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**IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE GALVESTON, HARRISBURG & SAN ANTONIO RAILWAY
NEAR LULING, TEXAS, ON JANUARY 29, 1916.**

On January 29, 1916, there was a derailment of a passenger train on the Galveston, Harrisburg & San Antonio Railway near Luling, Texas, which resulted in the death of 1 employee and the injury of 2 employees. After investigation of this accident, the Chief of the Division of Safety reports as follows:

This accident occurred on the Glidden-San Antonio subdivision of the Houston division of the Galveston, Harrisburg & San Antonio Railway. It is a single-track line and trains are operated by time-table and train-orders. The derailment occurred on straight track in a shallow cut and on a grade of 1.11 percent ascending eastward. The weather at the time of this accident was cloudy and slightly foggy.

The train involved was eastbound train No. 102, known as the "Sunset Limited," en route from San Francisco to New Orleans. It consisted of locomotive 703, 1 baggage car, 1 coach, 1 Pullman tourist car, 1 dining car and 3 Pullman cars, all of which were of steel construction with the exception of the dining car which was of wooden construction. This train was in charge of Conductor Hedges and Engineman Gregory. It left San Antonio at 7:30 a.m., 3 hours and 56 minutes late, departed from Luling, 54 miles east of San Antonio at 9:25 a.m., and was derailed 1.84 miles east of that point at about 9:30 a.m., while running at an estimated speed of 30 or 35 miles an hour.

The locomotive ran a distance of 363 feet after being

derailed and then turned over to the right coming to rest fouling the main line, only slight damage being sustained by it. The first four cars of the train were also derailed, all of which with the exception of the first remained upright, this first car coming to rest against the side of the cut at an angle of about 45 degrees. Other than wrecked trucks and damaged brakes, gas and electric fixtures underneath the cars, the damage sustained by the cars was slight. Engineman Gregory was caught between the boiler and cab on right side of locomotive and killed as locomotive turned over.

The track ~~was~~ at the point of accident is laid with 80-pound rails, 33 feet in length with approximately 20 cypress and pine ties to the rail. Tie plates are used and the rails are single spiked on both sides; the joints are secured by four-bolt angle bars. The ballast consists of about 18 inches of loose sandy grave

Examination of the track approaching the point of accident from the west showed the first indication of derailment to be a flange mark on the ties about 5 inches inside the north rail, made by the left front driver. This was established by gray paint on the inside of the ball of the north rail, just to the rear of the point of derailment, which corresponded with that which had been chafed from the outside of the left front driver tire, this being the only tire which showed chafing on left side of locomotive. A corresponding mark was on outside flange of south rail. These marks continued in same relative position for a rail length, where a joint on south rail was broken and south rail crowded inward, derailing the following drivers which bunched and broke the ties, causing the derailment of the first four cars of the train.

Approximately 100 feet west of the initial point of derailment there was a joint on the south rail which was $1\frac{7}{16}$ inches low. This low joint was caused by water collecting under the ties at the joint, and the weight of each passing train forced the water out which in turn carried more or less ballast with it leaving the tie unsupported. Such a condition is usually referred to as a "churn hole." This low joint evidently caused the locomotive to rock violently to the right and then as it straightened up it struck the joint on the north rail about 50 feet further east which was 1 inch low and which was also due to a churn hole. This caused the locomotive to rock to the left and in righting itself the front driver evidently rocked off to the right about 50 feet further east, at which point the south rail was three-fourths inch low. These low places went down about an additional three-fourths inch under a locomotive moving at a low rate of speed.

Aside from the churn holes the track approaching the point of accident was in fairly good surface, gauge and alignment. There were, however, a number of missing and insecure spikes at rail joints. The heads of many of these spikes were turned outward at rail joints in order to protect bond wires; some of the spikes had been displaced, while others had been sheared off by the creeping of the rails, due to expansion and contraction.

Fireman Avey stated that Engineman Gregory noticed that the track was uneven as he approached the point of accident and made a service application of the air brakes. The fireman estimated the speed of the train at the time to have been between 30 and 35 miles an hour.

Roadmaster Womack stated that during the afternoon of January 28th he passed over the track where the accident afterwards occurred and when at the section house that same evening called Section Foreman Smith's attention to the bad condition which existed there and definitely instructed him to attend to it the first thing the next morning. He stated that he again spoke to the section foreman about this matter on the morning of January 29th and left the section house under the impression that this particular place was to be worked on by the section gang before they undertook any other work. Roadmaster Womack further stated that there had been a great deal of rain in the vicinity previous to the day of the accident and on account of the ballast not being solid enough, it was necessary to watch certain places in the track very closely.

Section Foreman Smith stated that Roadmaster Womack did not instruct him to make the repairs at the point where the accident occurred at any particular time and as there were other places on his section which he considered to be in worse condition, he did not attend to that part of it the first thing on the morning of January 29th. He stated that he did not go over his section either on January 27th or 28th on account of other duties which had to be performed.

This accident was caused by the uneven and insecure condition of the track, which would not permit of the safe movement of passenger trains at their usual speed, for which Roadmaster Womack and Section Foreman Smith are responsible.

In view of the conflicting statements of the roadmaster and section foreman, it is impossible to state definitely whether

or not the section foreman received instructions on the evening of January 28th to attend to this part of the track the first thing the following morning. This accident occurred at 9:30 in the morning and even had the section foreman received the instructions, it is questionable whether the repairs would have been made prior to the passage of train No. 102. The fact remains, however, that a dangerous condition existed at this point and undoubtedly had existed to a greater or less extent for some time prior to the day of the accident. Proper track maintenance should not permit of the development of joints which are $1\frac{7}{16}$ inches low and which will sink an additional three-fourths inch or more under the weight of passing trains.

Roadmaster Womack entered the service in January 1909 in the capacity of section foreman and was appointed to the position of roadmaster in July 1915. Section Foreman Smith was employed in July 1914, as student foreman and promoted in March 1915, to the position of section foreman.

At the time of the accident the crew in charge of train No. 102 had been on duty about 1 hour and 32 minutes.