INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE NEW YORK CENTRAL RAILROAD NEAR RHINECLIFF, N.Y., ON MAY 10, 1931.

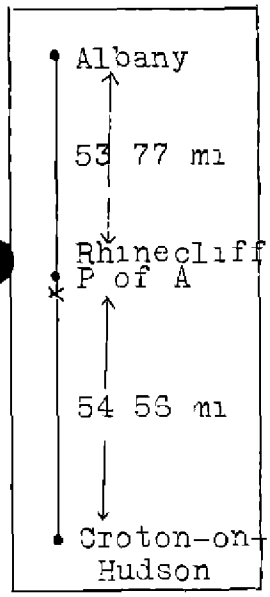
June 19, 1931.

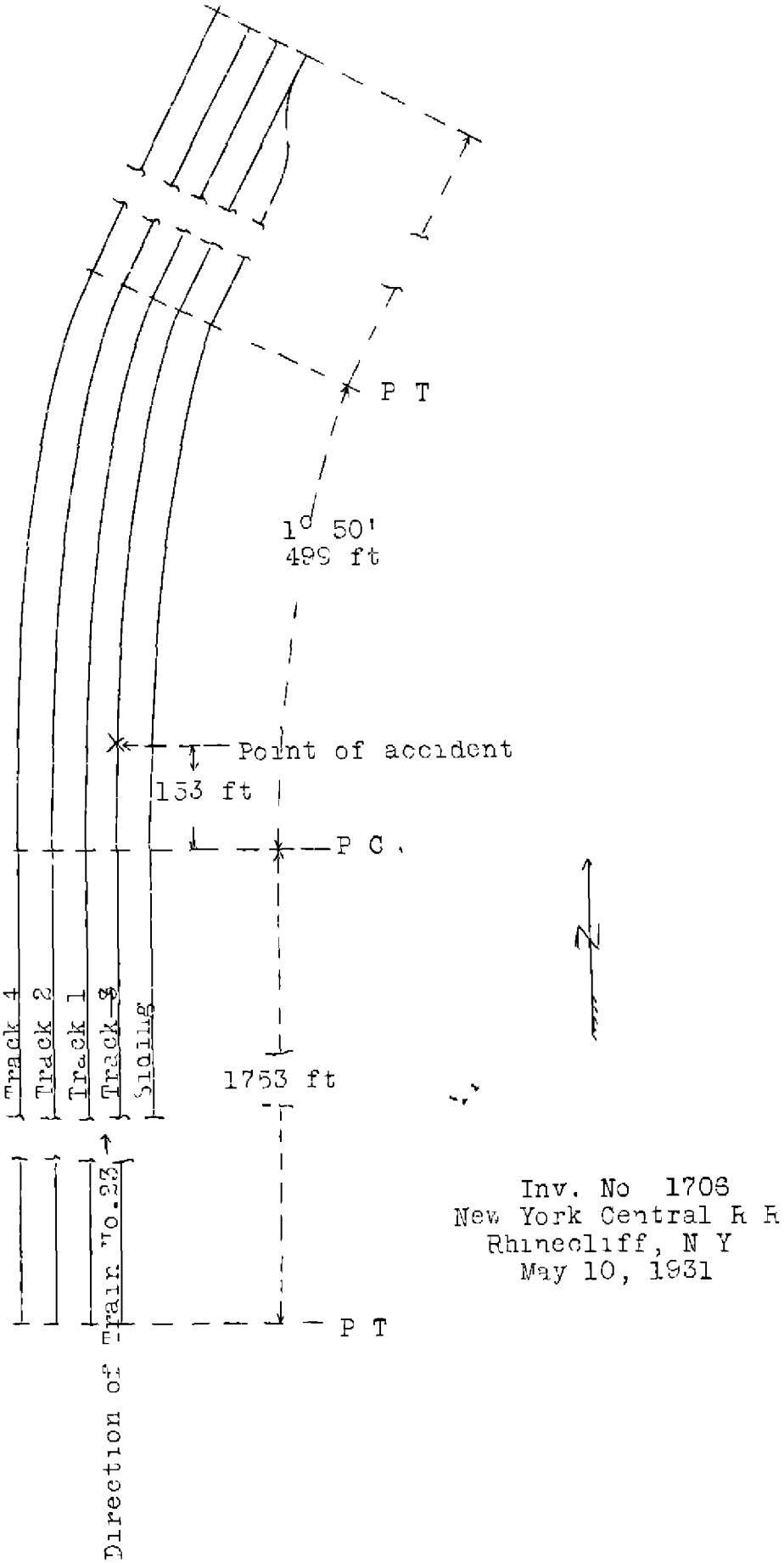
To the Commission:

On May 10, 1931, there was a collision between a passenger train and some derailed cars on the New York Central Railroad near Rhinecliff, N.Y., which resulted in the death of 1 employee and the injury of 3 passengers and 1 employee.

Location and method of operation

This accident occurred on the Hudson Division, which extends between Croton-on-Hudson and Albany, N.Y., a distance of 108.33 miles, in the vicinity of the point of accident this is a four-track line over which trains are operated by time-table, train orders, and an automatic block-signal and train-stop system, the latter being of the intermittent-inductive type. Compass directions are north and south, but the corresponding time-table directions are west and east, and these latter directions are used in this report. The tracks are numbered from north to south, 3, 1, 2, and 4, and the accident occurred on track 3 at a point 3,534 feet east of the station at Rhinecliff. At a point 2,756 feet east of Rhinecliff station there is a trailing-point switch for westbound trains which leads from track 3 to what is known as Pit siding, this siding extending eastward for a distance of 1,776 feet, and paralleling track 3 on the north Prior to the accident there were 31 empty box cars standing on this siding, the thirteenth and fourteenth of these cars, counting from the west end, being those involved in the accident. Approaching the point of accident from the east, the track is tangent for a distance of 1,753 feet, followed by a 1° 50' curve to the right 499 feet in length, the accident occurring on this curve at a point 153 feet from its eastern end; the grade is level. In the immediate vicinity of the point of accident there is an embankment on the north side of the tracks with a maximum height of about 81 feet, and this embankment extends for a distance of approximately 1,000 feet along the right-of-way. The last automatic block signal is located 1,970 feet east of the point of accident.




Inv. No 1708
New York Central R R
Rhinecliff, N Y
May 10, 1931

A light rain was falling at the time of the accident, which occurred about 8.40 p.m.

## Description

Westbound passenger train No. 23 consisted of 1 baggage car, 5 coaches, 1 Pullman parlor car, 1 dining car, and 5 Pullman sleeping cars, all of steel construction, hauled by engine 3611, and was in charge of Conductor Breadner and Engineman Wilson. This train passed S.S 60, 13.66 miles east of Rhinecliff, and the last open office, at 8.21 p.m. about one minute late, and was approaching Rhinecliff, traveling at a speed estimated at from 40 to 50 miles per hour, when it collided with two of the cars which had been standing on Pit siding, these cars having become partly derailed on account of their having been struck by a boulder which slid down the embankment, causing them to foul the main track.

None of the equipment in the train was derailed, although the entire right side of the train was damaged. One of the derailed freight cars was damaged beyond repair and the other car was considerably damaged. The employee killed was the engineman and the employee injured was the fireman.

## Summary of evidence

Fireman Novalles stated that the headlight was burning brightly while approaching the point of accident and that he was looking ahead from his side of the cab, but due to his position on the outside of the curve he did not see the derailed box cars and was not aware of anything wrong until he heard a crash followed by a scraping sound along the right side of the engine. He said the engineman had just shut off steam preparatory to making the station stop at Rhinecliff and the train was driftingat the time of the accident. As soon as he heard the noise on the right side of the engine, he looked across the cab and saw the engineman fall from his seat box. Realizing that something had occurred, he immediately crossed over tothe engineman's side of the cab, grabbed the brake-valve handle, which he found to be almost in emergency position, and after moving it slightly, he shoved it back; the brakes took hold and brought the train to a stop within a distance of from 15 to 17 car-lengths The engine was equipped with a speed recorder but he did not notice its indication at the time he applied the brakes, although he estimated the speed at the time at from 45 to 50 miles per hour. He said they held no orders to reduce speed in the vicinity of the point of accident, and during his experience of about 14 years he had never known of any slow orders being in effect

in that locality.

Conductor Breadner stated that he had just entered the forward end of the fifth coach when he noticed that steam was shut off, followed very closely by an impact resulting in the breaking of the windows on the right side of the train and boards from a box car entering through the vestibule door. After the train came to a stop and he had quieted the passengers, he looked out from the right side but was unable to see anything that could have caused the damage. He then got off on the left side of the train and proceeded to the head end but on account of escaping steam and considerable noise he still could not determine what had occurred. He then continued to Rhinecliff station and informed the dispatcher that his train had been involved in an accident, and upon his return he examined the right side of the train and discovered that it had come into contact with two freight cars which had been standing on Pit siding. He found the train in such a badly-damaged condition that it could not be moved, so he again called the dispatcher and made arrangements for transferring the passengers. He estimated the speed of his train at the time of the accident at 40 miles per hour.

The statements of Baggageman Shayne, and Brakemen Farran and Achilli, added no additional facts of importance as they also were unaware of anything out of the ordinary until they heard the crash when their train collided with the cars which were fouling the track on which their train was running.

Steam Crane Foreman Clark stated that when he arrived at the scene of the accident he made an examination and found that a large rock had slid down the embankment and struck two of the cars standing on the Pit track, causing the east end of one car and the west end of the other car to become derailed, the derailed trucks were about 12 inches from the track, while the track itself had been shoved towards track 3 about 18 inches, and he estimated that the ends of these cars had fouled the engine about 24 inches. As no part of the derailed equipment had come into contact with track 3 there was nothing to cause the signals to function and thereby give the engineman a warning of danger.

Rock Gang Foreman Ford stated that the last time his crew scaled the embankment adjacent to the point of accident was about April 4, 1931, and at that time only small shale was removed, there being no large rocks removed as there was no indication of any rocks being loose. He has never found any water on the ledge opposite the point of accident that would have a tendency to cause the rocks to loosen.

Section Foreman Cutler stated that a track walker patrols the track daily and that he was over it during the morning of the accident, while the section foreman also passed through this territory in the afternoon of May 10 but saw no indications of sliding rocks. He said a hail-storm prevailed during the morning, followed by a light rain during the afternoon, and some more light rain early in the evening, but he did not think this had any bearing on the rock breaking loose. He further stated that during heavy storms he has the track patrolled both day and night, but the storm on the day of the accident did not warrant such action.

Supervisor of Track Egan stated that he arrived at the scene of accident about 10.30 p.m , and upon examination he found two cars that had been standing on Pit siding were forced off that track by a large stone, which he estimated weighed about 70 tons, this stone having dropped from the rock ledge north of the point of accident from a point about 30 feet north of the siding and 40 feet from the tops of the rails. The following morning he made a further examination which disclosed that a concealed seam ran parallel with the base of the slope, from a point 20 feet above the base, toward the top, following from 6 to 8 feet in from the face. It was his opinion that the disintegration of the filling around the rock caused it to break loose from its foundation, resulting in its sliding down the embankment. His last inspection in this vicinity was on May 8, and from it he was satisfied that the inspection made by the rock gang foreman on April 4 and the section foreman on April 13 had been complete and satisfactory.

Division Engineer Hunt stated that he had made frequent general inspections in this vicinity, and from his observations he had no reason to suspect the existence of any conditions that would cause a rock to break away from the cliff, neither had he received any information that there might be trouble from this source.

The last train to pass over track 3 prior to the accident was train No. 171, which passed that point about two hours prior to its occurrence, while the last train to pass this point on any of the tracks was train No. 190, which passed on track 2 about 8.34 p.m; apparently there was nothing wrong when these trains passed, as the crews reported nothing out of the ordinary.

## Conclusions

This accident was caused by a large rock rolling down the embankment on the north side of the tracks and striking two of the cars standing on the siding, causing them to become partially derailed and resulting in train No 23 striking them when it passed this point.

The embankment involved ranges from about 30 feet to 81 feet in height and the rock in question fell from a point about 40 feet above the rails, where the embankment is approximately at its highest point. This embankment consists of stratified shale and large rocks and it was one of these rocks, weighing about 62 tons and measuring 29 feet in length, 11 feet in width, and 6 feet in thickness, that broke loose from the side of the ledge and slid down, striking two of the cars standing on the siding, causing them to become partly derailed and also shoving the siding out of line from 18 to 20 inches. An examination of this rock subsequent to the accident disclosed that there had been a dry seam on the back or embankment side of it which was not discovered by any of the inspections made during the spring season, and the indications were that the shale underneath this rock gradually disintegrated until it crushed under the rock, allowing it to break loose and slide down the embankment.

The employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.