

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
COLUMBUS & GREENVILLE RAILROAD NEAR WEST POINT, MISS.,  
ON APRIL 30, 1921.

May 16, 1921.

On April 30, 1921, there was a derailment of a freight train on the Columbus & Greenville Railroad near West Point, Miss., which resulted in the death of 3 employees and 1 trespasser, and the injury of 2 employees. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

Location and method of operation.

This accident occurred on the main line of this railroad, which extends between Columbus and Greenville, Miss., a distance of 167.7 miles. It 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 at a point about 3.5 miles east of West Point. Approaching this point from the west the track is tangent for about 1 mile. The grade is descending for a distance of 3,700 feet, varying from 0.62 to 1.07 per cent, the latter being the grade at the point of accident. The track is laid with 60-pound rails, 30 feet in length, with an average of 18 pine and oak ties to the rail-length. It is single-spiked, and ballasted with about 6 inches of cinders. The general condition as to gauge and alignment was good, while the surface was in fair condition. The weather was clear at the time of the accident, which occurred at about 10.35 a.m.

### Description.

Extra 163-170 was a freight train en route from Columbus to West Point and return. On its return trip to Columbus, eastbound, it consisted of engines 170 and 163, headed west, 9 cars and a caboose, and was in charge of Conductor Brown and Enginemen Woodall and Griffin. It left West Point at 10.17 a.m., according to the train sheet, and was derailed while travelling at a speed believed to have been at least 20 miles an hour.

The tender of engine 170 was derailed to the north and came to rest on its left side about 12 feet from the track, while the engine came to rest across the track nearly turned over on its left side, with its head end toward the south. Engine 163 was also derailed to the north but remained practically upright. The first two cars and the forward truck of the third car were also derailed. The employees killed were the engineman and fireman of engine 170 and a brakeman who was riding on that engine.

### Summary of evidence.

The statements of Engineman Griffin and Fireman McWilliams, of engine 163, and of Conductor Brown and Flagman McConnell, were to the effect that they had noticed no rough spots in the track, neither had they noticed any application of the air brakes while descending the grade approaching the point of accident. Engineman Griffin said the first he knew of anything wrong was when he noticed that the tender of engine 170

was derailed, while Conductor Brown said he felt a jar, noticed that the indicator of the air gauge registered a pressure of 70 pounds and that immediately afterwards there was a severe lunge and the indicator went to zero. The estimates of these employees as to the speed varied from 12 to 15 miles an hour. None of them was able to say what caused the accident, although the conductor and flagman made an examination of the track to determine the cause. Engineman Griffin further stated that two stops had been made leaving West Point and that the air brakes had worked properly on each occasion. Conductor Brown and Flagman McWilliams said no test of the air brakes was made before departing from West Point.

Section Foreman Logan was working at a point about 1 mile west of the place where the accident occurred and he said that when extra 170-163 passed him, at that time on an ascending grade, it was moving at a speed of about 20 miles an hour. After the accident he examined the track and found the gauge to be in good condition and the surface fairly good; in his opinion the track was safe for a speed of 20 miles an hour. He found nothing about the track which could have caused the accident, which opinion was verified by Roadmaster Crocker. The section foreman thought, judging from the wreckage, that the speed must have been 20 miles an hour or more, while the roadmaster thought it must have been between 25 and 30 miles an hour.

Master Mechanic Pullen, who reached the scene of the accident about an hour after its occurrence, said the throttles of both engines were closed, the reverse levers in the back-up position, and the brake valve on engine 170 in running position and on engine 163 in full release position. He made a careful examination of the track and equipment, but was unable to find any defects or broken parts except those which resulted from the accident. He thought the accident was due to excessive speed, while Superintendent Rigby, judging from the condition of the wreckage, estimated the speed to have been about 30 miles an hour.

Examination of the track disclosed that the first mark of derailment was a flange mark on the north rail, which extended diagonally across the rail and was 7 feet 2 inches in length, the next mark was a flange mark on the head of a spike 17 inches eastward, while 21 inches farther east there were flange marks on a tie. East of this point flange marks were plainly visible on the north sides of both rails for a distance of 35 feet, these marks leading away from the rails; beyond this point the track was torn up.

Measurements of the surface of the track showed it to be uneven, indicating that it had not been well maintained.

The engines involved in this accident were of the 4-6-0 type, and had a total weight, engine and tender of 222,000 pounds. The tenders had a wheel base of 16 feet, and a capacity of 4,000 gallons of water. They were carrying

nearly a full load at the time of the accident, water having been taken just before departing from West Point, while approximately 2 tons of coal had been burned en route from Columbus to West point. Engine 170 was received from the Mobile and Ohio Railroad on October 21, 1920, and had been in continuous service since that time. Engine 163 was received from the same railroad on October 24, 1920, and had been in the shops for repairs from March 8 to April 11, 1921. The last monthly tests showed both engines to be in good condition. The last inspection was on the night previous to the accident, and at that time all necessary repairs were made. Thorough examination of the engines and tenders failed to disclose anything which might have caused the accident.

#### Conclusions.

This accident was caused by extra 170-163 being operated, with the engines backing up, at an excessive rate of speed, together with the uneven surface of the track.

Under the rules, the speed of an engine backing up, must not exceed 12 miles an hour. While none of the estimates of the crew of extra 170-163 indicated that the speed was in excess of 15 miles an hour at the time of the accident, the condition of the wreckage, coupled with the fact that no application of the air brakes seems to have been made while descending the 3,700-foot grade approaching the point of accident, indicates that the speed was in excess of 15 miles

an hour. It is believed that the operation of the train at such a rate of speed over the uneven track caused the tender of engine 170 to rock to such an extent that a wheel or wheels on the north side of the track mounted the rail, resulting in the derailment of the train.

All of the employees involved were experienced men. At the time of the accident they had been on duty about  $2\frac{1}{2}$  hours, after periods off duty of 36 hours or more.