## INTERSTATE COMMERCE COMMISSION.

REPORT OF THE CHIEF OF THE BUREAU OF SAFETY IN RE IN-VESTICATION OF AN ACCIDENT WHICH OCCURRED ON THE ULSTER ? AND DELAJARE RAILROAD NEAR GRAND GORGE, N.Y., ON MAY 26, 1922.

June 12, 1922.

To the Commission:

On May 26, 1922, there was a collision between a freight train and a work train on the Ulster and Delaware Railroad near Grand Goige, N.Y., which resulted in the death of 6 employees and the injury of 5 employees.

Location and method of operation.

The accident occurred on that part of the railroad extending between Kingston and Oneonta, N.Y., a distance of 108 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 accident occurred at a point about 2 miles east of Grand Gorge. Approaching from the west there are 1,156 feet of tangent, a short curve to the right, 104 feet of tangent and a curve to the left of 50 which is 774 feet in length, the point of accident being in about the center of this curve. Approaching the curve from the east the track is tangent a distance of 898 feet. The grade in the immediate vicinity of the point of accident is level. The view is material The view is materially obscured by a rock bluff on the inside of the curve. The weather was clear at the time of the accident, which occurred at about 11:27 a.m.

## Description.

Work extra 21 consisted of 1 flat car, 1 steam ditcher, 2 flat cars, and a caboose, in the order named, hauled by engine 21, and was in charge of Conductor Mattice and Engineman Pellham, On arriving at Stamford, 8 miles west of Grand Gorge, at 7:53 a.m., the crew of extra 21 received a copy of train order No. 6, reading as follows:

Order No 1 is annulled Eng 21 will work extra 750 am until 1130 am between Stamford and Roxbury protecting against Extra 22 east after 1020 am

Roxbury is 6 miles east of Grand Gorge. Work extra 21 left Stamford eastbound at 7:59 a.m., arrived at Grand Gorge at 9:37 a.m., and after doing some work at that point, the crew of the train received a copy of train order No. 13, reading as follows:

Eng 21 will work Extra 1130 am until 3 pm between South Gilboa and Arkville protecting against Extra 22 east after 1130 am and against Extra 39 west after 1240 pm

Arkville is 17 miles east of Grand Gorge. Train order No. 13 was made complete at 10:54 a.m. and work extra 21 departed from Grand Gorge at 10:58 a.m. and proceeded eastward a distance of about 2 miles to where some scrap was picked up. This work was completed at about 11:22 a.m. and the train started to back toward Grand Gorge, but when it had moved a distance of about 2,100 feet it collided with extra 22 while travelling at a speed estimated to have been about 8 or 10 miles an hour.

Eastbound freight train extra 22 consisted of 10 cars and a caboose, hauled by engine 22, and was in charge of Conductor Redmond and Engineman Neebs. At Kortright Station, 26 miles west of Grand Gorge, the crew received a copy of train order No. 7 reading as follows:

Order No. 1 is annulled Eng 22 will run extra Kortright Station to East Meradith and East Meredith to Aikville Work Train Extra 21 protects against Extra 22 east between Stamford and Arkville after 1020 am.

Extra 22 left Kortright Station at 9:22 a.m., passed Grand Gorge at 11:23 a.m., and collided with work extra 21 while travelling at a speed variously estimated to have been from 15 to 25 miles an hour.

All the cars composing the train of work extra 21 were demolished with the exception of the steam ditcher, which was of steel construction, this was derailed, but was not seriously damaged. Engine 22 was derailed and came to rest on its left side on the inside of the curve. The first car of this train was entirely derailed and thrown olear of the track or the outside of the curve, while the second car was partly derailed. The employees killed were maintenance of way employees riding on the work extra.

## Summary of Evidence.

After work extra 21 had completed its work at Grand Gorge, it stopped on the main track opposite the station under flag protection while the conductor was obtaining an extension of the working orders. When train order No. 13 was received, the flagman was recalled and the train

proceeded eastward, stopped to pick up some scrap, made a second stop hear where the accident afterwards occurred for the purpose of picking up a section crew, and then proceeded a short distance farther east to where it made a third and final stop for the purpose of loading some After this had been completed, Supervisor Lafferty asked Conductor Mattice if he could back the train toward Grand Gorge before proceeding eastward for the purpose of returning the section crew as near as possible to the point During this time Conwhere they had been picked up. ductor Mattice, although he knew he was still working under train order No. 3, had confused with it the time shown in train order No. 13 and was under the impression that he did not have to protect against extra 32 until 11.30 a.m. and therefore he complied with the supervisor's request, intend= ing to back the train as far as possible without flag protection before 11:30 a.m., let the section crew get off, and then proceed eastward, Brakeman Holden was instructed to go to the engine and tell Engineman Pellham of the movement to be made. According to the conductor's own statement, before or at about the time the back-up movement was begun, Flagman Krom said that he had better go back with his flag but the conductor told him not to do so, as the train would back up faster than the flagman could go. When the backup movement was started, conductor Mattice was riging on the rear caboose platform, together with the flagman, and he said he did not see extra 22 around the curve until it was only about 2 car-lengt s distant.

Engineman Pellham had not made the same error as Conductor Mattice regarding the time at which his train had to be protected against extra 22, but assumed that the proper protection was being provided. Fireman Sember did not understand about the extension of the time, while Brakeman Holden was under the same impression as the conductor, thinking it was unnecessary to protect against extra 22 until 11.30 a.m. Brakeman Krom was not positive that he had seen train order No. 13, but he had been told by the conductor that he had an order to work from 11.30 a.m., to 3 p.m.

Engineran Meshe, of extra 22, said his train was drifting approaching the point of accident at a speed of 20 or 25 miles an nour, and that he and the fireman saw work extra 21 at about the same time. It did not seem to him that the two trains were more than a car-length apart.

Chief Dispatcher Stickles said there was nothing unusual in the manner in which the train orders were issued and that it was the practice to extend the working time of work trains by issuing additional orders to become effective at the expiration of working orders previously issued

## Conclusions.

This accident was caused by the failure of work extra 31 to be protected by flag against extra 32 after 10:30 a.m., for which Conductor Mattice is responsible.

Conductor Mattice understood that his train was still working inder the authority of train order No. 6, which authorized him to work until 11.30 a.m. and required him to protect against extra 32 after 10:30 a.m. But when train order No. 13 was received, authorizing the train to work from L1:30 a.m. to 3 p.m., protecting against extra 22 after 11:30 a.m., he became confused as to the time after which he was to protect against extra 23 and thought this time was 11:30 a.m. Conductor Mattice aid not remember having received similar orders in the past, although the chief dispatcher said it was a common practice to extend the working hours of work trains in this manner.

This accident emphasizes the necessity for a thorough uncerstanding between all members of a crew as to the contents of all train orders affecting a train, the rights conferred by such orders, and the proposed manner of exe-Engineman Pellham knew the contents of the train cution. order, but instead of conferring with Conductor Mattice as to the details of execution, took it for granted that conductor Mattice had provided protection for the westbound Fireman Sember knew notheng whatever of train order No. 13 and Brakeman Krom and not know whether or not he saw the order. Had the movement been discussed and thoroughly understood by all members of the crew, the error of Conductor Matrice and the lack of protection would have been discovered. The necessity icr close cooperation and thorough understanding between members of a crew applied with particular force to a work train.

The investigation developed that this railroad has not had any proper system for the examination and instruction of employes beyond that given when entering the service or when promoted. Ergineman Pellham was last examined when promoted to engineman in 1909, Fireman Sember when employed in 1921, Conductor Mattice when promoted to conductor in 1908, Brakeman Krom when he entered the service in 1918, and Brakeman Holden when he entered the service in 1919. Steps to remedy this condition had already been undertaken by a new superintendent who had only been with the company a few weeks at the time this accident occurred.

At the time the accident occurred the members of the two crews had been on duty a little more than 5 hours, previous to which they had been off duty for periods varying from  $10\frac{1}{2}$  to  $15\frac{1}{2}$  hours.

Respectfully submitted, W. P. BORLAND, Chief, Buream of Safety.