

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3055
COLUMBUS AND GREENVILLE RAILWAY COMPANY
REPORT IN RE ACCIDENT
NEAR MEANS, MISS., ON
DECEMBER 30, 1946

SUMMARY

Railroad: Columbus and Greenville
Date: December 30, 1946
Location: Means, Miss.
Kind of accident: Derailment
Train involved: Mixed
Train number: 110
Engine number: 506
Consist: 17 cars
Estimated speed: 30 m. p. h.
Operation: Timetable and train orders
Track: Single; tangent; 0.041 percent
descending grade eastward
Weather: Cloudy
Time: 5:10 p. m.
Casualties: 1 killed; 6 injured
Cause: Broken angle bars

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3055

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

COLUMBUS AND GREENVILLE RAILWAY COMPANY

February 11, 1947.

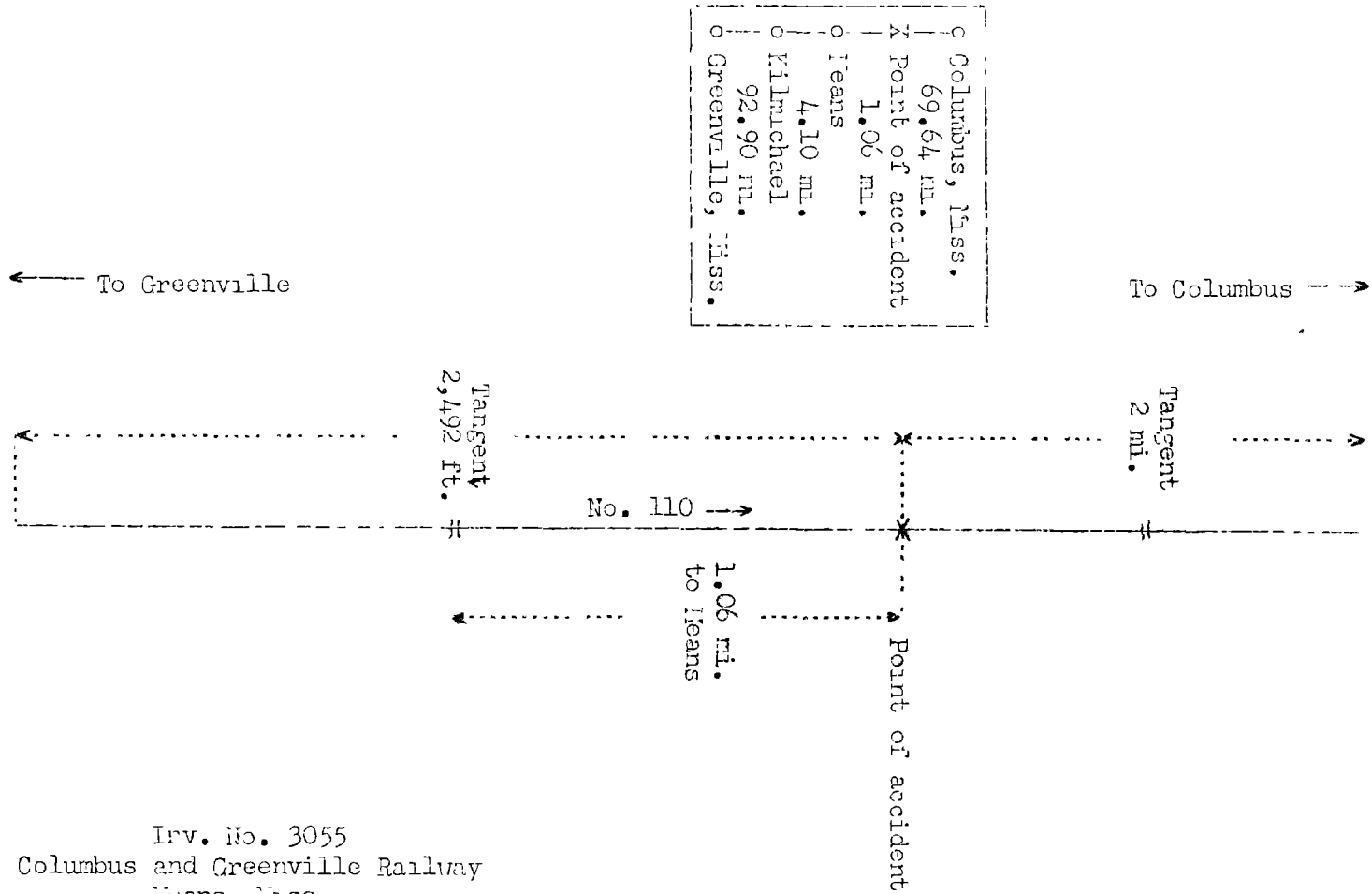
Accident near Means, Miss., on December 30, 1946, caused
by broken angle bars.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On December 30, 1946, there was a derailment of a mixed train on the Columbus and Greenville Railway near Means, Miss., which resulted in the death of one employee, and the injury of six passengers.

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.



Irv. No. 3055
 Columbus and Greenville Railway
 Means, Miss.
 December 30, 1946

Location of Accident and Method of Operation

The Columbus and Greenville Railway is a single-track line extending between Greenville and Columbus, Miss., 167.7 miles, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track 98.06 miles east of Greenville and 1.06 miles east of the station at Means. The track is tangent throughout a distance of 2,492 feet immediately west of the point of accident and a considerable distance eastward. The grade is 0.041 percent descending eastward.

In the vicinity of the point of accident the track is laid on a 5-foot fill. The track structure consists of 60-pound rail, 30 feet in length, laid in 1887 on an average of 18 ties to the rail length. It is fully tie-plated, single-spiked, provided with 4-hole 60-pound angle bars, rolled and installed in 1942 and secured by 3/4-inch by 4-1/4-inch bolts, nut locks and square-headed nuts. Each rail joint is spiked with 4 angle-bar holding spikes. The track is ballasted with cinders to a depth of 18 inches.

The maximum authorized speed for mixed trains is 50 miles per hour.

Description of Accident

No. 110, an east-bound second-class mixed train, consisted of engine 506, a 2-8-2 type, 15 freight cars, 1 baggage-mail-express car and 1 coach, in the order named. The passenger-equipment cars were of steel-underframe construction. This train departed from Kilnichael, the last open office, 4.1 miles east of Means, at 4:50 p. m., 1 hour 30 minutes late, passed Means, and while it was moving at an estimated speed of 30 miles per hour the engine, the first six cars and the front truck of the seventh car were derailed.

The engine overturned to the right and stopped on its right side down the embankment and at an angle of about 15 degrees to the track, with the front end 228 feet east of the point of derailment. The cab was demolished, steam pipes within the cab were broken, and the engine was otherwise badly damaged. The tender stopped on its right side, off its trucks, at the rear of the engine and at an angle of about 45 degrees to it. The derailed cars stopped in various positions and were considerably damaged.

The engineer was killed.

The weather was cloudy at the time of the accident, which occurred about 5:10 p. m.

Discussion

No. 110 was moving on tangent track at a speed of about 30 miles per hour, in territory where the maximum authorized speed was 50 miles per hour, when the derailment occurred. This train had been operated at a slow rate of speed throughout a distance of about 3 miles immediately west of the point of accident, in compliance with a train order which the crew had previously received instructing them to look out for a broken rail. The speed of the train had been increased to about 30 miles per hour when the derailment occurred. The fireman was on the deck of the engine and the first he knew of anything being wrong was when he felt a sudden downward movement of the front end of the engine. At that moment the engineer moved the brake valve to emergency position, then the engine overturned. The engineer was killed. The brakes of this train had functioned properly en route.

After the accident the west ends of two broken angle bars were found attached to the leaving end of a rail on the south side of the track. These angle bars were broken squarely at the rail-end location. The east end of the rail was battered downward about 1/8-inch and horizontally on the gage side about 3/8-inch. Eastward from this point the track was destroyed throughout a distance of about 200 feet to the point where the engine overturned. At the break in the outside angle bar there was a progressive fracture extending downward about 1/4-inch and across the entire width of the bar. At the break in the inside bar there was a progressive fracture which covered about 50 percent of the cross-sectional area. The breaks other than the progressive fractures were new. A tie supported each rail near its end at the joint in question, but there was no tie immediately under the joint. The bolt holes of the bars were elongated considerably, which condition indicates that there had been excessive movement at this joint. In this vicinity the track is laid on an earthen fill extending across marshland. The centers of the cribs were filled with cinder ballast extending to the tops of the ties, but the ends of the ties were inadequately supported by ballast. The batter marks on the east end of the rail at the location of the broken angle bars indicate that the complete failure of these bars occurred some time before the derailment occurred, and that the batter marks were made prior to the derailment by the wheels of the equipment of a west-bound train being in contact with the east end of this rail. Examination of the engine of No. 110 disclosed that the pilot was bent inward, and the right side of the pilot bore marks indicating that it had been in contact with the end of a rail. Evidently the west end of the rail

immediately east of the broken angle bars extended upward, as the result of surface bending, sufficiently to be in contact with the pilot of the engine of No. 110, then the general displacement of the track structure followed.

The foreman who had charge of this section of track said that during the period between December 1 and December 30, 1946, there were six broken rails in this territory, and an average of 3 broken angle bars daily. Some of the breaks in the angle bars were complete fractures and others were progressive fractures. The foreman inspected the track in the vicinity of the point of accident twice during the morning of the day the accident occurred. The last inspection was made about 5 hours 30 minutes prior to the derailment. No. 11, a west-bound passenger train, passed over this track at a speed of about 50 miles per hour about 2 hours before the accident occurred, and there was no indication of defective track in the immediate vicinity of the point of derailment. The crew of No. 11 observed a broken rail at a point about 3 miles westward and reported it to the train dispatcher. No rail-detecter car has been in use on this railroad.

Cause

It is found that this accident was caused by broken angle bars.

Dated at Washington, D. C., this eleventh day of February, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.