

Inv-2181

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

MISSOURI-KANSAS-TEXAS RAILWAY

NOXIE, OKLA.

June 12, 1937

INVESTIGATION NO. 2181

SUMMARY

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Railroad:	Missouri-Kansas-Texas
Date:	June 12, 1937
Location:	Noxie, Okla.
Kind of accident:	Derailment
Train involved:	Freight
Train number:	Extra 705 north
Engine number:	705
Consist:	50 cars, caboose
Speed:	30-35 m.p.h.
Track:	Tangent and level
Weather:	Clear
Time:	8 p.m.
Casualties:	1 killed
Cause:	Not ascertained

August 3, 1937.

To the Commission:

On June 12, 1937, there was a derailment of a freight train on the Missouri-Kansas-Texas Railway, at Noxie, Oklahoma, which resulted in the death of one trespasser.

Location and method of operation

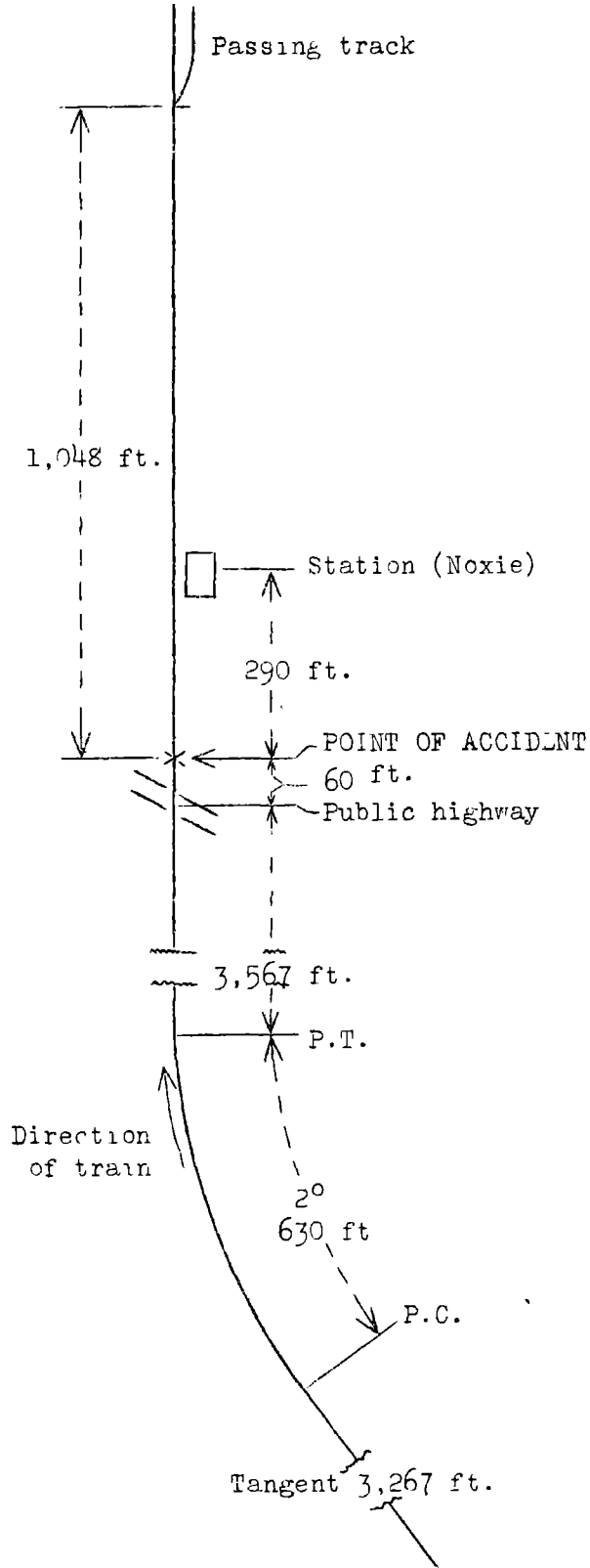
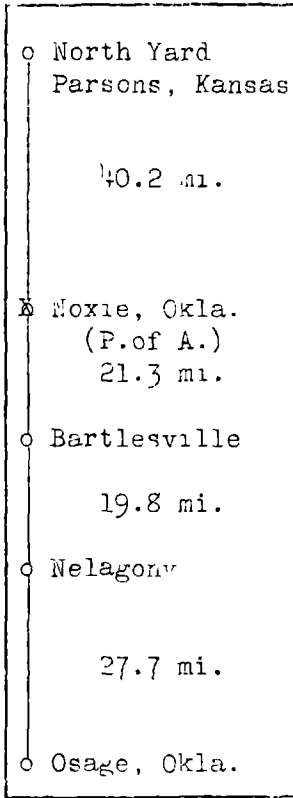
This accident occurred on the Osage Division of the Southern District, which extends between North Yard (Parsons), Kans., and Osage, Okla., a distance of 109 miles. In the vicinity of the point of accident this is a single track line over which trains are operated by time table and train orders, no form of block system being in use. A public highway crosses the track 350 feet south of the station at Noxie and the initial derailment occurred about 60 feet north of this crossing and 290 feet south of the station, the final derailment occurring at the south switch of the passing track, 1048 feet north of the point of initial derailment. Approaching this point from the south the track is tangent for 3,267 feet, followed by a 2° curve to the right 630 feet in length, then tangent for 3,265 feet to the point of initial derailment and for nearly a mile beyond. The grade is slightly undulating but is level in the immediate vicinity of the point of derailment.

The track was laid in 1918 with 85-pound rail 31 feet in length, with an average of 17 hard and soft-wood treated ties to the rail length, single spiked, about 40 percent tie plated and 25-inch, 4-hole angle bars. It is ballasted with chatt and cinders to a depth of from 4 to 6 inches and is fairly well maintained. The speed of freight trains is restricted by timetable to 25 miles per hour.

The weather was clear at the time of the accident which occurred about 8:00 p.m.

Description

Extra 705, a north-bound freight train, consisted of 50 cars and caboose, hauled by engine 705 and was in charge of Conductor Devore and Engineman Benson. This train left Osage at 4:55 p.m., left Bartlesville, 21.3 miles south of Noxie, at 7:25 p.m., according to the train sheet, and was derailed while approaching Noxie at an estimated speed of from 30 to 35 miles per hour.



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The locomotive and first 20 cars of the train remained coupled and stopped about 2300 feet north of the point of final derailment. The following 13 cars were piled up within a distance of approximately 162 feet and immediately caught fire. The next 8 cars were partially derailed but remained upright on the roadbed and sustained some damage. The remainder of the train was not derailed or damaged. The track was badly damaged and partially torn out northward from the switch for about 500 feet.

Summary of evidence

Engineman Benson stated that an air brake test was made before leaving Osage, and 12 cars of stock were picked up on the head of the train at Nelagony; there was nothing unusual in the riding of the locomotive, or the handling of the train en route. A drifting throttle was used from the apex of a hill about 3 miles south of Noxie, and a light service application of the air brake was made and the speed reduced to about 25 miles per hour when about one mile south of Noxie. He had been observing the train as it rounded curves and did not see anything wrong; his first intimation of the derailment was when the brakes became applied in emergency; upon looking back he saw a portion of the train in flames and he immediately pulled the forward portion ahead; he estimated the speed at the time of the derailment to have been about 30 miles per hour. There was nothing in the riding of the locomotive as it passed over the point of derailment to indicate anything wrong with the track and his inspection of the locomotive after the accident did not disclose anything that might have caused or contributed to the accident. After the accident he made an inspection of the rear car in the forward portion of the train and did not find anything wrong; however, he made no inspection of the track.

Head Brakeman Selander stated that when the 12 cars of stock were picked up at Nelagony he observed them as they pulled by and noted nothing wrong. He rode the rear of the tender en route and was able to observe the train at all times, but prior to the accident saw nothing to cause alarm; his first intimation of the derailment was when the train broke into flames. He estimated the speed to have been about 25 or 30 miles per hour at the time of the accident.

Conductor Devore stated that an air brake test was made before leaving Osage and the brakes functioned properly en route. When the train was stopped at Nelagony, he and the rear brakeman made an inspection of the east side of the train

as they went to the head end, and after 12 cars of stock were picked up he went to the rear of the train along the west side, inspecting it as he went, and noted nothing wrong. He rode in the right side of the cupola where he had been most of the trip and had observed the train when rounding curves. The air brakes were applied about two miles south of Noxie and the speed was reduced to about 25 miles per hour and soon after the brakes were released he saw sparks flying from under the train and thought a brake beam had come down. He immediately placed the conductors brake valve in emergency position and the train burst into flames. He noted nothing unusual in the handling of the train and no unusual slack action. He inspected the track and found no signs of anything dragging; however, about two rail lengths north of the highway crossing there were marks on the ties east of each rail. The marks appeared to have been made by one pair of wheels for about 5 or 6 rail lengths and then marks of two pairs of wheels appeared. After the derailment, he inspected the rear portion of the head end of the train but found nothing wrong that might have caused the accident. Other members of the crew gave no additional information of importance.

Wrecking Engineer Wickware and Car Inspector Doughty stated that they made a thorough inspection of Extra 705 before it left Osage and noted nothing wrong. They also made an air brake test and found the brakes working properly.

General Master Mechanic Lewis stated that he arrived at the scene of the accident about 11:40 p.m., and immediately made an inspection of the track and equipment. About 2 rail lengths north of the highway crossing a mark was found extending from the gauge side of the east rail diagonally across the ball for a distance of about 27 feet, where it then dropped outside the rail, from which point wheel marks appeared on the ties as far as the south switch of the passing track; the wheel then engaged the outer turn-out rail and pulled the passing track out of line. He assisted in clearing the wreckage and one pair of undamaged trucks was found at the bottom of the fill about 8 car lengths north of the switch, and another pair about 100 feet farther north. Car JORX 8289 was equipped with arch bar trucks and was the first of the 13 piled up cars and the next car behind JORX 8161, the rear car in the front portion of the train. The center casting fit and a comparison of the side bearings showed that the undamaged truck belonged to the north end, and the other truck belonged to the south end, of JORX 8289. The east rear column bolt of this latter truck was sheared off under the tie bar, longitudinally with the truck, which apparently occurred when it contacted the east rail of the passing track.

It was his opinion that when the lead wheel of the rear truck of JORX 8289 first became derailed, the movement of the car caused the rear pair of wheels of JORX 8161 to become derailed, and that if the lead truck of 8289 had become derailed first, the final derailment would have occurred sooner.

Road Master Moody stated that he arrived at the scene of the accident about 11:30 p.m. and also made an inspection of the track and equipment. About 2 rail lengths north of the highway crossing a flange mark appeared on the ball of the east rail, extending from the gauge side, diagonally for about 30 feet, to the outside of the rail where the first flange marks appeared on the ties and continued for about 1,000 feet to the point where most of the derailed cars stopped. On the day following the derailment he took cross-levels for 15 rail lengths south of where the first mark appeared; these levels were taken at joints and centers and showed the greatest variation to be $\frac{1}{2}$ inch; however, there was no place where one low spot existed opposite another. The gauge was good and there were no soft spots in the track. Since his return to this division in August, 1936, he has not had occasion to call the section foreman's attention to irregular track conditions in that vicinity. He went over the track on a passenger train on June 10 and noticed nothing unusual with the track and he considered it good for the speed allowed for freight trains and safe for a speed as high as 45 miles per hour. He did not think excessive speed contributed to the accident. It was his opinion that the lead wheel of a truck was the first to become derailed, because the wheel moved away from the rail, whereas a rear wheel would trail along the rail until deflected by a turnout or other condition. He thought car 8289 was the first to become derailed because it was the only car deflected to the east by the rails of the passing track switch. There were no marks to indicate anything dragging south of where the first mark was found on the rail.

Section Foreman Williams stated that he was at home, 2 miles south of Noxie, when extra 705 passed and he noticed nothing unusual in its speed. A short time afterwards, he saw smoke in the direction the train had gone and he immediately called a man and proceeded to the scene on his motor car. He inspected the track en route and saw no signs that anything had been dragging. He gauged the track and used the cross-level and found the gauge good and the level varied from $\frac{1}{4}$ to $\frac{1}{2}$ inch. He had not surfaced the track in this vicinity since he was assigned to the section in 1923, and had not spotted any low joints recently.

Car Foreman Allen stated that he made an inspection of the rear car of the forward portion of the train after the accident but found nothing wrong except a missing brake shoe and key from the L-4 location. All other foundation brake rigging was in place.

Inspection of the track by the Commission's inspectors, after the wreckage had been cleared, did not disclose any outstanding irregularities of gauge and surface.

Apparently the car first to become derailed was JORX 8289; this car was equipped with arch bar trucks and had a loaded capacity of 80,000 pounds and at the time of the accident, contained 8,166 gallons of gasoline, weighing 53,896 pounds.

Discussion

The first mark of derailment was a flange mark on top of the east rail, starting at the gauge side and running diagonally for about 27 feet to where it dropped to the ties outside the rail. The mark then appeared on the ties about 7 inches from the gauge side of the base of the west rail, and about 32 feet north of the point where the mark first appeared on the ball of the east rail. This flange mark continued diagonally toward the center of the track for about 15 feet until it reached a point 20 inches from the base of the west rail. The mark ran at an angle to the ties as though made by a slued wheel, as large splinters of the ties were torn out. It continued northward for 274 feet where a second flange mark appeared on top of the east rail and continued for about 18 feet, extending from the gauge side to the outside of the rail. A second flange mark showed on the ties at this point 6 inches from the gauge side of the west rail, and continued in a manner to indicate that the second wheel to become derailed was a trailing wheel, this wheel moving diagonally until the truck ran parallel to the track, after which the truck moved toward the rails until the marks were about 6 inches from the base, and the following flanges left but one mark. These marks, together with corresponding marks on the ties outside of the east rail, continued to the point where the track was completely torn out.

The trucks belonging to JORX 8289 were identified by side bearing measurements, center casting fits, and truck levers. The undamaged truck belonging to the north or "B" end was found at the bottom of the fill and east of the track, 271

feet north of the switch. The truck belonging to the south or "A" end was found a short distance farther north. The wheels of the latter truck were in good condition and there was no evidence of bent axles. The leading column bolt on the east side was sheared off beneath the tie bar, longitudinally to the truck. The spring nest on the east side was complete and in proper place, while the springs on the opposite side were out of the nest and lying on the sand board. The truck was bent downward about $2\frac{1}{2}$ inches where the column bolt was broken; however, all other column and box bolts were secure and in place. Both brake beams were broken at the fulcrums, but all brake beam hangers were in good condition and in proper place. This damage appeared to have been the result of the derailment.

Upon leaving Osage this train was restricted by timetable instructions to a speed of 25 miles per hour; however, after picking up 12 cars of stock at a later station it was permitted by verbal instructions to operate at a maximum speed of 35 miles per hour. There was no evidence of anything dragging or of striking any object before the derailment.

Gauge and cross-level measurements of the track, taken for about 15 rail lengths south of the first mark of derailment, showed slight irregularities. The rail joint where the first mark was found was $\frac{1}{2}$ inch low, while three other places on the east rail were $\frac{1}{4}$ inch low. The gauge showed less than $\frac{1}{2}$ inch variation.

At the joint, which was $\frac{1}{2}$ inch low, the ends of the rails abutted closely and showed even wear and the bolts were all secure except the one in the south end of the bar, which was slightly loose. The section foreman stated he had not surfaced this track in the 13 years he had been in charge, but had leveled up low joints from time to time. His crew consisted of one full-time man and another half-time man and his section included 7 miles of main track.

Conclusion

The cause of this accident was not definitely ascertained.

Respectfully submitted,

W. J. PATTERSON,

Director.