



# The Colorado River

## Railroad Survey

By JIM HEKKERS  
*Assistant Editor*

**W**HILE most people remember that Neil Armstrong was the first earthling to set foot on the surface of the moon, not many can recall that it was Charles Conrad who commanded the second manned expedition to explore the lunar surface. Such is history's notice of runners-up. Robert Brewster Stanton is a prime example.


Stanton led a tragedy-filled and little-known expedition down the Colorado River in 1889-90, surveying the steep and rugged canyons to determine if a railroad line could be built along the entire length of the river's course. Although the expedition was only the second ever to conquer the entire Colorado River, Stanton's story is buried deep within the long shadow cast by John Wesley Powell, whose epic first journey down the Colorado River preceded Stanton's by some 20 years.

Typical of Stanton's almost nonexistent place in history is the brief mention of him in *The Grand Colorado: The Story of a River and Its Canyons*, a fascinating book on the river's history and mystique. That work covers Stanton's expedition in three paragraphs and labels it "very nearly insane." While such a judgement ignores many of the circumstances

surrounding the Stanton journey, it's not hard to see why it was made. In the end, the expedition needlessly took the lives of three men, badly injured another, and nearly killed Stanton himself.

Yet, the expedition was significant. While several other adventurers tackled the river and its infamous rapids after Powell, none succeeded in running the entire course until Stanton and his crew. Successfully negotiating a river which has a descent of some 4,200 feet in less than 500 miles and contains 520 rapids, falls and cataracts is no small task in itself. Moreover, Stanton's purpose was not to merely go from one end of the river to the other, but to survey and chart its canyons and banks to convince potential investors that a railroad line could be built along the river. The expedition is a graphic symbol of the attitude of those who would conquer the western frontier: All things are possible.

Prospector S. S. Harper first conceived the idea of a railroad line down the Colorado River sometime around 1870 as a way to transport coal from coal-rich southwestern Colorado to California. As envisioned, the line was to start at Grand Junction, Colorado, where the Denver and Rio Grande Railroad crosses what



**The second great journey down the mighty Colorado was beset with tragedy, yet Robert Brewster Stanton succeeded in surveying the river to determine if a railroad line could be built along its entire course**

was then called the Grand River (now the Colorado River) to its junction with the Green River, down the Colorado to the Gulf of California, and, finally, on to San Diego. The idea intrigued Denver businessman Frank M. Brown, who set up the formal organization to explore its feasibility—the Denver, Colorado Canyon and Pacific Railroad—and was elected its president.

Brown proposed the survey of the entire length of the river to convince potential investors in the East that the line could be built and be profitable. He hired Stanton, then in his early 40s, as his chief engineer.

If anyone could build a railroad down the Colorado, Stanton seemed the ideal candidate. As a college student at Miami University in Oxford, Ohio, he had read about Powell's exploits and dreamed of building a single-span railway bridge across the Grand Canyon. As a highly-respected division engineer for the Union Pacific, Stanton built the famous Devil's Gate Viaduct or Georgetown Loop between Georgetown and Silver Plume in Colorado. (The line itself is now a national historic site.) While the idea of a railroad line down the Colorado seemed a flight of pure fancy to many (including John Wesley Powell, who called the proposal "an undertaking fraught with difficulties of great magnitude; in fact, it is impracticable ..."), Stanton saw few problems posed by the Colorado River canyons which rivaled what he considered far more difficult lines already built and operating in the Rocky Mountains.

Stanton was also dedicated to his work, and that dedication was to dominate the expedition. "It was not our purpose to explore the canyons, or to dash through the rapids, for the glory of its accomplishments," he wrote. While he admitted that the awe and mystery of the canyons could not be ignored, Stanton wrote that "whenever I allowed myself to be temporarily influenced by the strangeness of my surroundings, I was suddenly brought back to the reality of my work by remembering that the notes I was taking,

and the impressions I was recording, were to be put into a report and upon maps, which would be inspected by engineers and contractors..." Time after time on the journey, Stanton's devotion to duty dictated his actions. Tragedy, disaster and even the deaths of his companions would fail to deter him.

While Stanton's devotion seemed almost fanatical, he was, by no stretch of the imagination, foolhardy. He adopted a cautious and conservative approach to the dangers of the river, and, had he been the leader of the expedition from its inception, most of the tragedy might have been averted. As it was, Brown took charge from the very beginning. Stanton described his boss (he usually referred to him as "President Brown") as "a man of great ability—an optimist par excellence. He never saw an obstacle in his way, and, with all, he had an energy and determination that knew no bounds..." But, Brown's success was as a real estate promoter and businessman. He was ill-equipped to tackle the unforgiving rapids of the Colorado River.

Stanton got his first hint of the trouble ahead when he asked Brown to include four experienced boatmen in the survey party. Brown turned down the request, saying that he and two of his friends would go along as guests and handle the boats. "I was thunderstruck," Stanton wrote. "... two charming and genial young lawyers and clubmen of Denver, to handle the ~~boats~~ down the River that Major Powell's sturdy frontiersmen had found such a task!" Next, Brown rejected Stanton's request for life preservers.

Brown also ordered the boats. Stanton's first look at them added to his growing discomfort: "... my heart sank within me, not on account of their ~~size~~, their build or manner of fitting, but on account of the material—thin, light, red cedar—with which they were planked. The handling in transportation had split two of them almost from end to end." There were five cedar boats, each 15 feet long, about 40 inches wide and 18 ~~inches~~ deep. Brown argued that they would be easy to ~~handle, and~~ light to portage.

While Brown was making arrangements for the main expedition, a small crew under the direction of Frank C. Kendrick took a single boat and surveyed the Grand River (now the Colorado) from Grand Junction to its junction with the Green River in Utah territory. The main survey party traveled by rail to Green River Station in Utah Territory. On May 25, 1889, 16 men in six boats—the five cedar boats plus Kendrick's boat—began the main survey from Green River Station, setting out down the Green to Kendrick's terminal point.

It did not take long for Stanton's fears about the cedar boats to be realized. Five miles into the trip, the party met a light, shallow rapid and rocks punched three holes in the cedar planking of one of the boats, forcing the first of many stops for repairs. The entire month of June saw setback after setback for the expedition. The boats suffered almost daily damage, requiring numerous stops. Provisions and supplies were lost at every turn. When the expedition was begun, the party carried food for 75 days. By June 13, the provisions had dwindled to a six-day supply. Brown seemed oblivious to the crisis: "Mr. Brown does not seem to grasp the situation ... but goes on as if we had two months supplies in camp," Stanton wrote in his diary.

Stanton convinced Brown to go ahead of the survey party to get supplies, but Brown ran into trouble and Stanton soon caught up with him. By then, crew members were grumbling and talking mutiny. Stanton finally drove the point home to his boss by dividing up all the remaining food into tiny piles for each man. Brown decided to take one boat and a few men and make another attempt at going downstream for supplies. Crew members were given a choice: stay with Stanton or go downstream with Brown. Only four chose to remain with the chief engineer to continue the survey in one boat while the rest went after supplies. By June 20, the supplies were brought back to Stanton and his four men.

By June 25, the party had completed its work in Cataract and Narrow Canyons

—a total of just over 47 miles. Brown felt the survey was moving at a snail's pace and grew impatient. He decided to split up the party. Part of the men would continue the detailed survey through Glen Canyon to Lee's Ferry, while Brown, Stanton and the others were to push on through Glen, Marble and Grand canyons, making a preliminary report from observation and photos about the feasibility of a railroad route through those portions of the river.

Stanton felt the procedure was unwise, but once again deferred to Brown's position as his "superior officer." Two men left the party entirely, five were left with one boat to do the detailed survey, and Brown, Stanton and six men set out in three boats on Brown's hurry-up survey. The larger party made it easily through Glen Canyon, but disaster awaited it in Marble Canyon.

After stopping for supplies at Lee's Ferry, Stanton and Brown started through Marble Canyon on July 9. Going the first day was slow. At camp that night, Brown was troubled and talked to Stanton late into the night. The next morning, the company president told Stanton that for the first time on the entire journey he had dreamed of the rapids. When the party set out on the river, Brown was in the first boat and Stanton followed in another boat. On the second rapid of the morning, Brown's boat was caught in a whirlpool, and Brown was thrown out, sucked under the water and drowned. Several days later, his body was spotted floating down the river, but it was never recovered. Ironically, Stanton noted that Brown's life could have easily been saved had he worn a life preserver.

Ever the pragmatist, Stanton decided to continue the expedition after Brown's death. On Sunday, July 14, the party stopped to rest. One of the crew, Peter Hansbrough, was especially tormented that day, talking to Stanton of his past life, death and heaven. Another crewman, Henry Richards, confided to one of his friends in a similar vein. "I suggest no (Text continued on page 40.)

## Down the Colorado with Robert Brewster Stanton



The first expedition camped on the Green River.

A member of the Stanton party looks downstream in Marble Canyon near where President Brown was drowned.





Boats for the second journey were hauled to the head of Crescent Canyon.

Stanton waits in  
the Grand Canyon  
below Cataract Creek  
for the rest  
of the party



The expedition's journey ended at the head of the Gulf of California.

explanation of this (the gloom of the two men), but simply record the facts as they occurred, in connection with what followed," Stanton wrote. The next day, both men were dumped by a rough and rocky rapid and drowned. Although both were strong swimmers, they were powerless against the current. They too, Stanton noted, could have been saved if they had worn life preservers.

Finally, with three men dead and what was left of the crew demoralized and dispirited, Stanton decided to leave the river, hiking out a side canyon. However, his abandonment was only temporary. He returned to Denver and immediately set about obtaining financial backing to continue the survey. (Stanton later said that many of the promises for money were never kept; in the end, the expedition cost Stanton some \$12,500 out of his own pocket.) The pitfalls of the abortive first journey were taken into account for the second attempt. Stanton had three boats built of sturdy oak and riveted together with copper rivets. He bought the best cork life preservers he could find for all crew members. He got circular cork life-buoys for each boat and packed all the stores and provisions in watertight rubber bags.

The second party consisted of 12 men, including only Stanton, his assistant engineer John Hislop and the photographer F. A. Nims from the first party. Not wanting to take undue risks, Stanton had the boats and supplies hauled by wagon from Green River Station to the nearest point in Glen Canyon—the mouth of Crescent Creek. On December 10, 1889, the second part of the journey got underway. The party retraced its route through Glen Canyon, arriving at Lee's Ferry on December 23. Christmas was spent with Mormon friends there. (Incidentally, the Christmas dinner menu included Colorado River salmon—the now endangered and much-maligned Colorado River squawfish.)

On December 28, the expedition entered Marble Canyon, the scene of three tragic deaths on the first journey. While the big, strong boats handled the

rapids with relative ease, Marble Canyon still held its spell over the Stanton expedition. On New Years Day, 1890, the photographer Nims climbed a steep cliff to take photographs, slipped and fell over 20 feet, suffering a broken leg and internal injuries.

Nims was made as comfortable as possible and Stanton continued down the river looking for a place to take the injured photographer out a side canyon. Nims was hauled out on a makeshift stretcher, taken to a railroad station and, eventually, returned to Denver. Before he got to Denver, however, Nims touched off a bizarre incident in the Denver press when he wrote to a friend there asking for money to pay for lodging and travel expenses. Delirious from his injuries, Nims mentioned that he thought many more of the Stanton party had either been hurt or killed. The *Denver Times* obtained the letter and claimed in its January 28 issue that one-fourth of the entire Stanton party had "perished in the gloom of Marble Canyon."

The other Denver papers, taken aback by the scoop, checked with Stanton's wife, who was living in Denver, and pounced on the inaccuracy of the *Times*. The *Rocky Mountain News* accused the competing paper of propagating a "horrible hoax." Stanton's wife showed the *News* a letter from her husband in which he explained the Nims accident and concluded: "Don't let the papers get hold of this, as it is no fatality to the expedition and they might exaggerate it." The *Denver Republican* accused the *Times* of "irresponsible journalism."

The *Times*, however, not only stuck to its story, but expanded it. The next day's edition reported on a telegram obtained by the paper which pointed to "the probable loss of a whole boat's crew." Stanton claimed later that the newspaper fabricated the telegram.

The indignation of the *Republican* was swift in coming. The following day the *Republican* called the *Times* story "a brutal hoax," and "a cruel and foolish sensation created by an unreliable evening paper." When Nims finally



arrived in Denver, the *Times* interviewed him and dropped its contention that several crew members had died as quickly as it had raised it.

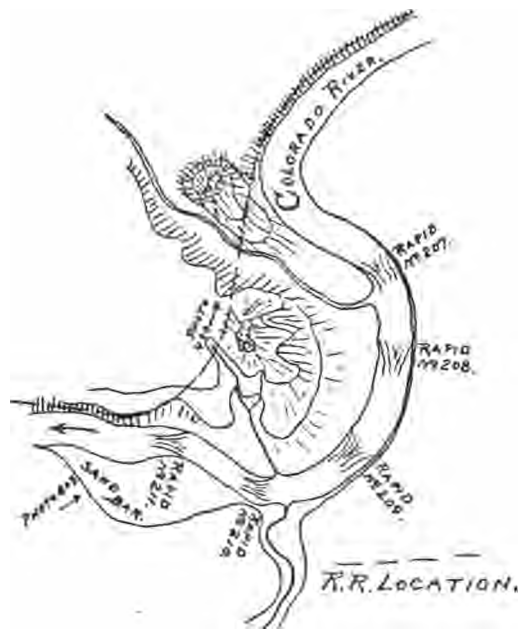
While the battle raged in the Denver press, Stanton was learning how to be a photographer, reasoning that the only way to convince the "doubters and prophets of Wall Street" to back the railroad financially would be to provide photographs of the canyons. Stanton knew little about photography other than "film should not be exposed so long in a bright sun as in a dark night," but felt his way along. It was not until three months later, after Stanton had sent two rolls of negatives to famed photographer William H. Jackson to be developed, that he knew his photographs were properly exposed. Stanton took some 1,600 photographs, continuing the detailed photographic record Nims had begun.

The Stanton party reached the Grand Canyon on January 20 and entered the chasm Powell had made famous. On February 6 one of the boats was completely destroyed and one crew member left the party. For Stanton, however, the continuing problems failed to diminish the beauty of the awe-inspiring Grand Canyon. His notes on that part of the journey are animated and by far the best written of any on the expedition. One passage, in particular, is worth repeating:

... Above us seemed to hang, almost over our heads, great mountains, five and six thousand feet high, snow-covered from their summits half way down. They were ranged in two battalions, as it were, on either side of the great gorge, those grand old chiefs, standing out in advance near the brink of the Canyon, while their legions were ranged in well ordered ranks in their rear, with skirmish lines and pickets far in advance, even to the rim of the inner gorge.

From under the dazzling white of the snowy mantles that encircled and hung down from their monstrous shoulders could be seen the bright colors of the cliffs that formed their war girdles and sashes—in scarlet, in orange and in purple.

*Among the emerald plumes of hemlocks and cedars upon the crests of their helmets, floated great black clouds, like demons in the air. All was quiet in the peaceful valley below, but the powers of the great winter tempest, the frost kings and their legions, were gathering for the onslaught. From the right came the wild north wind. The winter lightning flashed along the cliffs, and it seemed as if artillery from every castle, from every fort, from every redoubt, hidden among the recesses of the gorge, shot out tongues of fire. And the winter's thunder echoed and re-echoed the roar from the mighty guns, while great puffs of white smoke came from all along the battlements, in the form of enormous drifts of snow shot out into the upper canyon and hurled towards the opposite side. Then from the left came the almost wilder south wind, from the San Francisco mountains, and its gusts of drifting snow were dashed out against their foes from the north. There—over our heads—they whirled, they*



This is how Stanton envisioned the railroad alignment through the first 14 miles of the Grand Canyon. Stanton sketched alignments for the entire route, keying the sketches to photographs made by himself and F. A. Nims.



*circled, they rose, they fell and rose again, mingling with the black demons of the clouds, that hung low in the canyon, as if spirits, principalities, and powers were battling in the air, for the glory of possessing the mighty gorge . . .*

*. . . Again the north wind rushed and the south wind raged, the lightning flashed, and the thunder roared, and the black demons and the white spirits struggled in deadly combat far above our heads. But a mightier power, far above them all, spoke as in a still, small voice. The winds ceased, the lightning and the thunder were no more, the demons in the clouds and the spirits in the air were rolled back to either side, and the hoary warriors, the Frost Kings of the Mountains, though not conquered, folded their arms across their frosty breasts in silence. And from the west the brilliant rays of the afternoon sun flashed in between the contending forces and lit up the whole mighty chasm with a gorgeous beauty from Heaven itself, which seemed to say: "Peace! Be still! Vengeance is mine, saith the Lord."*

Compared to other parts of the journey, the trip through the Grand Canyon was difficult, but relatively uneventful. However, one close call still remained for Stanton. On March 13 (Stanton claimed that 13 was his lucky number) the survey came to the tremendous rapid known as Separation Rapid because it marked the spot where three men left the first Powell party. Just before reaching the rapid, Stanton took his notebook from his pocket, put it inside his inner shirt, and buttoned it up tightly. It marked the first time on the entire journey that he had taken the precaution. Half-way through the rapid, Stanton and all the men in his boat were thrown into the river. A huge wave swept Stanton into a whirlpool, where he was sucked under the water. "I wondered if I should ever reach the bottom. . ." Stanton wrote later. "The time seemed an age. The river seemed bottomless." The whirlpool shot Stanton out and down the remainder of the rapid, but his cork life preserver kept him afloat and he emerged from the

dunking unharmed with his diary still dry and safe.

Four days later, the party emerged from the Grand Canyon into open country and a quiet river. From there the journey was easy. The party reached tide-water at the head of the Gulf of California on April 26, 1890.

In his survey report, Stanton maintained that building the railroad line was, indeed, possible. He dismissed the immensity of the canyons, saying that to a railroad engineer, only the first two hundred feet of a canyon's walls make any real difference. "The line as proposed is neither impossible or impracticable, and as compared with some other trans-continental railroads, could be built for a reasonable cost," he concluded.

Stanton felt that from an operating standpoint, the railroad down the Colorado would have "many advantage in grades, distance and permanency of its roadbed ..." He claimed that it would be possible to operate the entire line "by electricity generated by the power of the river tumbling down beside its tracks."

Stanton readily admitted that he had no idea if the railroad venture could be profitable. He left that consideration for others to decide. Although the railway line was never to be, that did not mean the river was considered beyond the capabilities of the schemers and entrepreneurs. Dams, diversions, hydroelectric plants and every other imaginable indignity were planned for the mighty river, eventually reducing the Colorado to a comparative trickle at its terminal point. Buried forever in the bottled up river are many of the rapids Stanton and his crew paid such a dear price to overcome.

Stanton took copious and detailed notes on his expedition and was asked by a publisher to write about his experiences. But, Stanton saw his own journey as only one piece in the overall river puzzle. He wrote a few newspaper letters and articles in popular magazines and professional journals about his expedition, but wanted the whole story told in its proper perspective. He embarked

upon writing a complete history of the Colorado River in 1906 and became an authority on the river. The manuscript he finally finished in 1920 totalled 1,038 pages and was thought much too large for publication by prospective publishers.

After his Colorado River adventure, Stanton became a consulting civil and mining engineer in New York. He turned his attention to engineering problems in various places throughout the world and

lectured extensively in the United States. He returned to the Colorado River several times, however, including his involvement in a placer gold mining venture in Glen Canyon around the turn of the century. Stanton died in 1922 at the age of 75 in New Canaan, Connecticut.

---

Quotations and excerpts are from *Down the Colorado*, Stanton's written account of the Colorado River expedition edited by Dwight L. Smith and published and copyrighted by the University of Oklahoma Press in 1965.

---