

1945

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE PENNSYLVANIA RAILROAD NEAR SEANOR, PA.,
ON NOVEMBER 19, 1934.

January 15, 1935.

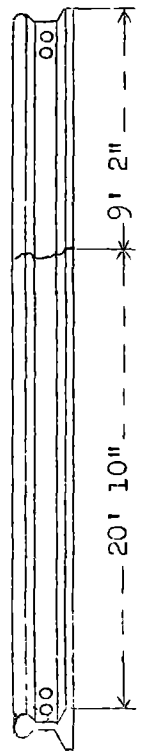
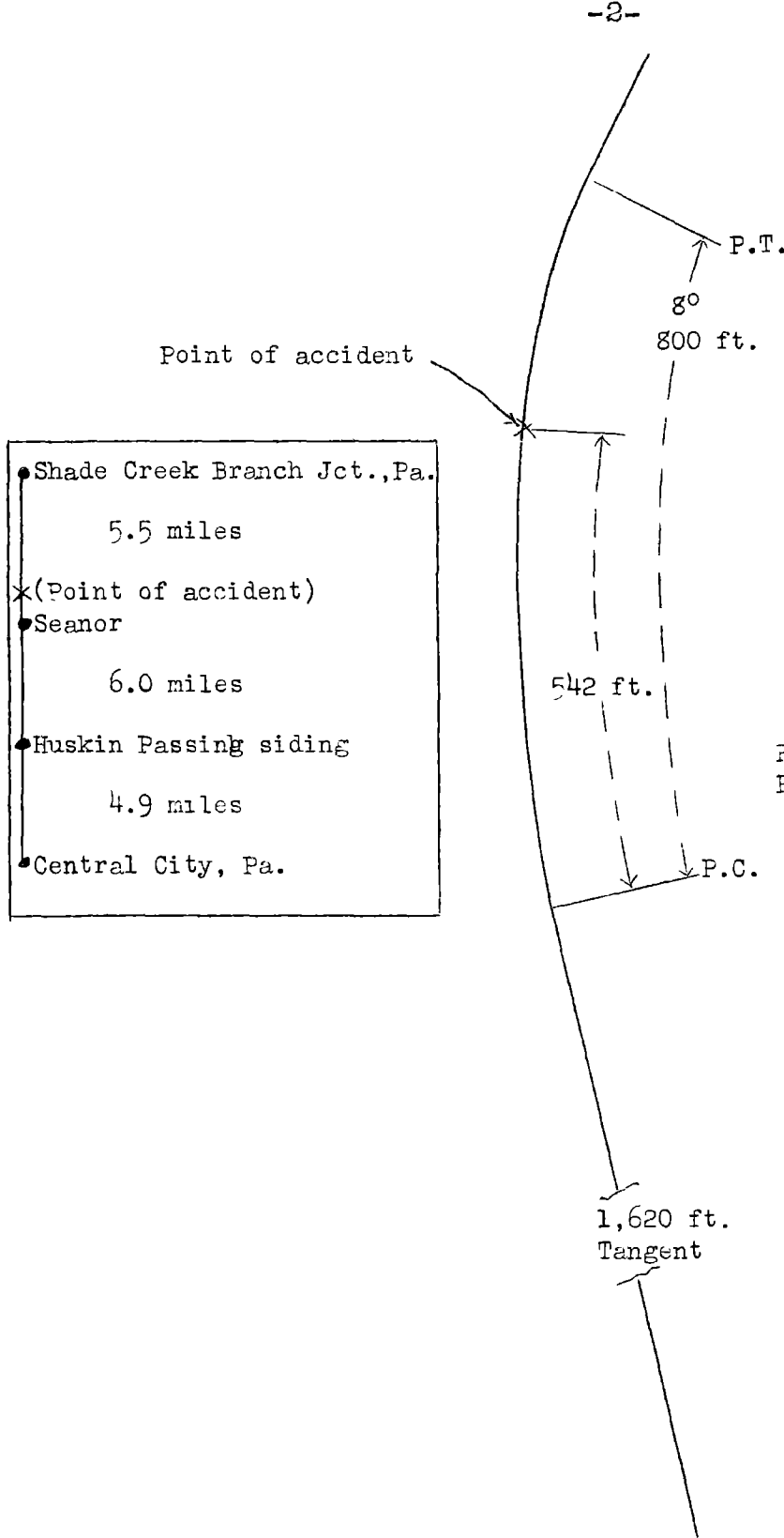
To the Commission:

On November 19, 1934, there was a derailment of a freight train on the Pennsylvania Railroad near Seanor, Pa., which resulted in the death of 1 employee and the injury of 1 employee. This accident was investigated in conjunction with the Pennsylvania Public Service Commission.

Location and method of operation

This accident occurred on the Shade Creek Branch of the Pittsburgh Division, extending between Shade Creek Branch Junction and Central City, Pa., a distance of 17.1 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 a manual block-signal system. The accident occurred about $\frac{1}{2}$ mile north of Seanor; approaching this point from the south, the track is tangent for a distance of 1,620 feet, followed by an 8° curve to the right 800 feet in length, the accident occurring on this curve at a point 542 feet from its southern end. The grade is 0.30 percent ascending for north-bound trains at the point of accident.

The track is laid with 100-pound sawed rails, 50 feet in length, with an average of 13 treated ties to the rail length, fully tieplated on curves, with 2 plate-holding spikes and 3 rail-holding spikes on the high rail and 1 plate-holding spike and 2 rail-holding spikes on the low rail, ballasted with cinders to a depth of 18 or 20 inches. The alignment and surface of the curve were in good condition, although the high rail showed considerable curve wear. The gauge varied from 4 feet 8 $\frac{1}{2}$ inches to 4 feet 9 $\frac{1}{8}$ inches, while the maximum elevation of the outside rail was 1 $\frac{1}{2}$ inches. Under time-table instructions the speed limit on the branch line is 20 miles per hour and on Seanor curve it is 15 miles per hour. No passenger trains are operated on this line, it being a coal-producing branch.



Receiving end of rail
 Piece $4 \frac{5}{8}$ " broken out
 and missing



Inv. No. 1945
 Pennsylvania R.R.
 Seanor, Pa.
 Nov. 19, 1934

The weather was clear at the time of the accident, which occurred about 5:25 p.m.

Description

Extra 1344, a north-bound freight train, consisted of engine 1344, 1 empty car, 40 loaded coal cars, 1 empty car, helper engine 1574, and a caboose, in the order named, and was in charge of Conductor Mitchell and Enginemen Lotz and Snowden. This train left Central City, 10.9 miles south of Seanor, at 3:04 p.m., performed work en route, left Huskin passing siding, 6 miles south of Seanor, at 5 p.m., and was rounding the curve north of Seanor when it was derailed by a broken rail while traveling at a speed estimated to have been about 12 or 15 miles per hour.

Engine 1344, its tender, the first six cars and one wheel of the forward truck of the seventh car were derailed. The engine stopped on its left side, parallel with and west of the track, with its front end 120 feet north of the point of derailment; the tender and first five cars were across and practically at right angles to the track. The employee killed was the head brakeman, while the employee injured was the fireman.

Summary of evidence

Engineman Lotz stated that the speed did not exceed 15 miles per hour at any point after leaving Huskin passing siding. On reaching the south end of bridge 5.39, just north of Seanor, the speed was about 8 miles per hour and while passing over the bridge he applied the brakes so that the pusher engine on the rear of the train would also pass over the bridge at a low rate of speed, following which he released the brakes. Approaching the curve he began to work steam, increasing the speed to about 13 miles per hour, and suddenly the engine became derailed and he immediately applied the air brakes in emergency. Engineman Lotz had not noticed any jar just before the engine became derailed but was of the opinion the accident was due to a broken rail. Statements of Fireman McCall were similar to those of the engineman.

Conductor Mitchell was in the caboose and when the train stopped suddenly he at first thought that an air hose had burst, but on going forward he saw that the train was derailed; owing to the derailed equipment and coal covering the track he was unable to make any inspection to ascertain what had caused the accident. It further appeared from the statements of various members of the crew that they had noticed nothing to indicate a broken rail when passing over the track on the south-bound trip earlier in the day.

Track Foreman Barndt stated that he had been on this section about 1 year and during that time no broken rails had occurred; the rail on the curve involved was curve-worn, but not enough to warrant removal, and no rail replacements had been made recently. He last inspected the track 6 days prior to the accident, walking over it, and had been over it afterwards on a motor car, but noticed nothing wrong on either of those inspections. After the wreckage had been cleared up a broken rail was found on the high side of the curve; a piece measuring $4 \frac{5}{8}$ inches in length was broken out of the head on the receiving end, the break extending down into the web to the first bolt hole at the rail joint; this was a new break and the metal beyond the break was battered somewhat, as though by wheels, and there were well-defined flange marks on top of the head from 1 to $1 \frac{1}{2}$ feet in length; the piece which had been broken out of the rail was not found. The rail also was badly twisted and bent, and it was broken in two near the center, apparently as a result of the accident. Track Foreman Barndt could not say whether the small piece had been broken out of the receiving end prior to the arrival of the train or whether it broke under the train, but in his opinion the broken rail caused the accident.

Supervisor Cranwell stated that only one regular train is operated daily over this branch, but that recently they had operated a couple of extra trains. About 4 weeks prior to the accident he inspected the track and as a result of that inspection he thought the rail was good enough for the type of equipment and small volume of traffic carried. The track was well drained, in good surface and alignment, and the gauge and superelevation were fairly uniform. His description of the broken rail, found after the wreckage had been cleared away, corroborated that of Foreman Barndt, with the exception that he said there were no definite flange marks leading across the head at the receiving end, although there was a burn or slide mark which started on the gauge side of the rail a few inches north of the break and extended across the head toward the outside.

Division Engineer Gillum arrived at the scene of the accident about 10:30 p.m. and inspected the track and equipment in an endeavor to ascertain the cause of the accident, but nothing could be found out until the following afternoon after the derailed equipment had been picked up. His examination of the leaving end of the adjacent rail south of the broken rail disclosed no marks on the end of that rail to indicate that the small piece was missing from the broken rail at the time the train passed over it on the south-bound trip, but in his opinion the small piece was broken during some very recent prior movement and then was held in place by the rail joint until kicked out by Extra 1544, thus precipitating the derailment.

Inspection of the track made by the Commission's inspectors disclosed conditions practically as stated by employees, and no marks of dragging equipment were found on the ties south of the point where the broken rail occurred, while inspection of the engine failed to disclose any defect that would have caused or contributed to the accident; the left front engine-truck wheel had a mark 1 inch long and about 1/16 inch deep on top of the flange where it had struck something a hard blow, and the left back driving wheel was marked in a similar manner, but no marks were found on any of the other wheels. The rail that failed was a 100-pound Cambria O. H. rail, rolled in April, 1913; the heat number had been effaced. The rail subsequently had been sawed to 30 feet in length and was relaid in 1925. At time of this examination no flange marks were visible on top of the rail.

Conclusions

This accident was caused by a broken rail.

A small piece had been broken out of the receiving end of the rail and there was another break 9 feet 2 inches from the leaving end. The latter break apparently was a result of the accident but the opinion was advanced that the small piece had been broken by some prior movement and then held in place by the rail joint until forced out by engine 1344. The question of when this break occurred, however, and the reason for its occurrence, were not definitely determined.

Respectfully submitted,

W. J. PATTERSON,

Director.