

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3149
GREAT NORTHERN RAILWAY COMPANY
REPORT IN RE ACCIDENT
AT BERTHOLD, N. DAK., ON
DECEMBER 22, 1947

SUMMARY

Railroad: Great Northern

Date: December 22, 1947

Location: Berthold, N. Dak.

Kind of accident: Rear-end collision

Trains involved: Freight : Freight

Train numbers: Extra 3118 East : Extra 193 East

Engine numbers: 3118 : Diesel-electric
193

Consists: Auxiliary water : 21 cars, caboose
car, 24 cars,
caboose

Speeds: Standing : 30 m. p. h.

Operation: Timetable, train orders and
automatic block-signal system;
yard limits

Track: Single; tangent; 0.40 percent
descending grade eastward

Weather: Clear and dark

Time: 5:50 p. m.

Casualties: 3 injured

Cause: Failure properly to control speed
of following train moving within
yard limits

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3149

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

GREAT NORTHERN RAILWAY COMPANY

- February 10, 1948

Accident at Berthold, N. Dak., on December 22, 1947,
caused by failure properly to control the speed
of the following train moving within yard limits.

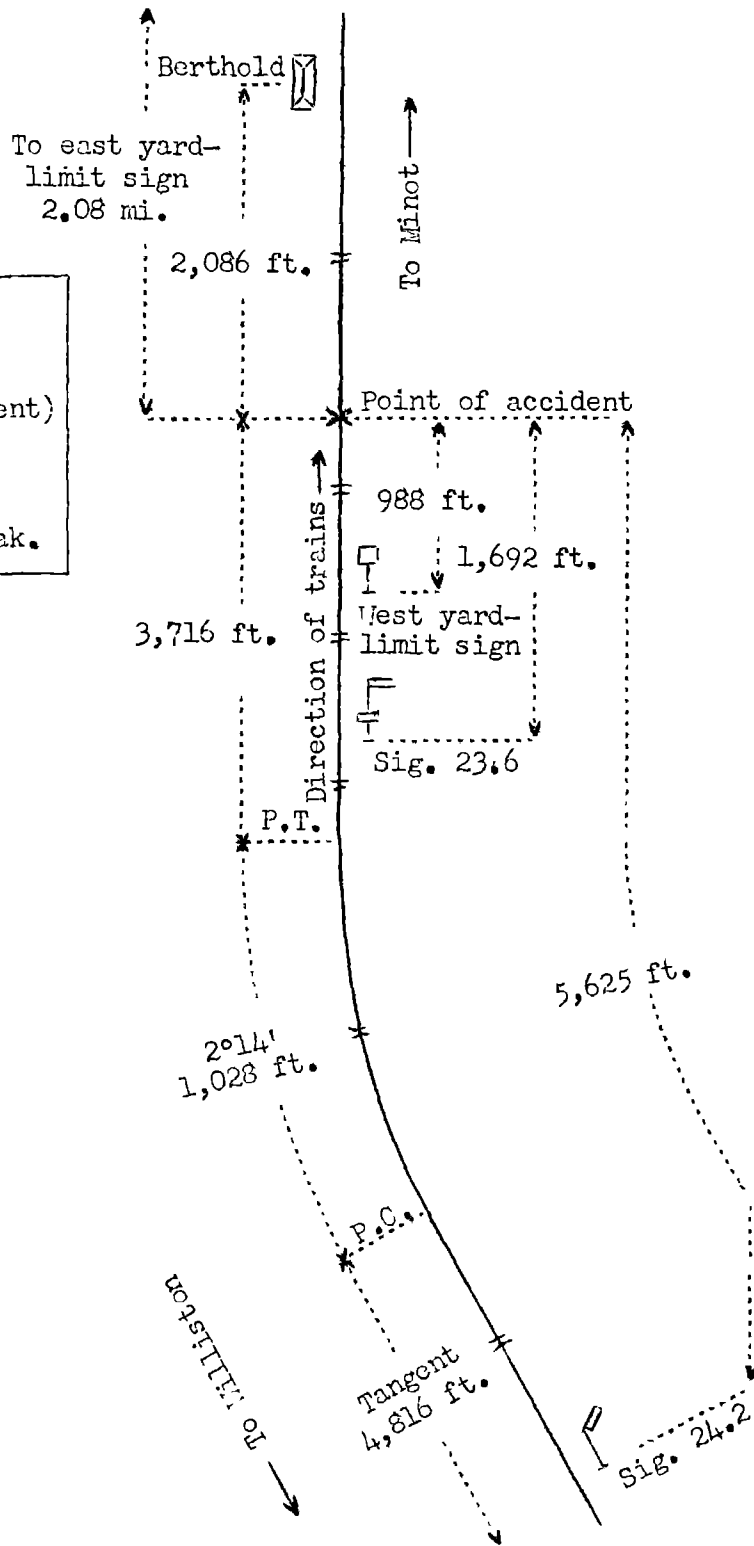
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On December 22, 1947, there was a rear-end collision between two freight trains on the Great Northern Railway at Berthold, N. Dak., which resulted in the injury of three employees.

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 | Minot, N. Dak |
| | 22.33 mi. |
| X | Berthold |
| | (Point of accident) |
| | 16.54 mi. |
| o | Blaisdell |
| | 81.45 mi. |
| o | Williston, N. Dak. |



Inv. No. 3149
 Great Northern Railway
 Berthold, N. Dak.
 December 22, 1947

Location of Accident and Method of Operation

This accident occurred on that part of the Minot Division extending between Williston and Minot, N. Dak., 120.52 miles, a single-track line in the vicinity of the point of accident, over which trains are operated by timetable, train orders and an automatic block-signal system. The accident occurred within yard limits on the main track at Berthold, 97.99 miles east of Williston, at a point 988 feet east of the west yard-limit sign, 2,036 feet west of the station and 2.08 miles west of the east yard-limit sign. From the west there are, in succession, a tangent 4,216 feet in length, a 2°14' curve to the right 1,028 feet and a tangent 3,716 feet to the point of accident and a considerable distance eastward. The grade for east-bound trains varies between 0.30 percent and 0.60 percent descending throughout a distance of 3.5 miles immediately west of the point of accident, where it is 0.40 percent descending.

Automatic signals 24.2 and 23.6, governing east-bound movements, are, respectively, 5,625 feet and 1,692 feet west of the point of accident. These signals are of the one-arm, upper-quadrant, semaphore type, and are approach lighted. The involved night aspects and corresponding indications and names are as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
24.2	Yellow	Proceed on main route prepared to stop at next signal. Train exceeding medium speed must at once reduce to that speed.	Approach signal.
23.6	Red, with number plate	Stop, then proceed at restricted speed. * * *	Stop and proceed signal.

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

DEFINITIONS.

* * *

Fixed Signal.--A signal of fixed location indicating a condition affecting the movement of a train or engine.

Note.--The definition of a "Fixed Signal" covers such signals as * * * block, * * * yard limit signs, * * * and other means for displaying indications that govern the movement of a train or engine.

* * *

Medium Speed.--A speed not exceeding thirty (30) miles per hour.

* * *

Restricted Speed.--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

11. A train finding a fusee burning red on or near its track must stop and extinguish the fusee, and may then proceed prepared to stop short of train or obstruction within the first mile.

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

93. * * *

Within yard limits the main track may be used without protecting against second and inferior class, extra trains and engines.

Within yard limits second and inferior class, extra trains and engines must move at restricted speed.

* * *

Description of Accident

Extra 3118 East, an east-bound freight train consisting of engine 3118, one auxiliary water car, 24 cars and a caboose, stopped on the main track at Berthold about 5:40 p. m., with the rear end standing 988 feet east of the west yard-limit sign. About 10 minutes later the rear end was struck by Extra 193 East.

Extra 193 East, an east-bound freight train consisting of Diesel-electric engine 193, 21 loaded cars and a caboose, passed Blaisdell, 16.54 miles west of Berthold, at 5:23 p. m., passed signal 24.2, which displayed approach, passed signal 23.6, which displayed stop-then-proceed-at-restricted-speed, passed the west yard-limit sign at Berthold and while moving at an estimated speed of 30 miles per hour it collided with Extra 3118 East.

The caboose and the rear two cars of Extra 3118 East, and the engine and the first six cars of Extra 193 East were derailed and damaged.

The conductor, the front brakeman and the fireman of Extra 193 East were injured.

The weather was clear, the temperature was 18 degrees above zero and it was dark at the time of the accident, which occurred about 5:50 p. m.

Discussion

About 10 minutes after Extra 3118 East, an east-bound freight train, stopped on the main track at Berthold the rear end was struck by Extra 193 East, an east-bound freight train, at a point 988 feet east of the west yard-limit sign. When the accident occurred the engine and the first thirteen cars of Extra 3118 East had been moved some distance eastward to the vicinity of a yard track to perform switching, and the members of the crew of this train were in the vicinity of the front portion of the train. The marker lamps on the caboose of Extra 3118 East were lighted, and they displayed red to the rear. The members of the crew of this train were not aware of anything being wrong until the collision occurred.

As Extra 193 East was approaching Berthold the speed was about 40 miles per hour. Brake-pipe pressure of 70 pounds was being maintained. The headlight was lighted brightly. The enginemen were in their respective positions in the control compartment at the front of the Diesel-electric engine, the conductor was standing immediately behind the engineer and the front brakeman was occupying a seat located at the front of the control compartment and midway between the enginemen's positions. The flagman was in the caboose. When the engine was in the vicinity of signal 24.2, located 3,933 feet west of signal 23.6 and 4,637 feet west of the west yard-limit sign, the employees on the engine called to each other the approach indication

displayed by this signal. The engineer said that he made a 12-pound brake-pipe reduction when the engine was in the vicinity of signal 24.2 and, soon afterward, because he did not think the brakes were functioning properly, he moved the brake valve to emergency position. The conductor, the fireman and the front brakeman said they did not observe that any action was taken by the engineer until after the engine had passed signal 24.2, then they saw a lighted red fusee, which had been dropped by the flagman of the preceding train when that train was approaching Berthold, the red aspect displayed by signal 23.6 and the lighted marker lamps of Extra 3118 East. They estimated the speed of their train as about 30 miles per hour when the collision occurred. The flagman said he thought the brakes were applied in service application soon after the caboose passed signal 24.2, but he did not observe that an emergency application had been made prior to the collision. The brakes of this train had been tested and had functioned properly at all points where used en route. When the undamaged equipment of this train was examined after the accident there was no condition found that would prevent the brakes from functioning properly.

The accident occurred within yard limits, and, under the rules, Extra 193 East was required to be operated in such manner that it could be stopped short of a train or an obstruction.

Cause

It is found that this accident was caused by failure properly to control the speed of the following train moving within yard limits.

Dated at Washington, D. C., this tenth day of February, 1948.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.