

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3745  
GREAT NORTHERN RAILWAY COMPANY  
IN RE ACCIDENT  
AT CONRAD, MONT., ON  
APRIL 5, 1957

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## SUMMARY

Date: April 5, 1957

Railroad: Great Northern

Location: Conrad, Mont.

Kind of accident: Rear-end collision

Trains involved: Freight : Freight

Train numbers: First 495 : Second 495

Locomotive numbers: Diesel-electric units : Diesel-electric  
470D, 470C, 470B, units 218, 216,  
and 470A and 211

Consists: 109 cars, caboose : 40 cars, caboose

Speeds: 3 m. p. h. : 33 m. p. h.

Operation: Timetable and train orders; yard limits

Track: Single; tangent; 0.6 percent descending  
grade westward

Weather: Light rain

Casualties: 2 killed; 3 injured

Time: 6:35 p. m.

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

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3745

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

GREAT NORTHERN RAILWAY COMPANY

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May 27, 1957

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Accident at Conrad, Mont., on April 5, 1957, caused by failure properly to control the speed of the following train moving within yard limits.

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REPORT OF THE COMMISSION<sup>1</sup>

TUGGLE, Commissioner:

On April 5, 1957, there was a rear-end collision between two freight trains on the Great Northern Railway at Conrad, Mont., which resulted in the death of two train-service employees, and the injury of three train-service employees. This accident was investigated in conjunction with a representative of the Montana Board of Railroad Commissioners and Public Service Commission.

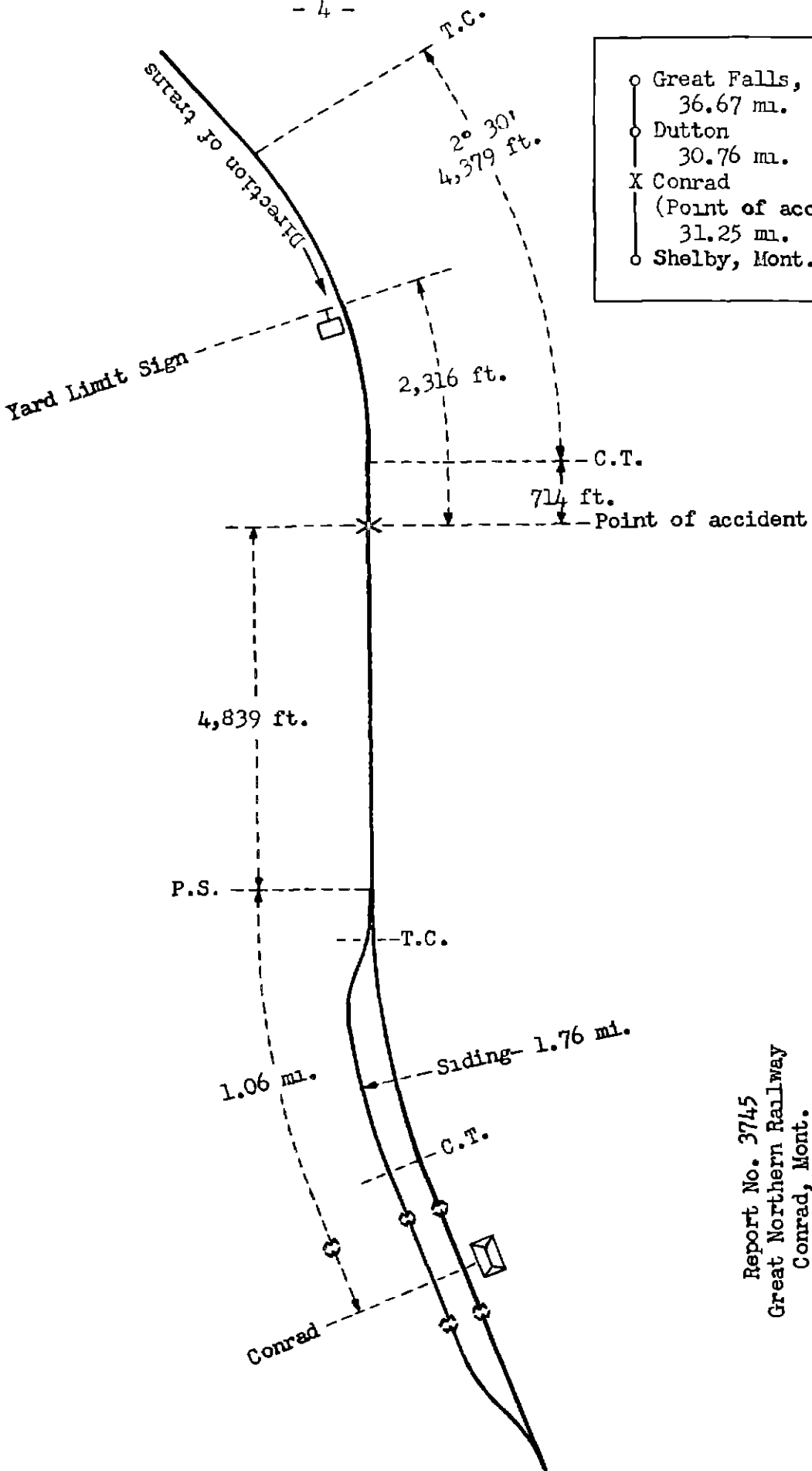
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Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Tuggle for consideration and disposition.

To Great Falls

To Shelby



- Great Falls, Mont.  
36.67 mi.
- Dutton  
30.76 mi.
- X Conrad  
(Point of accident)  
31.25 mi.
- Shelby, Mont.

Report No. 3745  
 Great Northern Railway  
 Conrad, Mont.  
 April 5, 1957

Location of Accident and Method of Operation

This accident occurred on that part of the Butte Division extending between Great Falls and Shelby, Mont., 98.68 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. Within yard limits at Conrad, 67.43 miles west of Great Falls, a siding 1.76 miles in length parallels the main track on the north. The east switch of this siding is 1.06 miles east of the station. The accident occurred on the main track within yard limits at Conrad at a point 2,316 feet west of the east yard-limit sign and 4,839 feet east of the east siding-switch. From the east there is a 2° 30' curve to the right 4,379 feet in length and a tangent 714 feet to the point of accident and a considerable distance westward. The grade for west-bound trains is 0.5 percent descending a distance of 4,000 feet, then 0.6 percent descending a distance of 953 feet to the point of the accident.

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

## DEFINITIONS

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

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.

\* \* \*

The maximum authorized speed for freight trains in the vicinity of the point of accident is 45 miles per hour.

### Description of Accident

First 495, a west-bound second-class freight train, consisted of Diesel-electric units 470D, 470C, 470B, and 470A, coupled in multiple-unit control, 109 cars, and a caboose. This train departed from Dutton, 30.76 miles east of Conrad, the last open office, at 5:30 p. m., 7 hours 25 minutes late. While entering the siding at Conrad at a speed of about 3 miles per hour, the rear end of the train was struck by Second 495. The accident occurred 4,839 feet east of the east siding-switch.

Second 495, a west-bound second-class freight train, consisted of Diesel-electric units 218, 216, and 211, coupled in multiple-unit control, 40 cars, and a caboose. This train passed Dutton, the last open office, at 5:55 p. m., 7 hours 50 minutes late, passed the east yard-limit sign at Conrad, and while moving at a speed of 33 miles per hour it struck the rear end of First 495.

The caboose and the five rear cars of First 495 were derailed. The caboose and the second and third cars ahead of the caboose were destroyed, and the first and fourth cars ahead of the caboose were heavily damaged. The fifth car was not damaged. The first Diesel-electric unit of Second 495 stopped 332 feet west of the point of the accident, down an embankment to the right, and at an angle of 60 degrees to the track. The second and third units stopped, respectively, 373 feet and 339 feet west of the point of accident. The units were separated and were badly damaged. The first 14 cars of Second 495 were derailed and stopped in various positions on or near the track. The first 13 cars were heavily damaged, and the fourteenth car was slightly damaged.

The Diesel-electric units of Second 495 were of the road-switcher type.

The flagman of First 495 and the front brakeman of Second 495 were killed. The conductor of First 495 and the engineer and fireman of Second 495 were injured.

The weather was cloudy and a light rain was falling at the time of the accident, which occurred about 6:35 p. m.

### Discussion

The crews of both First 495 and Second 495 intended to enter the siding at Conrad to clear an opposing superior train. The members of the crew of Second 495 were not aware that their train would overtake First 495 at this point.

When First 495 stopped at Conrad the enginemen and the front brakeman were on the locomotive. The conductor and the flagman were at the rear of the train. The front brakeman operated the east siding-switch, and the engineer then started the train into the siding. After the locomotive and several cars had entered the siding the brakes became applied in emergency as a result of the collision. The flagman was killed, and the conductor was so seriously injured that he could not be questioned during this investigation.

As Second 495 was approaching the point where the accident occurred the enginemen and the front brakeman were in their respective positions in the control compartment of the first Diesel-electric unit. The conductor and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted brightly. The engineer said that as the locomotive was entering the curve immediately east of the point of accident he made an application of the brakes, and that after the speed was somewhat reduced he released the brakes. As the locomotive was approaching the west end of the curve the engineer saw the lighted markers on the caboose of First 495. He immediately made an emergency application of the brakes and turned to warn the other employees on the locomotive. He then looked ahead and saw a lighted fusee which he had not seen before and which he thought had been thrown from the caboose. The fusee was near the caboose. According to the tape of the speed-recording device, as interpreted by an official of the carrier, the speed of the train had been reduced from 43 miles per hour to 38 miles per hour at a point about 2,300 feet east of the point of accident, and it was reduced by an emergency application of the brakes from 38 miles per hour to 30 miles per hour at the point of collision. When the speed-recording device was calibrated after the accident occurred it was found to register approximately 3 miles per hour lower than the actual speed.

The brakes on the undamaged cars in the train of Second 495 were tested after the accident occurred, and it was found that all brakes were operative. The air-brake control equipment was removed from the damaged Diesel-electric units of Second 495 and applied to similar units for testing. It was found to function properly.

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After the accident occurred observations were made to determine the distance from which the point of accident is visible from the engineer's seat in the control compartment of a Diesel-electric unit similar to unit 218 moving on the curve immediately east of the point of accident. It was found that between points 3,803 feet and 3,612 feet east of the point of accident the view of the point of accident was obstructed by a snow fence north of the track. With this exception, cars at the point of accident were visible to the engineer throughout the entire distance. The fireman's view of the point of accident was obstructed by the front of the locomotive as the locomotive moved on the curve. The accident occurred late in the afternoon. The engineer of First 495 said that immediately after the accident occurred there was sufficient light to enable him to see derailed cars at the rear of his train from a point near the front end of the train.

This accident occurred within yard limits. Under the rules of this carrier governing the operation of trains within yard limits, Second 495 was required to be operated in such manner that it could be stopped short of a preceding train.

#### Cause

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 twenty-seventh day of May, 1957.

By the Commission, Commissioner Tuggle.

(SEAL)

HAROLD D. McCOY,  
Secretary.