

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 DANLBOONE YARD, VA., ON
OCTOBER 16, 1925.

January 20, 1926.

To the Commission:

On October 16, 1925, there was a derailment of a freight train on the Southern Railway near Danlboone Yard, Va., resulting in the death of one employee.

Location and method of operation

This accident occurred on that part of the Appalachia Division extending between Bulls Gap and Appalachia, Va., a distance of 87.2 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; there is no block-signal system in use between 5 p.m. and 8 a.m., during which time the accident occurred, although between 8 a.m. and 5 p.m. a manual block-signal system is in use in the immediate vicinity of the point of accident. The initial derailment occurred in a cut about 15 feet in depth, at a point about 2,000 feet east of the east switch of Danlboone Yard; the final derailment occurring more than 2 miles farther to the eastward; approaching the initial point of derailment from the west the track is tangent for a considerable distance, followed by a 7° curve to the right 375.2 feet in length, the derailment occurring on this curve at a point about 200 feet from its western end. Following this curve there are several curves and tangents extending to the point of final derailment which took place on tangent track, 264.4 feet from the leaving end of a 3° curve to the left, approximately 2.23 miles east of the initial point of derailment, at a facing-point switch which leads to a passing track on the left side of the main track. The grade is generally descending for eastbound trains, varying from 0.35 to 1.15 per cent, being at its minimum at the initial point of derailment and 0.475 per cent at the final point of derailment. The track in this vicinity is laid with 85-pound rails, 33 feet in length, with about 21 ties to the rail-length, double-spiked on the outside of curves and single-spiked on tangents, and is ballasted with limestone to a depth of from 15 to 18 inches; the track is well maintained.

It was raining at the time of the accident, which occurred at about 8.40 p.m.

Description

Eastbound freight train second No. 84 consisted of 55 cars and a caboose, hauled by engine 4010, and was in charge of Conductor Keller and Engineman Adams. This train departed from Danboone Yard at 8.30 p.m., and after traveling a short distance, while running at a speed estimated to have been about 3 or 4 miles an hour, the pony-truck wheels were derailed to the left as a result of striking a rock, which had fallen close to the rail on the engineman's side of the track. The engine crew did not notice that there was anything wrong until the engine encountered the switch at which the final derailment occurred, at a station known as Marcem, while traveling at a speed estimated to have been between 18 and 20 miles an hour.

Engine 4010 and 14 cars were derailed; the engine remained upright and was not seriously damaged, but 5 of the derailed cars were demolished. The employee killed was the fireman, who was caught between the engine cab and the tender.

Summary of evidence

Engineman Adams stated that he was not looking ahead when rounding the curve on which the initial derailment occurred, but was watching the air gauge; he then opened the throttle and worked steam, watching the steam gauge for a distance of about 15 or 20 carlengths. The train dragged as though the air brakes were sticking and at Melvin, approximately 4,200 feet east of the initial point of derailment, he tried to release the air brakes at the rear of the train, by making a 10-pound brake-pipe reduction and then placing the brake valve in release position. On encountering the facing-point switch at Marcem he saw the head end of the engine head in on the passing track, thought the switch was open and immediately closed the throttle and applied the air brakes in emergency, he had not noticed any unusual motion of the engine prior to this time. The weather was stormy and under such conditions he had previously encountered fallen rocks, and he said he was maintaining a lookout at points where he expected them to occur, but never thought that a rock would fall in the cut where the initial derailment took place.

Conductor Keller, Head Brakeman Barker, and Flagman Black were riding in the caboose; they were unaware of anything wrong until the final derailment occurred. Flagman Black stated that on his way back to flag he noticed light wheel marks on the ties, about 8 or 10 inches to the left of each rail, and followed them back until he found the rock which caused the derailment, just outside of the south rail, while there are several pieces of the engine pilot scattered around, and the rock showed plainly where the engine had struck it.

Inspection of the engine disclosed that the pilot was broken; there was a mark on the nub of the right wheel of the engine truck, and also a large indentation on the head end of the right front cylinder, near the bottom, where it had come in contact with the rock.

The last train to pass through the cut was a westbound freight train, which arrived at Danlboone Yard at 4.40 p.m. the day of the accident.

Engine 4010 is of the 2-8-8-2 type, having a total weight, engine and tender loaded, of 603,000 pounds; its total wheel base is 86 feet 10 $\frac{1}{4}$ inches.

Conclusions

This accident was caused by a large rock having fallen from the side of a cut, fouling the track.

The rock which fell was 8 feet long, 4 feet wide, and 2 feet thick, and weighed about 2,000 pounds. It became dislodged from the top of the cut, on the south side of the track, and came to rest in the ditch, fouling the south rail. There had been a heavy rain the day of the accident, which probably accounted for the rock having become dislodged. About 6 feet east of the rock there was a deep mark on the center of a tie, and light wheel marks appeared on the ties, 8 or 10 inches to the left of each rail, which continued across a trailing-point switch at Melvin; at this particular point the right pony-truck wheel passed between the main track rail and the guard rail, which was turned partly over, while there was a heavy indentation on the heel of the frog, outside the left rail. These marks on the ties then continued to where the final derailment occurred at Marcem.

All of 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. DORLAND,

Director.