INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3472

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

IN RE ACCIDENT

NEAR DANCY, WIS., ON

JULY 6, 1952

SUMMARY

Date:	July 6, 1952
Railroad:	Chicago, Milwaukee, St. Paul and Pacific
Location:	Dancy, Wis.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	202
Engine number:	Diesel-electric units 991 and 990
Consist:	11 cars
Speed:	51 m. p. h.
Operation:	Timetable and train orders
Track:	Single; 3° curve; 0.07 percent ascending grade eastward
Weather:	Clear
Time:	10:40 p. m.
Casualties:	1 injured
Cause:	Broken rail

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3472

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

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

August 12, 1952

Accident near Dancy, Wis., on July 6, 1952, caused by a broken rail.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On July 6, 1952, there was a derailment of a passenger train on the Chicago, Milwaukee, St. Paul and Pacific Railroad near Dancy, Wis., which resulted in the injury of one train-service employee.

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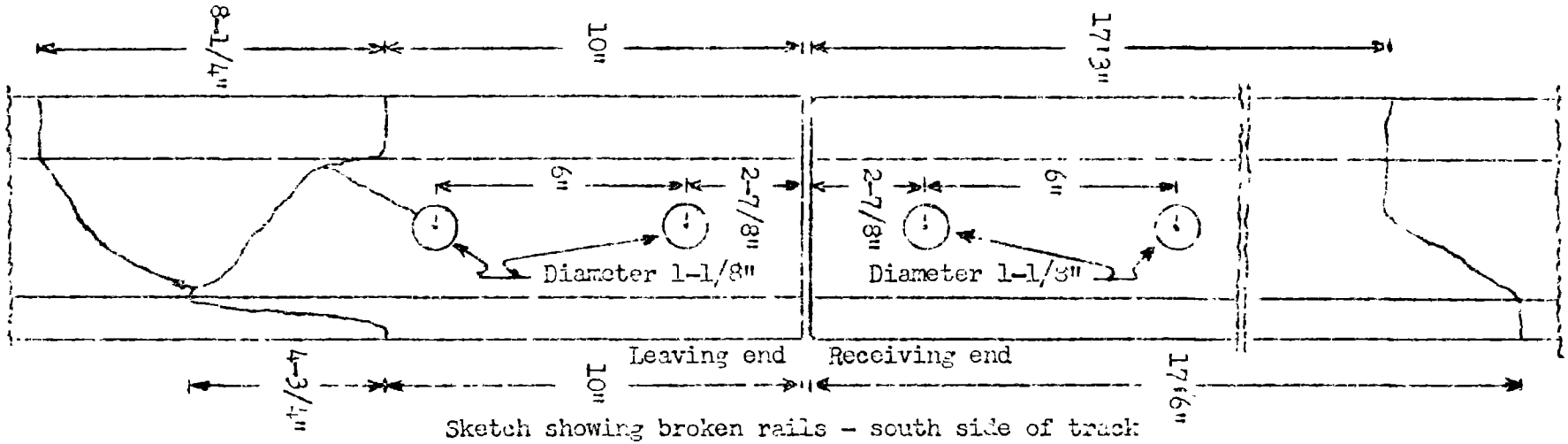
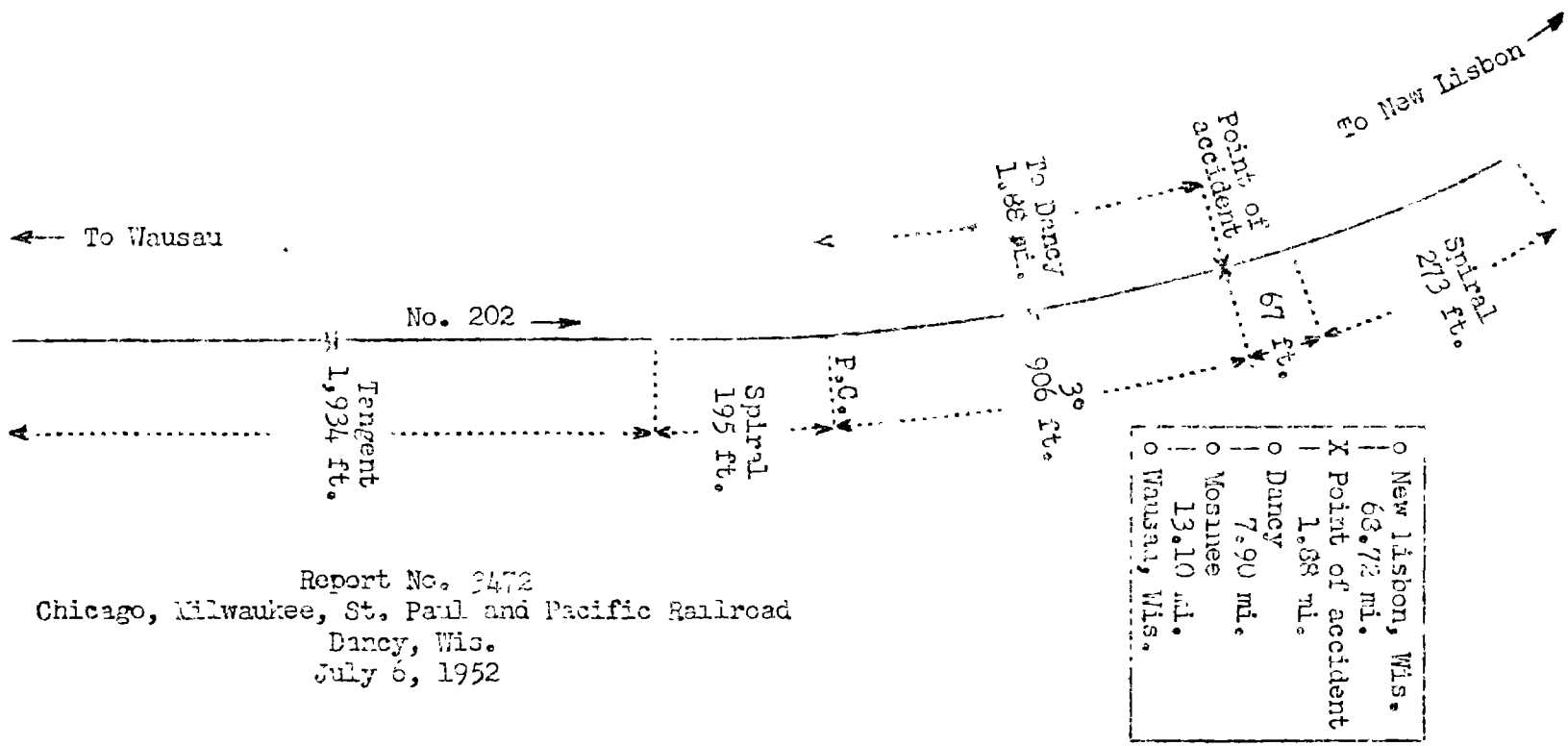
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Sketch showing broken rails - south side of track



Report No. 3472
Chicago, Milwaukee, St. Paul and Pacific Railroad
Dancy, Wis.
July 6, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the La Crosse and River Division extending between Wausau and New Lisbon, Wis., 91.6 miles, a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track at a point 22.88 miles east of Wausau and 1.88 miles east of the station at Dancy. From the west there are, in succession, a tangent 1,934 feet in length, a spiral 195 feet, a 3° curve to the left 906 feet to the point of accident and 67 feet eastward, and a spiral 273 feet. The grade for east-bound trains is 0.07 percent ascending at the point of accident.

In the vicinity of the point of accident the track is laid in a side hill cut about 3.5 feet in depth. Immediately east of the cut in which the derailment occurred, the track is laid on a fill 620 feet in length, and having a maximum height of about 9 feet. The track structure consists of 90-pound rail, 30 feet 10 inches in length, cropped and relaid in its present location in 1931, on an average of 18 treated hardwood ties to the rail length. It is fully tieplated with single-shoulder tieplates, single-spiked, and is provided with 4-hole 24-inch joint bars and an average of 6 rail anchors per rail. It is ballasted with gravel to a depth of 8 inches below the bottoms of the ties.

The maximum authorized speed for passenger trains is 55 miles per hour.

Description of Accident

No. 202, an east-bound first-class passenger train, consisted of Diesel-electric units 991 and 990, coupled in multiple-unit control, one baggage car, one mail-express car, four coaches and five sleeping cars, in the order named. The first car and the third to the sixth cars, inclusive, were of lightweight steel construction and the other cars were of conventional all-steel construction. This train departed from Mosinee, the last open office, 9.78 miles west of the point of accident, at 10:22 p. m., 27 minutes late, and while moving at a speed of 51 miles per hour the second Diesel-electric unit, the first seven cars, and the front truck of the eighth car were derailed at a point 1.88 miles east of the station at Dancy.

A separation occurred between the Diesel-electric units. The first unit stopped about 685 feet east of the point of derailment. It was not derailed. The second Diesel-electric unit was derailed to the south and stopped on its right side at the base of the fill, about 20 feet south of the center-line of the track and parallel to it. The front end of this unit was 605 feet east of the point of derailment. The derailed cars remained coupled. None of the derailed cars overturned. The first two cars stopped at the base of the fill, about 25 feet south of the center-line of the track and approximately parallel to it. The rear end of the third car and the front end of the fourth car, the rear end of the fourth car and the front end of the fifth car, the rear end of the fifth car and the front end of the sixth car, and the rear end of the sixth car and the front end of the seventh car were, respectively, 65 feet feet, 4 feet, 45 feet, and 5.5 feet south of the center-line of the track. The seventh and eighth cars stopped approximately in line with the track. The second Diesel-electric unit and the third to the sixth cars, inclusive, were somewhat damaged. The first Diesel-electric unit and the other derailed cars were slightly damaged.

The fireman of the second Diesel-electric unit was injured.

The weather was clear at the time of the accident, which occurred about 10:40 p. m.

Diesel-electric units 991 and 990 are of the 0-6-6-0 road-switcher type. Each unit weighs 250,500 pounds.

Discussion

No. 202 was moving on a 3° curve to the left at a speed of 51 miles per hour, as indicated by the tape of the speed-recording device of the locomotive, in territory where the maximum authorized speed for this train was 55 miles per hour, when the derailment occurred. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted brightly. The engineer and the fireman were maintaining a lookout ahead from the control compartment of the first Diesel-electric unit. A second fireman, who was assigned to operate the steam generator of the second Diesel-electric unit to augment the steam supply to the cars of the train, was seated in the left side of the operating compartment of that unit. The members of the train crew were in various locations throughout the

cars of the train. Members of the train crew said that before the derailment occurred the cars were riding smoothly. The engineer said that there was no indication of anything being wrong, until the brakes became applied in emergency and he observed that brake-pipe pressure was depleted.

Examination of the train equipment after the accident occurred disclosed no defective condition which could have caused or contributed to the cause of the derailment. There was no indication of dragging equipment or of an obstruction having been on the track.

After the accident occurred a broken rail was found on the south side of the track. It was broken into three pieces, all of which were recovered. This rail was manufactured by the Illinois Steel Company, South Works, in 1909. It bore heat number 439763. The rail was broken near the leaving end. A fracture extended through the head at a point 10 inches from the end of the rail, then diagonally downward and through the base at a point 1 foot 2-7/4 inches from the end of the rail. The portion of the fracture which extended through the web was rusted and apparently had existed for some time. The breaks through the head and the base were new. A second fracture, which also was rusted, extended diagonally downward from the point at which the first fracture entered the head of the rail to the west bolt hole. A third fracture extended through the head at a point 1 foot 6-1/4 inches from the end of the rail and then diagonally downward to the point at which the first fracture entered the base. The portions of the fractures which were rusted could not be detected by visual inspection when the joint bars were in place. Batter marks on each side of the break at the first fracture indicated that movements in each direction had passed over the rail after it was broken through the head and the base. The third fracture probably was caused by wheels striking the head of the rail at the first break.

Apparently the triangular piece of rail was dislodged by the wheels of the first Diesel-electric unit of No. 202, and the wheels of the second unit then struck the detached end of the rail with sufficient force to dislodge the joint bars and the end of the rail. The receiving end of the next rail to the east was battered, and this rail was broken 17 feet 5 inches from the receiving end. This break was new. East of this point the track was torn up throughout a distance of 430 feet.

This section of track was last inspected by the track supervisor from a passenger train 3 days before the accident occurred. On the same day the track in the vicinity of the point of accident was inspected by the section foreman. No defective condition was observed by these employees. A west-bound passenger train passed over the point of derailment about 4 hours 20 minutes before the accident occurred. The members of the crew on the locomotive of this train observed no unusual or defective condition of the track. A rail-defect detector car was last operated over this territory on May 6, 1952. No defective condition of the rail involved was indicated.

Cause

It is found that this accident was caused by a broken rail.

Dated at Washington, D. C., this twelfth day of August, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.