

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3239
THE DELAWARE AND HUDSON RAILROAD CORPORATION
REPORT IN RE ACCIDENT
NEAR DELANSON, N. Y., ON
MARCH 13, 1949

SUMMARY

Date: March 13, 1949

Railroad: Delaware and Hudson

Location: Delanson, N. Y.

Kind of accident: Rear-end collision

Trains involved: Freight : Freight

Train numbers: Extra 1503 South : Extra 1500 South

Engine numbers: 1503 : 1500

Consists: 90 cars, helper : 69 cars, caboose
engine, caboose

Estimated speed: Standing : 5 m. p. h.

Operation: Timetable, train orders and an
automatic block-signal system

Track: Double; 3° curve; 0.84 percent
ascending grade southward

Weather: Snowing

Time: 2.15 a. m.

Casualties: 1 killed

Cause: Failure to operate following train
in accordance with signal indications

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO: 3239

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE DELAWARE AND HUDSON RAILROAD CORPORATION

April 20, 1949

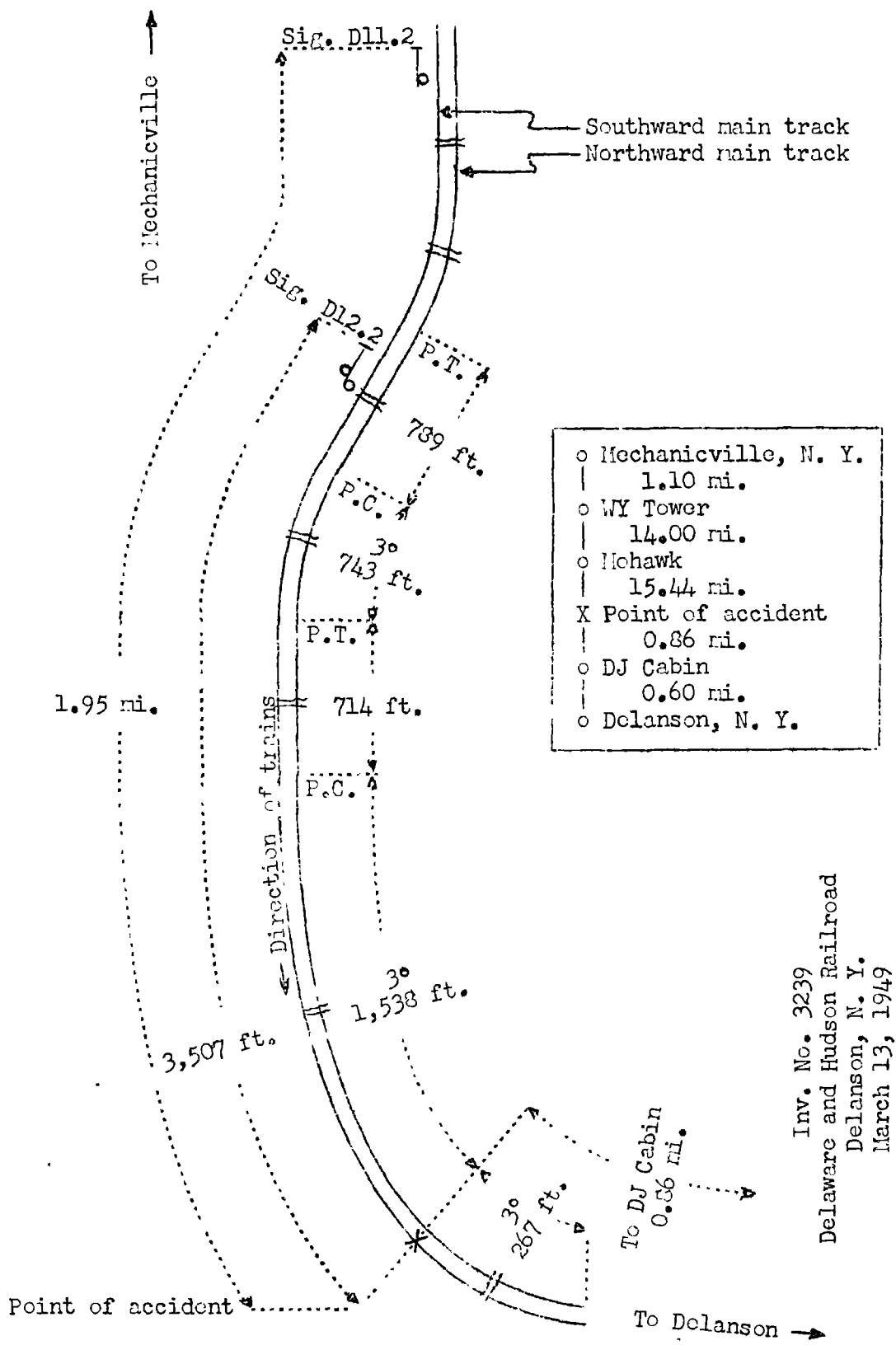
Accident near Delanson, N. Y., on March 13, 1949, caused
by failure to operate the following train in
accordance with signal indications.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On March 13, 1949, there was a rear-end collision between two freight trains on the line of the Delaware and Hudson Railroad Corporation near Delanson, N. Y., which resulted in the death of one train-service employee. This accident was investigated in conjunction with a representative of the New York Public Service Commission.

¹ Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



- | | |
|---|----------------------|
| o | Mechanicville, N. Y. |
| | 1.10 mi. |
| o | WY Tower |
| | 14.00 mi. |
| o | Mohawk |
| | 15.44 mi. |
| X | Point of accident |
| | 0.86 mi. |
| o | DJ Cabin |
| | 0.60 mi. |
| o | Delanson, N. Y. |

Inv. No. 3239
 Delaware and Hudson Railroad
 Delanson, N. Y.
 March 13, 1949

Location of Accident and Method of Operation

This accident occurred on that portion of the Susquehanna Division extending between WY Tower, Mechanicville, and DJ Cabin, Delanson, N. Y., 30.3 miles, a double-track line, over which trains moving with the current of traffic are operated by timetable, train orders and an automatic block-signal system. This accident occurred on the southward main track at a point 1.46 miles north of the station at Delanson and 0.86 mile north of DJ Cabin. From the north there are, in succession, a tangent 789 feet in length, a 3° curve to the left 743 feet, a tangent 714 feet and a 3° curve to the left 1,538 feet to the point of accident and 267 feet southward. Throughout a distance of two miles north of the point of accident the grade for south-bound trains varies between 0.88 percent and 0.82 percent ascending and is 0.84 percent ascending at the point of accident.

Automatic block signals D11.2 and D12.2, governing south-bound movements, are located, respectively, 1.95 miles and 3,507 feet north of the point of accident. Signal D11.2 is a color-light signal, which displays three aspects. Signal D12.2 is a two-unit color-light signal, which displays four aspects. These signals are approach lighted. The involved aspects and corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
D11.2	Yellow	Proceed preparing to stop at next signal. Trains exceeding medium speed must at once reduce to that speed.	Approach.
D12.2	Red-over-red, staggered	Stop; then proceed at restricted speed.	Stop and proceed.

This carrier's operating rules read in part as follows:

DEFINITIONS

Restricted Speed.--A speed not exceeding that which will enable a stop to be made short of train ahead, obstruction, switch not properly lined, look out for broken rail, and not exceeding slow speed.

Medium Speed.--A speed not exceeding thirty miles per hour, unless otherwise provided.

Slow Speed.--A speed not exceeding fifteen miles per hour, unless otherwise provided.

SIGNALS

15. The explosion of one or two torpedoes is a signal to reduce speed and look out for stop signal or track obstructions, * * *

* * *

USE OF SIGNALS

34. All members of engine and train crews must, when practicable, communicate to each other by its name the indication of each signal affecting the movement of their train or engine.

35. The following signals will be used by flagmen:

* * *

Night signals--A red light,
A white light,
Torpedoes and
Fuseses.

MOVEMENT OF TRAINS

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, place and leave two torpedoes on the rail, and when necessary, in addition, displaying lighted fuseses. When recalled and safety to the train will permit, he may return.

* * *

AUTOMATIC BLOCK SYSTEM RULES

505. Block signals * * * govern the use of the blocks, but, unless otherwise provided, do not supersede the authority of trains, nor dispense with the use or the observance of other signals whenever and wherever they may be required.

The maximum authorized speed for the trains involved was 45 miles per hour.

Description of Accident

Extra 1503 South, a south-bound freight train, consisted of engine 1503, 90 cars, helper engine 1118 and a caboose, in the order named. This train departed from Mohawk, the last open office, 16.9 miles north of Delanson, at 1:10 a. m., and stopped at 1:57 a. m., with the caboose standing 3,507 feet south of signal D12.2 and 1.46 miles north of the station at Delanson. About 18 minutes later the rear end was struck by Extra 1500 South.

Extra 1500 South, a south-bound freight train, consisting of engine 1500, 69 cars and a caboose, passed Mohawk at 1:41 a. m., passed signal D11.2, which indicated Approach, passed signal D12.2, which indicated Stop-and-proceed, and while moving at an estimated speed of 5 miles per hour it struck the rear end of Extra 1503 South.

The engine truck and the first pair of driving wheels of engine 1500 were derailed to the left, and the front end of the engine was badly damaged. The caboose of Extra 1503 South was demolished. The rear truck of the tender of the helper engine was derailed and damaged.

The conductor of Extra 1503 South was killed.

It was snowing at the time of the accident, which occurred at 2:15 a. m.

Discussion

The rules governing operation on this line provide that when a train stops under circumstances in which it may be overtaken by another train the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, and, when necessary, must display lighted fuses. A train must stop at a signal indicating Stop-and-proceed, then it may proceed but the speed must be so controlled that the train can be stopped short of a preceding train.

Extra 1503 South stopped at Delanson at 1:57 a. m. The engineer, the fireman and the front brakeman were on the first engine. The engineer and the fireman of the helper engine were in the cab of that engine, and the conductor, the swing brakeman and the flagman were in the

caboose. After the train stopped, the engine pulled the first car southward to perform switching and to supply the tender with water. The swing brakeman proceeded to the helper engine, which was to be detached and supplied with water after the train had proceeded farther south. The flagman proceeded northward to provide protection. When he reached a point about 700 feet north of the caboose he placed two torpedoes on the rail. He said that he then heard an engine whistle signal from the south. He thought this was a signal recalling him to his train, and he proceeded toward the caboose. He did not leave a lighted fusee. He stopped when he was about 400 feet north of the caboose. Shortly afterward he saw the reflection of the headlight of an approaching north-bound train, and he again proceeded toward the caboose. He had reached a point about 100 feet north of his caboose when the rear end of the north-bound freight train passed him. At that time he observed the headlight of an approaching south-bound train, heard the exhaust of the engine, and heard the torpedoes exploded. He gave stop signals to the approaching train with lighted red and white lanterns, both held in the same hand. He said the following train was so close to him that he did not have time to light a fusee. When he realized that the approaching train was moving at a speed too high to be stopped short of Extra 1503 South, he proceeded toward his caboose in an attempt to warn the employees on the rear end.

Extra 1500 South passed signal D11.2 at a speed of about 25 miles per hour. The engineer, the fireman and the front brakeman were in the cab of the engine, and the other members of the train crew were in the caboose. The headlight was lighted brightly. The brakes of this train had been tested and had functioned properly where used en route. The engineer observed that signal D11.2 indicated approach. Neither the fireman nor the front brakeman observed the signal but they heard the engineer call the indication, which they answered. It was snowing and there was a strong westerly wind. All windows of the engine cab were closed and the engineer was maintaining a lookout ahead through the front window. The engineer said that steam and smoke from the stack and swirling snow intermittently obstructed his view ahead. He said that he was prepared to stop the train short of signal D12.2. This signal is located on tangent track near the south end of a curve to the right. When he observed the signal at a distance of about 600 feet he thought that the aspect was yellow over red, therefore he did not stop the train. He did not call the indication, and neither the fireman nor the front brakeman observed the aspect displayed by the signal. After the engine passed signal D12.2, the engineer partially closed the throttle, and the speed was reduced to about 20 miles per hour. This speed was maintained until the engine was about 700 feet north of the caboose of Extra 1503 South. Prior to that time the view of the track

ahead was obstructed by the north-bound train, because of track curvature to the left. When the rear end of that train was opposite the engine of Extra 1500 South, the fireman observed the lighted red marker lamps on the caboose of Extra 1503 South and the flagman of that train giving stop signals with a white light from a point about 50 feet north of the caboose. He crossed to the right side of the cab and placed the brake valve in the emergency position. None of the employees on the engine of Extra 1500 South heard the explosion of torpedoes.

The front brakeman of the north-bound train was seated on the left side of the engine. He said that the flagman of Extra 1503 South was about 50 feet north of the caboose, that he had both a red light and a white light, and that engine 1500 was working steam. The conductor of the north-bound train said he was standing in the rear door-way of the caboose. He said the flagman of Extra 1503 South was about 100 feet north of the caboose and that he proceeded toward the northward main track after the caboose passed him. The engine of Extra 1500 South met the caboose of the north-bound train about 500 feet north of the caboose of Extra 1503 South. He did not hear the explosion of torpedoes. The swing brakeman of the north-bound train was in the cupola of the caboose on the left side. He said that the flagman of Extra 1503 South was about 100 feet north of the caboose and that he had a red light and a white light. He said that he heard the explosion of two torpedoes by the engine of Extra 1500 South, and the brakes of that train became applied in emergency immediately afterward.

Tests of the automatic block-signal system were begun by forces of the signal department of the carrier about 5 a. m. on the day of the accident. These tests indicated that signals D11.2 and D12.2 were functioning properly at the time Extra 1500 South passed them. The engineer of the helper engine of Extra 1503 South said that each of these signals indicated Stop-and-proceed when his engine passed them. After the accident and before the track circuit was cleared, the engineer of Extra 1500 South, accompanied by a road foreman of engines, inspected signal D12.2. At that time it was indicating Stop-and-proceed. However, they said that there was an accumulation of snow on the lower part of the top unit, but no snow had accumulated on the bottom unit. The engineer said he thought the accumulation of snow on the top unit resulted in that unit displaying an aspect less brilliant than the lower unit, therefore, in contrast with the red aspect displayed by the lower unit, it appeared to be displaying yellow instead of red.

Cause

It is found that this accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twentieth day of April, 1949.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.