

Journey to Promontory

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COVER Jupiter meets modern Union Pacific diesel at

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CENTRAL PACIFIC RAILROAD.



Who took t

Three photographers documented the first transcontinental

One hundred and fifty years after the completion of the first transcontinental railroad, we are grateful to have images of this amazing work. Images of the people, the trains, and the environment tell us the story of this incredible effort that is often referred to as the moonshot of its day. We have three photographers to thank for these images, and one, who made one of the most iconic

images of American history.

The photographers were Andrew J. Russell (1829-1902) for the Union Pacific, Alfred A. Hart (1816-1908) for the Central Pacific, and Charles R. Savage (1832-1909) of Salt Lake City. Good weather did not ease the difficulties of working with glass sensitized plates that needed to be exposed quickly. The wet-plate collodion process required coating,

sensitizing, exposing, and developing the negative in about 15 minutes. Each photographer kept a portable darkroom nearby.

Photographers at the golden spike ceremony faced far more challenges than photographers today, but they produced many of the most significant images in the history of westward expansion — a (some say the) dominant theme in U.S. history.



HART.

he picture?

355 The Last Rail—The Invocation.
Fixing the Wire, May 10th, 1869.

railroad, and one took the photo of a lifetime ■ by John Gruber

All took stereo negatives, while Russell was the only photographer to take large-format negatives. Let's take a look at each photographer and his contributions to the record.

Alfred A. Hart

Hart was born in Norwich, Conn., and trained as a portrait and landscape artist. He was the official photographer for the Central

Pacific from 1865 to 1869, showing the construction of the western half of the transcontinental railroad. He photographed with a dual-lens camera, traveling from Sacramento, over the Sierra, to Promontory, a distance of 690 miles. Hart created a series of 364 views documenting the challenging construction project. Hart traveled to Promontory on the train that brought CP

President Leland Stanford and his party from Sacramento.

Hart's mentor, Edwin B. Crocker, attorney for the railroad, approved Hart's first invoice. Because of this connection, he was able to stop and pose construction workers on the job. Crocker retired late in 1869 and Hart's position ended in a few months. The railroad owned most of Hart's negatives and when

Photographer Hart documented the construction of the Central Pacific and traveled with President Leland Stanford to Promontory. Library of Congress

S

herman Hill is one of the landmarks on the transcontinental railroad. It was the first major obstacle for the railroad as it headed west. It is the place where Big Boys, gas turbines, and Centennials were all put to the test. It's the highest point on the first transcontinental railroad, but at the same time is one of the lowest and easiest rail crossings of the Rocky Mountains. Today, it's one of the busiest main lines in North America — one of the best displays of modern railroading with heavy intermodal, coal, and merchandise traffic traversing not one, not two, but three tracks.

How the railroad put down tracks on this imposing grade and rebuilt them, here and across Wyoming and Utah for decades hence, is an epic story of pioneering effort, strategic growth, and an unending quest to run a better railroad.

The transcontinental railroad's first rails were laid in Omaha, Neb., on July 10, 1865, and the railroad reached North Platte, Neb., on Dec. 3, 1866. Locating the route was a tremendous task for survey parties. They followed every stream to its headwaters in an effort to obtain the easiest grade possible. Their goal was to locate grades that should not exceed 43 feet per mile, or an impressive 0.8 percent. Surveyors searched a broad area of about 200 miles. After leaving the Plate River Valley and moving into Wyoming, and especially on Sherman Hill, the terrain became more difficult with few favorable routes.

Gen. Grenville Dodge, who was in charge of determining the route, was on a reconnaissance trip when he spotted a Native American group, and while escaping, he came upon a rise and discovered the future Sherman Hill route west from Cheyenne. While it was impossible to maintain the desired grade, this route was the best one, and was not considered excessive.

Today, we know it as the "gangplank," a gently climbing strip of land west of Cheyenne to the south of the Crow Creek Valley, and east of present Granite Canon.

Challenging this effort were troublesome and hostile Native Americans, particularly Sioux. They conducted hit-and-run raids, scalped workers, and even wrecked trains. Their guerrilla warfare tactics were difficult for those building the grade, bridging ravines, and laying track. Military posts (including Fort D.A. Russell, the predecessor to Cheyenne's F.E. Warren Air Force Base) were built to protect construction workers.

Dodge's survey party set up camp, and on July 2, 1867, surveyors began staking out the boundaries of Cheyenne, a task completed on July 10. Cheyenne was named for one of the most important tribes of original Great Plains inhabitants, according to Dodge's biography. Dodge envisioned this location, blessed with plentiful water, to be a terminus and shops at the eastern base of the Rocky Mountains.

After rails passed Julesburg, Colo., 145 miles east of Cheyenne, the Colorado town's structures were picked up board by board, including many tents, and most of the town was moved by team and wagon to Cheyenne. Julesburg was one of the many notorious end-of-track towns where

gambling and other sins prevailed in a setting best known as Hell on Wheels.

Construction continued westward until the rails crossed from Nebraska (statehood on March 1, 1867) into the Dakota (later Wyoming) Territory at the end of the first week of October 1867. On Oct. 20, the track reached Hillsdale, 21 miles east of Cheyenne. From this point, heavy construction work was required leaving the Lodge Pole Creek Valley to Archer, where the line crossed into the Crow Creek Valley.

Searching for the best route, Dodge chose the lower route via the Lodge Pole Creek Valley toward Cheyenne, instead of a South Platte survey, due to the difficulty of constructing a railroad over the mountains west of Denver. Established in 1858, Denver had a large population, primarily due to mining and minerals in the mountains. Of course, Denver desired a railroad, but it was not about to get one.

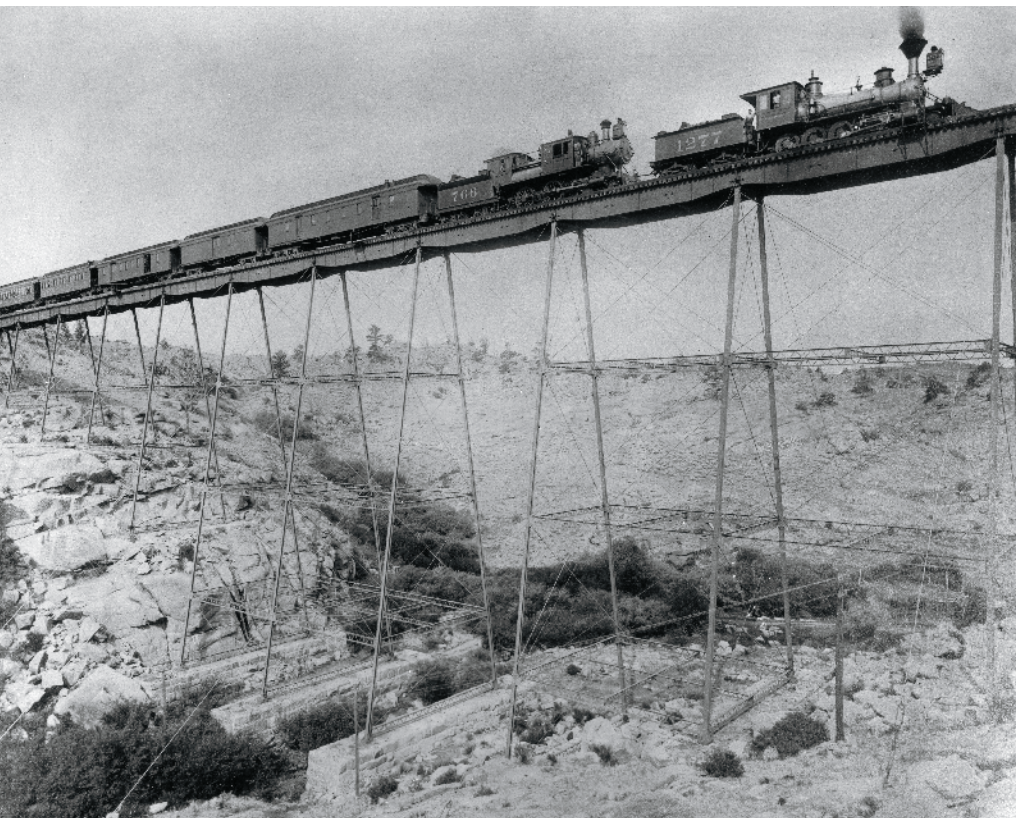
Many Denver businesses moved to Cheyenne. N.A. Baker moved from Denver to Cheyenne and issued the first edition of the Cheyenne Leader newspaper on Sept. 19, 1867. Reports vary, but many indicate Cheyenne's population during winter 1867-68 reached more than 4,000, with several thousand more at Fort Russell and Camp Carlin. People lived in dugouts, tents, and wagons.

After arrival of the railroad in Cheyenne on Nov. 13, 1867, a 3-mile-spur track was built to serve Fort Russell. Thus, supplies could be distributed from nearby Camp Carlin to military outposts throughout the region. Cheyenne was destined to become the end-of-track material and supply location during the winter months of 1867 and 1868.

UP built a frame depot of 24 by 135 feet, consisting of baggage, mail, and express rooms, a lobby, and a ticket office. A hotel and eating house were constructed. A 20-stall stone roundhouse with a 54-foot iron turntable, sand house, and a 44-pocket elevated coaling trestle were erected. Nearby stood a 65,000-gallon wood water tank.

Carloads of supplies, especially for mining in Colorado, arrived daily to be transferred to teams and wagons. Stages ran between Cheyenne and Denver as many as six times a day. Cheyenne thrived handling supplies for the cattle industry in the north, as well as shipments for Fort Russell and Camp Carlin.

Beyond Cheyenne loomed the rugged



Dale Creek trestle, just west of the summit of Sherman Hill, at more than 8,000 feet in elevation, was one of the major obstacles on the grade. This structure, reinforced in 1885, was the second trestle at the site, replacing a wooden bridge built when the railroad first passed here in the late 1860s. Union Pacific



Roadbed and track construction on the original Union Pacific main line was fast and rudimentary. This scene in Wyoming shows the cut-and-fill work, as well as the lack of ballast and the rough-hewn ties that marked the initial effort at building a transcontinental railroad. A.J. Russell

terrain known as Sherman Hill. Construction continued westward, and by the end of 1867, the end of track had reached Granite Canon, 19 miles from Cheyenne, and 536 miles west of Omaha. Here, construction became more difficult. The highest and longest earthen fill was built during the winter months of 1867 and 1868. This work required manpower and mules, hand tools, wagons and carts, and blasting powder.

Tracklayers worked westward to Sherman station, arriving on April 5, 1868, at what was the highest railroad station in the world at 8,247 feet above sea level. Dodge bestowed the name Sherman in honor of Civil War Gen. William Tecumseh Sherman, who also happened to be the tallest general in the U.S. Army.

Located 549 miles from Omaha, the town of Sherman swelled quickly to a population of more than 250. Company buildings consisted of a station, a small repair shop, a five-stall stone roundhouse, turntable, and a water tank. A post office, telegraph and express office, one store, two hotels, two saloons, and about 20 houses constituted the town.

Dale Creek ravine, about 3 miles beyond Sherman, was the second major obstacle on Sherman Hill. A huge trestle, 650 feet long and 126 feet high, was built during winter 1867-68, using timbers from Chicago. Dale City was located at the bridge construction site and included a short-lived post office. As soon as track was

installed on the bridge April 21, workers pushed westward.

Fort Sanders, another military camp built to protect railroad workers, was only 16 miles away. The first train worked its way into Laramie on May 4. Laramie immediately became a terminus. Dr. Thomas C. Durant, who was in charge of the construction, overruled Dodge's plan that Cheyenne would be the location of the railroad's major shops, and placed them at Laramie. This arrangement remained for more than 20 years.

Sherman Hill grades (up to 1.92 percent), as originally constructed, required the use of helper locomotives on most all trains. But gravity was only one problem. Snow was a major issue in the early days, due to the narrow cuts made during the line's hasty construction. At one time, 13 snow sheds lined the route between Archer (9 miles east of Cheyenne) and Laramie. The sheds became a hazard for trainmen riding the top of cars. Many sheds were destroyed when a hot cinder lodged in the dry timbers and fanned in the wind. Over time the cuts were widened, and the remaining sheds removed one by one prior to 1900.

By 1868, the Central Pacific was rapidly building across the Nevada desert. The UP no longer experienced Native American troubles west of the Continental Divide. West of Green River, Wyo., tough Irishmen laid nearly 8 miles of track in one day. By the end of the year, UP established the western

terminus at the Utah border, at Wahsatch (the railroad spelling), 966 miles west of Omaha. From Wahsatch, UP descended through Echo Canyon to the valley of the Weber River into Ogden, Utah, 1,032 miles west of Omaha, in 1869. Soon, the meeting of the rails would take place at Promontory. But that's not the end of the story. Because the UP had built rapidly and cheaply, it soon found its main line from Omaha to Ogden (where the Central Pacific interchange was soon moved) needed serious upgrades.

Railroad competition

America experienced "railroad fever" in the 1880s, with new lines built everywhere. This was especially true in the West. The advancement of other lines meant competition, and the result was that revenues were shared with those lines, cutting profits for UP. A Burlington Route extension into Denver was completed on May 24, 1882. To counter this competition, UP in 1881 revived a Colorado Central extension, originally graded in 1872, by building a 151-mile cutoff between Julesburg and La Salle, Colo.

The Northern Pacific (across southern Montana) was completed to the Pacific coast in 1883. The UP backed construction of the Oregon Short Line from Granger, Wyo., making a connection at Huntington, Ore., that was completed in 1884.

The Fremont, Elkhorn & Missouri Valley Railroad, a Chicago & North Western sub-

Following the



One man's pursuit of the ghosts of the original transcontinental railroad

By any measure, it was the moon shot of the 19th century. Like the Apollo program of the 1960s, the construction of the nation's first transcontinental railroad a century earlier was a test of new technology across enormous and hostile distances, required unprecedented government expenditure, and garnered the attention of the world.

As students of railroad history know, the Union Pacific built west from Omaha, Neb., and the Central Pacific built east from Sacramento, Calif., across some 1,800 miles of mountain, desert, and plain to meet at lonely Promontory Summit in Utah on May 10, 1869. This great event bound the nation east and west and spurred the development of lands from the Missouri River

to the West Coast, displacing native populations along the right-of-way.

A dozen or more books have been written about the monumental construction of the railroad, but except for corporate histories and railfan homages, little recent attention has been paid to this historic route. A couple decades ago, as I conducted field work and photography for a book on the Lincoln Highway, the nation's first transcontinental road, I often looked to the sometimes-parallel transcontinental railroad and wondered what stories, what secrets, hid near the tracks and along the abandoned embankments of sections bypassed for better alignments.

Other projects intervened, but thoughts nagged me: What

became of Terrace, Utah, once an important Central Pacific town on the now-abandoned route across the Promontory Mountains? The Dale Creek Bridge in Wyoming? Bloomer Cut in California? The famous Summit Tunnel on Donner Pass, where Chinese workers drilled some of the hardest rock on the planet? And where the original line and the current line are the same, how much has changed? Is anything besides the track gauge the same?

During the past several summers, when the snow is well melted in the Sierra and Wasatch, I've set out to explore this extraordinary path, deeply historic such as the Oregon Trail, the Lancaster Pike, and the Lincoln Highway.

It hasn't been easy. Today

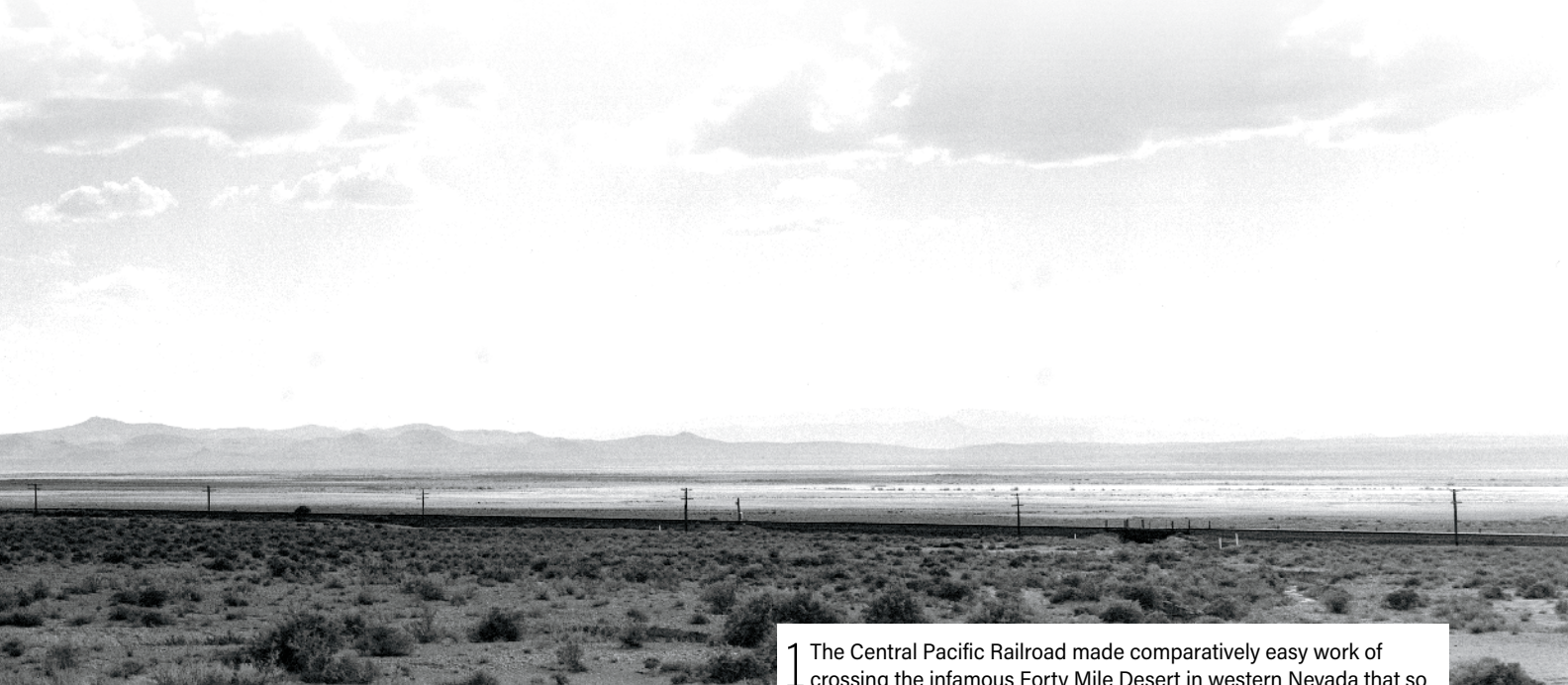
much of the path is the busy Union Pacific Overland Route and access is limited. Many of the bypassed and abandoned portions are on private property, and though the original Promontory line is on public lands, the road is difficult and sometimes impassable.

My tool kit is specific to the job. A high-clearance, four-wheel-drive vehicle, including a second spare tire; a full camp outfit, including cooking setup and food for several days; a great pile of maps and books; a list of cell numbers and contacts for local access; a tall tripod and a short ladder; several big cameras; and a cooler full of black-and-white 120 film.

Film?

First, I enjoy the entire process from shooting to traditional darkroom printing, and

Golden Spike



Story and photos by Drake Hokanson

somehow feel that this more deliberate method honors the work of A.J. Russell and Alfred Hart, photographers who struggled with immense wet plate cameras and tent dark-rooms to record the construction of this epic railroad.

In early days of its operation, the line was a tenuous thread. In order to hasten government subsidies, which were paid per mile of construction, it was built fast and cheap. Construction-era photographs show ties projecting beyond the edge of too-narrow embankments, shaky trestles, and poorly aligned track. The railroad and its parallel transcontinental telegraph line suffered frequent interruption due to washout, mountain blizzard, and accident.

The railroad seeded new

towns. Some thrived: North Platte, Neb.; Cheyenne, Wyo.; Ogden, Utah; Reno, Nev. Many others faded or disappeared altogether as the line shifted or the trains no longer stopped: Piedmont, Wyo.; Kelton, Utah; Palisade, Nev.

Though slow in coming, improved alignments — including the Lucin Cutoff across the Great Salt Lake, several generations of heavier bridges, the 8-mile-long Bailey Yard in North Platte, and a new longer but lower-altitude summit tunnel in the Sierra — helped create a modern 21st-century railroad.

The Union Pacific now owns the entire line between Sacramento and Omaha, a fact that would no doubt make the builders of the Central Pacific tremble in their graves. Long

1 The Central Pacific Railroad made comparatively easy work of crossing the infamous Forty Mile Desert in western Nevada that so worried California Trail travelers a short generation earlier and Lincoln Highway motorists a couple generations later. On this day, Amtrak's *California Zephyr* makes time eastbound in the late-day sun.

trains, using distributed power, climb and descend the Sierra on much the same route surveyed in the 1860s. Coal trains, double-stacks, and mixed freights speed across central Nebraska on the triple-track main, so fast and frequent that crossing gates sometimes stay down for the passage of three or four trains in a row.

During the heyday of passenger service, the route hosted dozens of passenger trains, from lowly locals to the famous *Overland Limited* that in the 1920s took a mere 56 hours between Chicago and Oakland, Calif. Today's Amtrak passengers on the *California Zephyr* between Sacramento and Winnemucca, Nev., travel much of the original line and have fine views of the exquisite Sierra crossing,

often narrated by volunteers from the California State Railroad Museum. Both east- and westbound trains cross the Sierra in daylight.

Between Winnemucca and Wells, Nev., the *Zephyr* runs on either the original transcontinental or the parallel former Western Pacific, and does so mostly at night. The line east of Wells and all the way to Omaha hosts no regularly scheduled passenger trains.

As proof of the soundness of the original route, today's Interstate 80 runs parallel and nearby for most of the distance between Omaha and Sacramento, at times right next to the railroad.

For 150 years, this historic line has provided a foundation story in our railroad history. What will the next 150 bring? 1