

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3362
SOUTHERN RAILWAY COMPANY
IN RE ACCIDENT
AT GIBSONVILLE, N. C., ON
SEPTEMBER 10, 1950

SUMMARY

Date: September 10, 1950
Railroad: Southern
Location: Gibsonville, N. C.
Kind of accident: Derailment
Train involved: Freight
Train number: 252
Engine number: 4847
Consist: 60 cars, caboose
Estimated speed: 35 m. p. h.
Operation: Timetable and train orders
Track: Single; tangent; 0.86 percent
descending grade eastward
Weather: Clear
Time: 3:15 a. m.
Casualties: 2 killed; 1 injured
Cause: Damaged track resulting from
previous derailment

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3362

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

SOUTHERN RAILWAY COMPANY

November 2, 1950

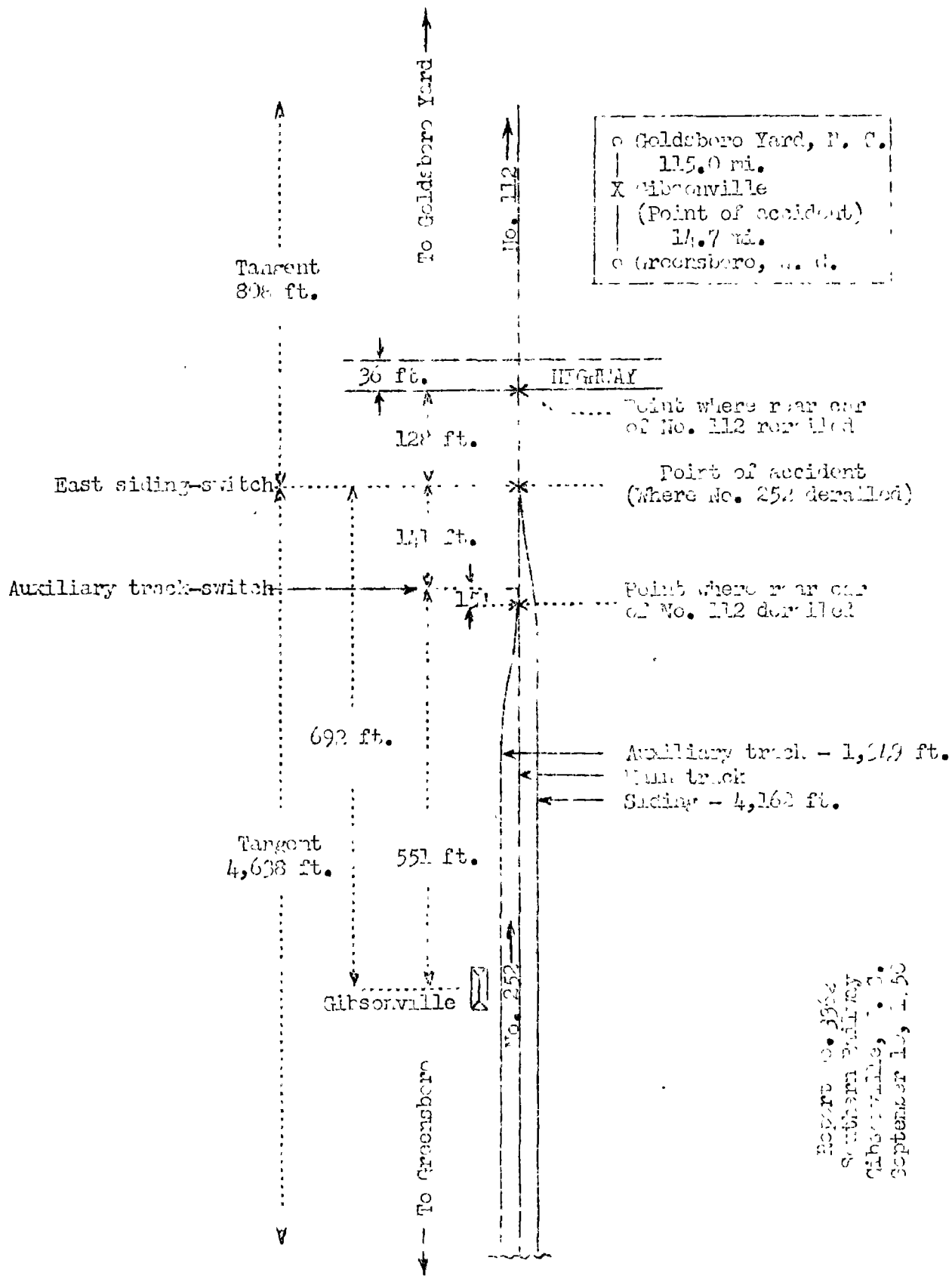
Accident at Gibsonville, N. C., on September 10, 1950,
caused by damaged track resulting from a previous
derailment.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On September 10, 1950, there was a derailment of a freight train on the Southern Railway at Gibsonville, N. C., which resulted in the death of two employees and the injury of one employee.

¹
Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Location of Accident and Method of Operation

This accident occurred on that part of the Danville Division extending between Greensboro and Goldsboro Yard, N. C., 129.7 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. At Gibsonville, 14.7 miles east of Greensboro, an auxiliary track, 1,349 feet in length, parallels the main track on the north. The east switch of this track is 551 feet east of the station. A siding 4,162 feet in length parallels the main track on the south. The east switch of this siding is 141 feet east of the east switch of the auxiliary track. The accident occurred on the main track at the point of switch of the siding, 692 feet east of the station. From the west the main track is tangent 4,638 feet to the point of accident and 808 feet eastward. Throughout a distance of 2,778 feet west of the point of accident, the grade varies between 0.31 percent and 0.86 percent descending eastward and is 0.86 percent descending at that point.

The track structure consists of 100-pound rail, 39 feet in length, laid new in May, 1927, on an average of 23 treated ties to the rail length. It is fully tieplated with double-shoulder tieplates, three spikes per tieplate, and is provided with 4-hole 24-inch continuous type joint bars and 8 rail anchors per rail. It is ballasted with crushed stone to a depth of 12 inches below the bottoms of the ties.

A highway 36 feet in width intersects the railroad at right angles at a point 128 feet east of the east siding-switch. Flangeways 2-1/4 inches in width are provided by 6-inch by 8-inch timbers inside each rail, and timbers of the same dimensions are located about 2-1/4 inches outside each rail. The area between the timbers inside the rails is paved with asphaltum to the level of the tops of the rails.

The maximum authorized speed for freight trains is 40 miles per hour.

Description of Accident

No. 252, an east-bound second-class freight train, consisted of engine 4847, a 2-8-2 type, 60 cars and a caboose. This train departed from Greensboro at 2:37 a. m., 4 hours 17 minutes late, and, while moving on the main track at an estimated speed of 35 miles per hour, the engine and the first 20 cars were derailed at the east siding-switch at Gibsonville.

The engine and the tender remained coupled and stopped on their left sides and parallel to the track, with the front end of the engine 339 feet east of the point of accident and 15 feet north of the main track. The first 19 cars stopped in various positions on or near the track. The front truck of the twentieth car was derailed. The left sides of the engine and the tender were badly damaged. Thirteen cars were destroyed and the other derailed cars were considerably damaged.

The engineer and the fireman were killed. The conductor was injured.

The weather was clear at the time of the accident, which occurred about 3:15 a. m.

Discussion

No. 252 was moving on tangent track at an estimated speed of 35 miles per hour, in territory where the maximum authorized speed was 40 miles per hour, when the derailment occurred. As the train was approaching the point where the accident occurred, the enginemen and the conductor were in the cab of the engine, the front brakeman was in the brakeman's booth on the tender, and the flagman was in the caboose. The front brakeman said that before the accident occurred the engine and the cars were riding smoothly and there was no indication of defective equipment or track nor of any obstruction having been on the track.

Examination of the engine and cars of No. 252 after the accident occurred disclosed no defective condition which could have contributed to the cause of the accident.

Examination of the main track west of the point of accident disclosed that the alignment, surface and gage were well maintained for the maximum authorized speed. At the west end of a grade crossing, 4.5 miles west of the point of accident, a flangeway timber on the inside of the north rail was marked. The indentation was about 3 inches in diameter, 2-1/2 inches deep and about 11 inches south of the gage side of the north rail. Within a distance of about three-fourths mile east of the crossing several pieces of a steam coupler and the parts of hangers used to support it were found along the track. These pieces consisted of the bottom section of a spring hanger, a small S hook, a carrier chain 25 inches in length equipped with hooks at each end, and a piece of metallic connection pipe 16 inches in length. The lower section of the flexible joint of a steam coupler, 3-3/8 inches in diameter and 7-1/2 inches in length, was wedged, with the

flange joint upward, between the south main-track rail and the lead rail of the turnout and near the heel of the east switch of the auxiliary track. The top section of this joint was found 10 feet north of the track and 10 feet east of the east switch of the auxiliary track. The lower section of the joint bore two flange marks about 1 inch wide, 5/8 inch long and 1/4 inch deep. The upper section bore a flange mark 3 inches long, 1-1/4 inches wide and 15/16 inch deep. It also was deeply marked where it came in contact with the south joint bar at the heel of the auxiliary-track switch. The first mark on the track structure was a flange mark on the gage side of the top of the south main-track rail about 8 inches west of the south switch-rail of the east auxiliary-track switch. This mark extended about 5 inches diagonally across the top of the rail to the outside. Flange marks then appeared on the tieplates and ties and continued eastward a distance of 31 feet to the north rail of the siding. At that point they were 32 inches south of the gage side of the main-track rail. The marks then continued eastward along the north rail of the siding and across the frog. Corresponding marks appeared south of the north main-track rail. The south stock-rail of the siding switch was canted outward and was displaced about 3 inches from its normal position. The south switch-rail was bent outward about 9 inches from the point, which condition indicated that the point had been forced toward the displaced stock rail. The track was destroyed between the switch and the rail-highway grade crossing 128 feet east of the siding switch. At the rail-highway grade crossing, the west end of the flangeway timber on the inside of the south rail bore a flange mark which continued diagonally to the south main-track rail, at which point one or more wheels were rerailed about 7 feet from the west end of the flangeway timber.

An examination was made of the cars of No. 112, a first-class passenger train, which passed the point where the accident occurred about 1 hour before No. 252 was derailed. The rear three cars of this train were sealed baggage-express cars. The examination disclosed that the rear truck of the rear car had been derailed. A portion of the metallic steam connection on the front end of this car was missing, and a piece was broken out of the right front journal box of the rear truck. The rims of all wheels of the rear truck and the south frame of that truck were marked.

Before No. 112 departed from Greensboro an air-brake test was made and the steam connections were coupled on the first five cars. The steam connections on the rear three cars were not coupled but were suspended by chains provided for that purpose. It could not be determined how the steam coupler at the front end of the rear car of No. 112 became disengaged

from the chain. All breaks in the coupler were new and there was no evidence of wear on the links or hooks of the chain or on the portion of the spring hanger which was found. However, it is apparent that the steam coupler on the east end of the rear car of No. 112 became disengaged west of Gibsonville. When this car passed the east switch of the auxiliary track at Gibsonville the flexible joint of the coupler became wedged between the lead rail and the stock rail near the heel of the switch rail. When the front wheel on the south side of the rear truck of the rear car of No. 112 came in contact with the rounded end of the joint the front wheels were derailed to the south. These wheels then continued eastward to the switch of the east turnout of the siding where they canted and displaced the stock rail southward, sheared the spike heads and overturned the rail braces. At this point the rear wheels of the truck also were derailed, but all wheels were rerailed at the grade crossing 128 feet eastward. Because the rear three cars were sealed, the flagman was in the fourth car from the rear and the derailment of No. 112 was not detected before No. 252 was derailed at the siding switch. As a result of the derailment of the rear truck of the rear car of No. 112, the south switch-rail and the adjacent stock rail were deflected outward to such an extent that the gage of the track was too wide for No. 252.

Cause

It is found that this accident was caused by damaged track resulting from a previous derailment.

Dated at Washington, D. C., this second day of November, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.