

INTERSTATE COMMERCE COMMISSION

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REPORT OF THE CHIEF OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF THE ACCIDENT WHICH OCCURRED ON THE ATCHISON, TOPEKA & SANTA FE RAILWAY NEAR BURBANK, OKLA., ON OCTOBER 10, 1922.

November 15, 1922.

To the Commission.

On October 10, 1922, there was a head-end collision between a freight train³⁷⁸ and a work train on the Atchison, Topeka & Santa Fe Railway near Burbank, Okla., which resulted in the death of 1 employee, and the injury of 3 employees and 1 trespasser.

Location and method of operation.

This accident occurred in the town district of the Oklahoma Division extending between Newkirk and South Shawnee, Okla., which is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The point of accident was 1.2 miles east of Burbank, approaching from the east there is a tangent 1,933 feet long, followed by a curve to the right of $3^{\circ} 30'$ which is 2,476 feet in length, the accident occurring at about the center of this curve. Approaching from the west there is a tangent 855 feet long, followed by the curve to the left on which the accident occurred. The grade is 0.6 per cent descending for westbound trains. The accident occurred on a fill, but there are cuts on either side which materially restrict the view from approaching trains. The weather was clear at the time of the accident, which occurred at about 11.15 a. m.

Description.

Work extra 579, which was moving eastward at the time of the accident, consisted of 13 cars and a caboose, hauled by engine 579, which was being operated backing up. This train was in charge of Conductor Blanchard and Engineer Linam, it originated at Burbank, at which point the crew received, among others, copies of train order No. 122, Form 31, and train orders Nos 123 and 154, Form 19. These orders read as follows

- No. 122. "Eng 392 works Six 6 am to Six 6 pm between Remington and Kaw. Eng 579 works Eight 8 am to Eight 8 pm between Remington and Kaw. Two work Exas 392 and 579 protect against each other Eastward Exas except Exa 4012 East wait at Remington until Eleven 11 am"
- No. 123 "Exa 4009 west wait at Kaw until Six fifty 650 am Apperson Seven ten 710 am. Exa 579 west wait at Kaw until Six thirty 630 am Apperson Six fifty 650 am EXa 4002 west wait at Kaw until Nine 9 am Other Westward Exas wait at Kaw until Eleven 11 am"
- No. 154 "Westward Exas Except Exa 4009 West wait at Kaw until One 1 pm for Work Exa 579"

Work extra 579 proceeded eastward from Burbank at 11.05 a.m. and collided with extra 4009 while traveling at a speed of about 10 miles an hour.

Westbound freight train extra 4009 consisted of 70 cars and a caboose, hauled by engine 4009, and was in charge of Conductor Duncan and Engineman Mackey. It left Apperson, 4.5 miles from Burbank, at 11.07 a.m. and collided with work extra 579 while traveling at a speed variously estimated by the crew at from 18 to 25 miles an hour.

Engine 579 was derailed but remained upright with its tender and cab demolished. The first car in this train was also derailed. Engine 4009 was derailed but came to rest in an upright position with its front end slightly damaged. The first eight cars were derailed and badly damaged, while five other cars in the rear portion of the train were derailed. The employee killed was the fireman of work extra 579.

Summary of evidence.

The crew of work extra 579 went on duty at Burbank at 8 a.m., and at 8.42 a.m. Conductor Blanchard received his work order. After doing some switching he inquired of the dispatcher about extra trains and was told extra 4009 was then at Kaw and that it had been followed out of Newkirk by extra 4002. Kaw and Newkirk are stations 8.3 and 24.8 miles, respectively, east of Burbank. Conductor Blanchard then sent Flagman Frost eastward to protect against westbound trains and continued with some station

work. While so engaged, a westbound extra passed, at 9.45 a.m., and when an automobile attempted to cross in front of it at a street crossing near the station, Conductor Blanchard and Head Brakeman Orchard ran toward the automobile in an endeavor to bring it to a stop, the conductor saying he got on the running board and took hold of the steering-wheel. The automobile was stopped within a few feet of the track and it was from this position, looking through the wind shield of the automobile, that Conductor Blanchard endeavored to ascertain the number of the extra. He thought it was extra 4009, when as a matter of fact it was extra 4003; the head brakeman did not see the number. Engineman Linam said he did not see the number because he was working on the lubricator, although he admitted he could have seen it if he had looked. Flagman Frost had seen the train on his way out to flag, and he was the only member of the crew of the work extra who knew that the train which passed was extra 4003. At 10.38 a.m. Conductor Blanchard received train order No. 154 which he delivered to Engineman Linam, who read it to him in the presence of the head brakeman and fireman and then turned it over to the fireman. Engineman Linam left the engine for a few minutes when train No. 407 arrived at 10.47 a.m., and according to his statement, it was on his return that he received a copy of train order No. 154, he said the conductor then told him that extra 4009 had gone and he remarked to the conductor that this gave them a clear track until 1 p.m. Conductor Blanchard, however, did not remember telling the engineman that extra 4009 had gone. Soon after the departure of train No. 407, work extra 579 was made upon the passing track, after which the flagman was recalled and the train departed at 11.05 a.m. The flagman boarded the caboose in which the conductor was at work on his delay report, and neither of them realized that there was anything wrong until the air brakes were applied just before the accident occurred. Engineman Linam said he saw the tops of some cars a considerable distance around the curve and at first thought they belonged to work extra 393, but at about the same time he saw the number of the engine as it rounded the curve, at which time he made an emergency application of the air brakes. Neither Head Brakeman Orchard, who boarded the engine leaving Burbank, nor Flagman Frost had seen a copy of train order No. 154, and while the flagman knew extra 4009 had not passed, he said he supposed the conductor had received additional orders while he was out flagging. Conductor Blanchard did not realize the mistake that had been made in the identification of extra 4009 until after the occurrence of the accident. Train order No. 154 was received at 10.38 a.m., 53 minutes after the passage of the train which he thought was extra 4009, but Conductor Blanchard said he had on several occasions received orders relating to trains which had passed, and Dispatcher Watson said it was customary to issue orders in this manner as long as the extras were within the working limits of work

extras, as something might develop which would result in the work extra passing them and then the crew of the work extra would have nothing in their orders relating to the other extras.

Engineman Mackey, of extra 4009, said he had reduced speed to about 20 miles an hour and then released the brakes. He remembered nothing of what occurred after this until after his removal from the scene of the accident, but according to Conductor Duncan, who was riding on the engine, and Fireman Stamm, the train traveled down the grade at a speed of 30 to 35 miles an hour, and the engineman applied the air brakes around the curve, reducing the speed to about 15 miles an hour, the brakes were then released and the speed had increased to about 20 or 25 miles an hour when the engineman saw the approaching work extra, called to the other members of the crew, applied the air brakes in emergency, and jumped.

The engineman of extra 4002 verified the statements of Conductor Blanchard about the latter's endeavor to stop an automobile at the street crossing near the station at Burbank. He considered that the numbers on his engine were clean and plainly visible, and this latter statement was corroborated by the operator at Burbank.

Conclusions.

This accident was caused by the crew of work extra 579 failing to identify a train, resulting in their own train occupying the main track without protection.

The crew in charge of work extra 579 first received an order which provided that work extra 4009 would wait at Kaw until 6.50 a.m., and extra 4002 until 9. a.m., thus indicating that extra 4009 was ahead of extra 4002. Extra 4002, however, passed extra 4009 at an intermediate station and when it passed Burbank the crew of extra 579 failed to identify it and assumed that it was extra 4009. They then received train order No. 154, which provided that all west-bound extras except extra 4009 would wait at Kaw until 1 p.m., which strengthened their belief that the train which had passed was extra 4009. While Conductor Blanchard had a reasonable excuse for failing to identify the train as it passed, due to his efforts in preventing an automobile from being struck by extra 4002, he was not justified in assuming that it was extra 4009, particularly when there were ample means at hand of communicating with the dispatcher, or even inquiring of the operator. Engineman Linam could have identified the train had he looked at it, but accepted the statement which he said was made to him by the conductor. These employees were in charge of the train and are primarily responsible for the occurrence of this accident.

While the head brakeman and flagman had not seen the last order received at Burbank, they made no attempt to see it, and did not inquire as to its contents. On this railroad flagman are required to be furnished with a copy of all train orders and had Flagman Frost asked for his copy of all orders received, as he should have done under the rules, or had the head brakeman read the engineman's copy of the order, as he was required to do under the rules, the error probably would have been discovered, and the train might have been brought to a stop in time to prevent the accident.

With the exception of the conductor and engineman, none of the members of the crew of extra 579 had had much railroad experience. At the time of the accident the crew of extra 579 had been on duty about 3 hours, previous to which they had been off duty about 11 hours; the crew of extra 4009 had been on duty about 8 hours, previous to which they had been off duty 19 hours or more.

Respectfully submitted,

W. P. Borland

Chief, Bureau of Safety.