

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE NEW ORLEANS, TEXAS & MEXICO RAILROAD NEAR
CLEAR CREEK, LA., ON AUGUST 8, 1921.

September 24, 1921.

On August 8, 1921, there was a derailment of a freight train on the New Orleans, Texas & Mexico Railroad near Clear Creek, La., which resulted in the death of 2 trespassers, and the injury of 1 employee and 4 trespassers. After investigation of this accident the Chief of the Bureau of Safety reports as follows:

Location and method of operation.

The Second District of the Louisiana Division, upon which this accident occurred, extends between De Quincy and Anchorage, La., a distance of 135.9 miles. It is a single-track line over which trains are operated by timetable and train orders, no block-signal system being in use. The speed of freight trains is restricted by timetable rule to 25 miles an hour. The accident occurred at a point approximately 834 feet east of the station sign at Clear Creek. Approaching the point of accident from the west the track is tangent for several miles, the grade is slightly descending for eastbound trains to within about 400 feet west of the point of accident, beyond which point it is level. The track is laid with 75-pound rails, 33 feet in length, single-spiked to an average of about 20 cypress and treated pine ties to the rail-length; tie plates are used only on curves. The track is ballasted with

mixed gravel and shell, about 18 inches in depth. At the point of accident the track is on a fill about 8 feet in height, while 587 feet east of this point is a trestle about 300 feet in length and approximately 25 feet in height. The weather was clear at the time of the accident, which occurred at about 10:50 a.m.

Description.

Eastbound freight train extra 88 consisted of 42 cars and a caboose, hauled by engine 88, and was in charge of Conductor Smitherman and Engineman Fitzgerald. According to the train sheet, it left De Quincy at 9:35 a.m., left Fulton, 8.7 miles from Clear Creek and the last open telegraph office, at 10:30 a.m., and was derailed near Clear Creek while running at a speed variously estimated to have been between 25 and 35 miles an hour.

The engine and first 5 cars and the rear 15 cars and caboose were neither derailed nor materially damaged, the rear trucks of the sixth, and both trucks of the seventh and eighth cars were derailed, but the cars remained coupled to the forward part of the train and came to rest a short distance east of the trestle in an upright position and in general line with the track, although in crossing the trestle the derailed trucks destroyed the guard rails and ties. The ninth car broke its couplings and came to rest to the north or left of the track and near the west end of the trestle upside down. The next

17 cars were also derailed to the north, before reaching the trestle and were destroyed by fire, while the following car came to rest about 150 feet east of the point of derailment but remained in general line with the track.

Summary of evidence.

Engineman Fitzgerald said he felt a slight jerk before the engine reached the trestle and on looking back saw dust flying so thickly as to obscure his vision, he then saw cars turning over to the left, which seemed to take fire immediately, and said he released the brakes and began to work steam in order to get as much as possible of the train across the trestle. Fireman Clark noticed the cars turning over on his side of the track and said he immediately notified the engineman, he did not notice the engineman release the brakes or work steam, and expressed the opinion that the train was brought to a stop as quickly as possible. Head Brakeman Mason, who was riding on the head end of the tenth car, had noticed an unusual amount of dust toward the head end of the train, but the first car he knew to be derailed was the one on which he was riding; it seemed to lunge first to the right and then to rebound to the left, throwing him to the ground.

Conductor Smitherman and rear Brakeman Robinson were riding in the caboose, the conductor thought the train slowed down as though the engineman had applied the brakes this being followed by a rebound which did not seem to be

severe, while the rear brakeman said there was a violent shock and that he then saw the cars leaving the rails, the first of which was a box car. The conductor estimated the speed to have been from 20 to 25 miles an hour, while all of the other employees thought it was about 25 miles an hour. None of them expressed any opinion as to what caused the accident.

Wreck Foreman Dunham and Carman Brown, who assisted in clearing the wreckage, said the rear truck of the sixth car and the forward truck of the seventh car were derailed to the right and were astride the right or north rail, while the rear truck of the seventh car and both trucks of the eighth car were between the rails.

There were two persons standing near the track when the train passed Clear Creek, one of these said he heard a noise which sounded like the rubbing of pieces of metal against each other, while the other noticed nothing unusual. The second party estimated the speed to have been 35 miles an hour.

Examination of the track disclosed peculiar marks appearing on the rails at three or four points within a distance of about 900 feet of the point of accident. These marks were from 30 to 40 feet in length, showed on both rails at the same time, and appeared to have been made by metal of some kind rubbing against the extreme outer edge of the ball of the rail. These marks did not appear in

the immediate vicinity of the point of accident and there were no marks on the ties near them. The investigation did not develop what caused these marks or how they were made.

The first definite indication of derailment was a flange mark about 10 feet in length on the head of the left rail, beginning near the gauge side and extending diagonally to the left to the outside edge. The next mark appeared on a spike head on the outside of the rail on the next tie to the east, beyond this point the track was practically demolished for a distance of 1,024 feet. Measurements made of the surface of the track for a distance of 55 rail-lengths west of the point of derailment disclosed considerable irregularity, due in many cases to bent rails. In a distance of approximately 200 feet west from the point of accident, the first joint on the right side of the track was level with the center of the opposite rail, while the next five joints on the right side were uniformly lower than the centers of the opposite rails, the variations being from $5/8$ to $7/8$ inch. Proceeding westward from the point of derailment, swinging or churning ties were in evidence as follows, first rail, 3 ties on north side just in advance of point of derailment, ninth rail, 3 ties, tenth rail, 8 ties, eleventh rail, 4 ties, twelfth rail, 3 ties. The foundation was good under each of these ties, none of which was swinging more than $3/4$ of an inch. Section Foreman Groom said he went over this portion of

the track on the day preceeding the accident and that it appeared to be in normal condition and safe for the speed permitted. Roadmaster Green, who went over the track on a motor car on August 5, found the track to be in good condition at that time and safe for the speed permitted.

Examination of the 6th, 7th, 8th and 9th cars, which were the first 4 cars to be derailed, disclosed marks indicating that the forward truck of the 7th car, N.O., T.& M. tank car 6174, loaded with oil, had been derailed and slued to the left, none of the other trucks under these cars appeared to have slued after derailment. This same truck was also found to have a side-bearing clearance of 1 inch. No other defects were discovered with the exception of a slightly bent axle on the first pair of wheels of the front truck of the ninth car, which was a box car; this had resulted in uneven flange wear on one of the wheels and indicated that the axle had been in this condition for some time. Extra 88 was inspected before its departure from De Quincy, no defects being found with the exception of some cars on which the air brakes were cut out.

Tank car 6174, believed to have been the first to be derailed, had a capacity of 100,000 pounds, or 10,974 gallons, and was equipped with trucks of the Vulcan type.

Conclusions.

This accident is believed to have been caused by excessive speed, irregular track, and the excessive side-bearing clearance of the front truck of the tank car.

While Engineman Fitzgerald said he worked steam after the derailment in an attempt to get across the trestle, this statement is disputed by that of the fireman. Regardless of these conflicting statements, when it is taken into consideration that 17 of the cars were piled up in a distance of about 300 feet, and that the head end of the train traveled a distance of approximately 1,000 feet after derailment, it is clear that the speed at the time of the accident must have been much higher than the rate of 25 miles an hour permitted by time-table rule. This excessive speed, coupled with the irregular track and swinging ties just in advance of the point of accident, and the excessive side-bearing clearance of the tank car, undoubtedly caused that car to rock to such an extent that the forward truck became derailed, damaging the track and resulting in the subsequent derailment of the train.

All of the employees involved were experienced men, at the time of the accident they had been on duty less than $2\frac{1}{2}$ hours, previous to which they had been off duty 15 hours or more.