

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE DENVER AND RIO GRANDE WESTERN RAILROAD
AT GENEVA, UTAH, ON JULY 3, 1935.

August 28, 1935.

To the Commission:

On July 3, 1935, there was a derailment of a freight train on the Denver and Rio Grande Western Railroad at Geneva, Utah, which resulted in the death of 4 trespassers and the injury of 7 trespassers. The investigation of this accident was made in conjunction with a representative of the Public Utilities Commission of Utah.

Location and method of operation

This accident occurred on Subdivision 6 of the Salt Lake Division extending between Salt Lake City and Helper, Utah, a distance of 119.6 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by ~~time table, train orders, and~~ an automatic block-signal system; the signals at Geneva are remotely controlled from Lehi, 7 miles west of Geneva. The accident occurred at a point 190 feet west of the west passing track switch at Geneva; approaching this point from the west the track is tangent for more than 1 mile and the grade is practically level.

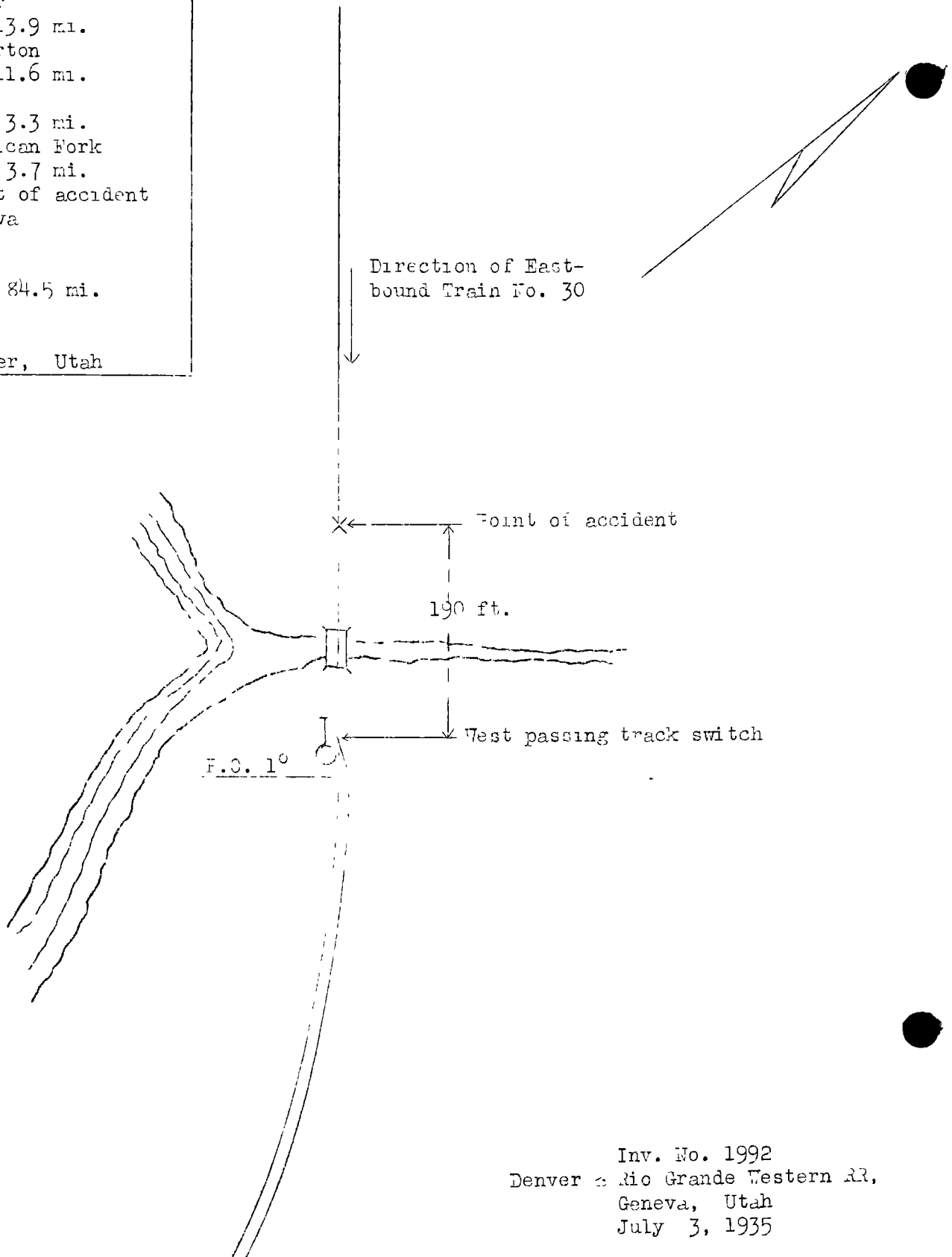
The track is laid with 110-pound rails, 39 feet in length, with an average of 24 treated ties to the rail-length, single-spiked and fully tieplated. The track is ballasted with gravel and is well maintained.

The weather was clear at the time of the accident, which occurred at 3:12 p.m.

Description

Train No. 30, an east-bound freight train, consisted of 55 cars and a caboose, hauled by engine 1404, and was in charge of Conductor Walraven and Engineman Wilson. This train departed from Roper, its initial terminal, 32.5 miles west of Geneva, at 1:50 p.m., according to the train sheet, 1 hour and 49 minutes late, picked up a car at Murray, 4.1 miles from Roper, thus making 56 cars, passed American Fork, 3.7 miles west of Geneva, at 3:03 p.m., and was derailed on approaching Geneva while traveling at a speed estimated to have been from 35 to 40 miles per hour.

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|------------------------|----------|
| • Salt Lake City, Utah | 2.6 mi. |
| • Roper | 13.9 mi. |
| • Riverton | 11.6 mi. |
| • Lehi | 3.3 mi. |
| • American Fork | 3.7 mi. |
| × Point of accident | |
| • Geneva | |
| | 84.5 mi. |
| • Helper, Utah | |



Inv. No. 1992
Denver & Rio Grande Western RR,
Geneva, Utah
July 3, 1935

The third to the twenty-second cars, inclusive, were derailed; the third car stopped 1,835 feet beyond the point of accident, while the balance of the derailed cars stopped in various positions within a distance of 550 feet, approximately 850 feet behind the third car.

Summary of evidence

Engineman Wilson stated that on rounding the curves en route he looked back over the train but did not see anything wrong. He did not know that the head brakeman was riding on the front of the engine; had he known this he said he would have instructed him not to ride there. He stated that it is his practice to receive his own signals from the rear of the train, and after passing the east switch at American Fork he looked back and thought he received a proceed signal. He estimated the speed at the time of the accident to have been between 35 and 40 miles per hour. After the accident he went back to ascertain the cause and observed a broken axle-stub lying in the journal box on the third car in the train; it showed a blue heat, although there was no fire around the box at that time.

Fireman Spear stated that he looked back over the train frequently but did not see any smoke at any time; he thought that about the sixth or seventh car from the engine was the first car of which he was able to obtain a good view of the trucks. A heavy wind was blowing across from the right side of the train and there was a great deal of dust at times, although he was able to see the proceed signal from the caboose on leaving Lehi. He observed section men at American Fork, 3.7 miles from Geneva, but did not see any signals given by them as he was looking ahead. He thought the head brakeman was riding in the tender cabin.

Head Brakeman Morgan stated that before leaving Roper the conductor told him to watch the third car in the train closely; it contained gravel and to set it out if it showed any indications of heating. After picking up a car at Murray, Brakeman Morgan got on the pilot of the engine with the intention of going back and looking at the journal boxes at Midvale where he expected water to be taken. A stop was not made at that point, however, and he was still on the pilot at the time of the accident. He thought he would be able to obtain a better view of the train from that point than he would from the tender cabin. He looked back over the train at curves, which were about 1 mile apart, and at no time did he see any sign of smoke; it was very dusty, however, the dust being so thick that it would have been difficult to distinguish smoke. Brakeman Morgan stated that it would have been almost impossible to see

the trucks of the third car from the tender cabin. The cabin is located on the left side of the tender, but is not flush with the side of the tender; he is unable to get any better view of the train standing outside than when sitting inside unless he gets clear out on the edge of the tender. Brakeman Morgan said he saw track men along the track at Lampton and American Fork, but he did not look back after passing them and did not see any signals that may have been given by them.

Conductor Walraven stated that on learning that the train included a car of gravel he told the head brakeman to watch this car carefully and to set it out if it started to smoke. He was at his desk in the caboose until they reached Lehi, at which time he finished his reports and went to the platform of the caboose to receive a message handed him by the towerman; after reading it and informing the flagman of its contents he sat on the left side of the cupola, keeping a lookout ahead; he observed the agent in his office at American Fork. The train was traveling at a speed of 35 or 40 miles per hour when the air brakes were applied in emergency. After the accident he walked toward the head end of the train, found where a car had first left the track a few car lengths west of the switch, and found a number of ties and a bridge on fire from burning waste, and realized that there was a broken journal. He put out the fire on the bridge and then reported the accident. Conductor Walraven stated that it is against the rules for the brakeman to ride on the pilot and had he known that Brakeman Morgan was riding there he would have instructed him to get off.

Flagman Tillery stated that after his train left Midvale he rode on the right side in the cupola of the caboose, crossing to the left side several times between that point and Lehi in order to watch both sides of the train. He did not see any smoke at any time although the dust was very thick. He saw the section men at the west end of American Fork after the train had passed them, but he did not hear any one trying to attract his attention nor did he see any one giving signals.

Towerman Reed, on duty at Lehi, 7 miles west of Geneva, stated that he delivered a message by means of hoops to the fireman and the conductor of Train No. 30 as the train passed his tower. He did not observe smoke or fire from any of the journal boxes on the north side of the train, on which side he stood. A few minutes later the section foreman at American Fork telephoned and informed him that there was a hot box on one of the cars of Train No. 30 but the train had already left American Fork. About 30 seconds after the call from the section foreman, the agent at American Fork called him and gave

him the same information. By that time he expected the train to enter the block at Geneva and for that reason did not attempt to place the signal at the west passing track switch in stop position as he knew the train would overrun the signal and probably damage would result if an emergency application of the air brakes was made.

Agent Bath, at American Fork, stated that he was sitting at his desk in the station as Train No. 30 passed and he saw a journal box blazing on one of the cars a few car lengths from the engine. He immediately called the towerman at Lehi so that the train could be stopped at the next point. When he had completed his telephone call the entire train had passed and he did not notice the train crew as the caboose went by.

Section Foreman Herbertson stated that he was working a short distance west of the west switch at American Fork when Train No. 30 passed. He was on the left side of the train and saw a journal box blazing on the second or third car in the train. He called to the fireman but the engine had passed him by that time. He looked for some one on the caboose to signal but could see no one. He then went to the telephone and informed Towerman Reed of the hot box. Section Laborers Shumway and Norton who were working with the section foreman also stated they saw the box blazing.

Section Foreman Brallsford, in charge of the Riverton section, was working on the spur track at Lampton in the vicinity of Riverton, 18.6 miles from Geneva, and as Train No. 30 passed he saw a box smoking on one of the cars near the head end of the train. As the rear end of the train went by he called to the crew but could not see any one. Due to the fact that the track on which he was working is considerably lower than the main track he would be unable to see anyone on the opposite side of the caboose cupola. Section Laborer Bristol stated the box was not smoking badly, while Laborer Peterson stated that he did not see the smoking box but he heard a wheel squealing.

Mr. Casper, a farmer, stated that he saw Train No. 30 as it passed through Clivers, 15.5 miles from Geneva, and he saw a box blazing on one of the cars near the head end of the train.

Car Inspector Gledhill stated that he inspected D&RGW 25666 on the repair track at Roper prior to its departure in Train No. 30 and found 2 cut journals, R. No. 1 and L. No. 4. The wheels were changed, the side motion adjusted on the A end and the side bearing and pin applied on the right A end. He examined all of the boxes on the car, giving them particular attention, including the box of the journal which failed in this

accident; he found no roughness and the box was not repacked; as far as he could determine the packing was in good condition.

Car Oiler Sanders stated that he repacked the boxes on which the wheels had been changed on D&RGW 25666 and conditioned the other boxes, using free oil on all of them. He saw no evidence of the box involved having been hot previously.

Car Foreman Woodhead stated that D&RGW car 25666 was shopped because of a cut journal and after the car was placed on the repair track an inspection disclosed another journal with a mark around it. The R. and L. No. 1 and No. 4 wheels were changed. Foreman Woodhead stated that he knew this car was to be moved in a fruit train and he cautioned every one, and also watched the work himself, to see that the other boxes were properly conditioned and the journals examined. He examined the wedges on the two pairs of wheels that had not been replaced and found them in proper position, and there was no indication of the boxes having been hot. He ordered free oil to be used.

Car Foreman Day stated that on June 25 D&RGW car 25666 was released to go to Nash after being conditioned for gravel service. On June 30 information was received that the car was set out at Midvale on account of a hot box. Foreman Day inspected the car at that point and found that the R. No. 1 and the L. No. 4 boxes had been hot. New brasses were applied and the car was ordered back to the Roper repair track for the reason that the two journals were cut. The balance of the journals showed no evidence of having been hot at that time. After the accident measurements were taken of the journal on the opposite end of the axle that had burned off; the diameter of the journal was $5 \frac{7}{16}$ inches; length, $10 \frac{3}{16}$ inches; thickness of the collar $\frac{5}{8}$ inch and the wheel seat was 7 inches. These measurements are in accordance with the A.A.R. standards for a car of like capacity. The repack date was May 5, 1935.

The car involved, D&RGW 25666, is a Hart convertible car, built in August, 1917, equipped with $5 \frac{1}{2}$ by 10 inch journals and has a nominal capacity of 100,000 pounds; the stencilled light weight is 46,600 pounds and the stencilled load limit is 122,400 pounds. The car was weighed at Springville after the accident and had a net weight of 108,140 pounds, tare weight of 46,600 pounds, gross weight of 154,740 pounds, being underloaded 14,260 pounds. The car was loaded with gravel and there was no loss of weight as a result of the accident.

Discussion

The investigation developed that the left No. 2 journal broke off on the third car in the train due to overheating. This car had been reported as having had a hot box several days previously and as a result was shopped for repairs and given a thorough inspection before its departure in Train No. 30. The right and left No. 1 and ~~left~~ No. 4 wheels were replaced, other adjustments were made, the journal boxes of the wheels replaced were repacked and the other boxes conditioned, free oil being used. This car traveled less than 14 miles when the box of the journal which failed was seen to be smoking by section men along the track at Lampton, and was seen to be blazing by a person about 3 miles beyond. The box was also seen blazing as it passed through American Fork after having traveled about 29 miles. Both the section foremen at Lampton and American Fork attempted to get the attention of the crew, but failed. The section foreman and agent at American Fork, however, reported the hot box to the towerman at Lehi immediately, but by that time the towerman realized that the train was about to enter the block at Geneva and did not place the signal at the west passing track switch in stop position as he knew the train would overrun the signal and was afraid that damage would result from an emergency application of the air brakes. The accident occurred approximately 190 feet west of the signal.

The members of the crew of Train No. 30 stated that they looked along the train as occasion permitted, but did not see smoke at any time. There was a wind blowing from the south, however, causing heavy dust along the track which made it very difficult to distinguish smoke. The fireman and head brakeman saw the section men at American Fork, but did not look back, which would account for the failure of the fireman to hear the section foreman call to him after the engine had passed by. Flagman Tillery stated that he saw the section men after the train had passed but did not see any of them give a signal.

Conclusion

This accident was caused by a broken journal, due to overheating; the cause of overheating could not be ascertained.

Respectfully submitted,

W. J. PATTERSON,

Director.