

# January 8, 1863

San Francisco Bulletin: January 8, 1863

## [SECOND DESPATCH.]

SACRAMENTO, January 8—2 P. M.

**The Central Pacific Railroad Company broke ground at noon to-day. Prayer was delivered by the Rev. Dr. Peck; and speeches were made by Governor Stanford, Mr. Crocker, Senators Crane, Vandyke and Booth, and Assemblymen Banks, Warwick and Sears.**

Once it had broken ground, the Central Pacific Railroad began the long, difficult construction process. The workers had to create a grade, or a foundation, for the track using shovels, wheelbarrows, picks, scrapers, and their own two hands<sup>1</sup>. Behind them came the track layers who had to lug and lay the wooden ties and 700 pound rails, finishing the process by driving in the spikes. Each mile of track required the Central Pacific Railroad to lay 400 rails and up to 2,640 ties<sup>2</sup>. That is quite a load of supplies!

Though California was plentiful in wood for ties, the Central Pacific Railroad relied heavily on the East to provide it with building materials. This process was both costly and time-consuming. Without a transcontinental railroad already in existence, the most efficient route to ship materials from East to West was around Cape Horn at the tip of South America. After arriving at San Francisco, they took a land route to Sacramento, then rode the train to the end of the tracks<sup>3</sup>. In addition to shipping costs, prices spiked due to the Civil War and the Congressional decree that all materials for the railroad must be made in the United States<sup>4</sup>.

### Increasing Supply Prices

<u>Product</u>	<u>1860-1863</u>	<u>1864-1867</u>	<u>1868-1869</u>
Iron Rails (per ton)	\$41.75	\$76.87	\$91.70
Spikes (per pound)	2.5¢	6.5¢	
Blasting Powder (per keg)	\$2.50	\$15.00	
Shipping (per ton)	\$17.50	\$51.97	
Locomotives	\$13,688	\$35,376	

Figures from Ambrose, Stephen A. *Nothing Like It in the World*. Simon and Schuster: New York, 2000. (pp. 102,117,147,301)

# september 10, 1865

As workers on the Central Pacific Railroad, you have now laid 54 miles of track to Illinoistown<sup>5</sup>. It's been 2 years and 8 months since the ground-breaking ceremony and 2 months since the Central Pacific reached Clipper Gap, a mere 11 miles away. Needless to say, the progress was not very impressive to the rest of the country<sup>6</sup>. While here, Governor Stanford invites the Speaker of the House, Schuyler Colfax, to see the end of the track. He then renamed this town Colfax in honor of the politician<sup>7</sup>.

By this time, the Big Four were worried about their labor shortage. White men proved to be unreliable workers who would work temporarily, but leave this low-paying job once they reached mines. Despite some initial resistance, the willing Chinese proved to be the answer to this problem.

San Francisco Bulletin:  
February 19, 1867

### How the Chinese Laborers came to be Employed.

It was in the year 1863, if I recollect aright, shortly after the building of the Central Pacific Railroad commenced, that the question of employing Chinamen in its construction was first forced upon the Board of Directors. I say forced upon them; for had they been able to obtain sufficient white labor no Celestial would ever have wielded a shovel on the road. But this white labor was not to be had. The Company were offering the last \$31 per month and board. This by many was deemed insufficient pay, and to some extent operated against the supply; but even had much larger wages been offered, it would still have been impossible for the Company to have secured anything like the requisite white force on this coast. They wanted thousands of men; they could only obtain hundreds. They wanted the work driven ahead; it was moving but slowly with the small force of white men. The urgent want was more laborers, and the employment of Chinese was mooted. When this was proposed the Superintendents of the road plumply refused to accept or have anything to do with Chinamen. His feelings were those of the entire Board of Directors, and they sympathized with his refusal. Time was given for other plans to be matured and offered, but none were presented. The work lagged; the funds in the Company's treasury were low, as well they might be, since the war had raised the price of iron from \$35 to \$90 per ton, and more respectable government securities had sent the value of their bonds down from 85 to 35 cents in gold. Every interest on the road was calling loudly for greater speed in pushing it forward, and at last, surrounded by the above state of affairs, the unwilling step of employing Chinamen was taken, with an almost entire unanimity of opinion on all sides that the experiment would prove a failure.

### Success of the Experiment.

But time has since abundantly proved that all forebodings were wrong. In a very humble way John came, went to work, saw that he got his wages regularly, and conquered—his weapon of offence being pick, shovel and drill. Now, there is as great a unanimity in John's favor as there was previously against him. He gets \$30 per month and finds himself. The Company adopted a good policy towards him from the first in many respects. In place of permitting him to be kicked, abused and imposed upon generally, they have invariably treated him with the kindness of justice. At first John had complaint to make about the treatment he received from some of the young superintendents. These complaints were always inquired into, and John's wrongs set right for the future. Then the Company studiously see to it that nothing in the shape of slave master's power was exercised towards the Mong-lian workers by their own countrymen. Whatever private arrangements they had, the Company did not seek to interfere with; but no recognition of any arbitrary claims was recognized by them on pay day. Each Chinaman got what he had individually earned for the month; and this course of treatment had the effect of opening John's eyes to the fact that he was working for a good "boss," and (as even a Chinaman has sparks of gratitude in his soul) he showed by the way he worked that he was doing his best. Of course it took time to school him effectively in his duties; but he excels in imitative qualities, and ere long he became an effective worker. Now there is not on the line better general workers than the Chinamen. They might not be able in a race to keep up with Irishmen; but what they lack for special occasions they make up by patient persistence and absence of a desire to shirk on every convenient opportunity. At the tiresome and monotonous duty of drilling they are peculiarly effective, and in this branch certainly are without superiors.

At present some 8,000 Chinamen are employed on the line, and more would be if they presented themselves; but so long as they do not, the Company utterly refuse to make any exertion to bring them, although they have often had proposals to do so; but these propositions always had a savoring of some of the objectionable tenets of coolieism, and for this reason were rejected. When Chinamen come along of their own accord, and as their own masters, seeking employment, they receive it, but in no other way.

# November 24, 1866

Today begins the procession from Cisco! Up the mountain come the trains with all the supplies we need to begin laying track through the Sierra Nevada<sup>8</sup>. It was no easy task getting to this point. Thousands of Chinese workers began last fall, blasting through the solid granite mountains. Usually, they managed to make between six and twelve inches of progress each day. Their task was to create thirteen tunnels that would allow the railroad to run through the mountains. The biggest, toughest challenge was Number 6, the Summit Tunnel, which would be 1,659 feet long when completed<sup>9</sup>. This would be the last tunnel completed, and that would not happen until September 1867.

*"In mid-October[1865], when the end of the track and supply base were at Colfax, Chief Engineer Montague started the Chinese working in shifts—eight hours per day, three shifts through the twenty-four hours—at each end of the formidable summit. There was only room for gangs of three men. One would hold the rock drill against the granite while the other two would swing eighteen-pound sledgehammers to hit the back end of the drill.*

*Of all the backbreaking labor that went into the building of the CP and the UP, of all the dangers inherent in the work, this was the worst. The drills lost their edge to the granite and had to be replaced frequently. The CP soon learned to order its drills in hundred-ton lots. The man swinging the hammer had to have muscles like steel. When a hole was at last big enough for the black powder, the crew would fill it, set a fuse, yell as loud as they could while running out of the range of the blast, and hope. Sometimes the fuse worked, sometimes it didn't." (Ambrose, 160)*

# Nitroglycerin

Nitroglycerin was used as an explosive to blast through the granite of the Sierra Nevada in 1867. It had both positive and negative effects. Read these facts and determine if each is a pro or a con of using nitroglycerin. Think about it...there is not necessarily a correct answer to some. When finished, decide whether using nitroglycerin was worth it.

Pro

Con

\_\_\_ Brand new invention refined by Alfred Nobel in 1860s \_\_\_

\_\_\_ Cost 75 cents per pound \_\_\_

\_\_\_ Eight times as powerful as the same weight of black powder \_\_\_

\_\_\_ Numerous accidents caused “many an honest John [to go] to China feet first.” \_\_\_

\_\_\_ Progress when using nitroglycerin jumped from an average of 2.5 feet per day to 4.4 feet per day. \_\_\_

\_\_\_ Hired a chemist to create the mixture on site \_\_\_

\_\_\_ Price of black powder had risen from \$2.50 per keg to \$15 per keg \_\_\_

\_\_\_ Thirteen times more destructive than black powder \_\_\_

\_\_\_ When money was an issue, CP was using up to 500 kegs each day to blast through the Sierra Nevada. \_\_\_

\_\_\_ “After a number of charges had been set off simultaneously, a Chinese worker hit a charge of nitro that hadn’t exploded with his pick. It exploded and killed him and the others working near that spot.” \_\_\_

WORTH IT

(Circle one)

NOT WORTH IT

# June 15, 1868

Telegram from Charles Crocker to Collis Huntington:

The track is connected across the mountains. We have one-hundred and sixty-seven continuous miles lain.

Today, all gaps in the Central Pacific Railroad from Cisco to Truckee are complete<sup>10</sup>. We have officially conquered the Sierra Nevada and did what many believed impossible. Due to the terrible winter of 1866-1867, it almost was.

Robert L. Fulton shared his experiences as a train dispatcher for the Central Pacific Railroad who oversaw the work done in the Sierra Nevada. Here is his account of the winter of 1866.

*"In the fall of 1866 the snow was very heavy, inquiries convinced the management that the road could not be kept open by any ordinary means. The Sierra Nevada mountains are in a belt that receives one of the heaviest snowfalls on the globe, seventy feet and even more having been known. It was decided to build sheds over the track in exposed places and in the summer of 1867 Arthur Brown planned a system nearly forty miles long. Sawed lumber could not be had in sufficient quantities, so round and hewn timbers were used, the whole work costing two million dollars. Brown was a genius in his line."*

*"Hardly had the sheds been built before fires broke out, inflicting heavy losses. The long open galleries acted like chimneys, producing a draft of such tremendous force that the flames leaped forward with race horse speed. It became necessary to hold fire trains, stationed one at each end and one at Summit station."<sup>11</sup>*

Arthur Brown, the Superintendent of Buildings and Bridges, commented:

*"Although every known appliance was used to keep the road clear from snow that winter, including the largest and best snow-plows then known, it was found impossible to keep it open over half the time and that mostly by means of men and shovels, which required an army of men on hand all the time at great expense."<sup>12</sup>*

April 28, 1869



Today, we laid 10 miles of track in a single day! What a record we've set! Celebrate with a piece of candy.

# December 2, 1863

Chicago Tribune: December 5, 1863

**THE UNION PACIFIC RAILWAY.**  
Our dispatches from Omaha for the last two days have informed our readers that ground was broken on Wednesday, in that city, on the line of this great national enterprise, with imposing ceremonies. The company has a magnificent grant of lands and assistance from the General Government to the amount of sixteen thousand dollars per mile for most of the way, and sums larger for sections of the work more difficult of construction in proportion to the difficulty. It is in

Today is the groundbreaking ceremony for the Union Pacific Railroad! We are gathered on the banks of the Missouri River to celebrate the making of history.

UNFORTUNATELY... a shortage of money and investors caused a halt to the project. The revival of the Union Pacific will not occur until the end of the Civil War in 1865 when supplies, investors, and labor became readily available.

The workers come from many walks of life. There are many Irish, but others come from all over the eastern United States. The end of the war left thousands of soldiers unemployed, so they keep flocking to the Union Pacific Railroad. Even some newly freed African Americans have joined the cause<sup>13</sup>. Despite their immense differences, the men worked well together.

Lowell Daily Citizen and News:  
August 17, 1868

spect. On they came. A light car, drawn by a single horse, gallops up to the front with its load of rails. Two men seize the end of a rail and start forward, the rest of the gang taking hold by twos, until it is clear of the car. Then they come forward at a run. At the word of command the rail is dropped in its place, right side up with care, while the same process goes on at the other side of the car. Less than thirty seconds to a rail for each gang, and so four rails go down to the minute! Quick work, you say, but the fellows on the U. P. are tremendously in earnest. The moment the car is empty it is tipped on the other side of the track to let the next loaded car pass

it, and then it is tipped back again, and it is a sight to see it go flying back for another load, propelled by a horse at a full gallop at the end of sixty or eighty feet of rope, ridden by a young Jehu, who drives furiously. Close behind the first gang come the gaugers, spikers, and bolters, and a lively time they make of it. It is a grand Anvil Chorus that those sturdy sledges are playing across the plains. It is in triple time, three strokes to a spike. There are ten spikes to a rail, four hundred rails to the mile, eighteen hundred miles to San Francisco. That's the sum, what is the quotient? Twenty-one million times are those sledges to be swung—twenty-one million times are they to come down with their sharp punctuation before the great work of modern America is complete.



# October 6, 1866

We have reached the 100<sup>th</sup> Meridian, which is 247 miles from Omaha, and Doc (Thomas) Durant has decided to make this event quite an ordeal. He invited many potential investors and supporters to stay on the site to be entertained for three full days<sup>14</sup>. Have a piece of candy to celebrate.

It was not easy getting here. Supplies are not easy to come by while we are this far west. They either come up the Missouri, which is only navigable about three months of the year, or they come west by means of existing railroads. However, the closest supply drop on the river is St. Louis, and the supplies then need to travel 300 miles by steamboat to reach Omaha. By train, the supplies reach within 100 miles of the Missouri River, but need to travel by wagon and ferry to actually reach Omaha. In other words, supplying the materials for the railroad is no easy task.

Unlike California, Nebraska lacks good wood to make ties. We either have to ship in hardwood or make use of the soft, thin, wet cottonwood. The directors were forced to settle for the latter because shipping would cost far too much. To deal with the situation, they brought over

## *The Burnettizer.*

### ***Features:***

- ✘** *100 Feet X 500 Feet,  
Cylindrical Shape*
- ✘** *Drains water from cottonwood*
- ✘** *Adds zinc solution*
- ✘** *Heats and dries wood*
- ✘** *Costs only 16 cents per tie*

Manufacturer not responsible if for short lifespan of ties. Cottonwood is not fit for railroads, and should be avoided if at all possible.





# Winter 1866-67

We have arrived at North Platte, where the Platte River splits to form the North and South Platte Rivers. With the winter weather, the track has halted here, and we must wait for warmer weather before we can begin laying more track. Luckily, we have plenty to do here.

Some smart folks from Chicago figured that they may as well capitalize on the building of the Pacific Railroad just like its investors planned to do. These "businessmen" took a different approach, however. They set up tents in towns wherever the workers were staying and ran dance halls, taverns, gambling dens, brothels, and other small businesses. Once the track progressed and the workers moved to a new town, the tents came down and followed the crowd. These towns were later coined "Hell on Wheels."<sup>15</sup>

Here are some accounts of those who experienced Hell on Wheels:

*At night new aspects are presented in this city of premature growth. Watch-fires gleam over the sea-like expanse of ground outside the city, while inside soldiers, herdsman, teamsters, women, railroad men are dancing, singing or gambling. I verily believe that there are men who would murder a fellow creature for five dollars. Nay, there are men who have already done it, and who stalk abroad in daylight unwhipped of justice. Not a day passes but a dead body is found somewhere in the vicinity with pockets rifled of the contents.*

*~Henry M. Stanlev (Julesbura) August 1867*

*Hell on Wheels was a village of a few variety stores and shops, and many grog-shops; by day disgusting, by night dangerous; almost everybody is dirty, many filthy, and with the marks of lowest vice; averaging a murder a day; gambling and drinking, hurdy-gurdy dancing and the vilest of sexual commerce the chief business and pastime of the hours.*

*~Samuel Bowles, Editor of Springfield Republican*

*Samuel B. Reed, UP Engineer, to his wife (July 30, 1867)*

*Julesberg continues to grow with magic rapidity, vice and crime stalk unblushingly in the mid-day sun. You know that I never keep from you any mean thing I do and now I am ready to confess to you what I have done since my return from Chicago; and let me say by way of apology, that it is the first offense of the kind I have knowingly committed...*

*General Auger and staff returned here last Friday evening and nothing would do but they must see the town by gas light...The first place we visited was a dance house, where a fresh importation of strumpets had been received. The hall was crowded with bad men and lewd women. Such profanity, vulgarity, and indecency as was heard and seen there would disgust a more hardened person than I.*

*The next place visited was a gambling hell where all games of chance were being played. Men excited with drink and play were recklessly staking their last dollar on the turn of a card or the throw of a dice. Women were cajoling and coaxing the tipsy men to stake their money on various games; and pockets were shrewdly picked by the fallen women of the more sober of the crowd. We soon tired of this place and started forth for new dens of vice and crime and visited several similar to those already described.*

*At last about 10 p.m. we visited the theater... From here I left the party and retired to my tent fully satisfied with my first visit to such places.*

April 23, 1868

**"Little Indian boy, step out of the way for the Big In-  
gine."**

Today, the Dale Creek Bridge that lies just past Sherman is complete<sup>16</sup>. Though we have successfully built throughout Nebraska and part of Wyoming, we have had our share of trouble with the Indians. Unfortunately, we expect more to come. While weather and money shortages were obstacles, the Indians are the real threat to the completion of this railroad.

Here's a look at both sides of the coin:

September 20, 1867, General Sherman announced the federal policy to the x Indians of the Dacotah and Cheyenne territories in the Arkansas Valley.

*Our people East hardly think of what you call "war" here, but if they make up their minds to fight you, they will come out as thick as a herd of buffalo, and if you continue fighting you will all be killed. We advise you for the best. We now offer you this: choose your own homes and live like white men, and we will help you all you want. We are doing more for you than we do for white men coming from over the sea. This Commission is not only a Peace Commission, but it is a War Commission also. We will be kind to you if you keep the peace, but if you won't listen to reason, we are ordered to make war upon you in a different manner from what we have done before.*

Crow Chief Bear's Tooth at the Fort Laramie Treaty Council, November 12, 1867:

*Achan! Achan! Achan! Father! Father! Father! Listen well. Your young men have gone on the path and have destroyed the fine timber and the green grass, and have burnt up the country. Father, your young men have gone on the road, and have killed my game and my buffalo. They did not kill them to eat; they left them to rot where they fell. Father, were I to go to your country to kill your cattle, what would you say? . . . Father, you talk about farming, I don't want to hear it; I was raised on buffalo and I love it. Since I was born I was raised like your chiefs, to be strong, to move my camps when necessary, to roam over the prairie at will. Take pity upon us; I am tired of talking.*

May 8-10, 1869

# Promontory Summit!

Despite the years it took to build up to and through the Sierra Nevada, the Central Pacific makes it to Promontory Summit first! Travelers from East and West come to experience the driving of the final spike, which is to take place on May 8. Unfortunately, trains get delayed, and Durant gets kidnapped by workers looking for back-pay. Therefore, the ceremony gets rescheduled for May 10.

Finally, the day is here; the day anticipated by Americans for six years. The ceremony to drive the Golden Spike will begin at noon. Telegraphy offices around the country await this monumental moment. At Ogden, telegraphers give constant updates.

Ogden: TO EVERYBODY. KEEP QUIET. WHEN THE LAST SPIKE IS DRIVEN AT PROMONTORY POINT, WE WILL SAY "DONE!" DON'T BREAK THE CIRCUIT. BUT WATCH FOR THE SIGNALS OF THE BLOW OF THE HAMMER.

Ogden: ALMOST READY. HATS OFF. PRAYER IS BEING OFFERED.

Ogden: ALL READY NOW; THE SPIKE WILL SOON BE DRIVEN. THE SIGNAL WILL BE THREE DOTS FOR THE COMMENCEMENT OF THE BLOWS.

Thomas Durant takes the first swing and taps the spike. Then, Leland Stanford takes the final swing. He misses and hits the rail, but this is good enough for the telegraphers.

Ogden: "DONE!"<sup>17</sup>

The railroad was far from perfect. It was far from being completely finished. Still, it was the First Transcontinental Railroad.

While you're here, find a worker from the other railroad and discuss your experiences. Each of you must write a reflection paper that compares and contrasts the obstacles faced by the two railroads. Also, you must explain why the First Transcontinental Railroad was so significant to United States History.

## Endnotes

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- <sup>1</sup> Ambrose, Stephen E. Nothing Like It in the World. Simon and Schuster: New York, 2000. (p. 136-139).
- <sup>2</sup> Cooper-Winter, Rebecca. Eastward to Promontory. 30 July 2007. CPRR.org. 12 Oct. 2008.  
[http://cpr.org/Museum/Galloway\\_Judah\\_ASCE/index.html#006](http://cpr.org/Museum/Galloway_Judah_ASCE/index.html#006).
- <sup>3</sup> Ibid, online.
- <sup>4</sup> Ambrose, 147.
- <sup>5</sup> Cooper-Winter, online.
- <sup>6</sup> Sabin, Edwin L. Building the Pacific Railway. J.B. Lippincott Company: Philadelphia, 1919. (p.107)
- <sup>7</sup> Ambrose, 155-159.
- <sup>8</sup> Ibid, 203.
- <sup>9</sup> Ibid, 160.
- <sup>10</sup> Ambrose, 306
- <sup>11</sup> Fulton, Robert L. Epic of the Overland. N.A. Kovach: Los Angeles, 1954. (p. 34-35)
- <sup>12</sup> Mayer, Lynne Rhodes and Kenneth E. Vose. Makin' Tracks. Praeger Publishers: New York, 1975. (p. 44)
- <sup>13</sup> Ambrose, 176-177.
- <sup>14</sup> Ibid, 185-187.
- <sup>15</sup> Ibid, 217, 238.
- <sup>16</sup> Combs, Barry B. Westward to Promontory. Promontory Press: New York, 1969. (p.24)
- <sup>16</sup> Ambrose, 360-366.

### Additional Citations

#### **January 8, 1863**

"By Magnetic Bulletin: Despatch to the Bulletin." San Francisco Bulletin. 8 Jan. 1863 (p.3)

#### **September 10, 1865**

"Chinese Labor on the Pacific Railroad." San Francisco Bulletin. 19 Feb. 1867 (p.1)

#### **November 24, 1866 (quotation)**

Ambrose, 160.

#### **Nitroglycerin Facts**

Ambrose, 201-202,235-236

#### **April 18, 1869 (picture)**

Mayer, 166

#### **December 2, 1863**

"Union Pacific Railway". Chicago Tribune. 5 Dec. 1863. (p. 2)

Bell, W.A. "The Character of the Union Pacific Railroad." Lowell Daily Citizen and News. 17 Aug. 1968. (p.2)

#### **October 6, 1866**

Ambrose 139-140.

Picture: Ambrose, pictures.

#### **Winter 1866-67**

Ambrose, 219.

Mayer, 102.

#### **April 23, 1868**

"Grand Torchlight Procession and Illumination on Account of the Pacific Railroad Act." San Francisco Bulletin. 11 July 1862 (p.3)

Mayer, 98.

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## Station Questions

### **Pictures**

Tea Carrier: Mayer, 32

Overlooking Native American: Ambrose, pictures.

Map of First Transcontinental Railroad: Ambrose, cover

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