INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 35[illegible]

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD COMPANY

IN RE ACCIDENT

AT [illegible], MINN., ON

[illegible], 1955

SUMMARY

Date:	June 9, 1955	
Railroad:	Chicago, Milwaukee, St. Paul and Pacific	
Location:	Stewart, Minn.	
Kind of accident:	Side collision	
Trains involved:	Freight	: Passenger
Train numbers:	Extra 117C West	: 16
Engine numbers:	Diesel-electric units 117C, 117B, and 117A	: Diesel-electric units 95C, 93B, and 104B
Consists:	174 cars, caboose	: 11 cars
Estimated speeds:	1-3 m. p. h.	: 15-20 m. p. h.
Operation:	Signal indications	
Track:	Single; tangent; level	
Weather:	Foggy	
Time:	5:30 a. m.	
Casualties:	29 injured	
Cause:	Failure to operate east-bound train in accordance with signal indications	

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3632

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

July 21, 1955

Accident at Stewart, Minn., on June 9, 1955, caused by failure to operate the east-bound train in accordance with signal indications.

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REPORT OF THE COMMISSION[1]

CLARKE, Commissioner:

On June 9, 1955, there was a side collision between a freight train and a passenger train on the Chicago, Milwaukee, St. Paul and Pacific Railroad at Stewart, Minn., which resulted in the injury of 23 passengers, 1 employee not on duty, 2 dining-car employees, 2 coach porters, and 1 train-service employee.

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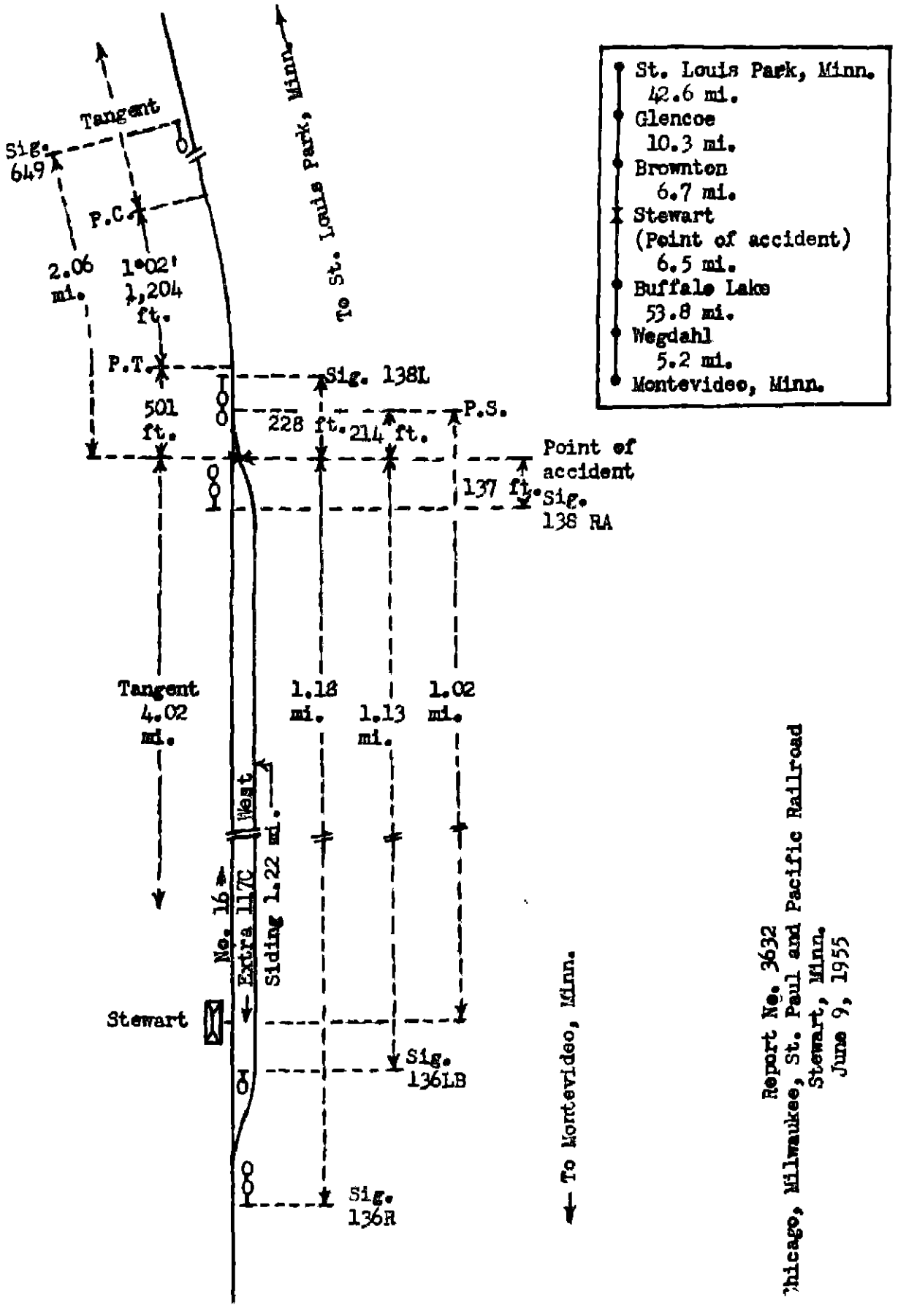
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.



Report No. 3632
Chicago, Milwaukee, St. Paul and Pacific Railroad
Stewart, Minn.
June 9, 1955

Location of Accident and Method of Operation

This accident occurred on that part of the Hastings and Dakota Division extending between St. Louis Park and Montevideo, Minn., 125.1 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by signal indications. At Stewart, 59.6 miles west of St. Louis Park, a siding 1.22 miles in length parallels the main track on the south. The east siding-switch is 1.02 miles east of the station. The accident occurred 214 feet west of the east siding-switch, at the fouling point of the main track and the siding. From the east there are, in succession, a tangent several miles in length, a 1°02' curve to the right 1,204 feet, and a tangent 501 feet to the point of accident and 4.02 miles westward. The grade is level throughout a distance of 1,699 feet immediately east of the point of accident. From the west the grade is, successively, 0.17 percent ascending a distance of 3,000 feet, 0.24 percent ascending 1,610 feet, 0.47 percent descending 1,460 feet, and level 560 feet to the point of accident.

Automatic signal 64-9 and semi-automatic signal 138L, governing west-bound movements on the main track, semi-automatic signal 136LB, governing west-bound movements from the siding to the main track, and semi-automatic signals 136R and 138RA, governing east-bound movements on the main track, are located, respectively, 2.06 miles east, 228 feet east, 1.13 miles west, 1.18 miles west, and 137 feet west of the point of accident. These signals are of the searchlight type. Signal 64-9 is approach lighted, and the other signals involved are continuously lighted. The aspects applicable to this investigation and the corresponding indications and names are as follows:

Signal	Aspect	Indication	Name
64-9	Yellow	Proceed prepared to stop at next signal. Train exceeding medium speed must at once reduce to that speed.	Approach signal.

138L	Red-over-yellow	Proceed at slow speed on diverging route.	Approach diverging route signal.
136LB	Red	Stop.	Stop signal.
136R	Yellow-over-red	Proceed prepared to stop at next signal. Train exceeding medium speed must at once reduce to that speed.	Approach signal.
138RA	Red-over-red	Stop.	Stop signal.

These signals form part of a traffic-control system extending between Glencoe, 42.6 miles west of St. Louis Park, and Montevideo. The control machine, located in the train dispatcher's office at Montevideo, is equipped with visual indicators to show track occupancy of each OS section and between OS sections, the position of each power-operated switch, and whether each controlled signal is displaying an aspect to proceed or an aspect to stop. The control circuits are so arranged that a controlled signal will not display an aspect to proceed when any opposing controlled signal or signal governing movements over a conflicting route is displaying other than its most restrictive aspect, when the block between adjacent controlled points is occupied by an opposing train, or when a switch within the route governed by the signal is not in proper position and locked. When the routes are lined for a west-bound movement from signal 64-9 into the siding at Stewart and for an east-bound movement from signal 136R to 138RA, signals 64-9 and 136R each indicate Approach, signal 138L indicates Proceed-at-slow-speed-on-diverging-route, and signals 136LB and 138RA each indicate Stop.

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

DEFINITIONS.

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

Slow Speed.--A speed not exceeding fifteen (15) miles per hour.

17. The headlight must be displayed to the front of trains by night and at any time the view is obscured by storm or fog * * *

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S-17. * * *

Until the headlight of a train turned out to meet another train is extinguished, it is an indication that the main track is obstructed. * * *

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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.

517. In foggy or stormy weather, engineers must approach all signals with great care, prepared to respect the indications given.

The maximum authorized speeds were 79 miles per hour for the passenger train and 55 miles per hour for the freight train.

Description of Accident

Extra 117C West, a west-bound freight train consisted of Diesel-electric units 117C, 117B, and 117A, coupled in multiple-unit control, 174 cars, and a caboose. This train passed Brownton, 6.7 miles east of Stewart, at 5:10 a. m.,

according to the traingraph of the traffic-control machine, and passed signal 64-9, which indicated Approach. The front of the train passed signal 138L, which indicated Proceed-at-slow-speed-on-diverging-route, entered the siding at Stewart, and stopped about 5:29 a. m. with the front end of the locomotive approximately 550 feet east of signal 136LB, which indicated Stop, and the one hundred twentieth to the one hundred twenty-fourth cars, inclusive, occupying the east turnout of the siding. About 1 minute later, as this train began to move westward, the cars on the turnout were struck by No. 16.

No. 16, an east-bound first-class passenger train, consisted of Diesel-electric units 95C, 93B, and 104B, coupled in multiple-unit control, one business car, one mail-express car, one baggage-dormitory car, three coaches, one sleeping car, one dining car, two sleeping cars, and one observation-sleeping car, in the order named. All cars were of all-steel construction. The Diesel-electric units and all cars except the first were equipped with tightlock couplers. This train departed from Montevideo at 4:40 a. m., 45 minutes late, passed Buffalo Lake, 6.5 miles west of Stewart, at 5:24 a. m., according to the traingraph of the traffic-control machine, passed signal 136R, which indicated Approach, passed signal 138RA, which indicated Stop, and while moving at a speed variously estimated at from 15 to 20 miles per hour it struck the one hundred twentieth car of Extra 117C West.

The one hundred twentieth to the one hundred twenty-fourth cars, inclusive, of Extra 117C West were derailed and stopped in various positions on or near the track. These cars were badly damaged. The first Diesel-electric unit of No. 16 was derailed to the north and stopped with the front end 183 feet east of the point of collision and at an angle of about 15 degrees to the main track. It leaned toward the north at an angle of approximately 20 degrees. The front end and the right side of the first Diesel-electric unit were badly damaged, and the front truck of this unit was displaced. No other equipment of

this train was derailed. The right sides of the second and third Diesel-electric units and the right side of the first car were somewhat damaged by contact with derailed equipment of the opposing train.

The baggageman of No. 16 was injured.

It was daylight and foggy at the time of the accident, which occurred about 5:30 a. m.

The first car of No. 16 was equipped with LN type control valve and the other cars were equipped with D-22-AR type control valves. All except the first car were provided with anti-wheel sliding devices.

Discussion

About 5:10 a. m., when Extra 117C West passed Brownton, the train dispatcher lined the route for that train to enter the siding at the east siding-switch at Stewart and for No. 16 to proceed from Buffalo Lake to signal 138RA. Immediately after No. 16 passed the west siding-switch at Stewart he lined the route for Extra 117C West to enter the main track at the west siding-switch. The indicators on the traffic-control machine indicated that the system functioned properly.

Extra 117C West stopped on the siding at Stewart with the front end of the locomotive clear of a highway crossing located approximately 800 feet east of the west siding-switch. The designated capacity of the siding is 123 cars. The enginemen and the front brakeman were in the control compartment at the front of the locomotive. The conductor was in the caboose. Immediately after the train stopped the flagman proceeded eastward to provide flag protection. The headlight was lighted brightly. Visibility was materially restricted by fog which varied in density at different locations. The members of the crew on the locomotive said that as No. 16 passed they observed that brakes were applied and sparks were flying

from the wheels of the equipment. They were unable to estimate its speed. After No. 16 cleared the west siding-switch and their train had moved westward a short distance the brakes became applied in emergency. Members of the crew on the locomotive were unaware that an accident had occurred until they inspected their train to ascertain the cause of depletion of brake-pipe pressure.

As No. 16 was approaching Stewart the enginemen were maintaining a lookout ahead from their respective positions in the control compartment at the front of the locomotive. The members of the train crew were at various locations in the cars of the train. The speed-recording device was inoperative but the engineer estimated the speed at about 79 miles per hour. The headlight was lighted brightly and the oscillating white headlight was in operation. The brakes of this train had been tested and had functioned properly when used en route. The enginemen said that visibility was restricted by fog to a distance of approximately 700 feet. Signal 136R indicated Approach, and the indication was called by the enginemen. The engineer said that when he observed the aspect of the signal he immediately closed the throttle, opened the sander valve, and made a 20-pound service brake-pipe reduction. A few seconds later he made a further service brake-pipe reduction of 12 or 13 pounds. He thought that there was a normal deceleration after the brakes were applied. The enginemen observed the lighted headlight of the locomotive of Extra 117C West and were aware that this was an indication that the train was not clear of the main track. The engineer said that when signal 138RA became visible to him it indicated Stop and he immediately moved the brake valve to emergency position. He thought that the speed previously had been reduced to about 35 miles per hour and that it was further reduced to about 15 miles per hour before the collision occurred. The fireman said he observed that signal 138RA indicated Stop and called a warning about the same time that the engineer made an emergency application of the brakes. He said that the brakes were not released at any time after the locomotive passed signal 136R, and until the stop signal at the east end of the siding became visible to him he thought the speed of the train was being properly controlled. He estimated that the speed was reduced to 15 or 20 miles per hour at the point of collision.

After the accident occurred the brakes of the equipment of No. 16 were tested. With the exception of the brake equipment of the first Diesel-electric unit, which was damaged in the accident, the brakes functioned properly. The brake control apparatus of the first Diesel-electric unit was removed and tested on a test rack in the shops of the carrier in Milwaukee, Wis., on June 15, 1955, and no defective condition was found. Examination of the tape of the speed-recording device disclosed that the device had become inoperative in the vicinity of Wegdahl, 60.3 miles west of Stewart.

The rules of this carrier require that when a train passes a signal which indicates Approach the speed of the train must at once be reduced to 30 miles per hour and must be so controlled that the train can be stopped short of the next signal. Apparently, in this instance, the engineer misjudged the speed of the train and the distance in which it could be stopped, and action was not taken in time to stop the train short of signal 138RA.

Cause

This accident was caused by failure to operate the east-bound train in accordance with signal indications.

Dated at Washington, D. C., this twenty-first day of July, 1955.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.