

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3053
ILLINOIS CENTRAL RAILROAD COMPANY
REPORT IN RE ACCIDENT
NEAR RUDDOCK, LA., ON
DECEMBER 27, 1946

SUMMARY

Railroad: Illinois Central
Date: December 27, 1946
Location: Ruddock, La.
Kind of accident: Derailment
Train involved: Passenger
Train number: 5
Engine numbers: Diesel-electric units
4003-4014
Consist: 13 cars
Speed: 60 m. p. h.
Operation: Timetable, train orders and
automatic block-signal system
Track: Double; tangent; level
Weather: Hazy
Time: 8:42 a. m.
Casualties: 48 injured
Cause: Broken rail

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3053

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

ILLINOIS CENTRAL RAILROAD COMPANY

February 6, 1947.

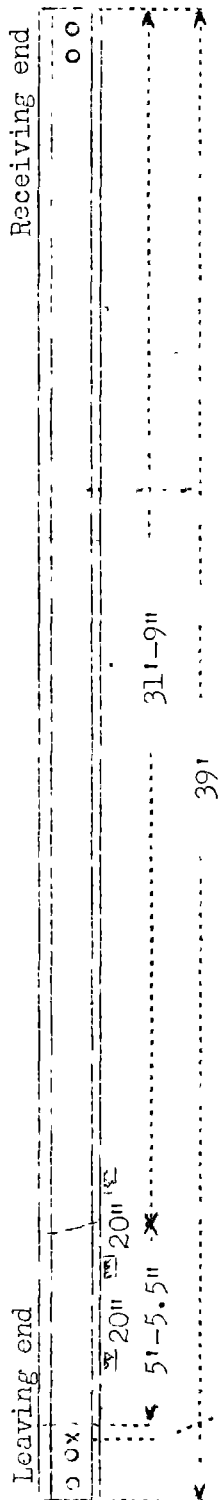
Accident near Ruddock, La., on December 27, 1946, caused
by a broken rail.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner

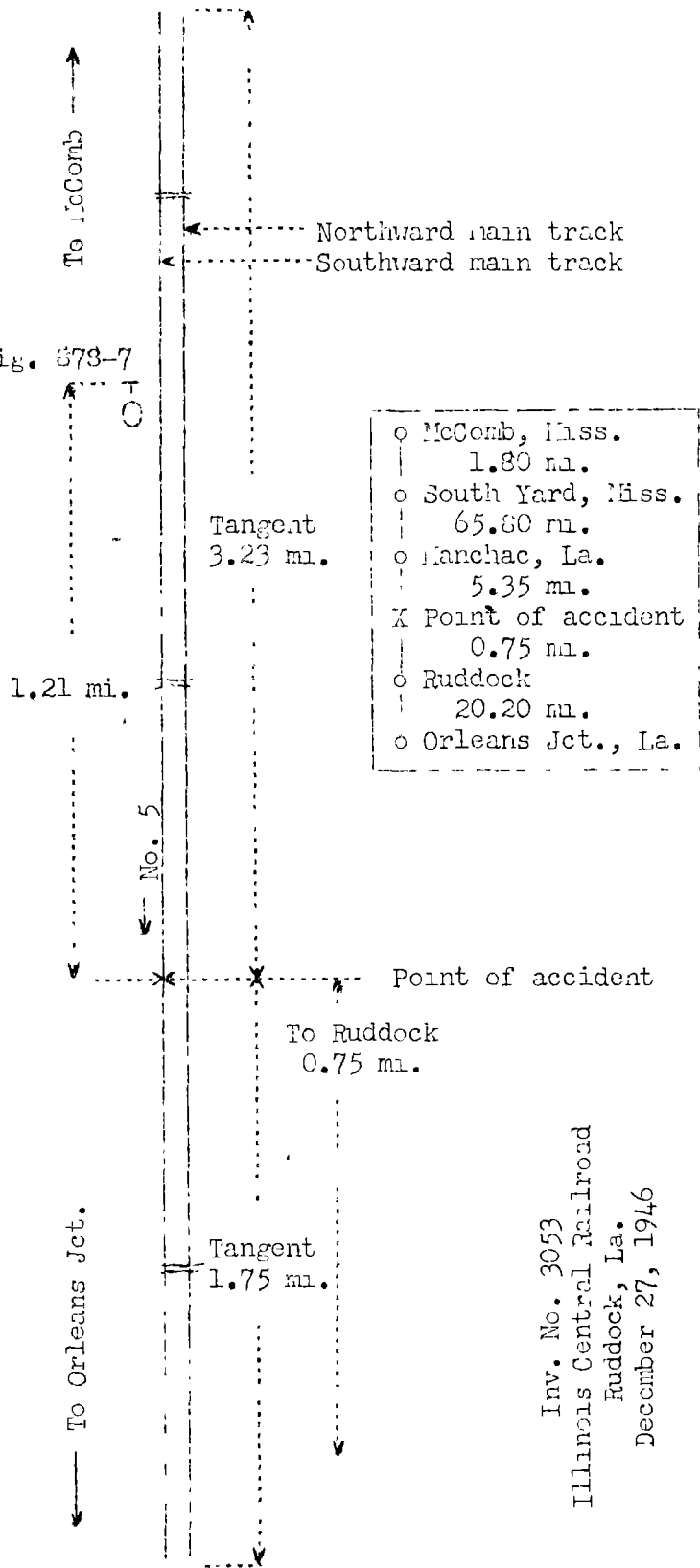
On December 27, 1946, there was a derailment of a passenger train on the Illinois Central Railroad near Ruddock, La., which resulted in the injury of 44 passengers and 4 dining-car employees.

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.



Sketch showing broken rail - west side of southward main track

Sig. 678-7



Inv. No. 3053
 Illinois Central Railroad
 Ruddock, La.
 December 27, 1946

Location of Accident and Method of Operation

This accident occurred on that part of the Louisiana Division extending between South Yard, near McComb, Miss., and Orleans Jct., La., 92.1 miles, a double-track line in the vicinity of the point of accident, over which trains moving with the current of traffic are operated by timetable, train orders and an automatic block-signal system. The derailment occurred on the southward main track at a point 71.15 miles south of South Yard and 0.75 mile north of the station at Ruddock. The southward main track is tangent throughout a distance of 3.25 miles immediately north of the point of accident and 1.75 miles southward. The grade is level.

The track structure of the southward main track consists of 90-pound rail, 39 feet in length, laid new during May, 1925, on 24 ties to the rail length. It is fully tieplated, single-spiked, provided with 4-hole angle bars 24 inches in length, an average of 10 rail anchors per rail length, and is ballasted with slag to a depth of 12 inches.

Automatic signal 878-7, governing south-bound movements on the southward main track, is 1.21 miles north of the point of accident. This signal is of the color-light type and is continuously lighted.

The maximum authorized speed for passenger trains is 60 miles per hour.

Description of Accident

No. 5, a south-bound first-class passenger train, consisted of Diesel-electric units 4003 and 4014, coupled in multiple-unit control, one baggage car, one dormitory car, six Pullman sleeping cars, one dining car, three Pullman sleeping cars and one Pullman observation car, in the order named. The first and the third cars were of conventional standard all-steel construction, and the remainder of the cars had heavy carbon-steel underframes and medium lightweight-steel superstructures. This train, moving on the southward main track, passed Manchac, the last open office, 5.35 miles north of the point of accident, at 8:34 a. m., 9 minutes late, passed signal 878-7, which displayed proceed, and while it was moving at a speed of 60 miles per hour the rear truck of the eighth car and the ninth to the thirteenth cars, inclusive, were derailed.

Immediately after the derailment separations occurred between the first and second cars, between the fifth and sixth cars, and between the eighth and ninth cars. The Diesel-electric units and the first car stopped with the front end of the first unit about 2,000 feet south of the point of derailment. The second to the fifth cars, inclusive, stopped with the front end of the second car about 300 feet north of the rear end of the first car. The sixth, seventh and eighth cars stopped with the front end of the sixth car against the rear end of the fifth car, and the rear end of the eighth car about 400 feet south of the front end of the ninth car. The ninth to thirteenth cars, inclusive, stopped about 20 feet west of the southward main track and practically parallel to it, with the front end of the ninth car 600 feet south of the point of derailment. These cars leaned to the west at angles varying between 30 and 60 degrees. The eighth car was slightly damaged and the ninth to thirteenth cars, inclusive, were considerably damaged.

The weather was hazy at the time of the accident, which occurred about 8:42 a. m.

The rail involved was a 39-foot, 90-pound rail, manufactured by the Tennessee Coal, Iron and Railroad Company, in March, 1925, and was laid in the track during May, 1925. The brand was 9020 ARA-A, OH-TCI & RR CO., Number 882591, Letter E.

Discussion

No. 5 was moving on tangent track at a speed of 30 miles per hour, as indicated by the speedometer with which the first Diesel-electric unit was equipped, in territory where the maximum authorized speed for this train was 60 miles per hour, when the derailment occurred. The engineers were maintaining a lookout ahead from the control compartment at the front of the first Diesel-electric unit. The conductor and the baggageman were in the second car, and the flagman was in the twelfth car. The last automatic block signal north of the point where the derailment occurred displayed proceed. Prior to the time of the accident, the Diesel-electric units and the cars had been riding smoothly, and there was no indication of defective equipment or track, nor of any obstruction having been on the track. The first that any member of the crew knew of anything being wrong was when the brakes became applied in emergency as a result of the derailment.

After the accident a broken rail was found on the west side of the southward main track. This rail was broken into three pieces. The first break occurred between two ties at a point 31 feet 9 inches south of the receiving end of the rail. The adjacent ends of the pieces at the first break were considerably battered. The second break occurred between two ties at a point 5 feet 5.5 inches south of the first break.

The receiving end of the third piece of rail was battered downward about 15 degrees. Both breaks occurred north of the north ends of the bond wires and the angle bars at the leaving end of the rail. At both breaks there were progressive detail fractures covering about 50 percent of the cross-sectional area of the head of the rail. The metal at these areas was darkened by oxidation, which condition indicated that the rail had been defective for some time prior to the accident. The remainder of the breaks through the head, and the breaks in the web and the base of the rail were new. The breaks through the head of the rail were square, but were slightly angular downward through the remainder of the rail. Both fractures occurred beneath rail burns caused by the slipping of driving wheels. At these points the top surface of the rail had shelled out, and the detail fractures had progressed downward in the head. Flange marks appeared on the west side of the web of the piece of rail extending between breaks Nos. 1 and 2.

A south-bound passenger train passed over this track about 14 minutes before the derailment occurred, and the crew did not observe any abnormal condition of the track. Since the first automatic block signal north of the point of derailment displayed proceed for No. 5, it is probable that the complete failure of the rail occurred when the front portion of this train passed over it, then the piece between the breaks became displaced and the general derailment followed.

The track involved was last inspected by the section foreman about 1 hour 20 minutes before the derailment occurred, and no defective condition was observed. A rail-detector car was last operated over this territory on October 2, 1946. This test did not disclose any defect in the rail in question.

Cause

It is found that this accident was caused by a broken rail.

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

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.