

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE PENNSYLVANIA RAILROAD AT ROYALTON, PA , ON
AUGUST 26, 1929.

December 13, 1929.

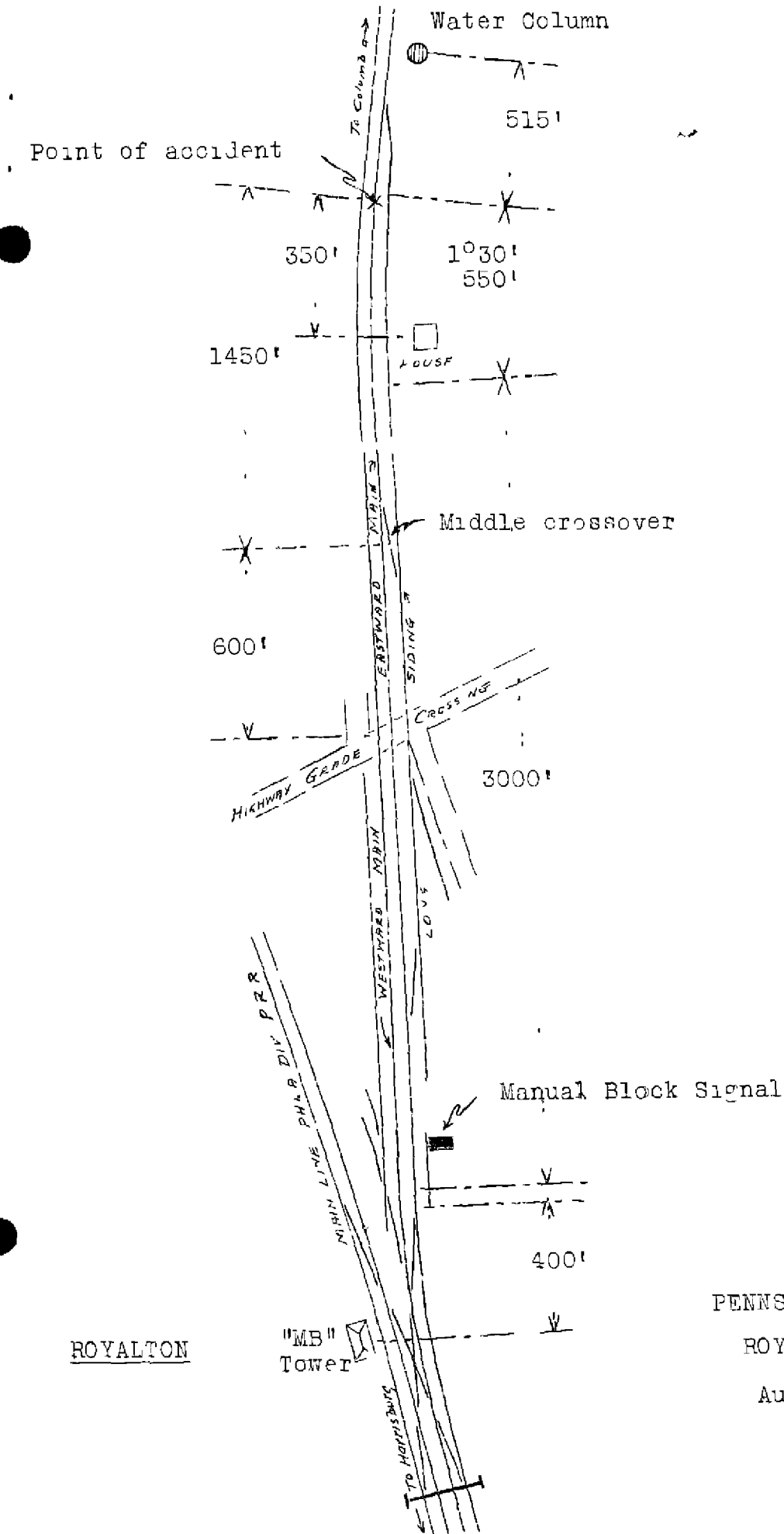
To the Commission.

On August 26, 1929, there was a rear-end collision between two freight trains on the Pennsylvania Railroad at Royalton, Pa., resulting in the death of two employees and the injury of one employee. This accident was investigated in conjunction with a representative of the Pennsylvania Public Service Commission.

Location and method of operation

This accident occurred on the Columbia Branch of the Philadelphia Division, extending between Royalton and Lancaster, Pa., a distance of 30.2 miles; in the vicinity of the point of accident this is a double-track line over which trains are operated by time-table, train orders, and a manual block-signal system. Royalton is the junction of the main line of the Philadelphia Division and the Columbia Branch, and "MB" tower is located on the north side of the tracks at the junction, the accident occurring on the branch at a point about 4,000 feet east of the tower. Approaching the point of accident from the west, beginning at "MB" tower, the branch-line tracks curve to the right for a distance of about 450 feet, and then they are tangent for about 3,000 feet, followed by a 10° 30' curve to the right about 550 feet in length, the accident occurring on this curve at a point about 10 feet from its eastern end. The grade is slightly descending for eastbound trains.

There is a manual block signal located at a point about 400 feet east of "MB" tower, on the south side of the branch line tracks. Starting at a point about 375 feet east of this signal there is a siding, known as the long siding, which parallels the main tracks on the south, this siding is about 3,600 feet in length, and there is a water column just east of its eastern end. About 1,175 feet east of the west end of the siding there is a public highway grade crossing, while at a point about 600 feet east of this highway grade crossing there is a crossover, known as the middle crossover, which connects the siding with the eastbound main track. The distance between this crossover and the point of accident was about 1,450 feet. Owing to



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dense foliage overhanging the siding and close to the eastbound main track, the view of the point of accident is considerably restricted, "MB" tower, however, is in direct line with the 3,000 feet of tangent track located west of the curve on which the accident occurred.

Under the rules, a train other than a passenger train may be permitted to follow a train other than a passenger train into a block under a permissive block signal indication, trains other than passenger trains receiving a permissive block-signal indication are required to proceed with caution prepared to stop short of a train or obstruction.

The weather was clear at the time of the accident, which occurred between 3.30 and 3.35 a.m.

Description

Eastbound freight train extra 1045, consisting of engine 1045, headed east and shoving a caboose, was in charge of Conductor Kane and Engineman Floyd. It left "MB" tower and was brought to a stop on the eastbound main track of the branch line, just east of the middle crossover, a running switch was then made, the engine backing through the crossover and the switch being thrown between it and the caboose, which continued westward on the main track and was brought to a stop. The engine picked up 10 cars from the west end of the long siding, headed out on the main track, and backed against the caboose. The train then departed from the middle crossover, eastward, at 3.16 a.m., according to the station record maintained at "MB" tower, and was brought to a stop with the engine at the water plug and the rear end of the caboose on the curve about 1,450 feet east of the middle crossover, while standing at this point it was struck by extra 1369

Eastbound freight train extra 1369 consisted of 54 cars and a caboose, 6,490 tons, hauled by engine 1369, and was in charge of Conductor Shuler and Engineman Ruby. This train passed "MB" tower at 3.29 a.m., according to the station record, passed the manual block signal, which was displaying a permissive indication, and collided with the rear end of extra 1045 while traveling at a speed estimated to have been between 25 and 35 miles per hour

The caboose and three rear cars of extra 1045 were derailed, badly damaged, and scattered across both main tracks and the siding, the force of the impact moved extra 1045 forward about one car length. Engine 1369, together with its tender, came to rest on its right side across the three tracks, seven cars in this train were derailed and

scattered about. The employees killed were the engineman and head brakeman, of extra 1369, and the employee injured was the fireman of that train.

Summary of evidence

Conductor Kane, of extra 1045, had no knowledge that his train was going to stop for water, but said that when it did make the stop for that purpose, at about 3.22 a.m., the flagman immediately started back to flag and went back around the curve beyond the view of the conductor, who estimated this distance to have been about 200 feet. About four or five minutes after the stop was made the conductor was apprised of the approach of extra 1369 by one of the brakemen in the caboose, the brakeman remarking, "I hope he is not on our track." Conductor Kane got up and went to the rear door, but at this time he could not see extra 1369, although he could plainly hear it as it approached, and he therefore picked up two fusees and got off, and when about four or five car-lengths back from the caboose, he lighted one of the fusees and began giving stop signals. At this time he could see the headlight of extra 1369, about at or just east of the public highway grade crossing, while Flagman Shaffer was back on the tangent track, about 15 or 20 car-lengths from the caboose, flagging with his lighted lanterns, white and red. When extra 1369 passed Conductor Kane, he was over on the public road that parallels the track, still flagging with the lighted fusee, the conductor did not think that the air brakes were applied on extra 1369, said that the engine was working steam, and estimated the speed of that train to have been about 25 miles per hour at the time of the accident, he looked at his watch on coming out of the field after the collision occurred and it was then 3.32 a.m. Conductor Kane further stated that he did not see Flagman Shaffer using a fusee at any time, but that Brakeman Haak used a flash light for flagging purposes after extra 1369 was heard approaching. Conductor Kane did not hear the approaching train sound whistle signals of any kind or explode any torpedoes.

Flagman Shaffer, of extra 1045, stated that he was back flagging near the highway grade crossing, or just east of it, while his train was being made up. When he was called in, he put down a torpedo, between the grade crossing and the switch, but did not leave a lighted fusee as he did not think it necessary, although he said that he should have left one and that he would have done so had he known it was intended to stop for water. Flagman Shaffer was riding on the caboose when the stop was made at the water column, immediately afterwards he heard the exhaust of extra 1369, told those in the caboose that some one was coming, and started back to flag, saying that when he first saw the headlight of engine 1369 it was about half way between the block-signal and the crossing. Flagman Shaffer maintained that he flagged with a lighted fusee and two

lanterns, red and white, and that he went back about 20 or 25 car-lengths, on the engineman's side. No answer was received to his flag signals and the engine was working steam when it approached, the air brakes not being applied until it had passed three or four car-lengths beyond him. Flagman Shaffer estimated the speed of extra 1369 to have been about 25 or 30 miles per hour when it passed him and fixed the time of the accident as 3.30 a.m., saying that he looked at his watch after engine 1369 passed and before the accident occurred. He did not hear any signal sounded on the engine whistle for the road crossing. Flagman Shaffer further stated that he could plainly see the marker lights on his own caboose from the point where he was stationed when extra 1369 finally passed him, and he fixed this location as being in the vicinity of a house which is located about 350 feet west of the point of accident.

Head Brakeman Deckert, of extra 1045, stated that the flagman got off immediately, at the time the train stopped for water, and that his train had been standing at the water column about five minutes before he heard the exhaust of engine 1369. He estimated that the engine was passing "MB" tower at that time, saying that the manner in which it was exhausting, similar to the way an engine exhausts when a run is being made for a hill, gave him considerable concern, and that he remarked to those in the caboose that he hoped the following train was not on their own track, he got off the caboose, looked at his watch, at which time it was then about 3.30 a.m., and saw Flagman Shaffer flagging at a point about 20 or 25 car-lengths from the caboose, on the engineman's side of the track, the engine, however, had passed him at this time. He estimated the speed of extra 1369 to have been about 30 or 35 miles per hour, and thought that his own train had been standing at the water column close to 10 minutes in all, prior to the occurrence of the accident. In his opinion, engine 1369 was still working steam when the collision occurred, although he said that he saw fire flying from the wheels when the train was about eight car-lengths from the caboose. Head Brakeman Deckert further stated that Engineman Floyd had told Fireman Nicholl and himself that he was going to stop at the water column, but the head brakeman did not mention this fact to the rest of the crew nor did he know whether they were aware of it. Head Brakeman Deckert at first said that he did not hear a torpedo exploded, but later said that he did hear one, he did not hear any whistle signal sounded on engine 1369.

Brakeman Haak, of extra 1045, did not know that a stop was going to be made at the water column, but said that after his train had been there about one or two minutes, extra 1369 was heard approaching, apparently as it was rounding the curve at "MB" tower. Flagman Shaffer got off at

this time and Brakeman ~~Peak~~ estimated that the flagman was back about 15 car-lengths, and still going, when extra 1369 came into view, traveling at a speed of about 25 to 30 miles per hour, with the engine working steam until the collision occurred. Brakeman Haak saw fire flying from the wheels when extra 1369 was about seven car-lengths from the caboose. He did not hear a torpedo exploded, nor any whistle signal sounded, and said he did not think that Flagman Shaffer used a lighted fusee to flag with, although he was on the opposite side of the tracks from the flagman and not in position to see him at all times.

Engineman Floyd, of extra 1045, stated that it was his intention to make a stop at the water column at the time he called in the flagman on completion of the work at the middle crossover, it was the practice to call in the flagman, provided there was any distance to go, and in this instance he thought that the flagman would not want to walk the distance involved. Engineman Floyd did not whistle out a flag when his train approached the water column. His attention was attracted to the approach of extra 1369 by the sounding of a road crossing signal, and on looking back he saw his flagman with a lighted fusee and also the headlight of engine 1369, then he saw another fusee, and men running over in the field, following which the collision occurred. Engineman Floyd estimated that his train stood at the water column about two or three minutes in all prior to the collision. The statements of Fireman Nicholl developed nothing additional of importance.

Fireman Frederick, of extra 1369, stated that at "MB" tower a permissive indication was displayed on the manual block signal, which was called and repeated by all three of the men on the engine, namely, himself, the engineman, and the head brakeman. Fireman Frederick was working on the fire and the first he knew of anything wrong was when the engineman applied the air brakes in emergency and shouted a warning of danger. The fireman looked out on the left side, and plainly saw the markers on the rear of the caboose of extra 1045, not more than five or eight car-lengths distant, also two men running over in the field, one with a flash light and the other with a fusee, and then he jumped. He estimated the speed of his train to have been fully 30 or 35 miles per hour when the air brakes were applied in emergency. Fireman Frederick further stated that he heard torpedoes exploded in the vicinity of Royalton, although he could not definitely locate where this occurred, but said that the speed was not reduced afterwards, he considered Engineman Ruby to be a fast runner. Fireman Frederick further stated that the air brakes had been inspected by a car inspector at Harrisburg, but that no terminal test was made of them, only a road test after the train had been assembled from the two tracks on which it

had been standing, and that the brakes had not been used any time prior to the accident. Conductor Shuler and Flagman Sullivan were riding in the caboose and were unaware of anything wrong prior to the accident, they estimated the speed to have been between 30 and 35 miles per hour. Conductor Shuler also stated that Engineman Ruby had the reputation of being a fast runner, saying that he, as well as other conductors, had cautioned the engineman in this respect. Flagman Sullivan stated that no terminal test was made of the air brakes, but that a road test was made.

Crossing Watchman Weirich, on duty at the highway grade crossing, stated that he did not notice what the flagman was doing at the time extra 1045 performed work at the middle crossover. About five minutes after extra 1045 left the crossover, he saw extra 1369 coming around the curve at "MB" tower, then he looked toward the east to see if the flagman of extra 1045 was out, and he said the flagman was in the vicinity of the west end of the curve, waving stop signals with a lighted red lantern, he thought that the flagman also had a white lantern. Crossing Watchman Weirich estimated the speed of extra 1369 to have been about 30 miles per hour on passing the crossing, with the engine working steam, he was on the north side of the tracks at the time and did not see any lighted fuses prior to the accident.

Signalman Berkstresser, on duty at "MB" tower, stated that while extra 1045 actually entered the block at about 3.05 a.m., he did not record it as having departed until it left the middle crossover, at 3.16 a.m. He had seen the flagman at a point about 15 to 18 car-lengths east of the highway crossing, at the time the train was being made up, heard the flagman whistled in before extra 1045 left that point, and estimated that the train arrived at the water column at 3.20 a.m. Extra 1369 received a permissive indication on the manual block signal, and when the engine was passing that signal he looked toward the east and saw the flagman of extra 1045 waving stop signals with a lantern and a fusee, in ample time for extra 1369 to have been brought to a stop without incident. His statements were so conflicting, however, that it can not be stated definitely where extra 1369 was located when he first saw the flagman's stop signals. He also saw another fusee, a few seconds later, over on the public road that parallels the tracks, saying that this light appeared about the time the road crossing signal was sounded on the engine whistle of extra 1369, he figured that the accident occurred about 3.33 or 3.35 a.m.

Conclusions

This accident was caused by the failure of Conductor Kane and Flagman Shaffer, of extra 1045, to provide proper flag protection, a contributing cause was the failure of Engineman Ruby, of extra 1369, properly to control the speed of his train when operating under a permissive block-signal indication.

Under the rules, when a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuses. When recalled, and safety to the train will permit, the flagman may return, and when the conditions require he will leave the torpedoes and a lighted fuse. Conductors and enginemen are responsible for the protection of their trains. The testimony was extremely conflicting in various details, particularly as to the movements of Flagman Shaffer both at the time work was performed at the middle crossover by extra 1045, and shortly afterwards when the stop was made at the water column, however, the requirements of the flagging rule apparently were violated at each of these points. According to the flagman's own statements, when the stop was made at the water column he did not start back until he heard the exhaust of an approaching train, and he only got back around the curve to a point in the vicinity of the dwelling, which is located about 350 feet west of where the collision occurred. It appears that there was ample time at the disposal of Conductor Kane and Flagman Shaffer within which to have provided proper rear-end protection, but instead of so doing they virtually took no action whatever along this line until it was too late to avert the accident.

Engineman Ruby apparently was in full possession of his faculties, called the indications displayed by the signals at "MB" tower, and shouted a warning of danger just prior to the accident. Why he did not properly obey the permissive indication displayed by the block signal and proceed with a greater degree of caution, prepared to stop short of a train or obstruction, could not be ascertained, as he was killed in the accident.

In view of the short distance from the middle crossover to the point of accident, about 1,450 feet, there is a question as to the judgment exercised by Engineman Floyd, of extra 1045, in calling in his flagman before departing from the crossover, when he fully intended to stop again at the water column. It is also to be noted that he did

not whistle out a flag approaching the water plug. The members of this crew were practically all together while making up their train, which was a very short one, and Engineman Floyd either should have said that he intended to make a stop at the water column, or else he should have proceeded to that point without recalling the flagman. In this connection it is to be noted that Head Brakeman Deckert knew a stop was to be made for water, and although he rode in the caboose from the middle crossover to the water column, yet he said nothing about it to the other members of the train crew.

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