INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2738

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT VENLO, N. DAK., ON

NOVEMBER 4, 1943

SUMMARY

Railroad:	Minneapolis, St. Paul & Sault Ste. Marie
Date:	November 4, 1943
Location:	Venlo, N. Dak.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	105
Engine number:	701
Consist:	2 cars
Speed:	50-55 m. p. h.
Operation:	Timetable and train orders, and manual-block system for following movements only
Track:	Single; tangent; 0.10 percent descending grade westward
Weather:	Cloudy
Time:	4:32 p. m.
Casualties:	2 killed; 3 injured
Cause:	Obstruction in flangeways of highway grade crossing

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2738

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

THE MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE
RAILWAY COMPANY

December 4, 1943.

Accident at Venlo, N. Dak., on November 4, 1943, caused by obstruction in the flangeways of a highway grade crossing.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On November 4, 1943, there was a derailment of a passenger train on the Minneapolis, St. Paul & Sault Ste. Marie Railway at Venlo, N. Dak., which resulted in the death of two train-service employees, and the injury of one railway-mail clerk and two train-service employees.

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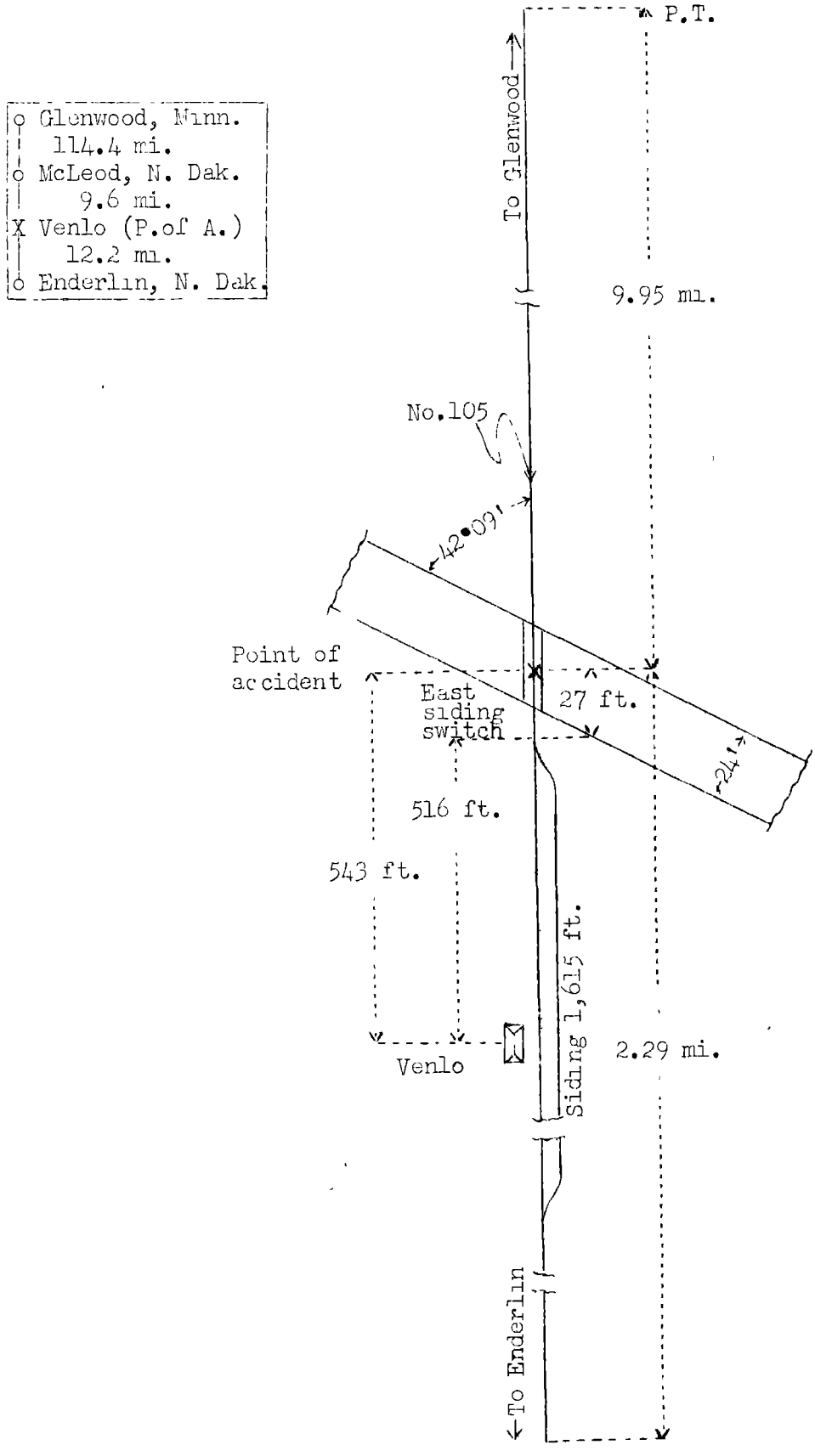
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2738
M. St. P. & S. S. M. Ry.
Venlo, N. Dak.
November 4, 1943

Location of Accident and Method of Operation

This accident occurred on that part of the Minnesota Division designated as the Second Subdivision and extending between Glenwood, Minn., and Enderlin, N Dak., 136.2 miles. This was a single-track line over which trains were operated by timetable and train orders, and a manual-block system for following movements only. The accident occurred at a highway grade crossing 543 feet east of the station at Venlo. The track was tangent throughout a distance of 9.95 miles east of this point and 2.29 miles westward. The grade for west-bound trains was 0.10 percent descending.

The highway intersected the railroad at an angle of 42°09', and was an unimproved road. The crossing was 24 feet wide and was of plank construction. The planks were secured to the ties and were beveled at the ends. The tops of the planks were about level with the tops of the rails. Flangeways 2-1/4 inches in width were provided inside each rail. In the vicinity of the crossing the track was laid on a fill, the maximum height of which was 6-1/2 feet. The track structure consisted of 85-pound rail, 33 feet in length, on 19 treated ties to the rail length. It was single-spiked, fully tieplated, provided with 5 rail anchors per rail length and was ballasted with gravel to a depth of 9 inches. The east switch of a siding, 1,615 feet long, which paralleled the main track on the south, was 27 feet west of the center-line of the crossing. Entry to the siding was made through a No. 10 turnout.

The maximum authorized speed for passenger trains was 60 miles per hour.

Description of Accident

No. 105, a west-bound first-class passenger train, consisted of engine 701, of the 4-6-2 type, one mail-express car and one coach, in the order named. The cars were of steel construction. This train departed from McLeod, 9.6 miles east of Venlo and the last open office, at 4:19 p. m., 31 minutes late, and while moving at a speed of 50 to 55 miles per hour it was derailed.

The engine stopped on its right side 373 feet west of the crossing, south of the main track and parallel to it, and was badly damaged. The tender cistern was torn from the frame and stopped across the main track, with its front end against the top of the engine cab. The first car stopped north of the

main track and at an angle of about 45 degrees to it. The second car stopped upright and in line with the track. The cars were considerably damaged.

It was cloudy at the time of the accident, which occurred at 4:32 p. m.

The engineer and the fireman were killed, and the conductor and the baggageman were injured.

Discussion

No. 105 was moving on tangent track at a speed of 50 to 55 miles per hour, in territory where the maximum authorized speed was 60 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.

Examination of the track disclosed a flange mark on top of the head of the south rail. This mark started 12 feet west of the east end of the crossing and extended to a point immediately east of the east siding-switch. Opposite this mark there was a flange mark on the north edge of the plank adjacent to the north flangeway. The north switch-point of the east siding-switch was bent toward the north rail of the main track, and flange marks appeared on two rail braces outside the south rail. From a point 49 feet west of the switch points to the frog, flange marks appeared on the ties inside the north rail and outside the south rail. West of the frog the main track was torn up 183 feet.

The investigation disclosed that just prior to the occurrence of the accident county highway employees were operating a grading machine on the highway immediately south of the crossing. When the machine was turned on the crossing, a considerable quantity of soil dropped from the machine to the crossing and the flangeways became entirely filled with soil. The highway employees said they were not aware that the flangeways were filled. The track foreman examined the crossing about 8 hours prior to the accident and found the flangeways clear. The last train to pass over the crossing was an eastbound freight train, which passed about 1 hour 40 minutes

prior to the time the accident occurred. The members of the crew of that train saw soil on the crossing, but they did not observe any unusual movement of the equipment of the train as it passed over the crossing.

Apparently the movement of the east-bound freight train caused the soil to be packed in the flangeways, and the soil in the south flangeway was packed solidly enough to cause the left front engine-truck wheel to be raised high enough for its flange to be in contact with the top surface of the head of the rail.

Cause

It is found that this accident was caused by obstruction in the flangeways of a highway grade crossing.

Dated at Washington, D. C., this fourth day of December, 1943.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL)

Secretary.