Mission Santa Clara because he was curious about the reddish color applied to the buildings and he was interested in the small quantity of red rock piled in the Mission yard. Castellero then began to test the rock, hoping that it might contain silver or gold. However, the general characteristics of the red rock reminded him of a similar type of rock which he had observed in his native Spain, where the quicksilver mines of La Mancha, the greatest in the world, had been producing for centuries. Castellero became more engrossed in his project, although he was briefly familiar with the elementary procedures in which quicksilver is extracted. With an offer of \$1000,000 for the discovery of mineral riches, he was willing to apply the technical knowledge that he had to reveal the secrets of red rock. If Andres Castellero was able to find a mineral of wealth in a strange land, it would be a contribution to Mexico as well as recognition and wealth for himself. Castellero continued with his testing. He placed some rocks in a circular arrangement and prepared a fire within. He kept the fire continuous and made a bed of extremely hot coals. He then laid several pieces of tile over the coals and

placed the red rock on top of the tiles. Castellero allowed the rocks to remain on the hot coals for a significant amount of time, hoping that a long exposure to heat would create some reaction. Cold water was then applied to the rocks by Castellero and a steaming condition was caused immediately. Next, he held a glass in each hand over the rising vapor and he continued with the constant firing and roasting of many samples. Andres Castellero's project of testing came to an end when he was highly overjoyed to discover small globular particles of a silvery nature, clinging to the inner walls of the glasses. Castellero examined them carefully and closely. He pressed the elusive substance with his hand until the scattered particles united into a single unit. He was quite impressed by the results, which, in his own theory and estimation, proved that the roasted rock was cinnabar, the bearer of mercury. After the discovery of the quicksilver, Castellero made immediate plans to journey in search of red rock hills. He did so along with provisions and a few Indian guides. On horseback they proceeded over the tree-shaded Alameda, through Pueblo San Jose along the green hills of the western Santa Clara Valley. By noon, the Indians stopped, dismounted and indicated to Castellero that they had reached the end of the prospecting trip. They had reached the Cinnabar Hills. The rest of the trip would be made on foot. The climbing and descending journey over an unmarked course, eventually led into a huge, open ravine of sparse vegetation. On the Northern side of the ravine the apex of the hill rose sharply. On its slopes large formations of deep, reddish stone projected. Castellero hiked up and over and viewed a cave-like opening of moderate size for entry and shallow in depth. This was the Red Cave and the source of the color that had been supplying the

visitors for a long period of unrecorded time. Andres Castellero's imaginative mind conceived that this great hill was a treasure chest of quicksilver ore. The results of his explorations seemed to be growing into gigantic proportions and Andres Castellero was convinced that he was on the doorstep of a great discovery. Castellero realized the merits of his discovery and became aware of the need to identify himself and make known his intentions for legal claim to the property. The details for legal registry involved several requirements which consisted of a production of the ore, a description of the locality, specific points of discovery and personal details concerning the discoverer. In addition, before the claim could be made out and officially recorded and juridical possession obtained, the claimant must appear before the proper official with a written statement pertaining to the prescribed details, and also, within ninety days, show development work at the site of discovery as specified. On November 22, 1845, Andres Castellero had made the necessary preparations for filing a statement of declaration. He then went to the office of Pedro Chabolla, the Alcade in Pueblo, San Jose, and following a brief conference, Castellero presented his declaration to request title to a mineral deposit. The statement of declaration was given and filed as follows:

Senior Alcalde of First Nomination;

Andres Castellero, captain of permanent calvary, and at present resident in this department, before your notorious justification makes representation, that, having discovered a vein of silver, with a ley of gold on the rancho pertaining to Jose Reyes Berryessa, retired sergeant of the Presidio Company of San Francisco, and wishing to work it in company, I request that in conformity with the ordinances mining, you will be pleased to fix up notices in public places of the jurisdiction, in order to make sure of my right, when the time for the juridical possession may arrive,

according to the laws on the matter. I pray you to provide in conformity, in which I will receive favor and justice; admitting this on common paper, there being none of the corresponding stamp.

With this statement Andres Castellero had completed the first step of entering a mining venture by the declaration of his intentions. His prime concern now was that of the establishment of a basic plan for procedure in the commencement of his mining activity. Castellero discussed in general the details for the development of the mining project with his good friend, Father del Real. The mining operation was to be as a company or partnership arrangement. The mine would be known as the "Santal Clara" and he would divide the ownership into twenty-four shares. Father Jose Maria del Real would receive **four** shares; Don Juan Castro would receive four shares, and Secundino and Teodoro Robles would each also be granted four shares. The remaining twelve shares were to belong to Andres Castellero. After having divided his shares of the company into parts and they were administered, Castellero returned to the cave accompanied by William Chard of Pueblo San Jose. Chard then proceeded to uncover the secrets of quicksilver extraction. He tried one way of extracting the mercury from the cinnabar ore, but the meager award was insufficient to further its continuance. Castellero then knew that he must continue his mining operation in order to maintain his possession. He returned to the Alcalde's office with another statement of declaration in which he stated, "In conjunction with the claim of silver with a ley of gold, I have definitely discovered quicksilver with sufficient evidence to substantiate my claim." Andres Castellero also wished for the statement to be placed on file and possession to be granted

according to the law. Several days passed and on December 30th a certificate of possession was granted by First Alcalde, Antonio Maria Rico to Castellero. The terms were stated:

I have granted three thousand veras (yards) of land in all directions, subject to what the general ordinance of mines may direct, it being worked in company, to which I certify, the witnesses signing with me.

Witnessess--Antonio Sunol, Antonio Maria Rico, Alcalde Jose Noriega.

Castillero then had acquired what was called "juridical possession" of the mining property. When Castellero returned to his camp near Red Cave, he found that Chard had discovered a new way to extract the quicksilver from the cinnabar ore. He did this by using Whalers' try-pots, which were large cast iron pots. The try-pots worked successfully for several months. However, although the primitive device was functioning successfully, the results were not sufficient enough to carry the project to the proportions of development necessary to advance the progress of the operation. Andres Castellero now recognized the next obstacle confronting his operation. Lack of finance, equipment and supplies was the obstacle blocking the way to a successive mining project. In addition William Chard informed Castellero that he and the Indians would be continuing on and could not help him mine anymore. Castellero then returned to Mexico seeking governmental aid. But, little was gained because of the mounting conflict between the United States and Mexico. Before Castellero ever received any financial support from his country, open war broke out and his dream of returning to the Red Cave to develop his great mine became more remote. Andres Castellero then decided to relinquish his shares in the Santa Clara mine. He soon found

a willing customer by the name of Barron, Forbes Company, who were industrial operators and were located in Tepic, Mexico. Andres Castellero's part in the New Almaden Cinnabar Mines came to an abrupt end in 1847. His identity, as the discoverer of quicksilver and the promotion of the first legal mining camp would become indistinct in the pages of recorded accomplishments. He disappeared into obscurity, not even aware that his discovery would, in the near future, attain world-wide prominence and the New Almaden Cinnabar Mines would become one of the greatest quicksilver mines in the world during its span of existence. Andres Castellero played a major role in the discovery and promotion of the New Almaden Mines. Although he was not successful, he contributed a great deal to the success of the mines in the future; because without this man and his discovery, the mines may not have ever been promoted later in the years.

After Andres Castellero sold his shares, the Barron, Forbes Company took over the quicksilver mines. In the fall of 1847, Alexander Forbes arrived from Mexico with a big group of workers, equipment, and John Young, who would superintend the initial operations. Within a very short amount of time, his crew was busily involved in the preparation of facilities for operation. Structures were built on the banks of the Los Alamitos Creek, and they would later be known as the settlement of Hacienda. Alexander Forbes planned a successful procedure that progressed with precision. That is, for a while until Forbes acknowledged that the Castellero claim was not sufficient in legal detail to show conclusively the absolute ownership of the mine. The problem was the boundary agreement which had been mutually executed at the time of discovery. Many years before, in 1842,

Jose Reyes Berryessa and Justo Larios received land grants from Governor Alvarado. The grants were primarily for grazing land and extended into the hills. Castellero covered the hill area, and Berryessa and Larios had the outer boundary of the hills because grazing near the hills was not worth much. However, as time passed, the mining activity on the hill revealed evidence which created great interest in certain parties. The attitude of the adjoining landowners (Berryessa and Larios) began to change. The strategic plan for developing a controversy into an open issue of contest was to prove the fact that Larios and Berryessa land extended into the mining property. Larios and the widow Berryessa took advantage and saw this as an opportunity to speculate on such a move. Larios claimed land in the area of the reduction works and the Berryessas claimed into the mineral deposits. Alexander Forbes now realized that he must take action against these jumpers, speculator and promoters who were taking advantage of the success that the Cinnabar Hills were quickly becoming. He hired a man by the name of Lyman who was a surveyor and stayed at the mines for several weeks. Lyman finished his work that resulted in a general disagreement with all parties involved. But, as the pioneer operations of the Barron, Forbes Company became more promising, the earlier problems resolved themselves. Although the other problems were solved, new barriers blocked the way to success for Forbes. He now needed to find an even more efficient and better way of extracting the quicksilver from the ore. He found his solution with the help of Henry W. Halleck, a graduate of West Point. They replaced man-powered work with that of mechanical machinery. In addition, a quicker process was

found to extract the mercury from the cinnabar ore. Alexander Forbes had then cleared the obstacle that was in his way. Forbes' problems seemed distant, that is, until the old quarrel of total ownership of the mine was brought forth once more. The ownership was ruled, by the Supreme Court, illegal, and in May of 1863, President Lincoln signed an order to evict the Barron, Forbes Company in a proclamation that the land was public domain (government property) and it was subject to government control. At the occurrence of this sad event, the Barron, Forbes Company returned to Mexico. Although they were looked upon as failing, their short span of years in promoting the first legal mining claim in California was very successful. Alexander Forbes was a great contributor to the mining venture that would eventually flourish for half a century. In addition, he and his company pioneered and established a settlement that is still known today as the beautiful New Almaden.

With the eviction of the Barron, Forbes Company, the New Almaden Mines faced a new beginning. The new start was organized by Samuel F. Butterworth, who was the president of the newly formed Quicksilver Mining Company. Butterworth was convinced that the red earth of the mines contained a great potential and that the outlook for long term operation showed great promise. In relation to his convincing attitude, Butterworth might also have been inspired on the long term operation of the mines by the article which appeared in Harper's New Monthly in 1863.

The ore of the New Almaden is solely sulphurets of mercury, the rarest known and exceeds in richness that of any other on record. The average yield is 35%. No native or Virgin quicksilver has yet been found.

The general outlook of the New Almaden Mines at this time would indicate that the mine is inexhaustible.

The article was written by William V. Wills and is believed to have inspired Butterworth in making the mines successful for the six years in which he was involved in this operation. Not only was he inspired, but Samuel Butterworth was also well informed in every aspect relating to the New Almaden Mines. In July, of 1864, his aggressive manner was already applying forceful measures for increased efficiency of operation and improvement in the general welfare of the mining community. Rules and regulations were set for employees and every employee became familiar with the specific details of living and working under the new management. In addition, the standards of operation were raised to stimulate greater production, and only the qualified and competent workers remained on the payroll. Because of these actions, a remarkable advance had been made in production by the end of 1864. The following year an even greater progress was made in production and sales of quicksilver. The year 1866 was also commendable, although its progress was a little less than that of the year before. The first three years of the Quicksilver Mining Company reached the peak of production and income because of the guiding hand of Samuel Butterworth. By 1866, he had initiated the basic projects of his reorganization program. The years passed successfully for Samuel Butterworth, until he resigned in 1870. Many say that the words of a reporter may have discouraged Butterworth from wanting to be involved in the management of the mines any further. "The present conditions of the principal mine is poor, both in quality and quantity of ore, its future uncertain and any conjecture would be valueless." Whether or

not the statement had bearing on Butterworth's resignation, the fact remains that he was very successful in reorganizing and promoting the New Almaden Mines for six consecutive years. The years were quite successful and made the New Almaden Mines known nation-wide due to the careful planning of Samual Butterworth.

In reviewing the early history of the New Almaden Quick-silver Mines, three different men are brought forth and outlined. The first, Andres Castillero, was the actual discoverer of the mines. Alexander Forbes became the second man who played an important part in the history of the mines. His company was, for a while, successful in operating the mines. The last man who was highlighted is Samual Butterworth, who operated and managed the mines for six years; three of which were peak production years. Each one of these men had problems in promoting the mines, but each of them also contributed to the popularity of them. In relation to this point, these three men had ideas that were not totally worked out and tested, although many of their discoveries were bright ideas and were successful.

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Source consulted: Mr. Pegg, a history teacher at Leigh High School who gave me information and some insight to the subject.