

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE BALTIMORE AND OHIO RAILROAD AT GUFFEY, PA., ON DECEMBER 11, 1937

January 33, 1938.

To the Commission

On December 11, 1937, there was a derailment of a passenger train on the Baltimore and Ohio Railroad at Guffey, Pa., which resulted in the death of 1 employee and the injury of 12 passengers and 3 employees. The investigation of this accident was made in conjunction with a representative of the Public Service Commission of Pennsylvania.

Location and method of operation

This accident occurred on the River Sub-division of the Pittsburgh Division, extending between Connellsville and Pittsburgh Pa., a distance of 52.5 miles, in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders and an automatic block-signal system. The point of accident was about 130 feet west of Guffey Station, approaching this point from the east, beginning at signal W-303-02 the track is tangent for a distance of 551 feet, followed by a compound curve to the left 2,100 feet in length varying in curvature from $1^{\circ} 20'$ to $6^{\circ} 30'$, the accident occurring on this curve 558.5 feet from its leaving end, where the curvature is at its maximum. The grade is practically level. At the point of accident the track is on a fill about 25 feet in height.

The track is laid with 100-pound rails, 33 feet in length, with 18 treated white oak ties to the rail-length, double-spiked on the inside and single-spiked on the outside of each rail, tie-plated. Six-bolt angle bars are used, and there are four anti-rail creepers to each rail-length. The track is ballasted with stone to a depth of 24 inches and is maintained generally in good condition.

It was raining at the time of the accident, which occurred at 10.03 p. m.

Description

Westbound passenger train No. 19 consisted of one combination baggage and passenger car, one coach, one Pullman parlor car, and three Pullman sleeping cars, in the order named, hauled by engine 5035, and was in charge of Conductor Kelly and Engineer Beltz. This train passed Vista Tower, the last open office, at 10 p. m., one minute late, and was derailed at Guffey, 1.3 miles beyond, while traveling at a speed estimated to have been between 35 and 40 miles per hour.

The engine was derailed to the north and came to rest on its right side headed diagonally away from and clear of the track, with its front end buried in an embankment, while the tender remained upright across the track. The combination car also remained upright across the track, just back of the tender, while the coach was in an upright position with its rear end on the road bed and its front end against a bank at the end of the fill on the outside of the curve. The parlor car came to rest parallel with the track at an angle of 45° to the south or left, the leading pair of wheels of the leading truck of the first sleeping car was also derailed. The employee killed was the baggage man.

Summary of evidence

Engineer Beltz stated that he had made several applications of the air brakes, the last one about one-half mile east of Guffey, and that he was resuming normal speed when his engine appeared to rise and he was thrown out of the cab window. The headlight on the engine was burning but he did not notice any one in the vicinity and he said he had no warning of any kind before the accident occurred. He estimated the speed of his train at the time of the accident to have been 38 or 40 miles.

Fireman Endler stated that he observed a clear signal at Shaner, one-half mile east of Guffey, and had just noticed the next signal, west of the point of accident, as being in the clear position when the accident occurred. After ascertaining that the train was protected in both directions and assisting with the injured, he made an examination of the track, which was about 30 minutes later, and near the front truck of the fourth car he found that a rail joint on the high side of the curve had been disconnected and that the rails were slightly separated. All of the bolts had been removed from the angle bars, and the angle bars, bolts and nuts were found lying close by, the bolts had no signs of the threads having been stripped. He also found another joint where the angle bars were held in place by only two bolts, the other bolts and nuts being found lying on the track, and he said there appeared to be no spikes holding the rail. The statements of Conductor Kelly and Fireman Dixon brought out nothing additional of importance. Conductor Lehart, off duty and riding on the train as a passenger, said he did not make a complete examination of the track but he observed

that under the fourth car in the train, the front end of which was derailed, the angle bars had been removed from the joint and that the spikes were pulled from the rail, the bolts were lying inside of the rail.

District Master Car Builder Miller, who was riding in the third car in the train, stated that after ascertaining that the train was properly protected and doing what he could to obtain a relief train, and assisting the passengers to the relief train, he went back to look for evidence of the cause of the accident. He was joined by District Boiler Inspector Poole, who was also a passenger on the train, and upon examination of the track it was found that all the bolts had been removed from one of the joints. The nuts had been put back on the bolts which were found lying beside the joint, while the spikes had been pulled from the rail on the high side of the curve, west of the joint, this joint was under the third car in the train. A little later while making a second examination of the track, District Master Car Builder Miller found a joint under the fourth car in the train with four bolts removed and lying near the rail; two bolts remained in the joint, one with the nut missing and one with the nut in place. He then walked westward and found all bolts removed from a third joint, located at the west end of the rail from which all the spikes had been removed. Examination of the spikes indicated that all of them had been pulled with a claw bar. At the second disconnected joint, at the east end of the rail from which the spikes had been removed, the outside angle bar was found on the ends of the ties close to the rail and the inside angle bar was in place close to the rail with one spike partly drawn, the receiving end of the rail had been moved outward about 3 inches. At the next or third disconnected joint, proceeding eastward, the angle bars were lying near the rails and beyond this point the track had been torn up by the derailed equipment. The rail from which the spikes had been drawn was not damaged. The first marks of derailment were on the gauge side of the base of the rail from which the spikes had been removed, a short distance from the east or receiving end of the rail, and they indicated that a wheel had dropped on the inside of the rail. The ties were in good condition and east of the point of accident there were no marks on the ties or roadway to indicate that anything had been loose or dragging from the train. He also stated that at the first joint the bond wires were intact. The statements of District Boiler Inspector Poole substantiated those of ~~Assistant~~ Master Car Builder Miller as to the condition of the second joint, which was the only portion of the track inspected by Mr. Poole.

Track Walker Penn and Track Foreman Calvitti stated that they had been over this section of track the day previous to the accident, Saturday, and found everything in good condition,

Track Walker Pena also said that he does not patrol the track on Sundays and that he had not been near the point of accident during the day. The statements of Track Foreman Chivitti corroborated those of the other witnesses as to the manner in which the track had been tampered with, and he stated that in his opinion the disconnecting of the joints and the pulling of the spikes was done by a man experienced in track work. Track Supervisor Schramm stated that at the first joint, from which four of the six bolts had been removed, the bolt on the leaving end of the rail was intact but showed that an effort had been made to remove the nut as it had been damaged as if struck with a hammer. The nut was off the remaining bolt but the bolt did not come out on account of the fact that the rail had pulled up against the bolt and it was impossible to remove it. After examining the next two joints, from which all the bolts had been removed, he crawled under one of the coaches and found one joint on the low side of the curve with the bolts entirely removed, the bolts were missing, possibly covered with dirt and ballast, but the angle bars were lying alongside the rail. This joint was between the joints on the high side of the curve from which all bolts had been removed. Track Supervisor Schramm further stated that he thought the derailment occurred at the second joint.

A careful inspection of the track for a distance of about 350 feet east of the point of accident disclosed no marks on the track to indicate that anything had been dragging from the spot, and measurements of the track for a distance of about 12 rail-lengths east of the point of accident, taken at each rail joint, the rail joints being staggered, disclosed the gauge, alignment and superelevation to be in good condition.

Inspection of the engine wheels for flange wear and other defects disclosed nothing which could have contributed to the occurrence of the accident.

Conclusions

This accident was caused by malicious tampering with the track.

The investigation developed that at four rail joints the bolts and nuts had been removed, three on the high or north side of the curve and one on the south side, at the first rail joint on the north side the angle bar was held in place with two bolts, at the second joint on the north side all the bolts had been removed and the outside angle bar was lying on the track with the inside angle bar close to the rail with one spike partly out and the rail west of this joint moved northward about 3 inches, the spikes having been removed from the outside of this rail for its entire length, all the bolts and nuts had been removed from the third joint on the north side and also from a joint on the

south side, opposite the rail which had been moved outward. The marks on the inside base of this rail indicated that a wheel or wheels had dropped on the inside of the rail, causing the accident. At the time of this investigation it had not been determined by whom the track was tampered with.

At the time of the accident none of the employees involved had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. B. BORLAND,

Director.