

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
LEHIGH VALLEY RAILROAD NEAR UPTON, N. Y.
JULY 19, 1919.

September 12, 1919.

On July 19, 1919, there was a rear-end collision between two extra freight trains on the Lehigh Valley Railroad, near Upton, N. Y., which resulted in the death of two employees and injury to one employee. After investigation of this accident, which was conducted jointly with the Public Service Commission of the State of New York, the Chief of the Bureau of Safety reports as follows:

The Buffalo Division of the Lehigh Valley Railroad, on which this accident occurred, is a double track road extending between Buffalo, N. Y., and Manchester, N. Y., a distance of 97.9 miles. Train movements are governed by time table, train orders transmitted by telephone and an automatic block signal system. The signals are of the J-position, upper quadrant, normal danger type; night indications being red, yellow and green for stop, caution and clear respectively. The blocks average about a mile and a quarter in length.

The accident occurred about 4 miles east of Longwood, N. Y. Proceeding eastward from Longwood, the track is tangent and the grade is undulating; approaching the point of accident the grade is descending at the rate of .4% for 3,67 feet, followed by 2,500 feet of level track to the point where the accident occurred; at that point the track is on a hill about 8 feet in height. Signal 4172 is located about 4 miles east of Longwood station; Signal 4192 is about 8,080 feet west of Signal 4172.

The trains involved in this accident were eastbound freight extra 2138 and eastbound freight extra 2149, both en route from Tifft Farm, N. Y., to Manchester, N. Y.

Extra 2138 consisted of locomotive 2138, 52 loaded and 9 empty box cars and a caboose, in charge of Conductor Steward and Engineer Holcomb. It left Tifft Farm at 12:01 a.m., and arrived at Wende, 18 miles east of Tifft Farm, at 1:36 a.m., where a defective car was placed on a siding and the ash pan of the locomotive was cleaned. Extra 2138 left Wende at 2:15 a.m., proceeding on NO. 2 eastbound track, but because of the engine steaming poorly, was compelled to travel at reduced speed. The train had reached a point about half a mile west of Upton, when it stalled on account of low steam pressure; while standing

there, with the rear end of the train 4,880 feet east of Signal 4172, it was struck by extra 2149 at about 3:25 a.m.

Extra 2149 consisted of locomotive 2149, 32 loaded ore cars, 3 box cars and a caboose, in charge of Conductor Lehman and Engineman Freeman. It left Tiffert Farm at 1:00 a.m., arrived at Wende at 7:25 a.m., and departed at 2:40 a.m. It was running at a speed estimated at from 20 to 30 miles an hour, and had passed Signals 4192 and 4172, when it collided with the rear end of extra 2138.

The steel underframe caboose and 2 wooden box cars in train extra 2138 were badly damaged, while 4 all-steel hopper coal cars were derailed. Engine 2149 came to rest on its left side, across the westbound track, but no cars in extra 2149 were damaged. At the time of the accident the weather was foggy.

Engineman Holcomb, of extra 2138, stated that while in places the fog hung in banks, it was not heavy enough to obscure signals and switch lights, and he had no trouble in observing signals from Tiffert Farm to the point of accident; when they stopped at Upton to get up steam, he could see his caboose markers, 60 car lengths away. Although he knew the rules required him to whistle for his flagman, he said he did not do so and did not observe that the flagman went back. When they were ready to depart, he sounded the whistle to call in the flagman and looked back for a signal. He saw the light from an approaching headlight and remarked to the fireman that extra 2149 was behind them. Receiving no signals from the flagman, he again sounded the whistle calling him in, but when he next looked back, he saw no headlight and concluded that Engineman Freeman had dimmed his headlight in order that it might not interfere with visibility of signals. When he had sounded the whistle for the flagman the third time, he noticed the air pressure slowly diminishing and soon afterwards, Brakeman Pitts came on the engine and reported the collision. He stated that he felt no jar on the engine and that the slack of the train was not bunched 30 or 35 cars from the engine. He did not know what time it was when they stopped near Upton, but thought his train had been standing there about 10 minutes before being struck. He thought that, in spite of the fog, he could have seen a caboose ahead of him between a quarter and half mile away.

Fireman McGuirk, of extra 2138, stated that engine 2138 was not steaming well and they had to stop and clean the ash pan east of Lake Shore Bridge and also at Wende.

They had been standing west of Upton waiting for steam for about 10 minutes when he saw the headlight of extra 2149.

Head Brakeman Demick, of extra 2138, stated the fog was rather light and he had no trouble in seeing signals a distance of half a mile. He said they stopped near Upton at 3:15 a.m. and the train had been standing about 5 minutes before being struck. He was standing on the deck of the engine looking for a signal and said he could see the markers of the caboose and saw the headlight of extra 2149 approaching.

Flagman Colleran, of extra 2138, stated that he knew extra 2149 was due to follow them from Tiffy Farm and when his train was leaving Wende, he saw the headlight of that train. He stated that the two markers and a deck light on the caboose were burning brightly when his train stopped and that within two minutes thereafter he went back with white and red lanterns and torpedoes. Although he had fuses on the caboose, he did not take any with him when he went back, as he did not think the weather conditions were such as to require their use. When he had gone back some distance he saw the rays of a headlight over the hill and heard the sound of an engine working steam, which he estimated was then about three-quarters of a mile away. He started swinging his lanterns across the tracks, but when extra 2149 did not answer his signals, he proceeded back at a faster pace, and at a point about 10 car lengths back from the caboose placed a torpedo on the rail. He said he heard Engineman Holcomb whistle him in once, but he kept on going back. He was about 20 car lengths from the rear of his caboose, on the engineman's side of the track when engine 2149 passed him at a speed he estimated at 40 miles an hour. He shouted at the engineman, but stated he saw no one on the engine. He stated that Engineman Freemyer did not shut off steam until after he exploded the torpedo and he then saw fire flying from the brakes. He thought his train had been standing about 5 minutes before it was struck. He stated that after the accident Engineman Freemyer told him that he had a clear signal and did not look for extra 2138. Flagman Colleran stated that he could see as far as the first automatic signal east of where his train stopped, which was about 10 car lengths ahead of the locomotive, and that when he looked at the signal it was clear. While he did not consider 900 feet ample distance in which to protect his train under the circumstances, he said he kept walking back from the time his train stopped until he was passed by extra 2149 and he considered that he got back as far as he could in the time he had.

Middle Brakeman Pitts, of extra 2138, stated that when the train stopped west of Upton he looked at his watch and it was 3:15 a.m. He was sitting in the caboose opposite Flagman Colleran, and within a minute after the train stopped Flagman Colleran got off the caboose with red and

whit lantern. He saw the flagman going back, then the sound of an engine working steam caused him to look out of the caboose door and he saw extra #149 approaching, 20 or 25 car lengths away. He yelled to the conductor to jump, then ran out and jumped off; after picking himself up, he looked at his watch and it was 3:25 a.m. He thought his train had been standing about 7 minutes when it was struck. He did not hear any torpedo. He stated that the markers and a deck light on the caboose were burning before the collision and thought they could be seen a distance of 60 car lengths.

Conductor Lohman, of extra #149, stated that the air brakes were tested at Tifft Farm and although it was customary for the air brake inspector to notify the engineer, either verbally or by a card, of the number of cars with air brakes working, this was not done. He said he took particular notice that the air brakes applied on all cars on the rear end and that the pressure gauge in the caboose registered between 68 and 70 pounds. He stated that after leaving Tifft Farm, the air brakes were not applied until the stop at Wende, at which time they operated satisfactorily. At Wende, he and the middle brakeman made an inspection of the train and upon arrival at the head end, found Engineer Freeman working on the engine. Signal 4292, east of Wende, showed yellow and Engineer Freeman said that, as the block was yellow, they might as well wait there and give extra #138 a chance to get ahead and they would then get a clear signal; therefore they waited for Signal 4292 to clear before departing. The only signal he noticed after leaving Wende was Signal 4285, which indicated caution. He was in the caboose and was knocked off the seat by the shock which followed the emergency application of the brakes. He estimated the speed of his train at 30 miles an hour. He said that after the accident he observed Signal 4172 and it was then working properly, and that also after the accident, he heard Engineer Freeman state that he had two clear signals.

Engineer Freeman, of train extra #149, stated that before leaving Tifft Farm, a test of air brakes was made and although he knew the rules required that he be advised of the number of cars in his train with operative air brakes, the air brake inspector did not notify him; it had been a year since the printed form for this purpose had been used. He stated he had no occasion to use the automatic brakes at any time between Tifft Farm and the point of accident; he used the independent brake in making the stop at Wende water plug, without detaching the engine from the train. He stated that he knew of 29 automatic signals between Tifft Farm and the point of accident and that he and Fireman Hartman called the indications of most of these

signals, excepting possibly two or three at Mendota, and that he had no occasion to call the indications to his fireman's attention more than once. Approaching Mendota signal 4294, west of the water plug, in increased caution and he proceeded down to the water plug and took water. As he was pulling up to the water plug he saw the markers on the rear end of the caboose of extra 118. While he was pecking some grease cups, Conductor Lohman came to the engine and said he was ready to go, to which he replied: "No use being in a hurry; extra 118 has just left and if we let them get out of the way we won't have to stop on the grade." While they were talking, signal 4294, west of Mendota, cleared and they then departed. He stated that they encountered only clear signals until near Chinglongwood; he had slackened speed and was proceeding over the hill at a speed of 15 or 20 miles an hour, with engine almost shut off, when he observed the caution indication of signal 419; he called the indication of the signal to his fireman when they were between 200 and 300 feet west of it, and the fireman acknowledged it. When he passed signal 419 he could not see the indication of signal 417 on account of the fog. He then proceeded at moderate speed to a point where he could see the indication of signal 417 and stated positively that it was in clear position, he remarked to the fireman: "That man is going right along, we have a clear block." He said he did not always check the light indication by the position of the blade and when he observed signal 417, he read the indication only by the color of the light. At this time the fireman was on the deck of the engine and he could not say whether or not he observed the signal, but he replied: "All right, go ahead." He then gave the engine steam, but after passing signal 417 he thought he heard a groaning noise from one of the cylinders and looked at the lubricator to see if it was feeding, then tried the water. After he tried the water he looked out of the cab window, which was open. They were just passing through a fog bank at this time, and, upon looking through his clear-vision window in front, saw a flagman at the head of the engine, on the right hand side, with a white lantern, and about the same time, a little beyond the flagman, the rear end of extra 118. He immediately closed the throttle and applied the brakes in emergency, but the air did not seem to take hold, and he then reversed the engine, jumped down on the deck of the engine, yelled to the fireman and brakeman to jump, and was hindered in his jumping off by the brakeman crowding him. He estimated the speed at time he applied the brakes at not over 15 miles an hour and said his engine was about a car length away from the caboose of extra 118. He stated he did not hear any torpedoes explode and that the fog prevented him from seeing the flagman and the rear end of extra 118 sooner than he did, although he maintained that he could see the signals above the fog.

Engineer Freeman stated he was in good physical condition to take out his train on this trip. He stated that on July 17 he reported for duty at West Buffalo at 1:15 p.m., made a trip to Lancaster where he had about 15 hours sleep, was called at 2:00 a.m., July 18, and went off duty at 8:45 a.m. at Tifft farm. He then went home and went to bed at about 9:45 and got up at 12:45 p.m. Then he learned at about 7:37 p.m. that he was second but he again went to bed and was called at 10:50 to take out Extra 2149 at 12:01 a.m. While at the time he reported for duty on this trip he had been off duty for about 15 hours, and at the time of the accident he had been on duty 3 hours and 45 minutes; according to his statement he had had only about 24 hours sleep in a period of about 48 hours, and this amount of sleep was secured in three different periods. He stated that at the time he saw signal 417 indicating clear, he was sitting down and looking out the side window. He then stood up, started the engine to work, and it was after he had passed the signal that he looked at the lubricator and tried the water.

Fireman Hartman, of Extra 2149, stated that the automatic brakes were not used after they left Tifft farm, that their headlight was burning brightly when they left Tende and that, although the light hung rather low, signals could be seen a distance of half a mile. He was familiar with the rule that engineers and firemen exchange the indications of signals with one another, not so that they passed 17 signals between Tifft farm and Tende, but that he personally saw only two of those signals, one after leaving Tende, saw only one signal, east of Tifft farm, which indicated clear. Approaching Longwood, he heard Engineer Freeman call a yellow signal, but he did not see it, then later on, the engineer called a clear signal, but he could not say which signal was referred to. At the time of the accident he was back in the tender, breaking coal, and did not see the flagman or markers of Extra 2148, nor hear any torpedo. He estimated the speed of his train just previous to the accident at about 5 or 10 miles an hour and did not think it was reduced before the collision.

Middle Brakeman Teter, of Extra 2149, stated that when they left Tifft farm, the gauge in the caboose registered about 65 pounds. He could see signals about 1/4 of a mile away. When he first saw the flagman of Extra 2148, he was about 10 car lengths in front of their engine and his train was running at about 10 miles an hour. He said signal 417 was in stop position after the accident.

Flagman Gilestine of Extra 2149, stated that they encountered a fog soon after leaving Tifft farm and it became more dense as they proceeded. He estimated they were running 25 or 30 miles an hour at the time of the accident. He said that within