

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
CENTRAL OF GEORGIA RAILWAY

ARLES, GA.

NOVEMBER 4, 1937

INVESTIGATION NO. 2218

SUMMARY

Inv-2218

Railroad:	Central of Georgia
Date:	November 4, 1937.
Location:	Arles, Ga.
Kind of accident:	Derailement
Train involved:	Passenger
Train number:	8
Engine number:	436
Consist:	5 cars
Speed:	50-55 m.p.h.
Track:	Tangent; 0.435 percent ascending grade.
Weather:	Clear
Time:	10:35 p.m.
Casualties:	8 injured
Cause:	Broken rail, due to transverse fissures.

December 6, 1937.

To the Commission:

On November 4, 1937, there was a derailment of a passenger train on the Central of Georgia Railway near Arles, Ga., which resulted in the injury of five passengers, one employee off duty, and two employees on duty.

Location and method of operation

This accident occurred on the Albany District of the Macon Division which extends between Macon and Albany, Ga., a distance of 106.3 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders and an automatic block-signal system. The accident occurred at a point 1,874 feet east of the east switch of the siding at Arles. Approaching this point from the west the track is tangent for more than 1 mile, this tangent extending for some distance beyond. The grade for east-bound trains is level for a distance of 1,500 feet, then 0.87 percent descending for 1,800 feet, followed by 0.435 percent ascending for a distance of 467 feet to the point of accident.

The point of accident is on a fill about 4 feet in height. The track is laid with 90-pound rails, 33 feet in length, on an average of 20 treated pine and cypress ties to the rail length, and is single-spiked and fully tie-plated. It is ballasted with from 10 to 12 inches of slag and is well maintained. The maximum speed limit for passenger trains is 60 miles per hour.

The weather was clear at the time of the accident, which occurred about 10:35 p.m.

Description

East-bound passenger train No. 8, consisting of two express cars, one combination mail and baggage car, one combination baggage car and coach, and one coach, in the order named, all of all-steel construction, hauled by engine 436, was in charge of Conductor Waters and Engineman Bell. This train departed from Albany, 39.8 miles from Arles, at 9:10 p.m., according to the train sheet, on time, left Americus, 4 miles from Arles, at 10:26 p.m., on time, and after passing Arles was derailed while traveling at a speed estimated to have been between 50 and 55 miles per hour.

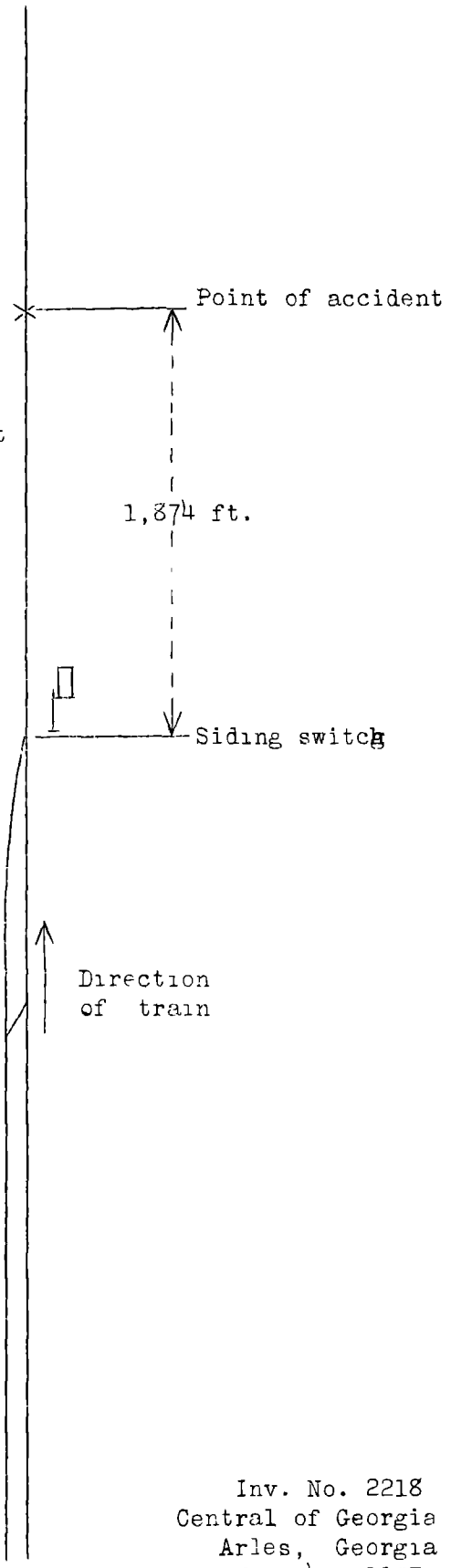
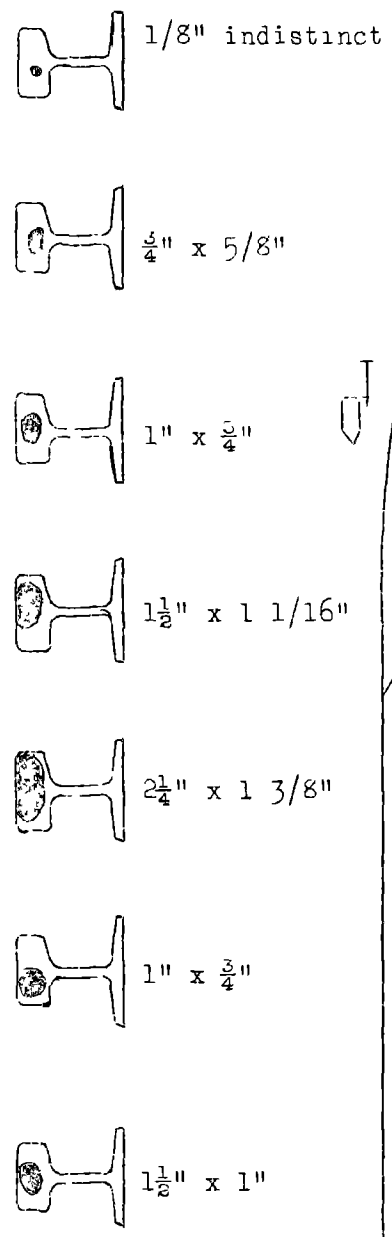
The engine and tender were not derailed and stopped about 830 feet beyond the point of derailment; the first car, with its rear

o Macon, Ga.
 66.5 mi.
 X Point of accident
 o Arles
 39.8 mi.
 o Albany, Ga.



33-ft. 90-lb. ARA rail T.C.I. R.R. Rail letter C. North rail
 Heat 31665 Date 8-1924

Size of Transverse Fissures.



Inv. No. 2218
 Central of Georgia Ry,
 Arles, Georgia
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truck derailed, remained coupled to the tender. The remaining four cars were derailed to the left and stopped about 581 feet to the rear of the front portion of the train in general line with the track but leaning at angles of from 30° to 45°. The employees injured were the baggagemaster and flagman.

Summary of evidence

Engineman Bell stated that the air brakes had been tested at Albany and functioned properly en route. Passing through Arles he noted that the automatic signals were displaying clear indications, and a short distance beyond that point he heard a rail break; the fireman also heard it and called out "broken rail". At that time the speed was between 50 and 55 miles per hour. The engineman immediately closed the throttle, applied the air brakes in emergency and opened the sanders, but he did not get very much response from the brake valve as the train broke in two about the time he applied the air brakes. After the accident he inspected the engine but did not find anything that could have contributed to the cause of the accident. The statements of Fireman Beal corroborated those of the engineman.

Conductor Waters stated that after the accident he went to the rear of the train, found a broken rail on the north side of the track, and on continuing back to Arles he did not see any evidence of anything having been dragging on the track. The east-bound signal at Arles displayed a red indication.

Section Foreman Worthy, in charge of the section on which this accident occurred, stated that on his arrival at the scene of accident he examined the defective rail which was broken into about 7 pieces; the initial break occurred at about the center of the rail and revealed a large transverse fissure. He had last been over this section of track on October 30. He considered it the best section in his district of 16 miles of main track, and he had experienced very little trouble with transverse fissures on the main line.

Supervisor of Bridges and Building Rhoads stated that the rail was broken into 7 main pieces and 7 smaller pieces, making a total of 14 pieces, and contained 7 transverse fissures. The first break occurred at a point 16 feet 2 inches from the west or receiving end of the rail; the transverse fissure at that break measured $1\frac{1}{2}$ by 1 inch. The largest fissure which was 20 feet $10\frac{1}{4}$ inches from the receiving end of the rail, measured $2\frac{1}{4}$ by $1\frac{3}{8}$ inches and covered practically the entire area of the head of the rail to within $\frac{3}{16}$ inch of the gauge side; it was badly oxidized. The rail involved was a 90-pound A.R.A. rail, 33 feet in length, manufactured by the Tennessee Coal and Iron

Company, lettered "C", with neat No. 31825 and dated August, 1924.

Division Engineer Golsan stated that he was over the section of track on which the accident occurred on a motor car about 3 p.m. on the date of the accident and noticed nothing unusual at that time. He stated that annual inspections by a rail detector car have been made since 1934, the last inspection having been made on December 10 and 11, 1936, and that he expected the next inspection to be made about November 16 of this year.

The engineman and conductor of Train No. 86, the last train to pass over the track involved prior to the accident, stated that their train passed Arles about 3:30 p.m. and no unusual condition was noticed.

Observations by Commission's Inspectors

Inspection of the track showed it to be in good condition and there was no indication of anything having been dragging. Inspection of engine 436 did not reveal any mechanical defects that could have contributed to the cause of the accident. Examination of the broken rail disclosed the transverse fissures as described.

Discussion

Examination of the track immediately after the accident disclosed broken pieces of a rail on the north side of the track in which there were 7 transverse fissures, the largest of which covered practically the entire area of the head of the rail and extended to within 3/16 inch of the gauge side and to the outside surface on the top and was badly oxidized. This rail apparently broke under the engine of the derailed train. Annual inspections are made on this line by means of a rail detector car and the next inspection was to be made about November 17, 1937.

Conclusion

This accident was caused by a broken rail, due to transverse fissures.

Respectfully submitted,

W. J. PATTERSON,

Director.