

INV. 302.

NOVEMBER 17, 1915.

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE NORTHERN PACIFIC RAILWAY AT ANGORA, N. D.,  
OCTOBER 16, 1915.

On October 16, 1915, there was a head-end collision between a passenger train and a freight train on the Northern Pacific Railway at Angora, N. D., which resulted in the death of the engineer of the passenger train and the injury of 42 passengers, 3 employees and 1 mail clerk. After investigation of this accident, the Chief of the Division of Safety reports as follows:

Eastbound stock extra 1912 consisted of 30 cars, 1 coach and 1 caboose, hauled by locomotive 1912, and was in charge of Conductor Laughlin and Engineer Calvin. It left Mandan, N. D. at 12:30 p.m., and passed Sterling, 2.6 miles from Angora, at 1:02 p.m., at which point the crew in charge received a copy of train order No. 35, reading as follows:

"No. 7 Eng. 2151 take siding meet stock extra 1912 east Angora."

Extra 1912 arrived at Angora at about 2:11 p.m. and stopped on the main track with the locomotive about 720 feet west of the east passing track switch. The train had been standing at this point about 3 minutes when it was struck by westbound passenger train No. 7.

Westbound train No. 7 consisted of 1 combination mail and baggage car, 1 express car and 2 coaches, hauled by locomotive 2151 and was in charge of Conductor Belmore and Engineer Wentland, en route from St. Paul, Minn., to Glendive, Mont. It

left Jamestown, N. D. at 11:55 a.m., 25 minutes late, and at Driscoll, 4.9 miles east of Angora, the crew in charge received a copy of train order No. 33, quoted above. The train left Driscoll at 2:05 p.m. and collided with eastbound stock extra 1912 at about 3:14 p.m. while traveling at an estimated speed of 25 miles an hour.

Locomotive 1912 was driven backward about 125 feet, the two box cars immediately behind it being destroyed. Both locomotives were quite badly damaged, while the tender of locomotive 2151 crushed the forward end of the mail car for a distance of about 5 feet. Slight damage was caused in the coaches by the loosening of seats.

This part of the Northern Pacific Railway is a single-track line. No block signal system is in use, trains being operated by time-table and train orders transmitted by telephone. Approaching the point of collision from the west, the track is straight for some distance, while approaching from the east there is a tangent 3,016 feet in length, followed by a curve of 30 minutes leading to the left, this curve being 1,450 feet in length. The accident occurred about 140 feet west of the western end of the curve. On the inside of the curve, near the middle of it, is an unused telegraph office and this obscures the view of an engine crew approaching from the east to such an extent that when a train is standing where the stock extra was standing, it is impossible to tell definitely whether the train is on the main track or on the siding, until nearly to the east switch. This switch, however, which is on the north side of the track, can be seen from

the fireman's side of the locomotive of a westbound train for a distance of about 2,000 feet. The grade for westbound trains is .66 per cent ascending for a distance of 2,800 feet, then .25 per cent ascending for 200 feet, then 1,400 feet of level track, followed by 200 feet of .25 per cent descending grade and 50 feet of level track to the point where the accident occurred. There was a light rain falling at the time of the accident.

Engineman Galvin stated that when his train came to a stop train No. 7 was in sight, being about 1½ miles distant. As soon as his train stopped, he instructed the head brakeman to go forward and open the passing track switch. He thought the engineman of the passenger train shut off steam when near the mile board, which is nearly 4,000 feet east of the point of collision. He then got off the seat box and did not look out again until the fireman told him to jump. He did not hear any station whistle sounded by the engineman of train No. 7, the only signals heard by him being two short blasts of the whistle sounded about the time train No. 7 reached the unused telegraph office. Engineman Galvin further stated that he did not see the brakeman giving any signals to the engine crew of train No. 7, but that the brakeman told him afterwards that he had given them stop signals, and Engineman Galvin thought that the two short blasts of the whistle heard by him had been in answer to these signals. He also stated that he asked the fireman of train No. 7 what the matter was, when he was lying on a cot in the baggage car shortly after the accident, and that the latter told him that the air brakes did not work.

Fireman Hornby stated that when he looked out after his

train had stopped he saw the head brakeman going toward the switch, at which time train No. 7 was from 20 to 30 car lengths east of the unused telegraph office. When the brakeman signaled the engineman to stop, the latter shut off steam, Fireman Hornby stating that he saw the smoke dragging. He saw the train pass the switch, with the brakeman giving stop signals, and at once told Engineman Galvin to jump, doing so himself. He did not hear the engineman of the passenger train sound the station whistle, but did hear two short blasts given in answer to the brakeman's stop signals. After the accident he went to the locomotive of train No. 7 and noticed that the brake valve was in the emergency position and the reverse lever set in about the center of the quadrant.

Head brakeman Meyers stated that when his train stopped at Angola, he started for the switch, intending to open it and let the passenger train in on the passing track. When he saw how fast the passenger train was coming, he knew it could not stop at the switch and began to run toward it giving stop signals. When train No. 7 passed the switch, he was still about three car lengths away from it. He did not remember whether or not the engineman of the passenger train sounded the whistle in answer to his stop signals, but before the train passed the switch the fireman waved his hand to him, apparently in answer to his stop signals. When the locomotive passed him, the engineman was standing up, looking ahead, apparently with his hand on the brake valve. He did not notice whether or not the air brakes were applied.

Conductor Laughlin of extra 1913 stated that his train stopped at about 8:11 p.m. He was in the cupola of the caboose

and saw the passenger train approaching in the distance. He thought the engineman did not shut off steam until about 30 or 40 car lengths east of the east passing track switch, the collision occurring at about 2:14 or 2:15 p.m. He also stated that he heard the fireman of the passenger train say that the air brakes did not work.

Fireman Fitjar, of train No. 7, was injured in the accident and was taken to the hospital. He stated that the speed of the train was about 55 miles an hour when the engineman shut off steam and applied the air brakes, about one-quarter of a mile east of the unused telegraph office. He stated that he did not notice whether the application was a light one or a heavy one as his mind was on the freight train. When he first saw the freight train, he told the engineman that he could not tell whether or not it was on the main track, but as he got nearer to it, he saw that it was on the main track and told the engineman to stop. He then looked across the cab from his seat box and saw that the brake valve was in the emergency position. At this time the train was about at the unused telegraph office and the engineman told him to get off. The last he saw of the engineman, the latter was standing up, looking ahead, trying to see the freight train, with his left hand on the independent brake valve and his right hand on the emergency valve. Fireman Fitjar also stated that he saw the head brakeman of the extra coming toward him and thought he was giving stop signals, but did not pay particular attention to him as he was watching for the freight train. The air brakes were working all right at Driscoll but he could not say whether or not they were working at Angola.

Head Brakeman Connors, of train No. 7, stated that approaching Angola, he heard the engineman sound the station whistle. He went into the express car and sounded three short blasts on the air whistle signal, as required by rule 14-d. This is to indicate that the train is approaching a meeting point. This signal was answered by the engineman by three short blasts of the whistle. The speed at this time was about 30 miles an hour. He then went forward into the mail car and had just reached the door when the car passed the switch, at about which time the engineman sounded two short blasts on the whistle. He thought the speed at this time was about 35 miles an hour. He then started to open the door, but before he could do so, the collision occurred. On getting out of the car, he found the fireman lying on the ground and when he asked him what the trouble was, the fireman told him that he did not know; that the engineman had said, "I cannot handle them; jump!" or something to that effect. Brakeman Connors further stated that when the meeting point signals were sounded, the train was about three-fourths of a mile from Angola. He did not think the engineman applied the air brakes at this time, but merely shut off steam. He also stated that prior to the accident, the train had made nine regular stops, besides several extra stops, and at no time was any trouble experienced with the brakes. He did not notice any application of the brakes coming into Angola.

A. F. Mallick, an engineman who was a passenger on train No. 7, riding in the third car in the train, stated that approaching Angola he heard the station signal sounded and then heard the engineman sound three short blasts on the whistle. Shortly after-

wards the brakes were applied, he stating that he heard them squeaking as the application was made; he thought this occurred about 20 car lengths east of the unused telegraph office. He next noticed that the train was passing the office at a speed of about 35 miles an hour and he heard the engineman sound two short blasts on the whistle. He then felt a jerk, as if the engine had been reversed, and braced himself, the collision occurring four or five seconds afterwards. On getting out of the car, he noticed sand on the rails, but did not look at the brakes to see if they were applied. Engineman Mallick further stated that the speed at the mile post was about 50 or 55 miles an hour and he thought that it had been reduced to 30 or 35 miles an hour when the collision occurred. He also stated that between the unused telegraph office and the point of collision the speed was reduced.

Conductor Belmore, who was injured and taken to the hospital, stated that he heard the station whistle sounded approaching An-gora, as well as the three short blasts given in answer to the air whistle signal. He felt the engineman shut off steam just after sounding the meeting point signal. At this time he was collecting tickets in the rear car and started for the rear door in order to look out and be able to identify the train, the collision occurring before he reached the door. He stated that he did not feel any application of the air brakes.

Flagman Barnhart stated that he heard the engineman sound the station whistle and in about a minute he heard him sound three short blasts on the whistle in answer to the meeting point signal. He thought the engineman shut off steam but did not think he made any

application of the brakes.

Mail Clerk Seeman stated that the train made all the regular stops without any apparent difficulty with the air brakes. He did not notice any application of the brakes at Angola.

Section Foreman Manly, who arrived at the scene of the accident within half an hour of its occurrence, stated that at that time the rails were sanded for a distance of about 200 feet.

Superintendent Berner stated that he arrived at the scene of the accident at about 5:00 p.m., at which time none of the cars had been moved. He at once looked over the brakes on train No. 7 and there was no air in the auxiliary reservoirs of any of the cars excepting the express car; from the auxiliary reservoir of this car he was able to get a very slight blow. He stated that he then had a locomotive coupled to the rear of the train and pulled the cars away from locomotive 2151, in doing which the forward end of the mail car settled back on its trucks. The train pipe on the forward end of this car was broken, and after it had been plugged a test was made of the airbrakes and they worked perfectly. He stated that he found two air hose close to the track near where the collision occurred, with the angle cocks attached, these hose having come from the rear of the tender and the forward end of the mail car. Both angle cocks were open, indicating that the air had been cut through from the locomotive to the train. He also stated that he examined the rails for a distance of about 1,000 feet but did not notice that any sand had been used.

Master Mechanic Littlehales stated that when the wrecking train reached Driscoll he found that the cars composing train



No. 7 were at that point and at once examined and tested the brakes. This piston travel on the rear car was 7 inches, on the third car 8 inches, on the baggage car 7 inches and on the mail car 10 inches. On looking for the cause for the piston travel of 10 inches on the mail car, he found that the forward truck had been knocked backward, being 18 inches off center, thus accounting for the excessive piston travel on this car. On reaching Angola, he found that the angle cock on the rear of the tender had been broken off flush with the end sill and that the train line had been broken off the mail car about 4 feet back from the end sill. The air hose and angle cocks were there and on examining them he found both angle cocks to be open. He also examined the cut-out cock under the engineer's brake valve to ascertain whether or not it might in some way have become closed, but upon investigation this cut-out cock was found to be open. The next day he returned to the point of collision and carefully examined the locomotive, as well as the physical conditions existing, with the view of ascertaining if possible the cause of the collision, but was unable to discover any mechanical defect. It was his opinion that the engineer of train No. 7 saw the freight train from a point three-quarters of a mile east of Angola and that the engine crew concluded that that the stock extra was on the passing track, no effort being made to control or stop the train until it was within a short distance of the stock extra. He thought the fireman must have misunderstood the stop signals given by the brakeman of the extra, taking them for proceed signals, and that when train No. 7 was near enough to enable the crew to see that the extra was on the main

track, it was too late to reduce the speed materially. Master Mechanic Littlehales further stated that the link block on locomotive 2151 was on the bottom of the link and that the link was badly corroded by dirt blown on it by escaping steam. Apparently it had not been moved since the occurrence of the accident, and its position indicated that the locomotive had not been reversed and that the valve was working in the forward motion at the time of the collision. On October 20, an examination and test was made of the air pump, brake valve, feed valve and distributing valve of locomotive 2151, but everything was found to be in first class working condition. The mail car was tested by piping out the broken train line, attaching an air hose and replacing the forward truck on the center. The brakes on this car were then in good condition and had a piston travel of 7 inches.

For the purpose of definitely ascertaining, if possible, the speed at which a train would pass this passing track switch, a test was made with train No. 7 a few days after the accident, and it developed that if steam had been shut off at the mile board, the train would have been brought nearly to a stop before passing the unused telegraph office without using the air brakes, this being readily accounted for by the fact that there is an ascending grade of .66 per cent. On account of this grade, the top of which is about one quarter of a mile east of the telegraph office, it is not customary to shut off steam until the crest is reached.

These tests and inspections developed the fact that the air brakes in train No. 7 were in good, serviceable condition, and if properly applied would have brought the train to a stop before passing the east passing track switch.

This accident was caused by the failure of Engineman Wentland, of train No. 7, properly to control the speed of his train when approaching the east passing track switch, at which it should have taken the siding to meet extra 1913.

While it is impossible to state why Engineman Wentland failed to bring his train to a stop before the collision occurred, it is believed that he did not shut off steam until the train reached the top of the ascending grade about one-quarter of a mile from the switch, and that when the fireman told him that the extra was there, he may have thought it had taken the siding, having reached the meeting point ahead of the passenger train; when his train had nearly reached the switch and the stock extra could be seen occupying the main track, the speed of his train was too great to allow him to bring it to a stop in time to avert the collision.

Engineman Wentland was employed as a fireman in April, 1885, and was made an engineman in August, 1890. In 1891 he was suspended for 30 days for responsibility in connection with an accident and in June, 1897, he was dismissed for burning the crown sheet on a locomotive. In November of the same year he was reinstated with full rights. In July, 1911, he was suspended for 30 days for overlooking a meeting point. At the time of the accident he had been on duty 3 hours and 35 minutes after a period off duty of 21 hours.