CHAPTER FOUR

Chinese by the Numbers

Research resulting from the payroll records of the Central Pacific Railroad Company becomes significant because it changes currently accepted historical data concerning the initial employment date and total number of the Chinese employed. The original records are archived in the basement of the California State Railroad Museum in Sacramento.[1]

The basic issues have, from time to time, raised several questions,
which I hope to answer with my findings.

1. When and who were the first Chinese employed?
2. What was the maximum number employed?
3. How was this number quantified and qualified?

Employment of the First Chinese Workers

Four of the most popular books about the building of the Transcontinental Railroad overlooked documents that pointed to the exact date of the hiring of the first Chinese railroad workers.

In Chapter Seven, "The Central Pacific Attacks the Sierra-Nevada, 1865," Stephen E. Ambrose writes in *Nothing Like It In The World*:

> In February, a month after Strobridge's all-but-fruitless call

> for labor, Charlie Crocker had met with him and raised the question of hiring Chinese. He said some twenty of them had worked, and worked well, on the Dutch Flat-Donner Lake Wagon Road. [2]

However, the Central Pacific Payroll Sheets No. 26 and No. 34 dated January and February 1864, are the documents that record the first Chinese railroad workers, Hung Wah and Ah Toy,[3] who supervised a crew of 23 unnamed workers.

Ah Toy was paid as railroad foreman at this time, and Hung Wah was the headman who later became a labor contractor known as the Hung Wah Company. These men worked for Division 2, Sections 30 and 31. Ah Toy, as headman, collected pay for himself in the amount of 24 man-days. Hung Wah collected pay for 588 man-days, which equals 23 men working an average of 26 days per month, thus adding 24 men who were the first employees for the Central Pacific Railroad. This number differs slightly with Ambrose's number of 20, but the difference is insignificant.

Ambrose implies that the Chinese started working on the railroad in 1865, even though the payroll data shows that 23 Chinese workers were employed in 1864.

In April 1864, Payroll Record 43 again confirms continued Chinese employment because it shows that Hung Wah was paid for 130 man-days of labor, approximating a crew size of five men working on Division 4, Section 34.[4] After the railhead

reached present-day Roseville, lack of funds and materials stymied progress for the remaining months of 1864.
Ambrose was not alone in propagating a later starting date. Other authors also believed that the first Chinese workers were hired in the spring of 1865.

Griswold relates in Chapter "1865" of his book *Work of Giants,* that as Crocker and Strobridge were on the excavation site of a roadbed east of Newcastle, threatened by the workers who said they would quit unless they were paid more, Crocker suggested that Strobridge go over to Auburn and hire some Chinese men. Faced with insufficient white workers, and frustrated by their unreliable attendance, a reluctant Strobridge gave in to Crocker's suggestion and hired 50 Chinese. The date and title of this chapter "1865" implies and misleads one to believe that this is the first hiring of Chinese.[5]

Opinion of the Chinese as a viable workforce was beginning to shift in their favor. The first indication of this appears in a letter written on April 12, 1865, by Central Pacific's legal counsel Judge E.B. Crocker to his long time friend Cornelius Cole, who was retiring as a California congressman.

Cole writes, "A large part of our force are Chinese, and they prove nearly equal to white men, in the amount of labor they perform, and are far more reliable. No danger of strikes among them. We are training them to all kinds of labor, blasting, driving horses, handling rock, as well as the pick and shovel."[6]

Charlie Crocker realized the necessity to employ thousands of Chinese laborers. However, still doubting their value, “Strobridge objected because they `were not masons.’ Crocker countered that the Chinese had to their credit the greatest piece of masonry in the world -- the Great Wall."[7] Crocker prevailed, as Payroll Sheet No. 102 dated March 1865 attests to the beginning of the mass hiring of Chinese workers, which, because of the widespread publicity given to this event, adds support to the misconception that this marked the first employment of the Chinese. This record showed 12 gang bosses collected pay for 730 workers. These numbers increased to 1,358 for April and 1,218 for May of 1865.

A logical assumption is that the 12-gang bosses, who are listed and named in the March 1865 payroll records, were among the first 21 workers for Ah Toy in January 1864, a year and three months earlier. As earlier workers of the Central Pacific, they gained enough experience to later become gang-bosses.

The identity of the first 20 Chinese workers relies on the time period and their residence near Auburn. Nearby Dutch Flat was the third largest Chinese settlement of that era. An unpublished research paper, "References to Chinese in Dutch Flat," by Douglas Ferrier,[8] named Chinese workers who were listed in the 1860 and 1870 Federal Census and correlated with payroll records of the Central Pacific Railroad.

The 12 Chinese names listed as miners in the 1860 Census are: Ah Chung, Ah Wong, Ah Kung, Ah Chin, Ah Fong, Ah Quong,

Ah Chow, Ah Lim, Ah You, Ah Henge (Hen Gee), Ah Fong, and Ah Paw who were also listed in the payroll records. The 1870 Census shows another nine Chinese who gave their occupations as railroad worker, and were also on the Central Pacific Railroad payroll. These men are: Ah You, Ah Chung, Ah Wah, Ah Ming, Gee Tong, Ah Jim, Ah Hing, Ah Tou (Too),and Ah Low.[9]

Had the census been taken before 1870, perhaps a higher number of Chinese would have correlated with a larger percentage of names in the payroll records because after the completion of the Transcontinental, most of the Chinese were laid off and moved out of the area.

How Many Chinese Worked for the Central Pacific?

It was the railroad's policy that a headman or labor contractor collected pay (in coins) for all the workers in his crew. George Kraus states in his article "Chinese Laborers and the Construction of the Central Pacific," that a method was used by the railroad company to count the total number of workers at the beginning of the morning shift, at lunch, and at the end of the shift to compare the total hours of wages turned in by the gang boss to prevent overpayment. It was said that one could not tell the difference between the Chinese and the Indian workers. Because of this policy it is improbable that the individual names of the actual laborers will ever be known.[10]

It is commonly reported that peak employment of Chinese workers by the Central Pacific ranges from 10,000 to 20,000. For

instance, Kraus states in his book, *High Road To Promontory*: "The force at work on the road probably averaged from six to ten thousand, nine-tenths of them being Chinese. . ."[11]
Pat Jones writes in *The Colfax Connection*, "By the time the golden spike was driven at Promontory three years after the Ledge Cape Horn was completed, over 10,000 Chinese had been brought from across the Pacific."[12]

The Official Map and Guide, Golden Spike declares that "Because California's labor pool had been drained by the rush for gold, Central Pacific imported 10,000 Chinese, the backbone of the railroad's work force."[13]

As I eagerly examined the payroll sheets I realized that out of 65 months of work – from January 1864 through May 1869 – 46 months were missing. The 19 existing records consist of three months for 1864, three months for 1865, a full year for 1866 (the year of peak employment), and one month for 1867. The year of peak employment was the result of the grading from Colfax, around Cape Horn, to the summit and the blasting of 13 tunnels during this time. April 1866 records the highest monthly employment with 6,190 men.

In June 1866, the Hung Wah Company was the largest labor contractor, supervising 506 men, working three shifts around the clock. Another large labor contractor was the Ah Sam Company with 405 men working three shifts as well. Hung Wah, the gang boss -- not the Company, had the distinction of supervising the largest crew of 629 men.

Chung Wah had 352 men in March 1866. Smaller crews of three men each were provided by Ah James, Ah Moon, and Ah Jack companies, while Ah Chick and Ah Get were gang-bosses to the smallest crew of two men each.

To calculate the total number of Chinese employed, according to 19 months of available payroll records from 1864 to 1867, I entered the complete database of 1,570 names and alphabetically sorted them deleting duplicates, reducing the total number of names to 972. Further subtracting the non-crew laborers of cooks, waiters, drivers, blacksmiths, stewards, and water boys who were paid directly, brought the number of names down to 816. These were the gang bosses and labor contractors who had crews. Multiplying the 816 by the calculated average crew size of 28 men, and adding back the 156 other individual workers initially subtracted, equals a grand total of 23,004 workers. The rounded total of 23,000 is considered to be a minimum but much larger than the previously published total of 10,000 at peak employment, especially when realizing that 29 months of payroll records, from 1864 through 1867, are missing.

The Grass Valley *Union* declared that at this rate there would soon be “at least 20,000 of these prospective unbleached American citizens scratching gravel on the great national highway."[14] The Chinese, like other day workers, did not work continuously for long periods of time.

A newspaper article, “The Chinese in California,” in the

Sacramento Daily Union dated July 9, 1866, reports:

> A member of a leading Chinese mercantile firm in San Francisco furnishes the following figures, showing the actual number of Chinese in California, as appears from the books of the Six Companies into all the Chinese in the State are divided: Ning Yeong Company, 15,000; Yuong Company [Yeong Wo], 11,500; Sam Yup Company, 10,500; Say Yup Company, 9,000; Hop Wo Company, 8,500; total 58,300. More than one-fourth of the entire number in the State are employed at this time on the Pacific Railroad, and other public improvements. Half as many more are engaged in manufacturing woolen goods, cigars, etc.; at least 10,000 in washing, and a considerable number in agricultural pursuits.[15]

In evaluating this article, I found that only five of the six companies reported their numbers therefore I will assume that one quarter of the total of 58,300 is correct. Therefore, the number of Chinese railroad workers is 14,575 for the month of July 1866. If one proportioned this calculated number of 23,000 for 19 months of data to 12 months, it would yield 14,526 workers, comparing favorably to the conclusion expressed in this article.

Him Mark Lai, a published American-Chinese historian, clarified the *Sacramento Daily's News* article about the missing data from the sixth company, by citing another newspaper:

> On July 7, 1866, the *Daily Alta California* reported that the Yan Wo Company had 3,800 railroad workers. These

> workers spoke the Hakka dialect, which the Canton contractors disliked and would not hire them to avoid confrontations.

It seems that even though the Hakka men were from the same southern district as most Chinese, they comprised a segment of the workforce that was considered socially incompatible and was not welcomed.

Further support for the larger total number of workers comes from an article by Mary Roberts Coolidge, *Chinese Immigration*. Citing statistics from the Six Companies that in 1866 there were 58,300 Chinese in California, with 25 percent of these immigrants, or 14,577, working on the railroad.[16] Furthermore, in 1868 the *Sacramento Daily* newspaper estimates that 41,000 more Chinese came to California. If we add 25 percent of these men, or 10,250, to the previous total it would increase the grand total of Chinese workers to 24,827. However, this figure cannot be verified because the 1868 payroll records are missing.

Table I summarizes the Central Pacific Railroad Company monthly payroll records from the computerized database that I generated. A sample page is shown in the Appendix.

Significant data from Table I (below) show that the largest monthly employment was 6,191 workers for April 1866. The average crew size for 1866 was 27, while the average for 1864-1867 was 30 men. Thus, the average number used for our purposes will be 28 men per crew.

Table I. Summary of the Chinese Monthly Employment

Payroll Date	Man-Days Paid	No. of Workers	No. of Headman	Avg. CrewSize
Jan 1864	612	23	2	23
Feb 1864	554	21	2	21
Apr 1864	130	5	1	5
Mar 1865	18,972	730	12	43
Apr 1865	35,311	1,358	13	39
May 1865	31,666	1,218	15	81
Jan 1866	29,116	1,120	55	20
Feb 1866	30,584	1,176	61	19
Mar 1866	65,640	2,525	89	28
Apr 1866	160,958	6,190 (max.)	169	37
May 1866	121,026	4,655	149	31
Jun 1866	134,773	5,184	161	32
Jul 1866	121,926	3,933	119	39
Aug 1866	52,300	2,012	34	20*
Sep 1866	113,337	4,359	216	20
Oct 1866	79,729	3,067	173	18
Nov 1866	63,964	2,460	122	20
Dec 1866	34,478	1,326	85	16
Dec 1867	10,427	401	17	24

Notes:

1. The average crew size for 1866 was 27, and the average for 1864-1867 was 28 men.
2. *Denotes 20 different men working tunnels for three shifts for a total of 60 men.

Length of Employment

After calculating the total of Chinese workers according to entries on payroll records from 1864 to 1867, a question lingers: How long was each Chinese employed? Each day the site foremen, mostly Irish, would tell the Chinese gang bosses and working labor contractors how many crews were needed on that day. It is believed that there were Chinese camp followers who were looking for work, hoping to replace regular workers who were sick, injured, or left the job. This was a common practice made easy by the fact that the Irish foreman could not tell the difference from one Chinese to another, neither did he care as long as he had the number of men needed for that day's work. Many Chinese, like other railroad workers, when realizing how arduous and dangerous railroad work was, resisted pushing their luck by not working longer than necessary to earn a stake.

How long each Chinese worker was employed needed to be known. This curiosity prompted another analysis. Sorting alphabetically the original 1,507 name entries of the master database, the result was a list of names of the gang bosses and working labor contractors for each month of employment. The following summary lists the number of crews and the number of months they worked.

Table II. Summary of Length of Employment

No. of Crews	No. of Months Employed
1,304	1
108	2
39	3
21	4
8	5
9	6
7	7
4	8
2	9
1	10
2	15
1	16
1	17

Considering that this data is skewed by showing the maximum of crews working the least number of months, I nevertheless tried to determine an average from the non-uniform, complex data. In order to calculate the average length of employment, several methods were used -- the mean, mode, median, and mid-mean. However, while the mean number of months shows to be 157, it is wrong, because we know that the railroad was completed in 76 months. The mode value was found to be 15 months, which also appears too large. The median value was seven months of employment and the mid-mean value five months. The maximum number of crews showed only one month of employment, while 18 crews worked more than six months. Compared to the other methods, the mid-mean calculation showed the least number of months worked, which seems to fit the data.

Some interesting facts surfaced from this analysis. The Ah Coon and Ah Fong crews were employed 15 months, followed by the Wo Hop crew with16 months. However, the Hung Wah crew worked for the longest period of time. According to the payroll records, they worked 17 of the 19 months, dating from January 1864 to December 1867. Hung Wah was one of the first Chinese to be hired in January 1864. His work longevity and leadership were later recognized by Strobridge at the completion of the railroad.