

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
DELAWARE & HUDSON RAILROAD, NEAR SCHOHARIE JUNCTION, N. Y.,
ON OCTOBER 14, 1918.

December 4, 1918.

On October 14, 1918, there was a rear-end collision between a southbound freight train and a light engine on the Delaware & Hudson Railroad, which resulted in the death of two employees and the injury of two employees. After investigation the Chief of the Bureau of Safety reports as follows:

That part of the Susquehanna Division on which this accident occurred is a double-track line extending between Delanson and Schoharie Junction, N. Y., a distance of about 9 miles, over which trains are operated by time card and train orders, supplemented by an automatic block signal system. The signals are 2 position, lower quadrant, normal danger, home and distant semaphores. The night indications are red, yellow and green for stop, caution and clear, respectively. On October 7, 1918, southbound signal 34.2 was moved 1,000 feet north and southbound signal 35.2 was moved 2,500 feet north of its former location to provide better protection for the operation of a hand thrown switch about 500 feet north of Schoharie Junction depot.

Freight extra 1047 north, drawn by engines 1047 and 1038, in charge of Conductor Fitzgerald and Enginemen Burgett and Fox, left Oneonta, N. Y., at 5:10 p. m., Oct. 13th, bound for Mohawk, N. Y. On arriving at Schoharie Junction Engineman Burgett was instructed to turn at Delanson, N. Y. The train arrived at Delanson at 10:30 p. m., and was put away. A southbound train was then assembled consisting of 11 loaded and 82 empty cars and a caboose, with the same crews and engines, and in addition engine 897 in charge of Engineman Loreman was added to act as a pusher on ascending grades and to uncouple and trail on descending grades. Engine 897 displayed markers, for this train, known as Extra 1047. It left Delanson at 1:05 a. m., Oct. 14th; engine 897 pushed it to the top of Esperance Hill, a distance of about 2 miles and there uncoupled from the train. Extra 1047, having clear signals, proceeded a distance of about 9 miles to Beckers Crossing, near Schoharie Junction. A special rule in the current time table reads as follows:

Southbound trains having pusher trailing from
Delanson or Mohawk will stop at Beckers Crossing and
wait until pusher comes against train.

In accordance with this rule, extra 1047 came to a stop with its engine about 10 or 12 car lengths north of the crossing. The rear of the caboose was about 40 feet in advance of signal 35.2 and approximately 1,000 feet north of Schoharie Junction. The train had been standing about three minutes when Engine 897 collided with it.

After uncoupling from extra 1047 just south of the crest

of Esperance Hill, engine 897 waited until the caboose was about 25 car lengths in advance, then started down the hill trailing the train. At about 1:35 a. m., while running at a speed of about 15 miles an hour it collided with the caboose of Extra 1047.

Approaching the scene of the accident from the north and beginning at a point approximately two miles south of the crest of Esperance Hill, there is a 2-degree 30 minute curve to the left, 1,500 feet long. Beyond this curve there is a tangent 2,200 feet long, then a 1-degree 40 minute curve to the left 700 feet long, then a tangent 1,700 feet long. Next there is a 2-degree curve to the right 2,000 feet long followed by a 4-degree curve to the left 2,400 feet long. Then there is a tangent 1,600 feet long. Beyond this tangent there is a 3-degree 30 minute curve to the right 1,600 feet long followed by a 500-foot tangent and a 3-degree 30 minute curve to the left 1,500 feet long. The grade all the way is slightly descending. The accident occurred on the last mentioned curve on about a 10-foot fill and where the grade is .7% descending. The weather was clear.

Engine 897 was derailed with all drivers off the track; its front end was crushed in, its pump was torn off and both steam pipes broken. The force of the impact destroyed the superstructure of the caboose, which caught fire and was burned. The car next to the caboose and its contents were also destroyed by the fire. The conductor and brakeman were killed.

Flagman St. Clair stated that he came up from Oneonta with Conductor Fitzgerald; that when extra 1047 started back with a pusher he was instructed to ride in the pusher; that when extra 1047 pulled out of Delanson engine 897 was coupled and helped shove off; that it continued to push until the top of the grade was reached, then uncoupled, waited about two minutes and followed the train. The first block after this was red, the next block was caution, then two clear blocks. The engine began to pick up speed a little and finally struck another caution block, then ran on caution blocks until it came in sight of the caboose lights. He stated that he was riding on the lefthand side of the cab and the engine was moving at a speed of about 15 or 20 miles an hour when he saw signal 34.2 in caution position. A little later they came around the curve and he saw the caboose of 1047 about 25 to 40 car lengths away. He did not see signal 35.2 as he was watching the caboose which was just beyond it and he was afraid the engine was not going to stop before striking it, but he was aware that the position of this signal had recently been changed. As soon as he saw the red deck light of the caboose he shouted a warning to the engineman who, on account of the curve, could not see it from his side. The engineman then applied the air. The first application of the brakes took a good hold; then there seemed to be nothing to them any more. The flagman said he called a second time and the engineman applied his brake in emergency. Sparks flew from the wheels but the brakes did not appear to stop the

motion of the engine any. He stated that the engineman did not apply his brakes when passing signal 34.2 at caution.

Engineman Loreman on engine 897 stated that he had been in charge of a pusher engine helping No. 804 from Oneonta to Delanson; that he arrived at Delanson at 10:00 p. m.; was there until 1:05 a. m.; that while there he did what he considered necessary to his engine and prepared for the return trip on which trip his engine was to act as pusher for extra 1047 south; that he had an understanding with Conductor Fitzgerald that he was to push No. 1047 to the top of Esperance Hill about two miles out of Delanson and then drift down to Schoharie Junction; that after reaching the top of the hill engine 897 uncoupled, came to a dead stop, then drifted down behind the train very slowly and did not stop again until after the collision. He stated that he knew the special rule which requires southward trains having a pusher trailing from Mohawk or Delanson to stop at Beckers' Crossing until pusher comes against train; that he knew how many cars there were in No. 1047; that he knew the changed position of signal 35.2 and was thoroughly familiar with the road in this vicinity; and that he knew No. 1047 would stop at Schoharie Junction, but expected to find it about 25 car lengths farther south and protected by a flag, which is the custom but not the rule. All the way down the hill he found the signals in caution position and stated that he does not believe he exceeded 25 miles an hour at any time; that the brakes worked all right at the top of the hill after leaving Delanson and he had no occasion to apply them afterwards until near the scene of the accident; but that at the water plug at Delanson the brakes did not take hold very well, were slow in applying; that the sand pipes were plugged up on both sides and had been so plugged when he left Oneonta; that he made no effort to have any defects corrected during the three hours he was in Delanson. He stated that he saw signal 34.2 in caution position and signal 35.2 he saw in stop position just before he saw the caboose lights of No. 1047. He was then about 12 or 15 car lengths distant, and engine 897 was moving about 12 or 15 miles an hour. Shortly before he saw the caboose lights the flagman had called a warning to him. He tried to stop the engine but the brakes would not work. He then applied the straight air brakes, but no reduction showed on the gauge; the brake would not take hold. He stated that he then released it and put the automatic in emergency. This apparently had no effect and he then reversed the engine and pulled the throttle wide open and went head on into the caboose with the engine revolving backwards.

Fireman Rhoades on engine 897 stated that he observed the signals after leaving Delanson; that the first signal was red and then several were yellow; that he is familiar with the location of the signals north of Schoharie Junction and knew of the change in the position of signal 35.2. He stated that he thinks that signal could be seen from the engineman's side a distance of probably 30 rods. He said that he was shoveling coal when the engine passed this signal and he did not see it; the first indication he had that anything was wrong was when he

heard the engineman put the engine in back motion and thinks 897 was then about 8 feet from the caboose. He further stated that the straight air did not hold, had not been holding for 3 or 4 trips before and to his personal knowledge had been reported; that the automatic brake held well; that Engineman Loreman knew these facts and had said before the accident that the straight air was not working.

Engineman Burgett on engine 1047 stated that he had clear signals all the way from Delanson, that his train stopped near Schoharie Junction between 1:30 and 1:35 a. m., and had been standing for about three minutes when he felt the shock of the collision.

Assistant Road Foreman of Engines Bouen made a test of the brakes on engine 897 after the accident. This engine has a G-6 brake valve #5 New York pump and straight air valve. In order to make the test, wrecking engine 763 and outfit were coupled on to rear end of tender of engine 897. Road Foreman Bouen stated that the brakes were applied from 763, which carried 80 pounds train line pressure and 100 main reservoir pressure. A 15-pound reduction was made and the piston travel on engine 897 showed 7 inches on the right side and 3-7/8 inches on the left side. The brakes remained applied until they were released some 10 minutes after they had been applied. The tender did not have any auxiliary reservoir or triple valve; therefore, the tender brake did not apply. As the engine was dead no test could be made of the straight air.

The direct cause of this accident was the failure of Engineman Loreman properly to control the speed of his engine approaching signal 35.2 after having passed signal 34.2 in the caution position. Furthermore, he was aware that the rest of his train could be expected to be found standing in the vicinity of signal 35.2; he was also aware that the brakes on his engine were not working in a satisfactory manner and that both his sand pipes were stopped up and were plugged up when he left Oneonta. He had about three hours at Delanson and during all that time he made no effort to have any of these defects repaired.

A contributing cause of the accident was the fact that the tender of engine 897 was not equipped with automatic brakes, and the engineman could not, therefore, get full braking power when he applied his automatic brake in emergency.

At the time of the accident Enginemen Burgett and Fox and Firemen Smith and Durfee had been on duty about 10 hours and the other members of the crew about 9 hours and 30 minutes.

A. H. C.