INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE GEORGIA SOUTHERN & FLORIDA RAILWAY, SOUTHERN RAILWAY SYSTEM, AT CLINCHFIELD, GA., ON OCTOBER 18, 1925.

December 3, 1925

To the Commission:

On October 18, 1925, there was a rear-end collision between two freight trains on the Georgia Southern & Florida Railway, Southern Railway System, at Clinchfield, Ga., which resulted in the death of two employees and the injury of three employees

Location and method of operation

This accident occurred on that part of this railway extending between Macon and Valdosta, Ga., a distance of 151.6 miles, which in the vicinity of the point of accident is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The maximum speed for freight trains is 30 miles an hour. The point of accident was about ¼ mile north of the station at Clinchfield, Ga., a non-telegraph office located 30.9 miles from Macon; approaching the point of accident from the north the track is tangent for about 3 miles, while the grade for southbound trains is level for 2,800 feet, then for 1,250 feet it is 0.77 per cent ascending, practically level for a distance of 375 feet, and is then 0.75 per cent descending to the point of accident, 225 feet distant, and for a short distance beyond.

Day was breaking and the weather was very foggy at the time of the accident, which occurred between 7.10 and 7.25 a.m.

Description

Southbound freight train extra 8254-8340 consisted of 43 cars and a caboose, hauled by engines 8254 and 8340, and was in charge of Conductor Hemingway and Enginemen Holley and Tunnison. It left Stratton, 2.06 miles south of Macon, at 12.47 a.m., and after considerable delay due to the train breaking in two, and to steam on the second engine failing twice en route, it arrived at Kathleen, 22.78 miles from Stratton, where it remained approximately three hours for trains first, second and third No. 3, first and second No. 4, and No. 10 On account of some derailed cars at the south

end of the passing track it was then necessary to back out on the main track and the train departed from Kathleen at about 7 a.m. While passing Clinchfield, 6.16 miles distant, at a speed of 28 or 30 miles an hour, the train again broke in two, and it had been standing at this point about three minutes when the rear end was struck by train first No. 53.

Southbound second-class freight train first No. 53 consisted of 60 cars and a caboose, hauled by engines 290 and 8334, and was in charge of Conductor Evans and Enginemen Crowell and McKinney. It left Stratton at 5.30 a.m., met train No. 10 at Bonaire, 3.6 miles from Kathleen, departing from Bonaire at about 7 a.m., according to the train sheet, 3 hours and 17 minutes late, and collided with extra 8254-8340 at Clinchfield while traveling at a speed variously estimated to have been from 20 to 40 miles an hour.

The engines of train first No. 53 went through the caboose and 4 rear cars in extra 8254-8340; 14 cars in train first No. 53 were derailed, and of the 19 cars derailed in both trains, 14 were almost completely destroyed. Engine 290, the leading engine of train first No. 53, was derailed to the left and came to rest on its right side, badly damaged, while engine 8334 was derailed to the right and came to rest on its left side, badly damaged. The tenders of both engines were practically destroyed, the tender cistern of engine 290 coming to rest on the right side of the track, almost clear of the right-of-way, while the tender of the second engine was buried in the mass of wreckage of the destroyed cars of both trains. The employees killed were the engineman of engine 290 and the head brakeman of train first No. 53, who was riding on engine 290.

Summary of evidence

Engineman Holley, of the leading engine of extra 8254-8340, said the speed of his train was about 28 or 30 miles an hour when it broke in two at about the time the engines were passing Clinchfield Station. The forward portion of the train was brought to a stop, backed up and the coupling to the rear portion had just been made when the rear end of the train was struck by train first No. 53 He estimated the interval between the time the train parted and the time it was struck at not over three minutes. According to the conductor the train broke in two between the 19th and 20th cars, and Engineman Holley said he could see the conductor's back-up signal, although at a point behind the rear of the train the fog was so thick that he could not have distinguished a burning fusee for a greater distance than six or eight car-lengths. The statements of Engineman Tunnison, of engine 8340, and of the fireman of the two engines on this train, brought out nothing additional of importance except that the fireman of the first engine was told by em-

ployees of a nearby cement plant that they had seen the flagman start back on a run as soon as the train had stopped.

Conductor Hemingway said the back-up movement at Kathleen was made immediately after train No. 10 had passed, and that this movement was under the protection afforded by the movement of that train from Kathleen to Bonaire, as well as the protection afforded by having the flagman on the rear end of the train with a lighted 10-minute fusee. The train departed from Kathleen at 7 a.m. and made ordinary running time to Clinchfield, and was running at maximum freight train speed when it parted between the 19th and 20th cars from the head end. Conductor Hemingway was riding on the lead engine and he said he got off before the head portion of the train came to a stop, went back, and found that the two sections of the train were about six or eight car-lengths apart; the angle cock on the rear of the 19th car was closed and a signal to back up was given to the engineman by means of a fusee. The coupling had been made but the air hose had not been coupled when he heard two torpedoes exploded at the rear of his train and realized that there would be a collision, as his train had not been standing long enough for the flagman to have provided adequate protection; he looked at his watch at the time the torpedoes exploded and noted that it was 7.18 a.m. Conductor Hemingway further stated that when he first reached the point where the train had broken in two he noticed the glare of a fusee at the rear end of the train, this fusee soon disappearing from view in the fog. The statements of Head Brakeman Croom, who was assisting Conductor Hemingway in coupling the two portions of the train together, brought out nothing additional of importance.

Flagman Jones, of extra 8254-8340, said that when his train backed out of the passing track at Kathleen, after train No. 10 had passed, he rode the rear of the train with a lighted fusee in his hand; he threw off this fusee when the train started ahead, but did not put down any torpedoes or leave a fresh fusee. He was riding in the caboose with two student brakemen as his train approached Clinchfield, and when the air brakes were applied in emergency he looked at the air gauge and realized that the train had parted again or that an air hose had burst. On getting off the caboose he looked toward the head end of the train but not being able to ascertain the nature of the trouble he went back with Student Brakeman Lindsey to protect the train. They had proceeded about five car-lengths when the rumble of an approaching train was heard and he then lighted a fusee and began to run; when he had gone a short distance farther he stopped and placed two torpedoes on the rail and had just stepped back when the two engines of train first No. 53 passed him, moving at a high rate of speed. He was unable to say whether the brakes had been applied or whether the engines were still working steam. Flagman Jones was unable to locate with certainty the point at which he placed the

torpedoes, but thought they were near the switch leading to the cement plant; the point of this switch is 1,557 feet north of the point of accident. Flagman Jones further stated that he had no knowledge of the location of train first No. 53, but he acknowledged that had he placed torpedoes on the rail when the caboose stopped after backing out of the passing track at Kathleen it would have been a warning to the enginemen of train first No. 53 that there was a train ahead of them.

Student Brakeman W. F. Lindsey was riding in the caboose with Flagman Jones and he estimated that Flagman Jones was down on the ground beside the caboose in about five seconds, after looking ahead to ascertain the nature of the trouble Flagman Jones called for fusees and torpedoes and Brakeman Lindsey went back into the caboose, picked up the flagging equipment and handed it to Flagman Jones, at the same time getting off and going back with him to protect the train, this being about 30 or 40 seconds after the train had come to a stop. Brakeman Lindsey's statements were to the effect that Flagman Jones lighted a fusee and that after running a short distance toward the approaching train Flagman Jones told him to put down some torpedoes as quickly as possible, Flagman Jones in the meantime continuing a short distance farther toward the approaching train. Brakeman Lindsey said that after putting down the torpedoes he also lighted a fusee to assist in flagging the approaching train. He estimated that the engines passed him, without the stop signals having been acknowledged, at a speed of 45 or 50 miles an hour, basing this estimate on his experience in driving an automobile. His estimate as to the location at which the torpedoes were put down agreed with that of Flagman Jones

Student Brakeman Digby was also riding in the caboose and when the train came to a stop Flagman Jones instructed him to go ahead and ascertain the nature of the trouble. He said he was five or six car-lengths from the caboose when he heard two torpedoes explode, and upon looking back he saw a lighted fusee carried by one of the flagmen; he had proceeded about three or four car-lengths farther when the collision occurred. The statements of Student Brakeman P. C. Lindsey brought out nothing additional of importance.

Fireman Rudolph, of the leading engine of train first No. 53, said his engine was working steam and traveling at a speed of about 35 miles an hour when the engineman suddenly applied the air brakes in emergency and on crossing over to the engineman's side of the cab he saw the rear end of a train about 30 car-lengths distant; he did not think the engine had passed the switch leading to the cement plant when the brakes were first applied. Fireman Rudolph also said that he did not hear any torpedoes or see a fusee, and that there was no flagman between his engine and the caboose when he looked ahead the first time. It did not seem to him the fog was very dense

Engineman McKinney, of the second engine of train first No. 53, said the only stop his train made between Stratton and the point of accident was at Bonaire, where it met train No. 10. His train then proceeded and he did not see any fusee when it approached Kathleen. The first intimation he had of the presence of a train ahead was when he felt a jar which he thougnt was caused by the engineman on the lead engine applying the air brakes. On looking out of the cab window he saw a flagman with a lighted fusee just in front of the lead engine, and he then attempted to cut in the air on his own engine, placed the brake-valve handle in the emergency position, got down on the steps of his engine, saw the outline of a caboose in the fog ahead, and jumped just before the collision occurred. Engineman McKinney also said the speed of his train was quickly increased to 30 miles an hour after leaving Bonaire and that it was maintaining about this speed when approaching the point of accident. He did not notice at what time his train passed Kathleen

Fireman Brook, of the second engine of train first No. 53, said the first he knew of the impending collision was when he heard two torpedoes explode, about 15 car-lengths from the point of accident, and saw Engineman McKinney cut in his brake valve, place the brake-valve handle in the emergency position, and prepare to jump; Fireman Brook said he first saw the caboose when it was about five car-lengths distant. He estimated the speed of his train at the time of encountering the torpedoes to have been about 40 miles an hour, and did not think the speed had been materially reduced at the time the accident occurred

Conductor Evans, of train first No. 53, said the speed of his train was about 30 miles an hour when the air brakes were applied in emergency, reducing the speed to about 25 miles an hour when the accident occurred, at a time he estimated to have been about 7.30 a.m. Flagman Epps, of the same train, thought it roved a distance of eight or nine car-lengths between the time the brakes were applied in emergency and the time of the collision, and estimated the speed at the time of the accident to have been about 25 miles an hour. He also said that after getting off the caboose he saw a fusee about four and one-half telegraph poles distant from the caboose.

On the second morning following the accident one of the Commission's inspectors, in company with Trainmaster Kelly, made an examination of the track and at the switch leading to the cement plant they found the remains of two torpedoes, near the right rail, while the cap from a fusee was found at the head block of the switch

Conclusions

This accident was caused by extra 8254-8340 occupying the main track on the time of an overdue superior train without sufficient protection.

Train first No. 53 and extra 8254-8340 occupied the passing tracks at Bonaire and Kathleen, respectively, until after train No. 10 had passed; these stations are 3.6 miles apart. Train first No. 53 then headed out on the main track and proceeded, and, according to one of the witnesses, it quickly attained the maximum speed of 30 miles an hour allowed for freight trains; extra 8254-8340, however, had to back out on the main track before proceeding, and it is probable that the two trains were not more than three or four minutes apart when leaving Kathleen. Under these circumstances when the extra was brought to a sudden stop on account of the break in two, there was little opportunity for the flagman to provide protection for the rear end of his train, in fact, practically all the evidence available indicates that there was no appreciable delay on his part in going back to flag, and had the weather conditions been favorable for the observance of his stop signals it is probable the accident could have been averted.

Flagman Jones is open to criticism for the manner in which he protected the rear of his train when it backed out on the main track at Kathleen; he said he rode on the rear end of the caboose with a lighted fusee in his hand, throwing off the fusee after his train started ahead. Had a fresh fusee been thrown off at this point, undoubtedly it would have been burning when train first No. 53 approached and the enginemen of that train then would have had warning that there was another train immediately ahead of their own train; the use of torpedoes at this point would also have served the same purpose

There was a question whether train first No. 53 was being operated in violation of the rule restricting the speed of freight trains to 30 miles an hour, but the estimates as to time varied to such an extent as to make it impossible to say definitely when the accident occurred or to estimate the average speed maintained by train first No. 53 after it left Bonaire. The fireman of the first engine of that train estimated its speed to have been about 35 miles an hour when the brakes were applied just before the accident occurred, and this estimate, coupled with the statements of the flagman of the extra and the amount of damage resulting from the accident, raises a question whether the speed prior to the time the brakes were applied was not at least equal to the maximum rate allowed, if in fact that rate was not being exceeded.

Rule 91, of the Rules of the Operating Department, provides that unless there is some form of block system, following trains must keep 10 minutes apart, except when closing up at stations. Such a rule often is of no practical benefit, as was the case in this instance, the extra having passed Bonaire more than three hours ahead of train first No. 53. The investigation developed that the average number of trains operated daily had increased within the past 12 months from 28 to 44. It is believed that traffic of this density warrants the introduction of additional means of safeguarding train operation. Had an adequate block-signal system been in use on this line, this accident probably would not have occurred; an adequate automatic train stop or train control device would have prevented it.

The majority of the employees composing the crew of the extra were experienced employees. Of the crew of train first No. 53, Engineman Crowell, of the lead engine was employed as a fireman in October, 1921, and promoted to engineman four days prior to the occurrence of the accident, the majority of the others were experienced men. At the time of the accident the employees involved had been on duty periods varying from 7 to 10 hours, after periods off duty varying from 11 to 16 hours, except one of the firemen, who had been on duty about $3\frac{1}{2}$ hours after about 31 hours off duty.

Respectfully submitted,

W. P. BORLAND,

Director.