

RAILROAD ACCIDENT INVESTIGATION

Report No 3821

SEABOARD AIR LINE RAILROAD COMPANY

ELLAVILLE, FLA

NOVEMBER 29, 1958

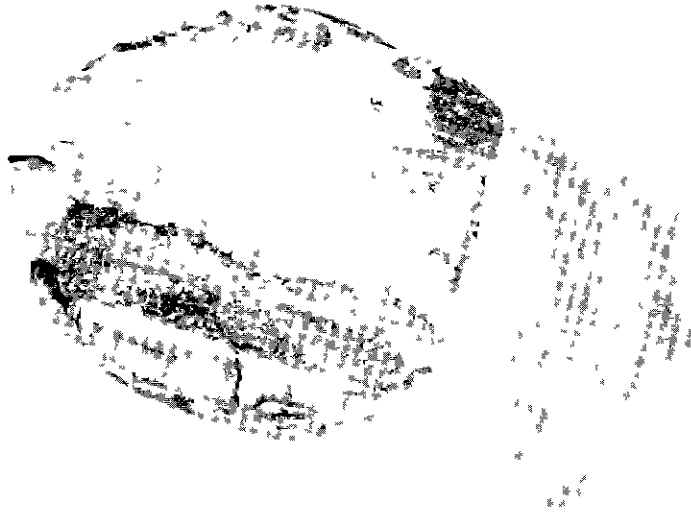
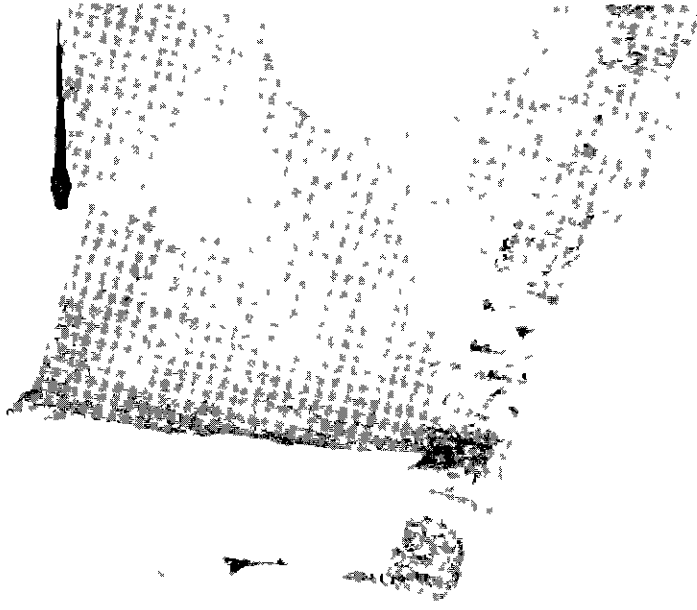
INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	November 29, 1958
RAILROAD	Seaboard Air Line
LOCATION	Ellaville, Fla
KIND OF ACCIDENT	Derailment
TRAIN INVOLVED	Freight
TRAIN NUMBER	First 84
LOCOMOTIVE NUMBER	Diesel-electric units 4508, 1901. and 4500
CONSIST	115 cars, caboose
ESTIMATED SPEED	45 m p h
OPERATION	Timetable and train orders
TRACK	Single; tangent, level
WEATHER	Clear
TIME	10 36 p m
CASUALTIES	3 killed
CAUSE	Broken switch connecting rod



INTERSTATE COMMERCE COMMISSION

REPORT NO 3821

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

SEABOARD AIR LINE RAILROAD COMPANY

January 23, 1959

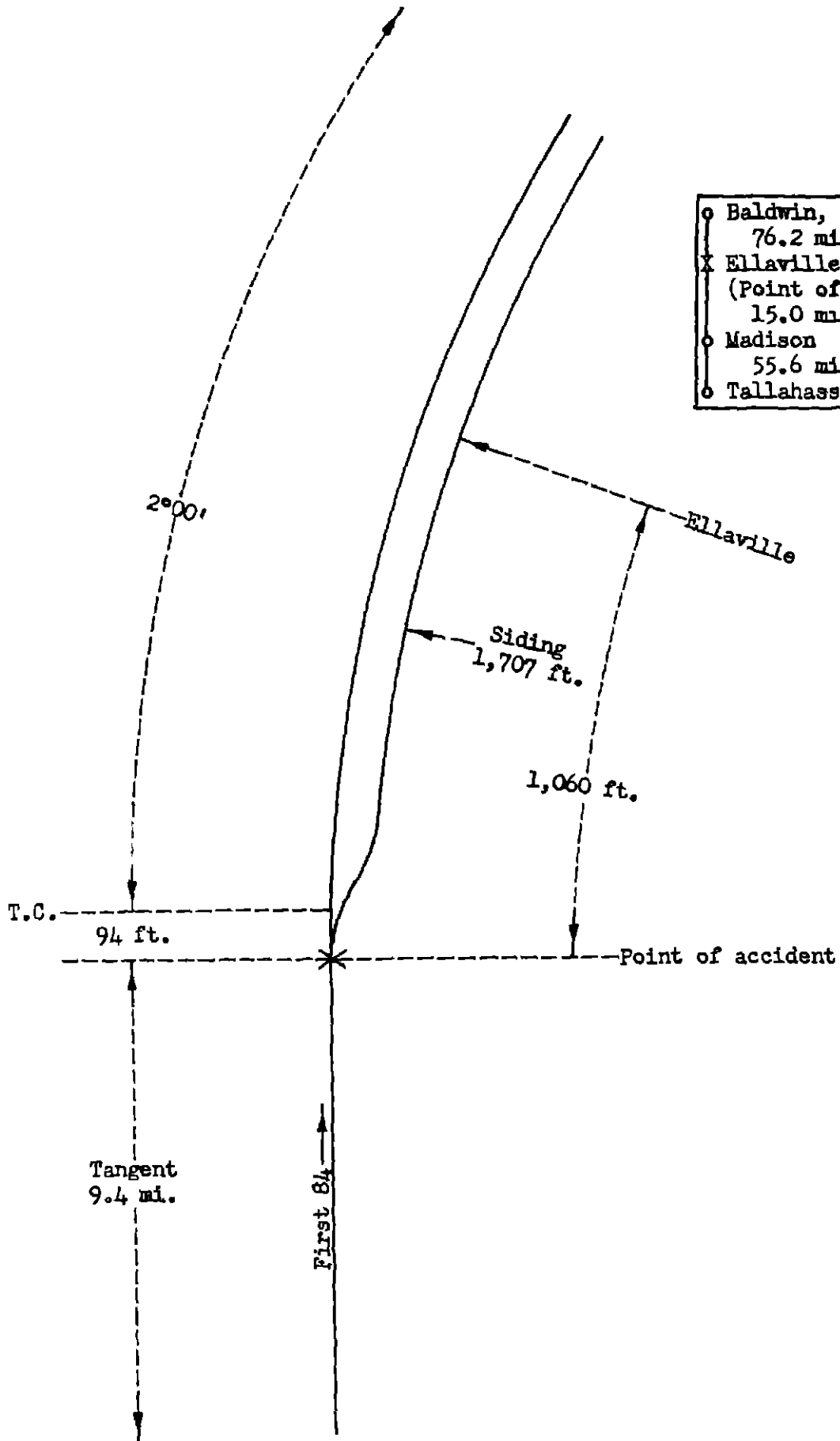
Accident at Ellaville, Fla , on November 29, 1958, caused by a broken switch connecting
rod

REPORT OF THE COMMISSION¹

FREAS, Commissioner

On November 29, 1958, there was a derailment of a freight train on the Seaboard Air Line
Railroad at Ellaville, Fla , which resulted in the death of three trespassers

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



○	Baldwin, Fla.	76.2 mi.
×	Ellaville (Point of accident)	15.0 mi.
○	Madison	55.6 mi.
○	Tallahassee, Fla.	

Seaboard Air Line Railroad
 Ellaville, Fla.
 November 29, 1958

Location of Accident and Method of Operation

This accident occurred on that part of the North Florida Division extending between Tallahassee and Baldwin, Fla., 146.8 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 Ellaville, 70.6 miles east of Tallahassee, a siding 1,707 feet in length parallels the main track on the south. The accident occurred at the west switch of the siding which is located about 1,060 feet west of the station point. From the west the main track is tangent throughout a distance of 9.4 miles to the point of accident and 94 feet eastward. A 2,000' curve to the right about 3,300 feet in length is located immediately east of this tangent. The grade is practically level at the point of accident.

The track structure in the vicinity of the point of accident consists of 115-pound rail, 39 feet in length, laid new in 1953 on an average of 22 treated ties to the rail length. It is fully tie-plated with double-shoulder tie plates, single spiked, and is provided with 6-hole 36-inch joint bars, and an average of 12 rail anchors per rail. It is ballasted with crushed granite to a depth of 6 inches below the bottoms of the ties. The west turnout of the siding consists of 115-pound reinforced switch rail 16 feet 6 inches in length, 115-pound rail, a No. 10 spring-rail frog, and one-piece guard rails 11 feet in length.

The switch stand of the west switch of the siding is of the horizontal throw intermediate-stand type and is located 9 feet 4 inches south of the centerline of the main track. When the switch is lined for entry to the siding a target consisting of two red discs 14 inches in diameter, each having an opening in the center 4 inches in diameter, is displayed at right angles to the main track. When the switch is lined for movement on the main track, a target consisting of two white spear-shaped banners 18 inches in length and 9 inches in width is displayed at right angles to the main track. The targets are provided with reflectors. Two operating-lever keepers are provided. One keeper secures the operating lever in normal position for movement on the main track and the other secures the operating lever in the reverse position for entry to the siding. The keepers are so designed that the operating lever can be secured in either position by a switch lock. The connecting rod of the switch is 1-1/2 inches in diameter and 6 feet in length and is provided with a clevis at the switch-rod end. The clevis is attached to the switch rod by a 1-1/8 inch bolt applied vertically. The centerline of the bolt is located 1-3/16 inches from the end of the clevis.

The maximum authorized speed for freight trains in the vicinity of the point of accident is 49 miles per hour.

Description of Accident

First 84, an eastbound second-class freight train, consisted of diesel-electric units 4508, 1901, and 4500, coupled in multiple-unit control, 115 cars and a caboose. This train departed from Tallahassee at 8:45 p. m., 3 hours 45 minutes late, passed Madison, the last open office, 55.6 miles east of Tallahassee, at 10:20 p. m., 3 hours 45 minutes late, and while moving at an estimated speed of 45 miles per hour it was diverted to the siding at Ellaville. The diesel-electric units and the 1st to 48th cars, inclusive, were derailed.

Separations occurred between the diesel-electric units and between the derailed cars. The 1st diesel-electric unit stopped on its right side with the front end on the main track 460 feet east of the point of derailment, and with the rear end on the siding. The 2nd unit, which was of the road-switcher type, stopped upright with the front end to the rear of the 1st unit and the rear end about 5 feet north of the siding. The 3rd unit stopped on its right side with the front end approximately 5 feet south of the rear end of the 2nd unit. The 1st and 3rd diesel-electric units were considerably damaged, and the 2nd unit was somewhat damaged. The derailed cars stopped in various positions on or near the track structure. The 26th to the 32nd cars, inclusive, were tank cars loaded with liquified petroleum material. An explosion occurred in one of the derailed tank cars immediately after the accident occurred, causing a fire. Forty-four cars were destroyed, 3 cars were considerably damaged, and 1 car was slightly damaged, as a result of the derailment and the fire.

It was clear at the time of the accident, which occurred about 10:36 p. m.

Discussion

As First 84 was approaching the point where the accident occurred the speed was about 45 miles per hour. The enginemen and the front brakeman were in the control compartment at the front of the locomotive maintaining a lookout ahead. The conductor and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted brightly. The members of the crew said that they noticed nothing unusual in the movement of the train before the accident occurred. The enginemen and the front brakeman said that as the train approached the west switch of the siding at Ellaville they did not notice anything wrong. The first members of the crew on the locomotive became aware of anything being wrong was when the first diesel-electric unit rocked violently and overturned. The conductor and the flagman were unaware of anything being wrong until the brakes became applied in emergency as a result of the derailment.

Examination of the track structure throughout a considerable distance west of the point of derailment disclosed no indications of defective track or dragging equipment.

Examination of the west turnout of the siding disclosed that the south switch rail was overturned to the north and the heel block was missing. This switch rail bore a heavy mark on the north side of the head of the rail approximately 5 feet from the switch point. The heel block was later found 235 feet east of the point of accident and 25 feet north of the main track. The west end of the heel block was bent inward. The inside face of the right No. 1 wheel of the first diesel-electric unit bore marks apparently caused by heavy contact with the switch rail. It is apparent that the switch had opened sufficiently to permit the first pair of wheels of the locomotive to enter the switch between the stock rails and switch rails, overturning the south switch rail, and permitting the wheels to drop between the rails. The track structure was destroyed throughout a distance of approximately 475 feet east of the switch.

After the accident occurred the operating lever of the switch stand was found to be locked in the position for movement on the main track. The white target was displayed, indicating that the switch was lined for movement on the main track at the time the derailment occurred. Examination of the switch operating mechanism disclosed that the top and bottom portions of the clevis of the connecting rod had broken permitting the switch rails to move. The breaks were located 2-3/4 inches from the end of the clevis. Approximately the entire surface of the break of the bottom portion and approximately 10 percent of the break of the top portion showed old break.

The switch was inspected on November 10, 1958, by a roadmaster and on November 21, 1958, by a section foreman and no exceptions were taken. A defective condition of the connecting rod could not readily be detected because it was coated with a protective material.

Since the accident occurred the connecting rods of all switches of the carrier have been removed, cleaned, and inspected.

Cause

This accident was caused by a broken switch connecting rod.

Dated at Washington, D C , this twenty-third
day of January, 1959

By the Commission, Commissioner Freas

H D McCoy,

Secretary

(Seal)