

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
SOUTHERN RAILWAY NEAR GILKEY, N. C., ON JULY 2, 1927.

July 30, 1927.

To the Commission

On July 2, 1927, there was a derailment of a freight train on the Southern Railway near Gilkey, N.C., which resulted in the death of five employees.

Location and method of operation

This accident occurred on that part of the Charleston Division which extends between Marion and Rockhill, N. C., a distance of 108.7 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block signal system being in use. The accident occurred approximately 1 mile north of the station at Gilkey, or about 8 feet from the leaving end of a trestle 775 feet in length, approaching this point from the south there is a 4° curve to the left 375.8 feet in length and then 884.2 feet of tangent extending practically to the leaving end of the trestle, this tangent is followed by a 5° curve to the left 416.3 feet in length, the first marks of derailment occurring on the spiral at the beginning of the last-mentioned curve. The grade for northbound trains from Gilkey is 1.44 per cent descending, tapering off to level across the trestle, followed by an ascending grade, the maximum of which is 1.62 per cent, the accident occurring at the beginning of this ascending grade. Freight trains are restricted to a maximum speed of 30 miles per hour.

The track is laid with 60-pound rails, 30 feet in length, with 18 or 19 oak ties to the rail-length, tie-plated on the curve, double-spiked on the outside of the rails, and is ballasted with cinders, the track is well maintained.

The weather was clear at the time of the accident, which occurred at about 1.17 p. m.

Description

Northbound third-class freight train No. 68 consisted of 20 cars and a caboose, hauled by engine 263, and was in charge of Conductor Eaker and Engineman Kendrick. It departed from Shelby, 34.7 miles south of Gilkey at 8 a. m., on time, arrived at Gilkey at 1.08 p. m., departing from that point at 1.13 p. m., 2 hours and 33 minutes late, and shortly afterwards was derailed while traveling at an undetermined rate of speed.

The engine, its tender, and the first 11 cars were derailed, the engine coming to rest on its right side 558 feet from the point of derailment, while the derailed cars were piled up along the track within a space of four or five car-lengths, 3 of them being destroyed and 7 considerably damaged, practically all of this equipment was clear of the road bed. The employees killed were the engineman, fireman, conductor, and two brakemen.

Summary of evidence

Flagman Penninger stated that one car was picked up at Gilkey, requiring less than 10 minutes in time, but that no air-brake test was made before departing from that point, the air gauge in the caboose, however, registered 70 pounds pressure. He did not know at what time the train departed from Gilkey, nor the time of the accident, and he said that between Gilkey and the point of accident he was in the caboose, being engaged in making out reports. The train was not being operated in a careless manner, Flagman Penninger saying that if it had been so operated he would have noticed it, and he estimated the speed at the time of the accident to have been 20 or 30 miles per hour. His first knowledge of anything wrong was when he felt three severe jolts and as soon as the train came to a stop he started forward expecting to find a burst air hose but discovered the derailed equipment. Flagman Penninger said the train consisted of the full tonnage rating for the class of engine hauling it, but that the train could have been brought to a stop at the bottom of the ascending grade on which the accident occurred and then could have proceeded without difficulty. He further stated he did not know what the other members of the crew had in mind, but it was his own intention to return on southbound passenger train No. 35 providing his own train arrived at Marion, 20.3 miles north of Gilkey, in time to enable him to do so, train No. 35 is scheduled to leave Marion at 4.25 p.m.

Supervisor Hardin stated that he had passed the point of accident about 15 minutes prior to its occurrence and did not observe anything unusual about the condition of the track or trestle. He said that when he inspected the track after the accident he found it in good condition, the rails were laid in 1912 and were slightly worn but at the point where the first marks of derailment appeared on the outside rail, on the trestle about 8 feet from its northern end, nearing the point of the curve, the rails were not worn to any great extent. The flange marks appeared on the top of the rail for a distance of more than 100 feet before the wheel which made them finally dropped off on the outside. The ties had been renewed in October, the drainage was good, with no soft spots, while an elevation of 3 inches was maintained. Supervisor Hardin could assign no cause for the accident.

Section Foreman Johnson said tie renewals were also made in April, near the leaving end of the curve. While the gauge and elevation had not been checked since October, he had walked over the track about two weeks prior to the accident. He considered the track to have been in good condition.

Roadmaster Clontz stated that he arrived at the scene of the accident at 8.30 p. m., but as it was dark he could not make a thorough inspection of the track and he did not observe the point where the wheels first mounted the rails. He did observe, however, that the track was torn up for a distance of about 180 feet, that the cars were piled up within a space of about 100 feet, the engine being one-half buried in the mud, and the distance the equipment traveled after becoming derailed and the manner in which it came to rest led him to believe that the accident was due to excessive speed. He said from his experience with derailments that when an engine derails while moving at a low rate of speed it ordinarily marks every tie, which was not the case in this instance. He further stated that he examined the watch of the engineman subsequent to the accident and found the crystal broken, while the watch had stopped at 1.17.12.

G. L. Stitton, chief engineer of maintenance of way, stated that he with the assistance of Supervisor Hardin checked the gauge and elevation from the point where the first marks appeared on the rails to where the wheel dropped off the rail, a distance of 168 feet, and found them to be in good condition.

An examination of engine 263, which is of the 2-8-0 type, weighing 132,000 pounds on its driving wheels, failed to disclose any defect that would have contributed to the cause of the accident. The driving wheels showed some wear but were not worn to the gauge limit, while the running gear was found intact. The damage to the engine was confined to its right side, after it had been overturned. It had received the monthly washing and inspection on June 26, and no defects had been reported since that time.

An examination of the track indicated that the right forward driving wheel had mounted the outer rail and had continued on the running surface of the rail for a distance of 168 feet before dropping off on the outside. The wheel then remained close to the rail for an additional distance of about 14 feet, as evidenced by grease from the inside edge of the driving wheel being found on the rail for this distance. The wheel then dropped down on the spike heads and ties and ran for a distance of about 50 feet to the point where an angle bar was broken at a rail joint. At this point a flange mark appeared on the ties on the inside of the west rail, indicating the point where the first wheels on the left side of the engine became derailed. The engine then traveled a short distance on the ties to the point where the track began to be torn up, the destroyed track extending a distance of about 240 feet.

Conclusions

This accident is believed to have been due to excessive speed.

The speed of freight trains moving through the territory in which the accident occurred is restricted to 30 miles per hour and the investigation failed to develop anything to indicate that the track was not safe for this rate of speed. Flagman Penninger, the only surviving member of the crew, would not admit the speed was excessive just prior to the accident, but the distance the equipment travelled after being derailed and before it came to rest, the condition and position of the wreckage, as well as the damage to the track, would make it seem probable that the train was moving at a speed in excess of that prescribed by the rules, and that this speed was responsible for the derailment.

The evidence indicated that it was not customary for trains to take a run for the ascending grade on which the accident occurred, yet the fact remains that the train consisted of the maximum tonnage rating for the engine hauling it and had just descended a heavy grade preparatory to ascending a grade ranging from 1.25 to 1.62 per cent, and it is reasonable to assume that the speed was materially increased on the descending grade for the purpose of assisting the train over the ascending grade.

The employees involved were experienced men, at the time of the accident none of them had been on duty in violation of any of the provisions of the *hours* of service law.

Respectfully submitted,

W. P. BORLAND

Director.