

BUREAU OF SAFETY

REPORT NO. 1956

Railroad: Mobile and Ohio
Date: December 20, 1934
Location: Trlo, Ala.
Kind of accident: Derailment
Train involved: Freight
Casualties: 2 killed
Cause of accident: Broken rail

1956

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE MOBILE AND OHIO RAILROAD NEAR TRIO, ALA.,
ON DECEMBER 20, 1934.

March 9, 1935.

To the Commission:

On December 20, 1934, there was a derailment of a freight train on the Mobile and Ohio Railroad near Trio, Ala., which resulted in the death of two employees.

Location and method of operation

This accident occurred on the Montgomery District of the Mobile Division, which extends between Artesia, Miss., and Montgomery, Ala., a distance of 181.09 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by time table and train orders, no block-signal system being in use. The accident occurred at a point 449 feet south of the south passing-track switch or 1,500 feet south of the station at Trio; approaching this point from the north the track is tangent for a distance of 2,207 feet, followed by a 5° curve to the left 584 feet in length, the accident occurring on this curve at a point 187 feet from its southern end. The grade is generally ascending for south-bound trains, it being 0.83 percent to within 432 feet of the point of accident, and then it is level to and beyond the point of accident.

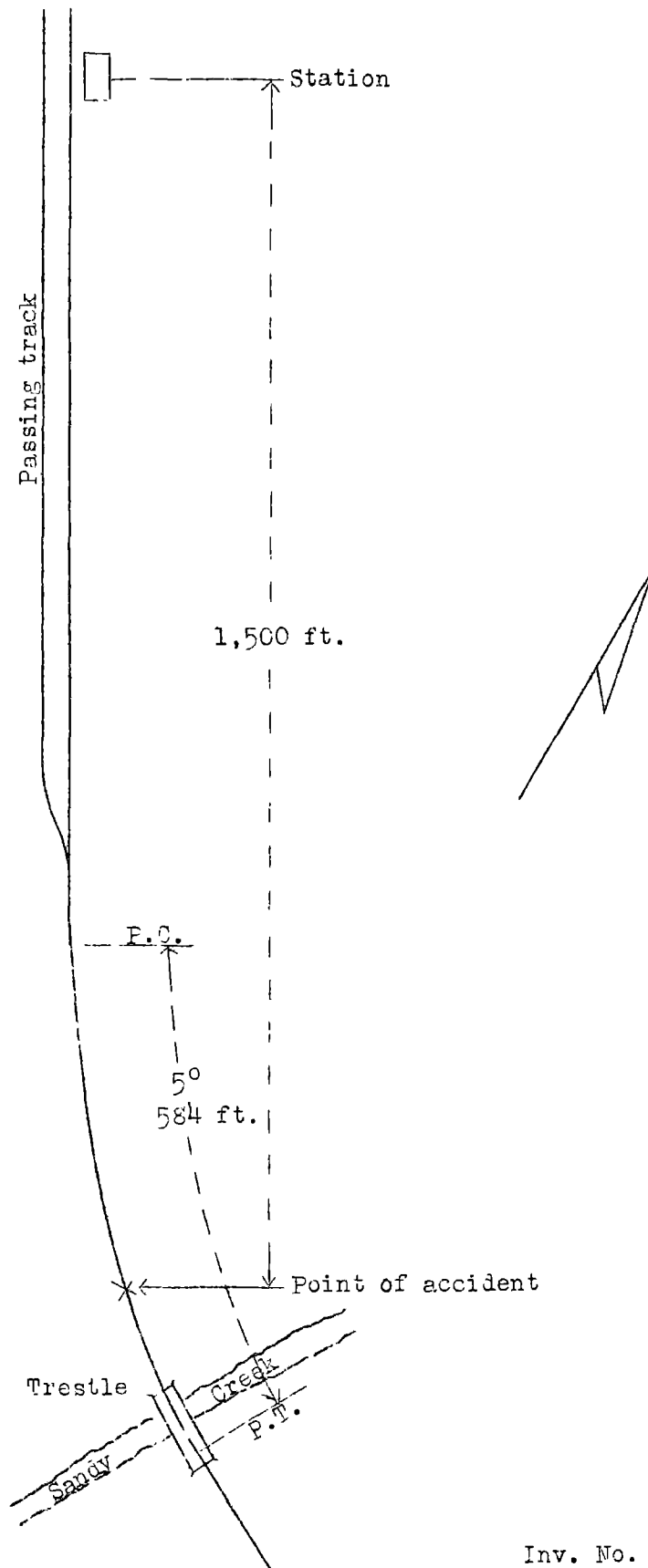
The track is laid with 60-pound rails, 30 feet in length, with 18 untreated white oak ties to the rail length, tieplated on every other tie, double-spiked on the outside, and is ballasted with 5 inches of pebbles and about 12 inches of cinders. The track is maintained in fair condition for the maximum speed allowed, which is 42 miles per hour for passenger trains and 30 miles per hour for freight trains.

The weather was clear and it was dark at the time of the accident, which occurred about 6:15 p. m.

Description

Extra 346, a south-bound freight train, consisted of two cars and a caboose, hauled by engine 346, and was in charge of Conductor Ray and Engineman White. It departed from Eoline, 14.34 miles north of Trio, at 5:40 p. m., according to the train sheet, and stopped approximately 5 minutes to pick up a third car at Centreville, 6.45 miles north of Trio. The train

• Artesia, Miss.
115.81 mi.
• Trio, Ala.
X Point of accident
65.28 mi.
• Montgomery, Ala.



Inv. No. 1956
Mobile & Ohio R.R.
Trio, Ala.
Dec. 20, 1934

then proceeded and was derailed south of Trio while traveling at a speed estimated to have been about 30 miles per hour.

The engine, tender and first two cars were not derailed and stopped nearly 400 feet south of the point of accident. The third car and caboose were derailed to the right, damaged a 73-foot wooden trestle located 137 feet beyond the point of derailment, and landed on their right sides paralleling the trestle, with the front end of the caboose in the stream, the stream bed being 14 feet below the level of the rails. The employees killed were the conductor and the flagman.

Summary of evidence

Engineman White stated that the train was traveling at a speed of about 30 miles per hour and on reaching a point between the south switch and the trestle he felt a jerk, the air brakes being applied and bringing the train to a stop; there had been nothing unusual in connection with the movement of the engine previous to that time and the brakes had worked properly en route. He later made an investigation to ascertain the cause of the accident and found a broken rail about five rail lengths north of the trestle; in fact, there were two rails which were broken near a joint on the right or high side of the curve. Engineman White was of the opinion that if the rail had been broken before his engine passed over it he would have noticed it.

Fireman Carter who was on the deck of the engine at the time of the accident, and Head Brakeman Steele, who was on the seat box on the left side of the engine, stated that they felt sure that if the rail had been broken when the engine passed over it they would have noticed it; Head Brakeman Steele further stated that when the stop was made at Centreville he looked over the train and found nothing wrong.

Section Foreman Lewis stated that he covers his section which extends between Trio and Lawley, a distance of 6.73 miles, every morning and afternoon on his motor car and makes a walking inspection twice a month, the last walking inspection having been made on December 14. His last inspection on the motor car was about 3½ hours before the occurrence of the accident, at which time he found nothing wrong.

Roadmaster Nicholls inspected the track and found the first marks of derailment to be near the joint on the right or high side of the curve at which the ends of the two adjoining rails had been broken. On the leaving end of the north rail there was a transverse fissure in the ball of the rail; this rail broke into four pieces, one line of rupture beginning

in the head at a point 16 inches from the leaving end of the rail and extending diagonally downward and through the base at a point $10\frac{1}{2}$ inches from the end, and from that point another break extended irregularly upward and then southward through the angle-bar bolt holes to the end of the rail, with a third break in the top portion and head of the rail between the two bolt holes. The transverse fissure in the ball of the rail was at this last-mentioned break; it extended to within $\frac{1}{4}$ inch of the top and sides and down into the web about $\frac{1}{2}$ inch. On the receiving end of the south rail there was a break which extended downward from a point $3\frac{1}{2}$ inches from the end of the rail at the top to a point 12 inches from the end at the bottom. The first-mentioned rail was a Cambria rail, rolled in July, 1897, section 527, and there was no record available as to when it was laid. Roadmaster Nicholls further stated that a Sperry detector car had never been operated over the Montgomery District.

Master Mechanic Stevens stated that he made an inspection of engine 346 after the accident and found it in good condition, while inspection of the derailed cars as well as those that remained on the tracks revealed nothing that could have caused or contributed to the derailment; a broken flange was found on one of the wheels of the caboose but it was a new break and apparently occurred at the time of the derailment.

The statements of the crew of Train No. 115, which passed through Trip about 3:30 p. m. on the day of the accident, the last train to pass prior to the accident, were to the effect that they noticed nothing wrong with the track and they felt sure that had the rail been broken at that time they would have detected it.

Discussion

Examination of the track immediately after the accident disclosed that the leaving end of a rail on the high side of the curve had been broken into several pieces, and when the roadmaster reached the scene he concluded that the rail broke because of the presence of a transverse fissure. The break in the receiving end of the adjoining rail showed no defective condition and no doubt was caused by the failure of the defective rail, which probably broke under the engine of the derailed train.

Conclusions

This accident was caused by a broken rail.

Respectfully submitted,

W. J. PATTERSON,
Director.