INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE SOUTHERN RAILWAY NEAR HEISKELL, TENN , ON FEBRUARY 8, 1927.

March 12, 1927.

To the Commission

On February 8, 1927, there was a derailment of a freight train on the Southern Railway near Heiskell, Tenn , which resulted in the death of 1 employee.

Location and method of operation

This accident occurred on that part of the Coster Division extending between Knoxville and Jellico, Tenn., a distance of 65.3 miles, which is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The accident occurred at a point about 1 mile west of Heiskell; approaching this point from the west there is an 8° curve to the left 293.7 feet in length and then 148.7 feet of tangent, followed by a 5° curve to the left 699.3 feet in length, the accident occurring on the last-mentioned curve at a point approximately 87 feet from its western end. The grade for a distance of about one-half mile is generally descending for eastbound trains, the maximum gradient being 1.87 per cent. On account of the many curves, and the trees and embankments adjacent to the right of way, the range of vision of an engine crew is restricted to a very short distance. The track is laid with 85-pound rails, 33-feet in length, with about 22 ties to the rail-length, double-spiked, tie-plated and is ballasted with chatts, the track is well maintained.

The weather was clear at the time of the accident, which occurred at about 1.45 p.m.

Description

Eastbound freight train No. 80 consisted of 31 cars and a caboose, hauled by engine 840, and was in charge of Conductor Gregory and Engineman Hylton. Upon arrival at Clinton, the last open office, 7.5 miles west of Heiskell, the crew in charge received a copy of train order No. 512, Form 19, directing them to look out for a steel gang engaged in laying rail between mile posts 14-C and 15-C from 7 a.m. to 4 p.m. This train departed

from Clinton at 1.35 p.m , nearly four hours late, and was flagged by the steel-gang flagman, located about one-half mile west of the point of accident. The train then proceeded and was derailed shortly afterward upon encountering an open space in the track while traveling at a speed estimated at about 12 miles an hour.

The engine was derailed and overturned, coming to rest on its left side at the bottom of a fill. The first three cars and the forward truck of the fourth car were also derailed, but remained in an upright position. The employee killed was the engineman.

Summary of evidence

Extra Gang Foreman Majors stated that on the day of the accident he had a force of 29 laborers engaged in laying rail, working westward from mile post 14-C toward mile posts 15-C and before starting work he verbally instructed one of his men, whom he considered to be reliable, to station himself at Chestnut Ridge, which is about 1,600 feet west of mile post 15-C and to notify the crews of all eastbound trains, except passenger trains, that rail was being laid between the two mile posts Shortly before the accident, at which time a four-rail section had been removed from the north side of the track, he heard a train approaching and judging from the sound it appeared to be traveling at too high a rate of speed. He then told one of his men to run around the curve and flag the train and watched the man as he ran toward the approaching train At this time the foreman was stationed at a road crossing immediately west of where his men were working and as the train came within his range of vision, at which time it was traveling at 12 or 15 miles an hour, he also started giving violent stop signals and about this time one short blast of the engine whistle was sounded. Noticing that the approaching train was not reducing speed sufficiently to enable it to stop before reaching the open space in the track he called to his men and as the engine passed him he shouted to the engineman to jump. Foreman Majors could not say whether or not the brakes were applied from the time the train came into view until it was derailed as its speed did not seem to be diminishing to any extent.

Section Laborer Glenn Arnwine stated that a short time before the accident occurred he and Foreman Majors heard a train approaching, the foreman instructing him to run around the curve and flag it. After going around the curve and waiting five or six minutes he was recalled by the foreman, but about two minutes later they heard the train and he was again given the same instructions. As he reached a point about 10 rail-lengths from where he had been working he observed the approaching train,

about 8 rail-lengths distant, and gave a violent stop signal with his hat while standing in the center of the track. He noticed someone in the engine cab on the fireman's side, who had been looking ahead, turn toward the engineman which he thought was for the purpose of informing the engineman of the stop signal. At the time the engine passed him he was standing on the fireman's side and called to the fireman to jump off.

Section Laborer John Arnwine stated that he had been instructed by Foreman Majors to station himself at Chestnut Ridge and to flag all eastbound trains until the arrival of, but not including, passenger train No. 20, and after that train had passed to flag all second and inferior-class trains, and to inform the crews to look out for the steel gang laying rail between mile posts 14-C and 15-C He placed torpedoes on the track and then took up his position at a point about one-quarter of a mile west of mile post 15-C When train No. 80 arrived he flagged it with a red flag, the engine passing him at a speed of about 15 miles an hour and being brought to a stop a short distance east of where he was standing. Section Laborer Arnwine then proceeded to the engine, boarded it and informed the engineman of his flagging instructions, the engineman repeating them for the benefit of the fireman and head brakeman, while the fireman also repeated them. He said the engineman gave as his reason for passing him, the fact that there was some doubt as to the ability of the engine to start the train directly on the apex of the grade without breaking it in two; Section Laborer Arnwine also stated that at the time he was in the cab of the engine he noticed nothing unusual in the actions of the engineman.

Fireman Lawson stated that at Clinton they received an order to look out for men engaged in laying rail between mile posts 14-C and 15-C, and that their train was flagged by a section man about one-half mile west of the point of accident. After the train had been brought to a stop the section man boarded the engine and informed the engineman that rail was being laid between mile posts 14-C and 15-C, the engineman repeating the instructions. After standing at that point four or five minutes for the purpose of building up the brake-pipe pressure before descending the grade the train was started and had traveled a distance of about 15-car lengths when a 15 or 20-pound reduction was made, the speed of the train being reduced to about 2 miles an hour before the brakes were released. At about this time Fireman Lawson said he saw some one giving violent stop signals and he informed the engineman to that

effect, the engineman immediately applying the brakes in emergency, but on account of the fact that the brakes had just been released an emergency effect was not obtained; in fact, it appeared that the engine increased speed due to the slack of the train running in, and he estimated that it was moving at a speed of from 10 to 15 miles an hour at the time of the derailment. He also said they had had no trouble with the air brakes en route. Fireman Lawson further stated that he had been working regularly with Engineman Hylton for about five months and considered him a competent engineman.

Brakeman Sauls stated that he was riding in the engine cab at the time his train was flagged at Chestnut Ridge; he did not hear the instructions given the engine crew by Section Laborer Arnwine but the fireman told him to look out for section men laying rail in the vicinity of mile post 15-C. After his train departed from Chestnut Ridge he kept a close watch ahead when the curves were in his favor and upon reaching a point 15 or 20 car-lengths from the point where the train was derailed he observed two men giving violent stop signals and called the engineman's attention to these signals. Brakeman Sauls said the air brakes had been applied and released at some point on the descending grade and thought an emergency application was made at the time the engineman's attention was called to the stop signals, at which time the speed was about 15 miles an hour, and he estimated that the speed was reduced to about 10 miles an hour before the accident occurred.

Conductor Gregory stated that he delivered to Engineman Hylton, at Clinton, a copy of the train order to look out for the steel gang laying rail between mile posts 14-C and 15-C. His train was stopped at the summit by a flagman and after remaining at that point for about five minutes two blasts of the engine whistle were sounded and the train was started, a pusher engine assisting for a short distance. As the caboose passed the point where the flagman was standing Conductor Gregory noted that the gauge registered a brake-pipe pressure of 70-pounds, and shortly afterward an application of the brakes was made, reducing the speed of the train to about 5 miles an hour. The brakes were then released and the train had attained a speed of about 10 or 12 miles an hour, within a distance of from 15 to 18 car-lengths, when an emergency application was made, and he estimated that the speed of his train was still 10 or 12 miles an hour at the time of the accident. Conductor Gregory further stated that he did not make an inspection of the brakes at points where cars were picked up en route, but that he saw them apply and release. The statements of Flagman Hubbs practically corroborated those of Conductor Gregory.

Conclusions

This accident was caused by the train encountering an open space in the track, due to the failure of Engineman Hylton properly to control the speed of his train after he had been warned that a rail-laying gang was at work.

Engineman Hylton received a copy of a train order at Clinton which instructed the crew to be on the lookout for the men who were laying rail between mile posts 14-C and 15-C In addition he brought his train to a stop near the apex of the descending grade, about one-half mile west of the point of accident, after having been flagged, and apparently he understood clearly the flagging instructions, which were in conformity with the train order already in his possession. The evidence indicated, however, that a short time after his train departed from this point he made a service application of the air brakes and that he released the brakes at a point where the view was very much restricted Shortly after the brakes had been released the train was flagged again, but the running-in of the slack, coupled with the inability of the engineman to obtain an emergency effect so soon after having released the brakes, made it impossible to bring the train to a stop.

When a situation arises which appears to require the taking of precautions not specifically mentioned by the rules, it is incumbent on the crew of the train so affected to do whatever may be necessary to provide for the safe movement of their train. In this particular case, owing to the fact that no adequate test was made of the air brakes on the 6 cars which had been picked up at Pioneer and the 14 cars picked up at Coal Creek, stations located 35.6 and 18 miles, respectively, west of Heiskell, there is no way of knowing definitely that the brakes on all of these cars were in proper working order. Precautions had been taken, however, to warn approaching trains that the steel gang was at work, and all that remained to be done was the taking of adequate precautions by the crew of the train involved in this accident.

The employees involved were experienced men, at the time of the accident they had been on duty nearly 13 hours after from 9 to 17½ hours off duty.

Respectfully submitted,

W P. BORLAND,

Director.