

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE ST. LOUIS & SAN FRANCISCO RAILROAD AT LELA,
OKLAHOMA, JANUARY 18, 1916.

On January 18, 1916, there was a derailment on the St. Louis and San Francisco Railroad at Lela, Oklahoma, which resulted in the death of two employees and injury to two employees. After investigation of this accident the Chief of the Division of Safety reports as follows:

The accident occurred on the Perry sub-division of the Western Division of the St. Louis & San Francisco Railroad which extends from Tulsa, Oklahoma, to Enid, Oklahoma, a distance of 121 miles. The line is single track and the movement of trains is governed by time-table and train orders.

The train involved in this accident was westbound freight train No. 637, en route from West Tulsa to Enid. It consisted of engine No. 987, 17 freight cars and a combine, and was in charge of Conductor Avery and Engineer Hawley, and left West Tulsa at 11:00 p.m. It passed the last open telegraph office 7.5 miles east of Lela at 6:25 a.m. and was derailed at a point about 100 feet west of Lela at about 7:25 a.m., while running at a speed estimated to have been about 25 miles per hour.

The engine came to rest upon its left side, on the south side of the track, 413 feet west of the point where the first marks of the derailment appeared. The tender broke away from the engine, was pushed forward and practically turned around; the car next to the tender telescoped the end of the engine, and the four cars following were derailed and badly damaged. At the time of the accident a high wind was blowing and sleet was falling, the temper-

ature being about zero.

In the vicinity of the accident the track is tangent for over 1,000 feet in each direction and there is a grade of .45% descending westward. Paralleling the main track on the north is a passing siding which enters the main track about 37 feet west of the station. Located about 100 feet west of Lela station is a highway crossing at grade. This crossing consists of five, three-inch planks, 10" X 16", two planks paralleling each rail and one in the center, the minimum flangeway clearance being 2½ inches. The vacant spaces and crossing approaches are surfaced with limestone screenings. The planks on the outside of the rails were from an inch to an inch and a half above the top of the rail. During the 12 hours preceding the accident no train had passed over this crossing and the storm which was prevailing at that time had blown a considerable amount of sleet and screenings against the gauge side of each rail thereby partially choking the flangeways.

The track in the vicinity of the accident is laid with 65-pound steel rails, 33 feet in length. About 80% of the ties are of untreated hardwood while the remaining 20% are of treated soft wood, about 20 ties being used to the rail. The track is ballasted with about 10 inches of chat. The gauge of the track was fairly uniform, varying from a maximum of three-eighths inch wide gauge at a point 250 feet east of the point of the derailment to one-sixteenth narrow at a point, 3,000 feet west thereof. The elevation was practically uniform.

Roadmaster Aaron stated that when he reached the scene of the accident he found flange marks on the inside of the north rail, also on the outside of the south rail, which began at the

crossing and extended westward 268 feet to the switch frog at the west end of the house track at which point the wing rail clearly showed that it had been struck by a wheel flange. He also stated that about 300 feet east of the crossing he found a piece of oak timber about 4 feet 3 inches long, which had had a piece split off, and at the crossing another piece of the same timber was found in the center of the track and still another piece was found south of the south rail, a short distance west of the crossing. The piece of timber found between the rails bore evidence of having been run over by a wheel. This, together with marks which appeared on the crossing plank, leads him to believe that a piece of timber had fallen from the pilot of the engine some distance east of the crossing, splitting it, throwing a part of it aside, and carrying the remainder along until it reached the crossing, where it fell under the wheels and derailed them.

Engineer Hawley of train No. 637 stated that as he was approaching Lela his train was running between 25 and 27 miles per hour; shortly after passing the station he about the time his engine was on the crossing he felt the locomotive settle as if a spring hanger had given away. He soon felt the wheel on the ties. He closed the throttle, but before he could apply the brakes the engine turned over.

An examination of the locomotive after the accident disclosed that the pilot and yoke brake were broken, also the main equalizer of the pony truck was broken in front of fulcrum and the forward part had been trailing behind the derailed wheels.

The evidence is not sufficient to enable the cause of

the accident to be definitely determined, but it is believed that it resulted from one of two causes; The equalizer, which was found broken after the accident may have broken just as the locomotive was passing over the crossing, thus relieving the pony truck of part of the engine's weight, and the ice and snow in the flange-way, forced the leading wheels to raise sufficiently to permit the flange to ride over the rail. On the other hand, the piece of timber, which was found on the track in the vicinity of the crossing, being free from ice and snow, indicates that it may have been placed upon the pilot of the engine and fallen off in such a manner that it fell under one of the wheels of the pony truck, thereby causing it to derail.

Engine No. 987 is a Baldwin consolidated of the 2-8-0 type, weighing 121,500 pounds, of which 21,450 pounds are carried on the pony truck. An examination of the equalizer bar disclosed no flaw; the wheel flanges were of proper gauge, and in all other respects the engine was in apparent good order.

The crew of train No. 637 at the time of the accident had been on duty approximately 6 hours and 5 minutes.