

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
SOUTHERN RAILWAY NEAR NEW MARKET, TENN., ON APRIL
26, 1931.

June 11, 1931.

To the Commission:

On April 26, 1931, there was a rear-end collision between two passenger trains on the Southern Railway near New Market, Tenn., which resulted in the injury of 20 passengers and 6 employees.

Location and method of operation

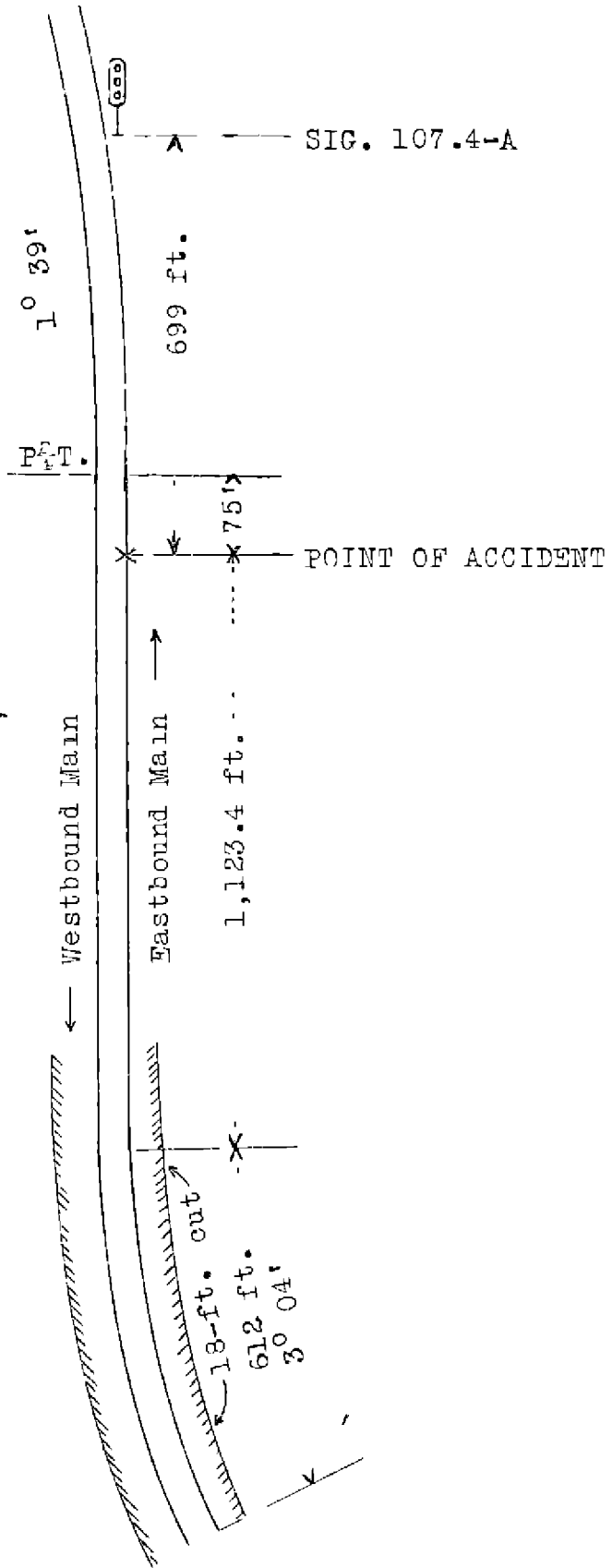
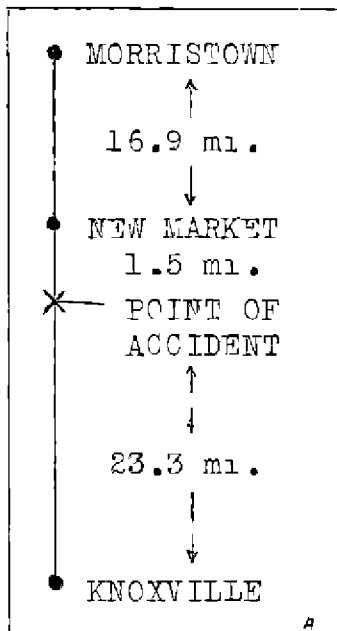
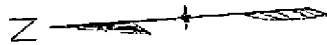
This accident occurred on that part of the Knoxville Division extending between Morristown and Knoxville, Tenn., a distance of 41.7 miles, which is a double-track line over which trains are operated by time-table, train orders, an automatic block-signal system, and an automatic train-control system of the intermittent inductive type. The accident occurred at a point 699 feet west of signal 107.4-A, which is located approximately $1\frac{1}{2}$ miles west of New Market, approaching this point from the west, there is a 30° 04' curve to the right 612 feet in length, tangent track for a distance of 1,123.4 feet, and then a 10° 39' curve to the left extending beyond signal 107.4-A, the accident occurring on the tangent track 75.4 feet from its eastern end. The grade is slightly ascending for east-bound trains, it being 0.44 per cent at the point of accident.

Due to a rock cut 18 feet in height, located on the curve west of the tangent track on which the accident occurred, the view had by an engineman of the rear of an eastbound train standing at the point of accident was restricted to 1,181.5 feet.

The signals are of the 3-position, color-light type, displaying red, yellow, and green, for stop, caution, and proceed, respectively. The current, however, had failed at Mascot, 11 miles west of New Market, resulting in the signal system being out of order between Knoxville and Morristown.

It was raining at the time of the accident, which occurred about 6.07 a.m.

INV. NO. 1732
SOUTHERN RAILWAY.
NEW MARKET, TENN.
APRIL 26, 1931.



SIG. 107.4-A

Description

Eastbound passenger train No. 28 consisted of 1 combination mail and baggage car, 1 express car, 1 combination car, 1 coach, 4 Pullman sleeping cars, and 1 dining car, all of steel construction, hauled by engine 1471, and was in charge of Conductor Miller and Engineman Smith. This train departed from Knoxville, 24.8 miles west of New Market, at 5.15 a.m., according to the train sheet, on time, at Mascot, 13.8 miles from Knoxville, a stop was made at signal 1170-A, which was displaying a stop indication, followed by stops being made at five successive signals, the last one being signal 1074-A. The train had started to move forward at the last signal, and had attained a speed of about 10 miles per hour, when its rear end was struck by train No. 4.

Eastbound passenger train No. 4 consisted of 1 baggage and mail car, 1 combination car, and 1 coach, in the order named, hauled by engine 1450, and was in charge of Conductor Cartwright and Engineman Adams. The first and last cars were of steel construction, while the second car was of wooden construction. Before departing from Knoxville, the crew received a message reading as follows:

Account current off signal line between
Knoxville and New Line pass these signals
without stopping.

This train departed at 5.30 a.m., according to the train sheet, on time, maintained its scheduled time, and collided with the rear end of train No. 28 while traveling at an estimated speed of from 15 to 18 miles per hour.

The rear truck of the last car in train No. 28 was derailed, and the rear end of this car was badly damaged, while the first car was slightly damaged, the couplers being knocked down. Engine 1450 and the first car in train No. 4 sustained slight damage, but were not derailed. The employees injured were the conductor of train No. 28, and five dining-car employees.

Summary of evidence

Engineman Smith, of train No. 28, stated that he stopped his train at six successive signals, the first one being at Mascot, 13.8 miles out of Knoxville, and after passing the second signal he realized that the current was off. The last stop was at signal 1074-A, and the train had

attained a speed of about 10 miles per hour, with the engine about five car-lengths beyond the signal, when the accident occurred, he heard the whistle sounded on the following train after he had started his own train. Engineman Smith stated that after realizing that the signals were out, he operated his train so that he could stop within his range of vision, he did not whistle out a flag at any time, as his flagman and conductor were experienced and competent men and he had no doubt but that his flagman was furnishing the proper protection by throwing off fusees or putting down torpedoes. The statements of Fireman Kinbaid added nothing of importance.

Conductor Miller, of train No. 28, stated that after leaving Knoxville he was busy collecting tickets and continued to work with his tickets practically up to the time of the collision. He asked the porter what the trouble was when the train made the stops and the porter informed him that the signals were red. He then went to the baggage end of the third car in the train where he attended to the Pullman tickets, and was standing in the baggage car door looking for signal 107.4-A when he heard a whistle signal sounded by the following train, whereupon he looked back and saw train No. 4 approaching. Conductor Miller stated that upon leaving Knoxville the flagman was on the rear of the train, and as he was a reliable man he presumed that he would remain there, properly protecting his train, and did not think it necessary to go back to see if the train was being protected. He knew that train No. 4 was following his train out of Knoxville, but he presumed that that train would be making the same stops as his own train. After the occurrence of the accident the flagman told him that he had been riding on the next to the last car, but just before the last stop was made he went to the rear end of the last car to throw off a fusee, but was delayed in throwing it off due to difficulty in getting the fusee out of the case and in getting off the cap.

Flagman Parker, of train No. 28, stated that after leaving Knoxville he rode at the rear end of the last Pullman car, which was next to the dining car, the last car in the train; when the first stop was made, at Mascot, he went to the rear of his train and saw that the signal was displaying a red indication, and on passing Hodges, about 4 miles west of the point of accident, he saw by the signals on the westbound track that the current was off. The flagman said he rode in the Pullman car, with the exception of two trips that he made

to the rear of the dining car, and that he made no attempt to protect his train until just before the last stop was made, at which time he threw off a fusee just as the train came to a stop, the fusee being dropped practically at the center of the tangent track on which the accident occurred. Flagman Parker stated that he had not thought it necessary to throw off a fusee previous to this time as he expected train No. 4 also to make the stops at the signals, but he was prompted to throw off a fusee at the last stopping point as he knew that train No. 4 was due to pass Hodges, 5.5 miles from New Market, at 6.01 a.m.

The members of the crew of train No. 28 did not have a uniform understanding as to the operation of a train within block-signal territory when in receipt of a message to the effect that the current was off and to pass signals without stopping. Engineman Smith was of the opinion that the train should be operated under control prepared to stop within range of vision, Conductor Miller thought that they would have the right to make good time, but he also was somewhat dubious as to whether or not the train should be operated under control, Flagman Parker stated that while it was not necessary to stop at the signals, yet he did not think that a message of this kind restored the rights of a train to make the schedule speed.

Engineman Adams, of train No. 4, stated that before departing from Knoxville he received the message that the current was off and to pass signals without stopping. After leaving Knoxville he found the first signal out and the balance of the signals were clear as far as Mascot, but the signal west of Mascot was displaying a yellow indication while the remainder of the signals to the point of accident were out. He operated his train on its regular schedule time, stating that he did not reduce speed and approach these signals under control. He was looking out for train No. 28, but as he saw no fusees or torpedoes he presumed that it was making its schedule time, assuming also that the crew of train No. 28 held the same message relative to passing the signals without stopping. Engineman Adams was operating his train at a speed of about 30 miles per hour, when he first saw train No. 28 about 1,100 feet ahead he applied the air brakes in emergency and put on both sand blowers, the rails were wet and slippery, however, and the wheels locked on the engine, losing braking power, and the engine skidded into train No. 28 at a speed of 15 miles per hour. He felt that if the sand had not been wet and

had worked properly, he would have been able to stop his train before the collision occurred. Engineman Adams at first said he interpreted the message he had received to mean he should operate his train under control, but afterwards he stated that it was his understanding that trains were to be operated on their schedule time when holding a message of the kind involved in this accident and that he had always operated his train on schedule time in the past under similar circumstances. Engineman Adams further stated that the air brakes had been tested at Knoxville and had worked properly en route. The statements of Fireman McCullough practically corroborated those of Engineman Adams as to the operation of their train from Knoxville to the point of accident.

The statements of Conductor Cartwright, Baggage-master Blankenship and Flagman Wilson, of train No. 4, brought out nothing additional of importance, except that their train maintained its scheduled time up to the point of accident. Conductor Cartwright stated that he understood that a train could be operated on its schedule time when in receipt of a message similar to the one involved.

Engineman Smith, of westbound freight train extra 5024, stated that at New Line he received a message that the current was off and to pass the signals without stopping, and that it was his understanding that he should not attempt to make schedule time, but should operate his train under control so he could stop within one-half his range of vision.

Dispatcher Leonard, on duty at Knoxville at the time of the accident, stated that the operator at KY office at Knoxville called him at 5.28 a.m., and told him the current was off the signal line. He immediately gave the crew of train No. 4 a message that the current was off and to pass the signals without stopping, overlooking the fact that train No. 28 had left 15 minutes previously without any such instructions. He admitted that he should not have given the crew of train No. 4 a message unless he could have given train No. 28 a similar message, or else he should have instructed the crew of train No. 4 to run under full control looking out for train No. 28. He further stated that it was not customary for him to give instructions of this kind by message, the rules requiring him to issue such instructions in the form of train orders and then only when copies could be sent to all trains affected, but due to the telephone and telegraph being in bad condition he thought it advisable to give a message in this instance so as not to delay train No. 4.

Signal Supervisor Colvin stated that on the morning of the accident the 2300 volt line of the American Zinc Company at Mascot burned down on account of two of the phases swinging together, due to a hard wind. One of the phases fell across the top phase of the 4400 volt line of the railroad, kicking out the breaker at the sub-station at Morristown, and resulting in all the signals between Morristown and Knoxville being dark. The operator at Knoxville immediately threw in his switch or remote control, which gave signal indications from Knoxville to Mascot, these signals were on two or three times intermittently, but later on all the signals were out between Knoxville and Morristown.

Conclusions

This accident was caused primarily by the failure of Flagman Parker, of train No. 28, to provide proper flag protection.

Under the rules, 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 fusees must be thrown off at proper intervals. Flagman Parker was fully aware of the fact that his train was losing time and that train No. 4 was due to pass Hodges, 4 miles west of the point of accident, at 6.01 a.m., yet he rode practically the entire time from Knoxville to the point of accident in the car next to the rear and made no attempt to protect his train until just before the occurrence of the accident when he threw off a fusee, too late to avert the accident, at a point where the view of the approaching train was materially obscured. He had had many years' experience as a flagman, was well acquainted with the territory, and was thoroughly familiar with the rules, but he assumed train No. 4 also would be stopping at the signals, thus delaying that train in a similar manner. Conductor Miller was fully aware of the delay of his train, yet he took no action whatever to see that proper protection was being afforded his train, giving all of his attention to the handling of his tickets. It is true he had an experienced flagman, but it also was his duty to know whether that flagman was fully alert and providing the protection required; this he failed to do.

Dispatcher Leonard received the information that the current was off at 5.28 a.m. and he then issued a message to the crew of train No. 4 to that effect and to pass signals without stopping, overlooking the fact that train

No. 28 had departed only a short time previously, and paying no attention to instructions that in such cases a train order should be sent to each train. In view of the fact that the current did not go off until after the departure of train No. 28, he should have instructed the crew of train No. 4 that train No. 28 did not have the message and to look out for them, or else have said nothing to them at all and have allowed them to proceed in the same manner as train No. 28.

There was conflicting evidence as to the interpretation placed by the different members of the crews on the message involved, some were of the opinion that a train should make its schedule time, others thought the train should be operated under control, while again doubt was expressed as to how a train should be operated under such circumstances. Engineman Adams said he had made scheduled time under similar circumstances in the past, although his judgment in doing so is open to question, but at the same time it is apparent that the officials of this division should see to it that the proper interpretation is placed on messages of this kind and that steps should be taken to see that all concerned have a uniform understanding concerning this interpretation.

All of the employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.