

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN  
ACCIDENT ON THE ATCHISON, TOPEKA & SANTA FE RAILWAY  
NEAR ENTERPRISE, KANS., ON SEPTEMBER 29, 1933.

January 10, 1934.

To the Commission:

On September 29, 1933, there was a rear-end collision between a relief train and a freight train on the Atchison, Topeka & Santa Fe Railway near Enterprise, Kans., which resulted in the death of 1 employee and the injury of 6 employees.

#### Location and method of operation

This accident occurred on the Strong City District of the Middle Division, which extends between Neva, Kans., and Superior, Nebr., a distance of 153.8 miles, and is a single-track line over which trains are operated by time table and train orders, no block-signal system being in use. This accident occurred at a point about 2 miles east of Enterprise; approaching this point from the east, there is a 2° curve to the right 507 feet in length, followed by 3,725 feet of tangent track to the point of accident, this tangent extending for some distance beyond that point. The grade for west-bound trains is 0.9 percent descending at the point of accident. Special time-table instructions restrict the speed of trains handling steam wrecking cranes to 20 miles per hour and 3100-class and 4000-class engines to 30 miles per hour. Operating rule 85 allows extras to pass and run ahead of second and third class and extra trains.

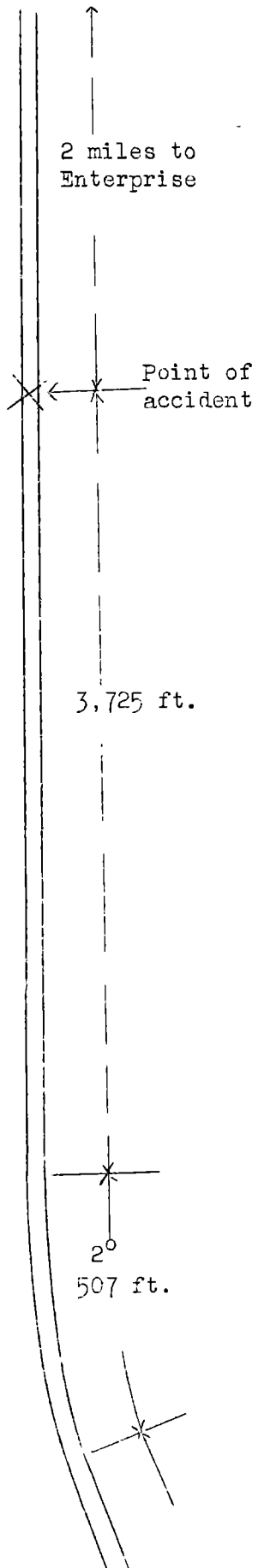
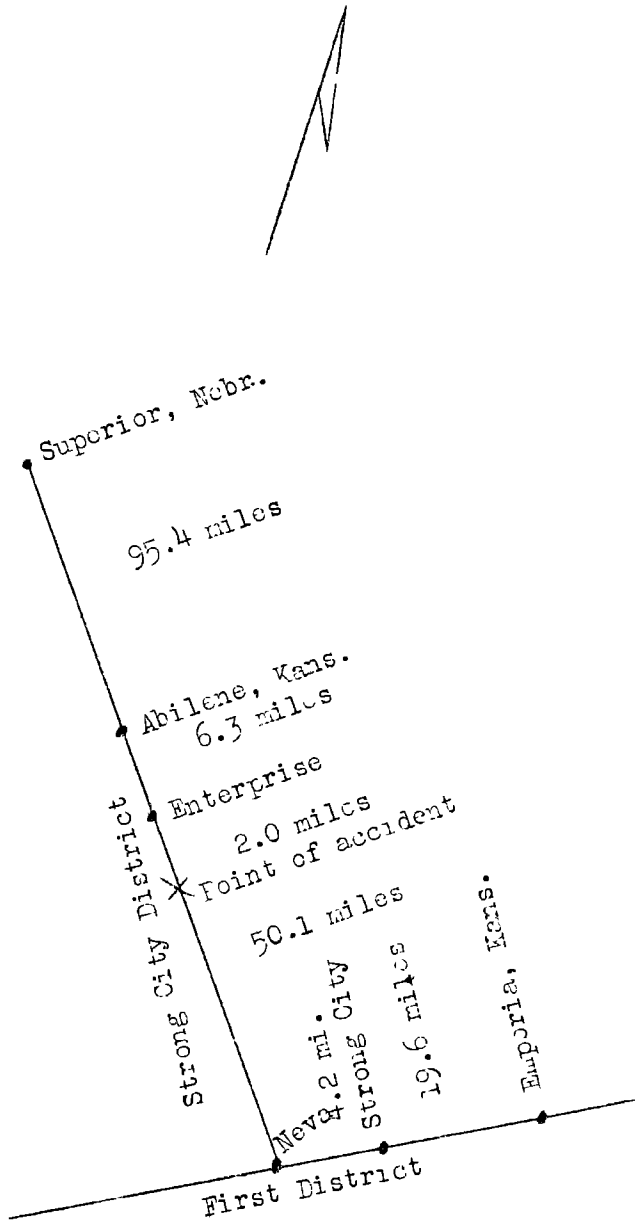
There was a dense fog at the time of the accident, which occurred about 7:08 a.m.

#### Description

West-bound extra 4000 consisted of a steam derrick, 1 block car, 1 water car, 2 loaded flat cars, 1 coach, 1 tool car, and a caboose, hauled by engine 4000, and was in charge of Conductor Collins and Engineman Hoffman. At Strong City, 56.3 miles east of Enterprise, the crew of this train received train order no. 492, directing them to run extra Strong City to Abilene, together with a telegram from the trainmaster reading as follows:

"If you are overtaken by no. 73 head in and let them by promptly."

This train departed from Strong City at 4:30 a.m., according to the train sheet, entered the tracks of the Strong City District at Neva, 4.2 miles beyond, and was approaching Enterprise at a speed of 18 or 20 miles per hour when its rear end was struck



Inv. No. 1859  
Atchison, Topeka & Santa Fe Ry.,  
Enterprise, Kansas  
September 29, 1933.

by train no. 73.

West-bound third class freight train no. 73 consisted of 46 cars and a caboose, hauled by engine 3124, and was in charge of Conductor Holderman and Engineman Wilson. At Strong City the crew received a copy of train order no. 408, as follows:

Westward extras between Neva and Abilene following no. 73 wait at Neva until nine ten 9:10 a.m. This order is annulled if no. 73 passes extra 4000 west.

Extra 4000 west has passed Neva.

At four forty five 4:45 a.m. all regular trains have arrived and left Strong City except no. 73.

This order was made complete at 4:48 a.m. and the train departed from Strong City at 5:15 a.m., according to the train sheet, 2 hours and 10 minutes late, colliding with extra 4000 while traveling at a speed estimated to have been between 20 and 32 miles per hour.

The five rear cars in extra 4000 were derailed and demolished and the engine and first three cars in train no. 73 were derailed and damaged. The employee killed was a coach cleaner on extra 4000 and those injured were the conductor, flagman, and three members of the wrecking crew of extra 4000, and the head brakeman of train no. 73.

#### Summary of evidence

Engineman Hoffman, of extra 4000, stated that no stops were made after leaving Strong City but he applied the air brakes at times so as to keep his train within the required 20-mile speed limit. When he received the train orders and message from the conductor he asked about train no. 73, as he had seen it was not on the register and was past due, and the conductor told him that it had not left Emporia. The fog was so dense he could not see for more than six car lengths, many times being unable to see the outline of the caboose, and at no time did he see the headlight of an approaching train. When he felt the shock of the collision he was looking out of the window and then looked back and saw the cars piling up; the speed of his train was about 20 miles per hour at the time of the accident. Fireman Grove said the fog was so thick he could not see for a distance of more than 100 yards.

Conductor Collins, of extra 4000, stated that shortly before his train left Strong City, or about 4:25 a.m., he was told by the operator and also the yard foreman that train no. 73 had not left Emporia and that they did not know when it would

leave that point. He rode on the left side in the cupola of the caboose and while it was foggy yet he could see for a distance of about 200 yards, and he did not think there was much difference in the density of the fog after passing Hope, a station 15.3 miles from Enterprise; in fact, he said that just before the occurrence of the accident he could see the fireman when he leaned out of the window and could even see beyond the engine, and on looking back he thought he could see for a distance of about 15 car lengths. No fuseses were thrown off at any time as he did not think that it was necessary, not expecting train no. 73 to overtake his own train and not considering that the condition of the weather was an element of danger. He did not hear the whistle of train no. 73, did not see its headlight, and was unaware of its approach until it struck his caboose. The last time he looked back was about 2 minutes before the occurrence of the accident, and he said he had seen the brakeman looking back frequently.

Flagman Kelly, of extra 4000, stated that he read the orders and the message received at Strong City and on leaving that point the conductor informed him that train no. 73 had not yet left Emporia; he therefore figured that they were about 45 minutes ahead of that train and could go ahead of it to Abilene, 6.3 miles west of Enterprise. The fog was very dense throughout the entire trip and at some places he could not see more than three or four car lengths; he was unable to see his engine but could see the blur of the headlight. Train no. 73 was not again mentioned and he did not throw off any fuseses as he did not think that the conditions warranted it, adding that if fuseses had been used it would have been necessary to drop one every 5 minutes; he had three dozen in the caboose, but stated that that would not have been enough. Flagman Kelly further stated that the markers on his caboose were burning.

Engineman Wilson, of train no. 73, stated that the fog was quite dense and was worse at some places than at others. He made no stops after leaving Strong City, but at Lost Springs, 26.6 miles east of Enterprise, he reduced the speed as the fog obscured his view of the interlocking signal. He did not again reduce the speed on account of fog, although he applied the air brakes several times after that on descending grades. In the vicinity of Hope the weather cleared to some extent and the sun shone through for a short time, but after passing Navarre, 7.7 miles east of Enterprise, the fog was quite dense although he did not realize it was so thick until he was quite close to the extra train. He was watching closely ahead, knowing the extra was ahead of him, and the first thing he saw was the glare of his headlight on the cupola windows of the caboose, about 400 feet distant. He applied the brakes in emergency, opened the sanders and started to get off but changed his mind when he discovered that the train ahead was moving; he did not see the markers on the caboose. Engineman Wilson stated that he had been operating his train at a speed of between 25 and 30 miles per

hour and thought the speed had been reduced to 20 miles per hour at the time of the accident, saying that it seemed as if his engine pushed the extra along for four or five car lengths before anything happened. Engineman Wilson also said that at times he might have been operating his train at too high a rate of speed in view of the prevailing fog, although at the same time he figured that he could see far enough ahead to avoid an accident. He further stated that he complied with the rule requiring the sounding of a whistle on rounding curves where view is obstructed, and at frequent intervals during fogs. The statements of Fireman Ledwith practically corroborated those of Engineman Wilson, and he added that he did not know that engine 4000, which is allowed to move at 30 miles per hour on the Strong City District, was handling the wrecker, which under the rules can not be handled on this district at a speed in excess of 20 miles per hour.

Conductor Holderman, of train no. 73, stated that the weather was very foggy until they reached Hope, and then the sun shone through the fog until they reached Navarre, but from that point on the fog was very dense more so than at any other place, and he could not see for more than six or eight car lengths. The train was traveling at a speed of 30 or 32 miles per hour when it stopped gradually, as if an air hose had burst. Conductor Holderman stated that the brakes had been tested at Emporia, that the brakes on the 11 cars picked up at Strong City also were tested, and that they functioned properly en route; when leaving Strong City he had no information as to the character of extra 4000. Conductor Holderman further stated that he had been working over the Strong City District for about 14 years, and while it was considered a foggy district due to climatic conditions, it was no worse than other places on the division. The statements of Head Brakeman Lemon, who was riding on top of the tender, and Flagman Nowers, who was riding in the caboose, brought out nothing additional of importance.

#### Conclusions

This accident was caused by the failure of Conductor Collins and Flagman Kelly, of extra 4000, properly to protect their train.

Under the rules extra trains may run ahead of second and third class trains; the rules also require that when a train is moving under circumstances in which it may be overtaken by another train the flagman must take such action as may be necessary to insure full protection; by night, or by day when the view is obscured, lighted fuses must be thrown off at proper intervals. Extra 4000 was being operated at less than the speed permitted for a 4000-class engine, due to the fact that it was handling the wrecker, and the crew knew train no. 73 was following them, but Flagman Kelly made no attempt to throw off fuses at any time and Conductor Collins, who was in a position to see that the rear end of his train was properly protected, took no action. A dense fog prevailed at the time of the

accident, apparently worse immediately east of the point of accident than it had been a few miles away, and under such circumstances it was incumbent on these employees to protect themselves when in fog so dense as to interfere materially with the range of vision. Both the conductor and the flagman, however, stated that they did not think train no. 73 would overtake their train and that it was not necessary to throw off fusees, basing their opinion apparently on the unofficial information the conductor received just before leaving Strong City to the effect that train no. 73 had not then left Emporia, 19.6 miles east of Strong City; as a matter of fact, however, train no. 73 left Emporia at 4:20 a.m., 10 minutes before extra 4000 departed from Strong City. This, however, was no assurance that their train would not be overtaken and in no way relieved them from properly protecting the rear of their train, particularly as their speed was restricted by reason of the special equipment being handled.

Engineman Wilson, of train no. 73, stated that due to the density of the fog he had to reduce the speed of his train at one point when approaching an interlocking signal, but he did not again reduce the speed on account of fog, although he admitted that at times he might have been operating his train at an excessive rate of speed in view of the prevailing conditions. He knew there was an extra ahead of him, and with fog in the vicinity of the point of accident of sufficient density to make the use of fusees necessary in order to provide full protection, it was incumbent on Engineman Wilson to use extra precaution at such points if the hazard of an accident were to be avoided. At the same time, however, the record does not indicate that he knew engine 4000 was handling the wrecker and therefore could not exceed 20 miles per hour, whereas a 4000-class engine normally is allowed to move at 30 miles per hour on this territory.

The movement of trains handling special equipment which must be moved at reduced rates of speed should be surrounded with all necessary safeguards. In this particular case extra 4000 was restricted to a speed of 20 miles per hour, and had the crew of train no. 73 been informed of that fact and controlled the speed of their own train accordingly, they would have been able to stop in time to avoid the accident.

Respectfully submitted,

W. P. BORLAND

Director.