

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE  
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE  
DETROIT, TOLEDO & IRONTON RAILROAD NEAR DENVER,  
OHIO, ON JANUARY 17, 1929.

April 16, 1929.

To the Commission.

On January 17, 1929, there was a rear-end collision between two freight trains on the Detroit, Toledo & Ironton Railroad near Denver, Ohio, resulting in the injury of one employee.

Location and method of operation

This accident occurred on the Fourth Division of this railroad, extending between Junction and Jackson, Ohio, a distance of 106 miles, this is a single-track line over which trains are operated by time-table and train orders, no block signal system being in use. Denver is located 4.1 miles south of Summit and 3 miles north of Peck, while Storms is located 7.1 miles north of Summit. On account of grade conditions numerous freight trains are doubled or tripled up the hill on either side of Summit. The accident occurred at a point about  $1\frac{1}{2}$  miles south of Denver, approaching this point from the north the track is tangent for a distance of 1,269 feet and then there is a 40° curve to the left 235 feet in length, followed by 1,876 feet of tangent, the accident occurring on this tangent at a point 244 feet from its northern end. The maximum descent of the grade southward from Summit is 1.95 per cent, being 1.55 per cent at the point of accident. Under special instructions contained in the time-table freight trains must keep 15 minutes apart, leaving Summit. A view of the point of accident can be had from the engineman's side of a southbound engine for a distance of only 300 feet, although during clear weather the point of accident can be seen from the fireman's side for a distance of at least 1,500 feet.

The weather was foggy at the time of the accident, which occurred at about 9.40 a.m.

### Description

Southbound freight train No. 33 consisted of 87 cars and a caboose, hauled by engine 201, and was in charge of Conductor Quinn and Engineman Kinney. At Bainbridge, 12.1 miles north of Summit, a copy of train order No. 11, Form 19, was received reading in part as follows.

"Eng 82 \*\*\* work extra 745 am until 501 pm between Peck and Denver. Work extra 82 protect against extra 303 south after 901 am \*\*\* No 33 eng 201 wait at Denver until 901 am \*\*\*."

Train No. 33 left Bainbridge at 6.55 a.m., doubled the hill between Storms and Summit, departed from Summit at 9.20 a.m., passed Denver and after encountering two torpedoes and then being flagged with a lighted red fusee by the flagman of work extra 82, was brought to a stop at a point about 1 mile south of Denver. The work train flagman was picked up and train No. 33 immediately proceeded, and after traveling about 75 car-lengths was again brought to a stop, on account of closing up too much on the work train ahead. Train No. 33 immediately proceeded again and had moved about 15 car-lengths and was traveling at a speed of from 7 to 12 miles per hour when its rear end was struck by extra 303.

Southbound freight train extra 303 consisted of 23 cars and a caboose, hauled by engine 303, and was in charge of Conductor Haager and Engineman Stone. At Bainbridge a copy of train order No. 11, Form 19, previously referred to, was received together with copies of other orders. Extra 303 departed from Bainbridge at 8.40 a.m., passed Summit at 9.30 a.m., only 10 minutes after the departure of train No. 33, and collided with that train while traveling at a speed variously estimated to have been between 4 and 20 miles per hour.

The caboose of train No. 33 and the car ahead of it were derailed, as was engine 303 and the first two cars in that train. The derailed caboose and engine came to rest down the embankment on the east side of the track, while the other derailed cars remained practically upright on the roadbed.

### Summary of evidence

Engineman Kinney, of train No. 33, stated that after passing Denver he operated his train with a little more precaution than he would have taken had the weather been clear, as he expected to be flagged. He made two complete stops just prior to the accident, one on being flagged and the other on gaining too much on the work train; after the second stop his train had proceeded about 15 car-lengths and was following the work train at a speed of between 8 and 10 miles per hour when the rear end of his train was struck by extra 303. Engineman Kinney said that the fog was in pockets and that when he first saw the work train it was about 35 or 40 car-lengths distant. Conductor Quinn, Fireman Bonner, and Head Brakeman Shellabarger, of train No. 33, and Flagman Fry, of work extra 82, were riding on engine 201 at the time of the accident, their statements developed nothing of additional importance.

Flagman Lintner, of train No. 33, stated that after departing from Summit the speed of his train was about 15 or 20 miles per hour, with the weather very foggy and misty, his vision being restricted to about 12 or 15 car-lengths. Flagman Lintner had an ample supply of fuses and torpedoes, but at the rate of speed at which his train was traveling he did not think there was any use in dropping a fuse between Summit and Denver, although he anticipated that the progress of his train would be impeded to a certain extent by the work train ahead and he intended affording protection against the following train. His train was traveling at a speed of about 15 or 20 miles per hour when he threw off a lighted fuse, this being before his train made its first stop south of Denver for the purpose of picking up the flagman, he was not whistled out or in and he did not place torpedoes on the rail as his train stopped only long enough to pick up the work train flagman. Flagman Lintner said this fuse fell in the snow, but he maintained that it was still burning when it disappeared from view in the fog and he said he was relying upon it for protection. When his train came to a stop the second time he got off the caboose with a red flag and a fuse but he walked back only a few steps when his train started again and he ran and caught the caboose, and after getting on the caboose he put his red flag inside and then came out on the platform. On looking back he heard a noise, saw the engine of

the following train appear suddenly through the fog, about 10 or 12 car-lengths distant, and threw off another fusee, getting off the caboose just before the accident occurred, he said that the engine and about six or seven cars of extra 303 had passed him when that train came to a stop. Flagman Lintner estimated the speed of his own train to have been about 10 or 12 miles per hour immediately prior to the collision, and thought that extra 303 passed him at a speed of about 20 miles per hour, possibly less. After the accident he noticed that the air brakes were set on about the first six cars in extra 303, he did not go back toward the rear end. Flagman Lintner acknowledged that there was sufficient time at his disposal to have placed torpedoes on the rail when his train made its first stop and admitted his responsibility for the occurrence of the accident.

Engineman Stone, of extra 303, stated that at Summit the fog restricted his view of the train-order board, which was displaying a red indication, to about 200 feet; no stop was made at this point and the operator came out, gave a proceed signal and delivered train orders, the train proceeding at a speed of not more than 8 miles per hour. Between Summit and Denver the train did not exceed a speed of more than 25 miles per hour, he reduced speed on two occasions between these points, the first time to about 8 miles per hour and the next time on approaching Denver, to about 10 or 15 miles per hour, the air brakes working properly on each occasion. South of Denver he made another air-brake application, reducing the speed to about 8 or 10 miles per hour, and was looking for a flagman. He then released the air brakes and had proceeded about 20 or 25 car-lengths and was moving at a speed of about 15 to 17 miles per hour when either the brakeman or the fireman shouted "fusee". Engineman Stone immediately applied the air brakes in emergency and then some one shouted "caboose", whereupon the engine-man opened the sanders and sounded the whistle. The speed of his train was not checked very much and he estimated it to have been about 15 miles per hour when the collision occurred. Engineman Stone was not certain as to the effectiveness of the emergency air brake application, although he thought there had been sufficient time for the train line to recharge while the train was drifting a distance of 15 or 20 car-lengths, in his opinion there was a distance of about three or four car-lengths between the point where

"Fusee" was shouted ~~at~~ and the point of accident. He knew that train No. 33 was ahead of his own train, but said that he did not see a flagman nor were torpedoes or fusees encountered coming down the hill until he saw the fusee immediately prior to the collision, this fusee appearing to be not more than 10 feet behind the caboose. Engineman Stone attributed the accident to short flagging, saying that in his opinion he exercised due precaution in operating his train on the descending grade under the existing conditions, that he was expecting to encounter a flagman, and that had he been flagged properly the accident would have been averted.

Fireman Van Fossan did not think that the train line was fully recharged at the time the emergency application was made and that consequently a full emergency effect was not obtained, owing to the previous service application, he also attributed the accident to improper flagging. Head Breakeman Littlejohn was riding on the engine while Conductor Haaga and Flagman Smith were riding in the caboose, their statements were to the effect that while no air brake test was made at Bainbridge yet all the indications were that the brakes worked properly en route. Conductor Haaga and Flagman Smith did not feel the air brakes apply when the emergency application was made just prior to the collision. The estimates of the speed of the train at the time of the collision made by these employees ranged from 4 to 17 miles per hour.

Operator Lowery, stationed at Summit, said that train No. 33 left Summit at 9.20 a. m. and extra 303 passed at 9.30 a.m., only 10 minutes afterwards. According to his statements he had been verbally instructed by various trainmasters and dispatchers to use his own judgment in permitting light trains to follow tonnage trains down the hill and this was the reason why he allowed extra 303 to follow 10 minutes after train No. 33 left Summit instead of waiting 15 minutes as required by time-table instructions. He gave no information to the crew of extra 303 as to the time at which train No. 33 passed or as to how far ahead it was and did not think that such information was necessary. Operator Lowery had never received any written instructions to ignore the time-table instructions relative to spacing trains but said it had been the practice for him to space trains less than the required time at this point ever since he had been employed there, a matter of several years. In exercising his judgment in spacing trains he takes into consideration the density of traffic, condition of weather, etc., but in his opinion trains should be

spaced not less than 15 minutes apart down the hill at all times, regardless of weather conditions.

Train Dispatcher Jones stated that it did not occur to him that the spacing requirement was being violated when extra 303 was reported as being by Summit at 9.30 a.m., and that the enforcement of the spacing instructions is left entirely to the operator at Summit. He said he had no previous knowledge of the violation of the instructions and did not give consent or imply that it was all right for extra 303 to depart from Summit less than 15 minutes behind train No. 33.

Trainmaster Brennan stated that at about 3.30 p.m. on the day of the accident, in company with President Ruddiman, he walked from the scene of the accident northward along the track to the telephone box located at the south end of the passing track at Denver, looking very carefully for evidence of fuses and torpedoes. The only thing that was observed in this connection was a burned fuse, the spike of which was sticking in a tree, at a point about 50 feet north of the point of accident, exactly opposite the point where Conductor Hodge said he had picked it up, and the top of a fuse, which was found at a point about half-way between the point of accident and Denver.

#### Conclusions

This accident was caused by the failure of Flagman Lintner, of train No. 33, properly to protect the rear of his train.

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 fuses must be thrown off at proper intervals. No indication of a burned fuse was found anywhere in the vicinity of the point at which Flagman Lintner maintained that he threw off a fuse, north of the point where the first stop was made. The spike of a fuse, apparently the one that Flagman Lintner threw off immediately prior to the accident, when he became aware of the proximity of extra 303, was found sticking in a tree at a point about 50 feet north of the point of collision, opposite the point where it was picked up. Flagman Lintner acknowledged that he neglected to place torpedoes on the rail when there was time at his disposal in which

to have done so, he should have put down torpedoes at one of the points at which his train stopped, and should have thrown off lighted fuses at proper intervals as his train descended the hill in the fog.

Operator Lowery allowed extra 303 to pass Summit only 10 minutes behind train No. 33, although it is required that trains must be spaced 15 minutes apart when leaving that point. According to his statements, however, he had received verbal permission from different staff officials to use his own judgment in spacing trains and had been following this practice for many years. While there is no assurance that an accident would not have occurred even had the requirements of the spacing rule been complied with, this fact does not relieve Operator Lowery from censure for his failure to obey the rule, or the supervising officials for their failure to see that the rule is enforced at all times.

According to the evidence extra 303 traveled the distance between Summit and the point of accident, approximately 5½ miles, in about 10 minutes, or at an average speed of 33 miles per hour. When taking into consideration the atmospheric conditions, the judgment of Engineman Stone and Conductor Hanger is questioned as to the operation of their train at such a rate of speed on a heavy descending grade when approaching and moving through work train limits.

The statements of the conductor and engineman of extra 303 indicated that they made no air-brake test before departing from Bainbridge, and that they did not compare time nor did they compare the train orders received after they went on duty at that point. Conductor Hanger said he made no inspection of the air and when asked if there was a rule to that effect he said that he thought so "but we were never examined on that." The statements of these witnesses, coupled with the statements of the operator as to his method of spacing trains and the high average speed maintained by extra 303 in view of the existing conditions, strongly suggest the need for efficient supervision on the part of the responsible operating officials. All of the matters here referred to are matters which can be checked up easily and there is little excuse for allowing them to exist on any railroad.

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.