

January 25, 1915.

In re investigation of accident which occurred
on the Southern Railway near Jetersville, Va., on December 18,
1914. Inv-240

On December 18, 1914, there was a derailment of a passenger train on the Southern Railway near Jetersville, Va., which resulted in the death of 1 passenger and the injury of 16 passengers, 5 employees, 1 mail clerk and 1 express messenger. After investigation of this accident the Chief of the Division of Safety reports as follows:

Southbound passenger train No. 13 was in charge of Conductor Drake and Engineman Robinson. It left Richmond, Va., at 10.30 a.m. and arrived at Chula at 11.44 a.m. At this point the train was delayed on account of the derailment of a freight train 2 miles beyond. Orders were finally issued to proceed to the scene of derailment and exchange equipment with northbound train No. 8, which was on the opposite side of the derailed cars, the passengers, baggage, mail and express to be transferred from one train to the other. After this transfer had been effected, the equipment composing train No. 8 was operated, backing up, as train No. 13. It started at 1.15 p.m. and was made up in the following manner: 2 coaches, 1 combination baggage and mail car and 1 express car, all of wooden construction, and was being backed by locomotive No. 1105. This train reached Amelia, 3.5 miles beyond the scene of the transfer, at 2.20 p.m. On leaving the station at this point the train proceeded to the south switch, about one-quarter of a mile beyond the station, where the locomotive was shifted to the forward end of the train and at 3.10 p.m. it again proceeded, with the locomotive backing up, and had reached a point about 2 miles north of Jetersville, which is 7.4 miles beyond Amelia, when it was derailed at about 3.25 p.m.

The engine came to rest on its side across the track at a point about 200 feet beyond the initial point of derailment, the tender breaking away and landing on the left side of the track. The first coach tipped over on its side on the right of the track with its forward end against the pilot of the engine, this end being badly damaged. The passenger who was killed was riding in the vestibule on this end of the car. One truck of the second car was derailed but none of the other cars was damaged to any extent.

This division of the Southern Railway is a single track line. No block signal system is in use, trains being operated by train orders and time-card rights. Approaching the point of derailment from the north, there is a curve of $3\frac{1}{2}$ degrees to the right, 1800 feet in length, followed by a tangent 350 feet in length; then there is a curve of 3 degrees to the left 2,100 feet in length. It was on this second curve that the derailment occurred, at a point about 1,230 feet south of its northern end. The superelevation of this curve at the point of derailment was 3 inches. The track is laid with 80-pound rails, 30 feet in length, with 16 or 18 oak ties under each rail, ballasted with about 6 inches of pebble ballast. The track is single spiked and no tie plates are used. One rail brace is placed at the center of each rail on the outside of the curve. The weather was clear.

Examination of the track showed that the rear tender truck wheels had mounted the rail on the outside of the curve and after running along on the ball of the rail for a short distance had dropped off on the ties, running along on the same for about four rail lengths, beyond which point the track was badly torn up by

the derailment. This examination also showed that the track approaching the point of derailment from the north was in good condition.

Engineman Robinson stated that at the time the tender was derailed, the train was running at about 15 or 18 miles per hour and that he at once applied the emergency air brakes. There was no noise or any indication of any kind that there was anything wrong prior to the derailment of the tender. The statements of the fireman added nothing to those of the engineman. He estimated the speed to have been between 15 and 20 miles per hour, while the conductor thought that the speed was about 20 miles per hour.

Superintendent of Motive Power Sasser, who was a passenger on train No. 13 when it was derailed, stated that while the train was at Amelia he walked around the locomotive examining both the engine and tender and found them to be in good condition. After the derailment he examined the track and found that one of the tender wheels had mounted the rail and had run along on the bull of the same for a distance of about 9 feet before dropping off on the ties. At this time he made a further examination of the engine and tender but was unable to find anything which could have caused the accident.

Section Foreman Merritt, in charge of the section on which the accident occurred, stated that he had put new ties and ballast on this part of the track within two weeks previous to the date of the derailment. There was a soft spot in the track near the point of derailment which occasionally caused trouble. He had worked on this soft spot a few days prior to the occurrence of the accident and had put it in first-class condition. He had no idea what caused the accident. Supervisor Averett stated that he made an examination of the track about two hours after the occurrence of the accident, at which

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time no work had been done on it, but he was unable to determine what caused the accident. He stated that the soft spot was about 30 feet in length, but that it did not require special attention.

Superintendent Hudspeth stated that on his arrival at the scene of the accident he made an inspection of the track and equipment and found the track to be in good condition, seeing nothing which he thought caused the derailment. Although he made a careful inspection of the tender trucks he was unable definitely to ascertain their condition prior to the occurrence of the accident, on account of their being badly broken up.

Master Mechanic Owens stated that locomotive No. 1105 had been in the shops about August 1, 1914, at which time the tires were changed and other running repairs made. He made an examination of the locomotive after the accident and found everything to be in good condition with the possible exception of a flange on one of the steel-tired wheels on the inside of the rear tender truck, which was slightly worn. The rear side bearing clearance was about one-quarter of an inch, while the clearance on the forward truck was about three-eighths of an inch.

Locomotive No. 1105 is of the 4-6-0 type and has a total weight, engine and tender, ready for service of 325,100 pounds. At the time of the derailment, the tender was carrying 5 or 6 tons of coal and was about half filled with water.

This accident was caused by the rear tender truck wheel mounting the rail on the outside of the curve, while backing at a speed estimated to have been about 20 miles per hour. Why the tender wheels were derailed was not definitely ascertained, but it is believed that it may have been due to the fact that the locomotive was

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backing up, and that on this account the tender, which was about half-full of water, rocked more than usual, this rocking motion being increased by any slight irregularities in track, due to the soft spot, which might have existed.