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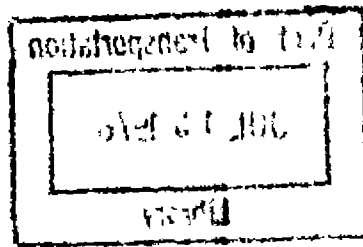
REPORT OF THE DIRECTOR
BUPEAU OF SAFETY

ACCIDENT ON THE
CHICAGO & NORTH WESTERN RAILWAY

MARIBEL, WISCONSIN

OCTOBER 18, 1938

INVESTIGATION NO. 2301



SUMMARY

Inv-2301

Railroad: Chicago & North Western
Date: October 18, 1938
Location: Maribel, Wisconsin
Kind of accident: Rear-end collision
Trains involved: Freight : Passenger
Train numbers: 173 : 317
Engine numbers: 2543 : 1521
Consist: 39 cars and caboose : 4 cars
Speed: 18-20 m.p.h. : 30-45 m.p.h.
Operation: Timetable and train orders
Track: Single; tangent, 0.70 percent ascending grade westward.
Weather: Heavy fog
Time: About 7:22 a. m.
Casualties: 11 injured.
Cause: Inferior train occupying main track without authority on time of following first-class train and not providing proper protection.

November 21, 1938.

To the Commission:

On October 18, 1938, there was a rear-end collision between a freight train and a passenger train on the Chicago & North Western Railway near Maribel, Wis., which resulted in the injury of nine passengers, one express messenger and one employee.

Location and method of operation

This accident occurred on that part of the Lake Shore Division designated as Sub-Division No. 5 which extends between Wisconsin and Green Bay, Wis., a distance of 109.82 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, no form of block-signal system being in use. The accident occurred at a point 5,145 feet east of the station at Maribel. Approaching this point from the east the track is tangent 2.62 miles to the point of accident and a distance of 4,050 feet beyond. The grade varies from 0.25 to 0.70 percent ascending westward for a distance of 1.39 miles to the point of accident and 0.75 mile beyond, the grade being 0.70 percent at the point of accident.

The maximum authorized speeds are 60 for passenger trains and 40 miles per hour for freight trains.

Operating rules provide as follows:

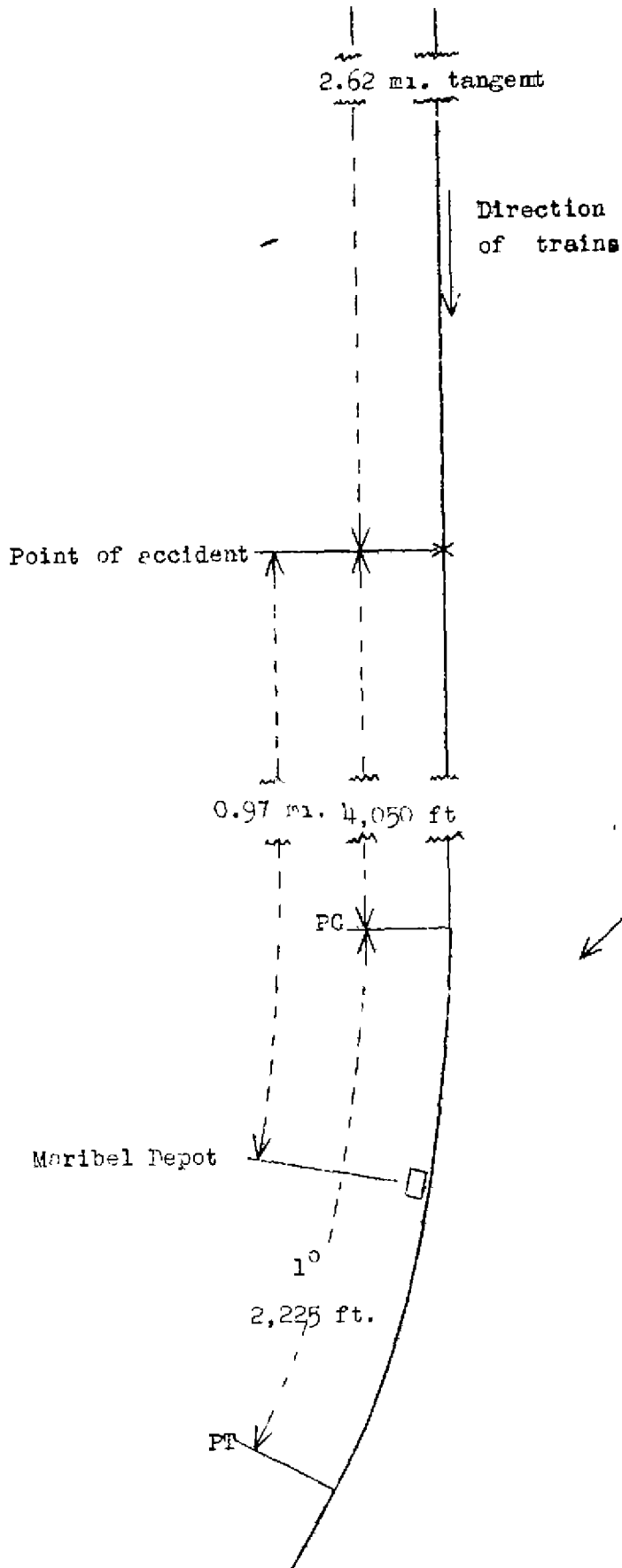
Rule 35. The following signals will be used by flagmen:

Day signals - A red flag,	Night signals - A red light,
Torpedoes and	A white light,
Fusees.	Torpedoes and
	Fusees.

Rule 36. * * * an inferior train must clear the time of a superior train, in the same direction, not less than five minutes; but must be clear at the time a first-class train, in the same direction, is due to leave the next station in the rear where time is shown.

Rule 31. Unless some form of block signals is used, the time space to be maintained between trains in the same direction will be regulated by special rule on each division timetable. This rule will not relieve trainmen from observing all rules in regard to the protection of their trains.

o	Wisconsa, Wis.	
		71.03 mi.
o	Calumet Yard	1.52 mi.
o	Manitowoc	1.55 mi.
o	Rosemere	6.54 mi.
o	Francis Creek	6.28 mi.
X	Point of accident	0.97 mi.
o	Maribel	5.01 mi.
o	Denmark	16.92 mi.
o	Green Bay, Wis.	



Inv. No. 2301
 Chicago & North Western Ry.
 Maribel, Wis.
 Oct. 18, 1938

Timetable Rule 24. *** trains will be spaced 10 minutes apart ***.

Rule 99. *** When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection. By night, or by day when the view is obscured, lighted fuseses must be thrown off at proper intervals.

When day signals cannot be plainly seen, owing to weather or other conditions, night signals must also be used. Conductors and enginemen are responsible for the protection of their trains.

Rule 1004. Rear brakemen must consider it their special duty to protect the rear of train in accordance with the rules, and must allow nothing to interfere with the prompt and efficient discharge of that duty. *** never wait for signal or orders from the conductor when train needs protection.

The weather was foggy at the time of the accident, which occurred about 7:22 a.m.

Description

No. 173, a west-bound second-class freight train, consisted of 39 cars and a caboose, hauled by engine 2543, and was in charge of Conductor Gagan and Engineman Sobush. This train left Wiscona at 1:50 a.m., 2 hours 20 minutes late, passed Francis Creek, 6.28 miles east of the point of accident, the last open telegraph office, at 7:05 a.m., 2 hours 27 minutes late, according to the train sheet, and while traveling at a speed estimated to have been 18 or 20 miles per hour it was struck by No. 317.

No. 317, a west-bound first-class passenger train, consisted of one mail car, one baggage car, one Pullman sleeping-car, and one coach, in the order named, all of all-steel construction, hauled by engine 1521, and was in charge of Conductor McCulloch and Engineman Mayer. This train left Wiscona at 4:57 a.m., 8 minutes late, left Francis Creek at 7:17 a.m., 6 minutes late, according to the train sheet and, while traveling at a speed variously estimated to have been between 30 and 45 miles per hour, collided with the rear of No. 173.

The caboose and the rear car of No. 173 were demolished, and the second car from the rear was derailed to the right and stopped parallel with the track, badly damaged. Engine 1521 was derailed

to the left and stopped leaning at an angle of about 45 degrees and was considerably damaged. The tender and the cars of No. 317 were neither derailed nor damaged.

Summary of evidence

Engineman Sobush, of No. 173, stated that en route there was fog of varying density. Verbal information received at Calumet Yard, 16.86 miles east of Maribel, indicated that No. 317 would arrive at that point 5 minutes late; he therefore expected train orders at Rosemere, 12.82 miles east of the point of accident, or at Francis Creek, which would enable him to continue ahead of No. 317; there were no train orders at either point but at Rosemere he received a proceed signal from the operator. After passing Rosemere the fireman, who is a qualified engineman, took charge of the engine and he was operating it at the time of the collision. Engineman Sobush said he did not take siding at Francis Creek because the fog made it dangerous to reduce the speed sufficiently to do so; he therefore endeavored to go to Maribel to take siding instead. His engine passed Francis Creek about 7:05 a.m. at a speed of about 28 miles per hour. He said that No. 317 was due to leave Francis Creek at 7:11 a.m., and No. 173 should have been clear at Maribel, 7.25 miles distant, at 7:11 a.m. The tonnage of the train was less than the specified rating for engine 2543; however, due to leaves on the rail, he began to lose time between Francis Creek and Maribel, where he had expected to make considerably better running time. When the locomotive passed the point where the collision later occurred the fog had cleared up to some extent and the visibility was about 50 percent of normal. The speed was about 20 miles per hour when there was a lurch, the automatic brakes became applied, and the train stopped smoothly. The engineman again took charge of the locomotive and the brakeman, who had gone back to look for a burst air hose, returned and informed him of the collision. Engineman Sobush assumed that the rear of the train was being fully protected.

Fireman Coniff, of No. 173, stated that the fog was very dense during the entire trip to Francis Creek, and after leaving that point it was encountered intermittently. Verbal information was received from the operator at Calumet indicating that No. 317 would arrive there 5 minutes late; no train orders were received authorizing movement ahead of that train. Leaving Rosemere he took charge of the locomotive; it was steaming properly and the sanders were operating; the rail was very slippery due to the fog and to leaves on the track at various points. The train was moving at a speed of about 20 miles per hour at the time of the collision which occurred about 7:22 or 7:23 a.m.

Head Brakeman Stewart, of No. 173, corroborated the statements of the engineman and the fireman in all essential details.

Conductor Gagan, of No. 173, stated that his train passed Francis Creek about 7:05 a.m., and ran ahead of No. 317 without authority. Fog limited the visibility immediately west of Francis Creek to 35 or 40 car lengths. Approaching the point where the accident occurred he went out on the rear platform of the caboose when the flagman lighted a fusee. Shortly thereafter he saw the headlight of No. 317 about 50 car lengths distant; he immediately gave stop signals with the lighted fusee and continued to do so until he jumped off when the locomotive was within 6 or 7 feet of the caboose. No. 173 was moving at a speed of not less than 20 miles per hour prior to, and at the time of, the collision. He was running on the time of No. 317 without authority which is a violation of Rule 86. Rule 99, which requires that lighted fusees be dropped on the track at frequent intervals, was also violated; however, because of the visibility and the speed of No. 173 at that time, he thought that the engineman of No. 317 could have seen the lighted fusee in time to avert a collision. Because of the foggy weather the caboose markers were lighted. No. 317 was running at a speed of 40 or 45 miles per hour at the time of the accident which occurred about 7:22 a. m.

Rear Brakeman O'Connor, of No. 173, corroborated the statement of the conductor in all essential details except that he said Rule 99 was not violated because No. 173 was running at a speed of about 20 miles per hour at the time of the accident and 20 or 25 miles per hour just prior thereto, and that the engineman of No. 317 should have seen the burning fusee a distance of 35 or 40 car lengths.

Engineman Mayer, of No. 317, stated that he took charge of the locomotive at Calumet Yard. Leaving that point he made a running test of the air brakes and they functioned properly en route. His conductor informed him at Manitowoc, 1.52 miles west of Calumet Yard, about 7:03 a.m., that the operator advised that No. 173 had passed Rosemere, 2.55 miles distant, at 6:48 a.m.; he assumed that No. 173 would keep clear of his train to Denmark, 5.01 miles west of Maribel; however, he received no train order authorizing such movement. No. 317 left Francis Creek at 7:16 a.m. Immediately approaching the point where the accident occurred the speed was 40 or 45 miles per hour; he was on his seat box when he saw the outline of the rear car of No. 173 about 400 or 500 feet distant and a fusee was being waved as a stop signal from the caboose platform. He immediately made an emergency application of the brakes, closed the throttle, opened the sanders and called a warning to the fireman. The weather was very foggy during the entire trip to the point where the accident occurred. He estimated that the accident occurred about 7:24 a. m.

Fireman Dahin, of No. 317, corroborated the statement of Engineman Mayer in all essential details and added that he and his

engineman saw No. 173 at Calumet Yard and they assumed that No. 173 would run ahead of them to some point beyond Rosemere.

Conductor McCulloch, Baggage man McKenna, Brakeman Shay and Flagman Fitzgerald, of No. 317, variously estimated that visibility was limited by the fog a distance of 4 to 10 car lengths at the time of the accident. Their statements contained nothing additional of value.

Train Dispatcher Heinig stated that he issued no train orders authorizing movement of No. 173 on the time of No. 317; furthermore, he did not authorize any operator at points involved to furnish any verbal information concerning the movement of either train and he had no knowledge of such verbal information being supplied.

Operator Mohr stated that No. 173 passed Francis Creek at 7:05 a.m. In compliance with the time-spacing rule he displayed the westward train-order signal in stop position until 7:15 a.m.; No. 317 arrived at 7:16 a.m. and departed at 7:17 a.m. No. 173 passed Francis Creek at a speed of about 35 miles per hour.

Discussion

No. 173 passed Francis Creek at 7:05 a.m. and No. 317 was due to leave that point at 7:11 a.m. Under the rule, after passing that point No. 173 was required to be in the clear not later than 7:11 a.m. Since the next possible clearing point for No. 173 was Maribel, 7.25 miles west of Francis Creek, No. 173 had only 6 minutes in which to clear at Maribel. Although No. 317 did not leave Francis Creek until 7:17 a.m., no authority was issued to No. 173 to proceed ahead of No. 317. According to the evidence the weather was foggy and the estimates of visibility ranged from a distance of 4 car lengths to a distance of about 50 car lengths. No. 173 encountered leaves on the rail and this condition coupled with the wet rail caused the engine to slip, thereby materially reducing the speed, and when about one mile east of Maribel while proceeding at a speed of about 20 miles per hour its rear end was struck by No. 317 at 7:22 a.m., the time No. 317 was due to leave Maribel.

According to the evidence No. 173 provided no flag protection other than the waving of stop signals with a lighted fusee from the rear platform of the caboose when No. 317 was heard approaching. The engineman of No. 317 stated that he was able to see this fusee a distance of only 400 or 500 feet, at which time the speed of his train was 40 or 45 miles per hour. Rule 99 requires that when a train is proceeding under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection,

and that by night or by day when the view is obscured, lighted fusees must be thrown off at proper intervals. The flagman of No. 173 considered it not necessary to drop off lighted fusees and in his opinion the lighted fusee on the rear of the caboose was sufficient protection. Had lighted fusees been dropped off at proper intervals by No. 173 it is probable this accident would have been averted.

Conclusion

This accident was caused by an inferior train occupying the main track without authority on the time of a following first-class train, and not providing proper protection.

Respectfully submitted,

W. J. PATTERSON,

Director.

