

1985

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE YAZOO & MISSISSIPPI VALLEY RAILROAD,
ILLINOIS CENTRAL SYSTEM, AT STEVEN, LA., ON MAY 18, 1935.

June 29, 1935.

To the Commission:

On May 18, 1935, there was a derailment of a freight train on the Yazoo & Mississippi Valley Railroad at Steven, La., which resulted in the death of 1 trespasser and the injury of 3 trespassers.

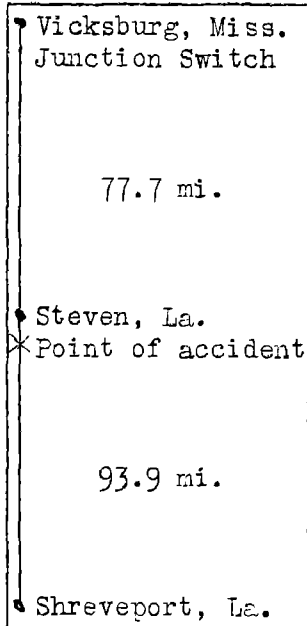
Location and method of operation

This accident occurred on the Shreveport District of the Vicksburg Division, which extends between Junction Switch (Vicksburg, Miss.) and Shreveport, La., a distance of 171.6 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 on the main line approximately 748 feet west of the east passing track switch at Steven. The track is tangent in the vicinity of Steven, while the grade for east-bound trains is generally descending, being 0.36 percent at the point of accident.

The track is laid with 90-pound rails, 39 feet in length, with an average of 22 ties to the rail length, single spiked, fully tieplated, and ballasted with gravel to a depth of 10 inches. The track is well maintained. The maximum permissible speed for freight trains is 40 miles per hour.

There is a passing track 3,419 feet in length paralleling the main track on the north and north of the passing track is a storage track 2,977 feet in length. At the time of the accident seven gondola cars were stored on the storage track in the immediate vicinity of the point of accident.

It was raining at the time of the accident, which occurred at 11:40 p.m.



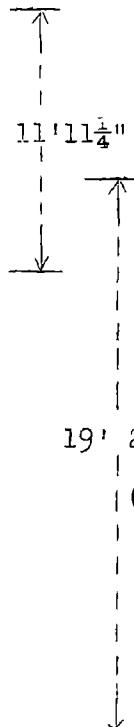
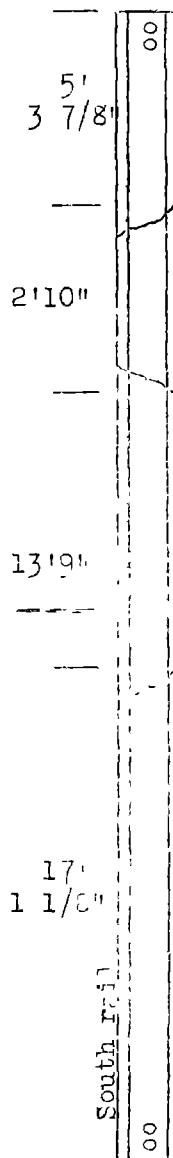
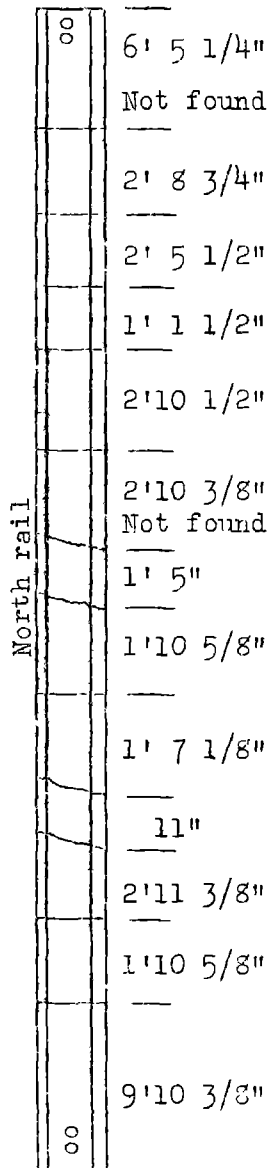
Fast passing track switch

Storage track

748 ft.

Point of accident

Direction of train



Inv. No. 1985
Yazoo & Mississippi Valley
Steven, La.
May 18, 1935

Description

Train No. 272, an east-bound freight train, consisted of 45 cars and a caboose, hauled by engine 1898, and was in charge of Conductor Kennon and Engineman Clark. This train departed from Tremont, 16.9 miles west of Steven about 11:02 p.m., according to a member of the train crew, about 1 hour and 14 minutes late, and was derailed while passing through Steven at a speed estimated to have been 40 miles per hour.

The engine and tender broke loose and stopped with the front end of the engine about 645 feet beyond the point of derailment; the engine remained on the track, but the front truck of the tender was derailed to the south while the rear truck was derailed to the north. The first car turned over on its left side, parallel with the main track 300 feet beyond the point of derailment, while the second to twenty-fourth cars, inclusive, were derailed and stopped in various positions within a distance of 280 feet, obstructing the passing and storage tracks, and struck and derailed 5 of the cars on the storage track. The front truck of the twenty-fifth car was derailed, but the remaining equipment was not derailed nor damaged. The third to seventh cars in the train were loaded with gasoline which became ignited, destroying 23 of the derailed cars and five cars on the storage track.

Summary of evidence.

Engineman Clark stated that the first intimation he had of anything wrong was when he felt the engine run over something, but he could not tell whether it was something on the track, such as a spike or nut, or broken rail. At about the same time the tender became derailed and he immediately applied the air brakes in emergency, but there was no exhaust as apparently the train line had been broken. The speed of his train was 40 miles per hour at the time of the accident.

Fireman Turner stated that it felt to him as though the engine truck struck a broken rail on his side of the track. He looked back immediately and saw the first car turning over and the tender was leaning; fire broke out almost at once.

Head Brakeman Lesley, who was sitting in front of the fireman, stated that he felt the jar and heard the noise as though the engine had run over a broken rail or chain.

Conductor Kennon said the brakes on this train were in operating condition although some of the brakes on old cars were not as efficient as more modern equipment and a considerable distance was required to stop the train; cars were picked up at two points en route and switched to his train with air coupled

but no test was made after placing cars in train other than releasing the brakes on the rear portion of the train. There were five cars picked up at Gibsland which were loaded with casing head gasoline, the first of these being placed behind the second car from the engine; although the rules require that a car loaded with gasoline be placed behind the fifth car from the engine, he had received instructions, however, not to go to the trouble of placing cars loaded with gasoline in their proper location in trains, but to place them in their destination blocks.

Track Supervisor Greer stated that on his arrival at the scene of the accident several hours after its occurrence the derailed cars were still burning, but after the fire had died down he found a broken rail on the north side of the track. A piece of the receiving end of the rail 9 feet 10 $\frac{3}{8}$ inches in length remained spiked in the track and other pieces that matched were found, making a total of 7 pieces measuring 20 feet 6 inches. All of these pieces had transverse fissures in the ball varying in size from $\frac{5}{8}$ x $\frac{1}{2}$ inch to $1 \frac{5}{8}$ x $2 \frac{1}{8}$ inches, two of which had reached the outside surface. Beginning with the receiving end in numbering the pieces, the two fissures which extended to the outside surface were between the second and third pieces and the fifth and sixth. The receiving ends of pieces Nos. 3 and 7 were bruised. The rail on the south side of the track opposite the broken rail on the north, was also broken, but appeared to have been broken as a result of the derailment. A piece of the receiving end 17 feet $1 \frac{1}{8}$ inches in length remained in the track and there was a transverse fissure approximately 1 inch in diameter in the ball of the rail. The break was very irregular and ragged. There was no definite indication as to just where the initial derailment occurred; the ties were burned beyond the tie east of the east end of the section of rail remaining in the track on the north side, and while there was a mark on this tie, Track Supervisor Greer stated that it could have been made by a car being dragged back. He inspected the track for a distance of 3,800 feet west of the point of derailment and found the track in good condition. The statements of Division Engineer Harper corroborated those of the track supervisor.

Section Foreman Brown stated that he had been over the track on which the accident occurred on the morning prior to the day of the accident, and found the track in good condition.

General Foreman Schlottman stated that he inspected engine 1898 after the accident and found it in first-class condition; thorough examination of the wheels revealed no marks of any kind. Examination of the tender truck wheels, however, revealed numerous marks on the left wheels; it was his opinion that the No. 2 wheel

first contacted the broken rail and the other marks occurred during the derailment. It was possible, however, that all of the marks were made by the wheels coming in contact with the ends of the broken pieces of the rail. There were no marks on any of the wheels on the right side of the tender.

The members of the crew of west-bound Train No. 203, the last train to pass over this track, which was about 8 p.m., stated that no unusual condition in the track was noted.

Inspection of the track by the Commission's inspectors for a distance of 3/4 mile west of the point of derailment showed the track to be in good condition and there was no indication of anything having been dragging. Examination of the north rail disclosed it to be broken into 13 or more pieces, there being 3 sections, one 2 feet 10 3/8 inches and the other 6 feet 5 1/4 inches in length, that were not found. Beginning with the receiving end of the rail, which section remained in the track, the pieces measured as follows: 9 feet 10 3/8 inches, 1 foot 10 5/8 inches, 2 feet 11 3/8 inches, 11 inches, 1 foot 7 1/8 inches, 1 foot 10 5/8 inches, 1 foot 5 inches, 2 feet 10 3/8 inches not found, 2 feet 10 1/2 inches, 1 foot 1 1/2 inches, 2 feet 5 1/2 inches, 2 feet 8 3/4 inches, and 6 feet 5 1/4 inches not found. All except 1 of the sections found contained transverse fissures, ranging in size from 1/8 x 1/4 inch to 1 5/8 x 2 1/8 inches, the latter fissure being at the fifth break and extended to the top surface of the rail; the fissure at the second break also extended to the top surface and to within 1/8 inch from the gauge side and measured 1 1/4 x 2 3/16 inches. The leaving end of the second section was considerably bruised, having the appearance of wheels rolling off from it, while the receiving end of the third section was battered, having the appearance of being struck by wheels rolling onto it. The south rail was also broken into 4 pieces, a transverse fissure 1 x 1 1/4 inches existing at the first break which occurred 11 feet 11 1/4 inches west of the first break in the north rail. The ties had been destroyed by fire practically up to the first break in the north rail, the last tie remaining in the track was just east of the first break and it had been burned from the center of the track southward. This tie showed a mark which appeared to have been a flange mark about 10 inches inside of the gauge side of the north rail. The south halves of the next ten ties westward were also destroyed by fire. Both rails involved were 39-foot rails, rolled in February 1927 by the Tennessee Coal and Iron Company, heat number 834537, letter A, 9020, A.R.A. - A, and laid in July, 1927; the north rail bore ingot No. 1 and the south rail ingot No. 22.

Inspection of engine 1898 did not disclose any defective condition that could have contributed to the cause of the accident.

Discussion

Examination of the track after the accident disclosed that the rail on the north side had broken into thirteen or more pieces, there being ten fractures due to the presence of transverse fissures, the largest of these fissures occurring at the second and fifth breaks and extended to the top surface of the rail, covering an area of more than three-fourths of the head of the rail. The bruised and battered ends at the second break may indicate that the derailment first occurred at that point, as no such condition existed at the first break. Any evidence of flange marks on the ties was destroyed by fire. The only remaining mark was on the last tie left in the track which could have been made by the dragging back of some of the equipment. While the first break in the south rail disclosed the presence of a transverse fissure, all of the breaks in this rail appeared to be torn and ragged and it is believed that they were a result of the derailment. There were no marks of any kind on the right wheels of the tender trucks which was the first equipment derailed, while the left wheels of these trucks disclosed numerous marks indicating that they had come in contact with the broken rail. The evidence shows that there was no indication of a broken rail at the time the last train passed over this track, approximately 4 hours prior to the occurrence of the accident.

Conclusions

This accident was caused by a broken rail.

Respectfully submitted,

W. J. PATTERSON,

Director.