

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2750
THE SEABOARD AIR LINE RAILWAY COMPANY
REPORT IN RE ACCIDENT
AT SEALS, GA., ON
DECEMBER 12, 1943

SUMMARY

Railroad: Seaboard Air Line
Date: December 12, 1943
Location: Seals, Ga.
Kind of accident: Derailment
Train involved: Passenger
Train number: 108
Engine numbers: Diesel-electric 3006, 3104 and 3015
Consist: 14 cars
Speed: 75 m. p. h.
Operation: Timetable, train orders and
automatic block-signal system
Track: Single; tangent; 0.06 percent
ascending grade northward
Weather: Clear
Time: About 8:40 p. m.
Casualties: 2 killed; 36 injured
Cause: Broken rail, as result of presence
of transverse fissures

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2750

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

THE SEABOARD AIR LINE RAILWAY COMPANY

January 14, 1944.

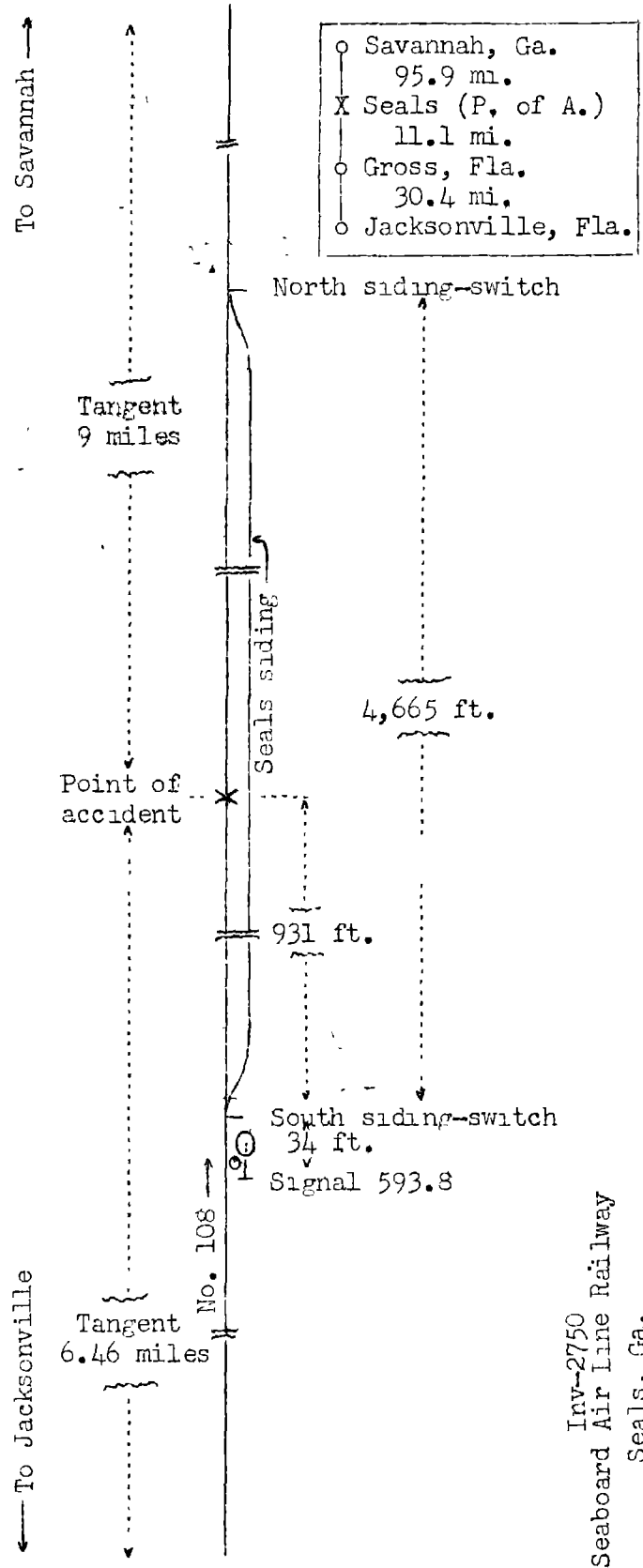
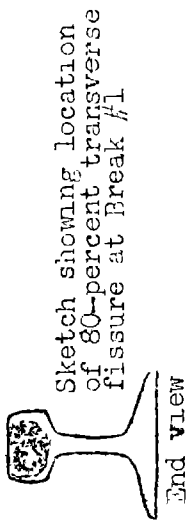
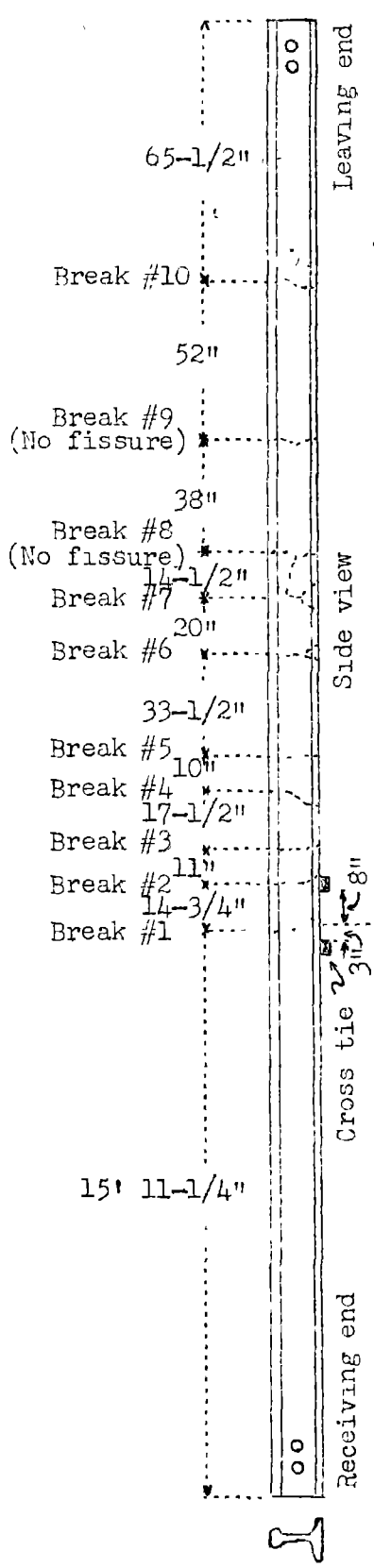
Accident at Seals, Ga., on December 12, 1943, caused by
broken rail, as result of presence of transverse
fissures.

REPORT OF THE COMMISSION¹

PATTERSON, Chairman:

On December 12, 1943, there was a derailment of a passenger train on the Seaboard Air Line Railway at Seals, Ga., which resulted in the death of 2 passengers, and the injury of 29 passengers, 2 Pullman employees, 1 dining-car employee, 1 employee off duty, and 3 train-service employees.

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



○	Savannah, Ga.	95.9 mi.
X	Seals (P. of A.)	11.1 mi.
○	Gross, Fla.	30.4 mi.
○	Jacksonville, Fla.	

Inv-2750
 Seaboard Air Line Railway
 Seals, Ga.
 December 12, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the South Carolina Division designated as the Jacksonville Sub-division and extending between Jacksonville, Fla., and Savannah, Ga., 137.4 miles. In the vicinity of the point of accident this was a single-track line over which trains were operated by timetable, train orders and an automatic block-signal system. At Seals a siding 4,665 feet in length paralleled the main track on the east. The accident occurred on the main track 931 feet north of the south siding-switch. From the south the track was tangent 6.46 miles to this point and about 9 miles beyond. The grade for north-bound trains was 0.06 percent ascending.

The track structure consisted of 100-pound rail, 39 feet in length, laid new in January, 1931, on 22 treated ties to the rail length. It was fully tieplated, single-spiked, provided with 4-hole 100-percent angle bars and 8 rail anchors per rail length, and was ballasted with crushed stone to a depth of 6 inches.

Automatic signal 593.8, which governed north-bound movements, was 965 feet south of the point of accident.

The maximum authorized speed for the train involved was 75 miles per hour.

Description of Accident

No. 108, a north-bound first-class passenger train, consisted of Diesel-electric engines 3006, 3104 and 3015, one baggage-mail car, one baggage car, six coaches, one dining car, four Pullman sleeping cars and one business car, in the order named. All cars were of steel construction. After a terminal air-brake test was made this train departed from Jacksonville, 41.5 miles south of Seals, at 7:45 p. m., on time, passed Gross, 11.1 miles south of Seals and the last open office, at 8:30 p. m., 6 minutes late, passed signal 593.8, which displayed proceed, and while it was moving at a speed of 75 miles per hour the fourth to thirteenth cars, inclusive, were derailed.

The diesel units and the first car, remaining coupled, stopped with the front end about 2,100 feet north of the point of derailment. The first and second cars were separated about 1,000 feet. The second and third cars remained on the track and coupled to the fourth car. The fourth to eleventh cars, inclusive, were derailed to the west, with the front end of the fourth car 720 feet north of the point of derailment. The fourth and fifth cars remained on the roadbed and leaned to the west. The sixth car stopped on its left side at an angle of 30 degrees to the track, with its front end against the rear

of the fifth car. The seventh car stopped on its left side about 40 feet south of the sixth car, with its front end on the roadbed. The eighth car stopped upright, with its front end 17 feet south of the seventh car and 88 feet west of the track. The ninth car stopped upright, 15 feet west of the track and parallel to it. The tenth car stopped practically upright, with its front end against the rear of the ninth car. The eleventh car stopped upright and in line with the tenth car. The twelfth car stopped upright on the roadbed. The front truck of the thirteenth car was derailed. The fourth to eleventh cars, inclusive, were badly damaged. The main track was damaged throughout a distance of 730 feet.

It was clear at the time of the accident, which occurred about 8:40 p. m.

The rail involved was a 39-foot, 100-pound R. E. rail, manufactured by the Tennessee Coal, Iron and Railroad Co., in February, 1930, and was laid in the track during January, 1931. The brand was Tenn, Number 886272, Letter B.

During the 30-day period preceding the day of the accident there was a daily average of 31.1 trains in the vicinity of the point of accident.

Discussion

No. 108 was moving on tangent track at a speed of 75 miles per hour in territory where the maximum authorized speed for this train was 75 miles per hour when the fourth to thirteenth cars, inclusive, were derailed. The headlight was lighted brightly. A road foreman of engines, who was operating the engine, and both enginemen were maintaining a lookout ahead. Prior to the time of the accident the engine and the cars were riding smoothly, and there was no indication of defective equipment nor of any obstruction having been on the track. The last automatic signal that No. 108 passed displayed proceed. When the engine passed over the point where the derailment occurred, the enginemen did not feel any abnormal condition of the track. The baggageman, who was in the second car, was not aware of anything being wrong. The first that the enginemen were aware of the accident was when the brakes became applied in emergency. The road foreman of engines immediately moved the brake valve to lap position. The remaining members of the crew were not aware of anything being wrong until the brakes became applied in emergency, and simultaneously the cars were derailed.

After the accident a broken rail was found on the west side of the track. The rail was broken through the head, web

and base at ten places. The first break occurred 3 inches north of a tie and 15 feet 11-1/4 inches north of the receiving end of the rail. The leaving end at this break was battered slightly. The receiving end at the second break, 14-3/4 inches northward, was battered considerably. The other breaks apparently occurred during the derailment. At the first break there was a transverse fissure covering about 80 percent of the cross-sectional area of the head of the rail, and it had progressed very close to the outer surface but had not broken through. There was no evidence of oxidation. At breaks Nos. 2, 3, 4, 5, 6, 7 and 10, there were transverse fissures which, respectively, covered 8, 20, 8, 10, 1, 2 and 3 percent of the cross-sectional area. None of these fissures extended to the outer surface. The division engineer thought that the rail broke first at break No. 1, then at break No. 2, and the piece between these breaks was forced out of its proper alignment. No. 101, a south-bound first-class passenger train, passed over the rail involved about 8:01 p. m., and no member of the crew of that train felt any abnormal condition in the track. Since no abnormal condition of the track was felt when the front portion of No. 108 passed over the point where the accident occurred, and the last signal displayed proceed, it is apparent that the rail broke under the train.

The track involved was last inspected by the section foreman from a motor-car on the day before the accident occurred, and no defective condition was found. A detector car was last operated over this track on May 3, 1943. The detector tape indicated no defective condition at the point where the derailment occurred.

Cause

It is found that this accident was caused by a broken rail, as a result of the presence of transverse fissures.

Dated at Washington, D. C., this fourteenth day of January, 1944.

By the Commission. Chairman Patterson.

(SEAL)

W. P. BARTEL,
Secretary.