

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2939
GREAT NORTHERN RAILWAY COMPANY
REPORT IN RE ACCIDENT
AT SHEFFELS, MONT., CN
OCTOBER 9, 1945

SUMMARY

Railroad: Great Northern
Date: October 9, 1945
Location: Sheffels, Mont.
Kind of accident: Derailment
Train involved: Passenger
Train number: 235
Engine number: 1718
Consist: 6 cars
Estimated speed: 50 m. p. h.
Operation: Timetable and train orders
Track: Single; 1° curve; level
Weather: Clear
Time: 11:30 a. m.
Casualties: 2 killed; 3 injured
Cause: Obstruction in flangeway of
private-road grade crossing

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2939

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

GREAT NORTHERN RAILWAY COMPANY

November 15, 1945.

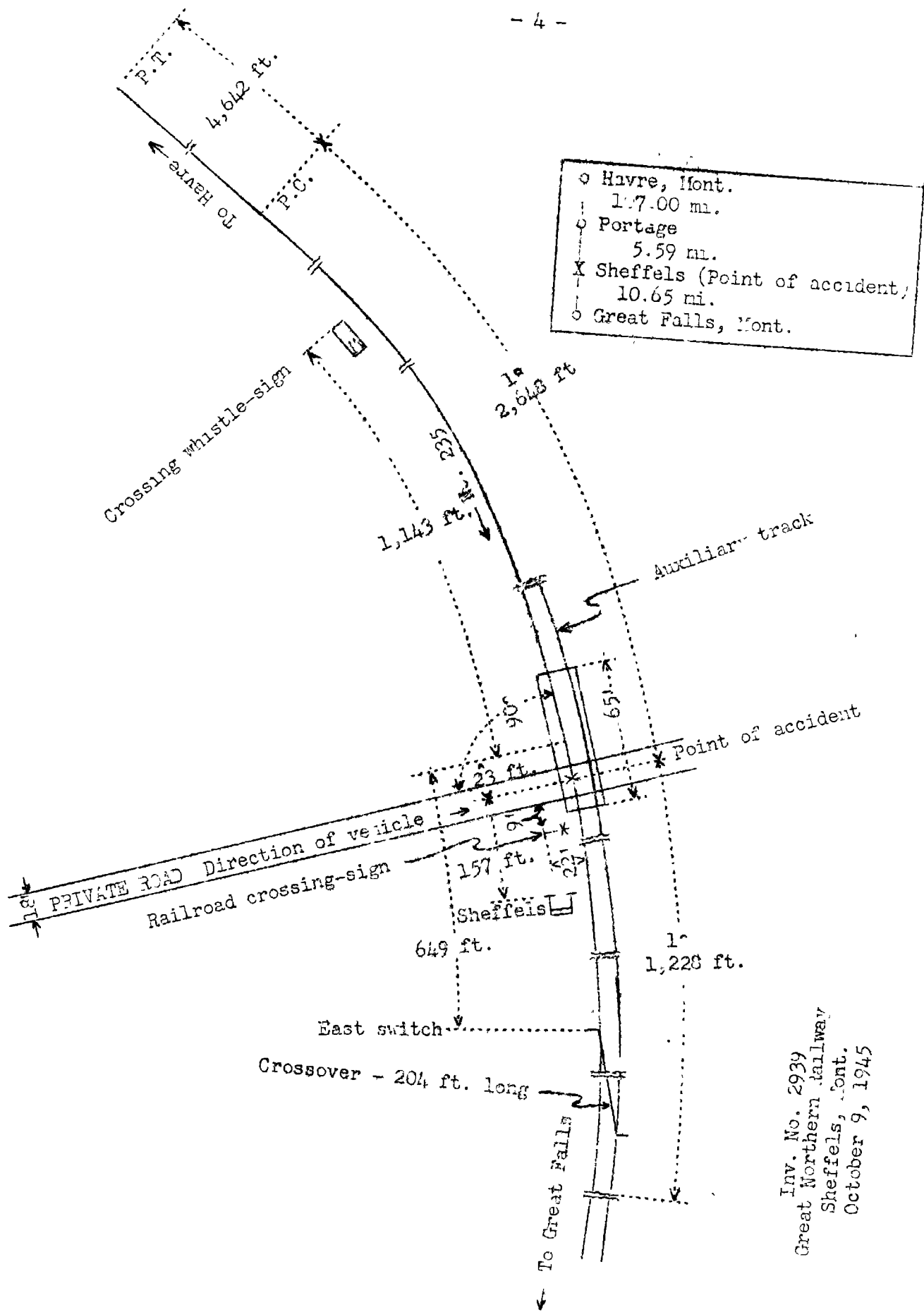
Accident at Sheffels, Mont., on October 9, 1945, caused by
an obstruction in the flangeway of a private-road
grade crossing.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On October 9, 1945, there was a derailment of a passenger train on the Great Northern Railway at Sheffels, Mont., which resulted in the death of two train-service employees, and the injury of one passenger and two dining-car employees. This accident was investigated in conjunction with a representative of the Montana Board of Railroad Commissioners and Public Service Commission.

¹Under 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.



Inv. No. 2939
 Great Northern Railway
 Sheffels, Mont.
 October 9, 1945

Location of Accident and Method of Operation

This accident occurred on that part of the Butte Division which extends between Havre and Great Falls, Mont., 123.24 miles, a single-track line in the vicinity of the point of accident, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track 112.59 miles west of Havre, at a point 157 feet east of the station at Sheffels, where the railroad is crossed at grade by a private road. From the east there is a tangent 4,642 feet in length, which is followed by a 1° curve to the right 2,648 feet to the point of accident and 1,228 feet westward. The grade is level.

The private road intersects the railroad at right angles, and is surfaced with gravel to a width of about 18 feet. The crossing is 65 feet wide and is of plank construction. The tops of the planks adjacent to the gage side of the north rails of the main track are about level with the tops of the rails and the tops of the planks adjacent to the gage side of the south rails are about 1-3/4 inches below the tops of the rails. Flangeways 2-1/2 inches in width are provided inside each rail. In the vicinity of the crossing the track structure consists of 90-pound rail, 33 feet in length, relaid in 1944 on 19 treated ties to the rail length. It is fully tieplated, single-spiked, provided with 12 rail anchors per rail length, and is ballasted with about 8 inches of gravel. The east switch of a trailing-point crossover 204 feet long, which connects the main track and an auxiliary track located on the south side of the main track, is 649 feet west of the crossing. A standard cross-buck railroad-crossing sign is located to the right of the direction of south-bound traffic, 22 feet north of the track and 9 feet west of the road. This sign is mounted on a mast 8 feet 9 inches above the level of the road, and bears the words "RAILROAD CROSSING" in black letters on a white background. A crossing-whistle sign for west-bound trains is located 1,141 feet east of the crossing.

Operating rules read in part as follows:

14. ENGINE WHISTLE SIGNALS.

Note.--The signals prescribed are illustrated by "o" for short sounds: "___" for longer sounds.
* * *

Sound.	Indication.
* * *	
(1) ___ ___ o ___	Approaching public crossings at grade. To be prolonged or repeated until the engine has passed over the crossing.
* * *	

The maximum authorized speed for the train involved was 55 miles per hour.

Description of Accident

No. 235, a west-bound first-class passenger train, consisted of engine 1718, a 4-6-2 type, two mail-baggage cars, two coaches, one Pullman sleeping car and one cafe-coach, in the order named. The first car was of steel-underframe construction, the third and the sixth cars were of steel-underframe construction and had side sheathing of steel, and the remainder of the cars were of all-steel construction. This train passed Portage, the last open office, 5.59 miles east of Sheffels, at 11:23 a. m., 22 minutes late, and while moving at an estimated speed of 50 miles per hour the front engine-truck wheels were derailed on the private-road crossing at Sheffels. These wheels continued in line with the track 826 feet to the east crossover-switch, where the general derailment occurred.

The engine stopped on its left side north of the track and at an angle of about 15 degrees to it, with the front end 369 feet west of the east crossover-switch. The first three cars stopped practically upright and in line with the track. The front truck of the fourth car was derailed. The engine was badly damaged, and the derailed cars were slightly damaged.

The weather was clear at the time of the accident, which occurred about 11:30 a. m.

The engineer and the fireman were killed.

Discussion

No. 235 was moving on a 1° curve to the right at a speed of about 50 miles per hour, in territory where the maximum authorized speed was 55 miles per hour, when it was derailed. As the train was approaching the point where the accident occurred the cars were riding smoothly. The surviving members of the crew were not aware of anything being wrong until the derailment occurred. It could not be determined when the enginemen first became aware of anything being wrong, as they were killed in the accident. Prior to the accident there was no defective condition of the engine, and there was no indication of dragging equipment or defective track.

The investigation disclosed that just prior to the occurrence of the accident the driver of a tractor, which was equipped with a grader-blade attached to the front end of the tractor frame and pulling a road-dragging device, drove this vehicle upon the crossing. The road-dragging device was of steel construction and consisted of two parallel angle-bars, 11 feet 3 inches long, and one diagonal angle-bar. These bars

were held in position by two transverse angle-bars, about 5 feet long, bolted to the tops of the other members and spaced about 6 feet. The legs of the angle bars were 3-1/2 inches wide. The front and the rear bars were so fixed that one edge was in contact with the surface of the road and at right angles to the direction of movement. The other edge was horizontal to the ground surface and about 3-1/2 inches above it. The diagonal member was fixed in position so that two edges were in contact with the surface of the road. This device was attached to the rear of the tractor by a V-shaped chain-hitch. The legs of the hitch were so arranged that the device would move over the surface of the road at an angle of about 30 degrees to the tractor. As the drag was being moved over the crossing the vertical side of the rear bar dropped into the south flangeway of the crossing. The vertical side of the bar stopped against the gage side of the south rail and the horizontal side extended over the top of the rail. A few seconds later and before the driver could remove the bar from the flangeway, the engine of No. 523 entered upon the crossing, and the flange of the left front engine-truck wheel mounted the angle bar and was derailed to the left, which was to the outside of the curve.

The driver of the tractor said that he was moving the equipment over the crossing for the purpose of dragging the surface of the road south of the crossing. Before the vehicle entered upon the crossing he looked to the east and to the west, and, as he did not see or hear an approaching train, he drove the vehicle upon the crossing. When the drag was moving over the crossing the front bar dropped into the south flangeway. He stopped the vehicle and lifted the bar clear of the flangeway. Then he again drove the vehicle forward and the rear bar dropped into the south flangeway. Immediately afterward he heard an engine whistle being sounded and saw the approaching train. He was giving hand signals in an attempt to warn the enginemen when the engine of No. 523 entered upon the crossing.

Cause

It is found that this accident was caused by an obstruction in the flangeway of a private-road grade crossing.

Dated at Washington, D. C., this fifteenth day of November, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.