

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
PERE MARQUETTE RAILWAY AT ANN PERE, MICH., ON DECEM-
BER 2, 1930.

December 27, 1930.

To the Commission:

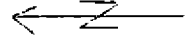
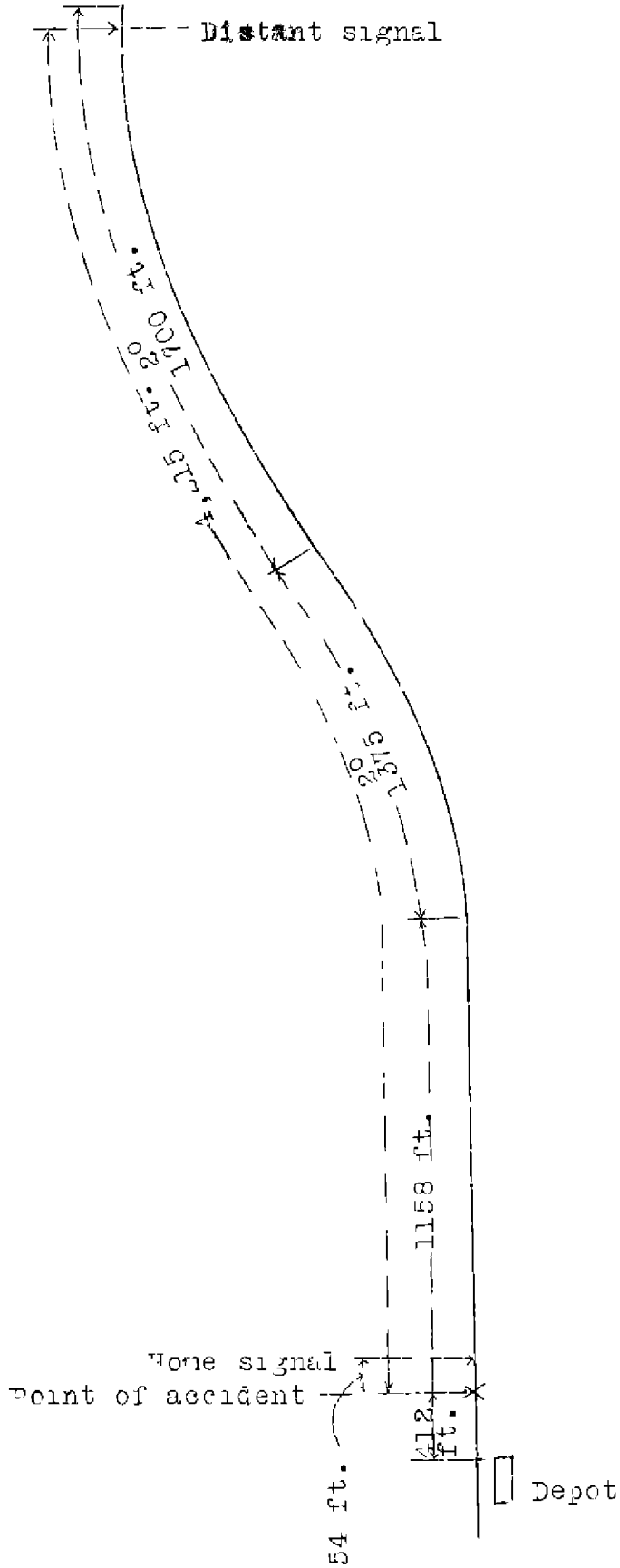
On December 2, 1930, there was a derailment of a freight train on the Pere Marquette Railway at Ann Pere, Mich., which resulted in the injury of three employees.

Location and method of operation

This accident occurred on the Detroit Division, which extends between Detroit and Grand Rapids, Mich., a distance of 152.13 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and an automatic block-signal system, supplemented by an automatic train-stop system. The accident occurred at a point 412 feet east of the station at Ann Pere; approaching this point from the east, there is a 2° reverse curve, leading first to the left for a distance of about 1,700 feet and then to the right for about 1,375 feet, from which point the track is tangent to the point of accident a distance of 1,158 feet, and for a considerable distance beyond that point. The maximum grade is 1.20 per cent descending, and it is 0.86 per cent descending at the point of accident.

The signals involved are distant signal 1007 and the home interlocking signal, located 4,315 and 54 feet, respectively, east of the point of accident. A view of the home signal can be obtained from the engineer's side of a westbound train for a distance of about 1,580 feet. There is a derail located 54 feet west of the home signal, or 637 feet east of the entrance to the passing track.

The weather was clear and it was cold at the time of the accident, which occurred about 1.27 a.m.



Inv. No. 1680
Pere Marquette Railway
Ann Pere, Mich.,
December 2, 1930.

Description

Westbound freight train extra 1041 consisted of 37 loaded and 2 empty cars, and a caboose, hauled by engine 1041, and was in charge of Conductor Wise and Engineman Gaul. This train left Plymouth, 28.42 miles east of Ann Pere, at 12:25 a.m., passed South Lyon, 11.56 miles beyond, at 1.01 a.m., and was derailed upon encountering the derail near the home signal at Ann Pere while traveling at an estimated speed of 8 miles per hour.

The engine and tender were derailed and remained upright, coming to rest on the roadbed approximately 275 feet west of the initial point of derailment. The first five cars and the forward end of the sixth car were also derailed, the first car remaining coupled to the tender; the second and third cars slid down an embankment alongside the track, while the fourth and fifth cars remained upright on the roadbed. None of the equipment was badly damaged. The employees injured were the engineman, fireman and head brakeman.

Summary of evidence

Engineman Gaul stated that prior to departing from the initial terminal, a proper air-brake test was made and upon completion of this test he received a proceed signal from an air-brake inspector, the brakes also worked perfectly in making three stops, as well as in reducing speed at other points en route. When the train reached a point about 40 or 50 car-lengths east of the distant signal approaching Ann Pere, and while traveling at a speed of about 25 miles per hour, he observed this signal displaying a caution indication and applied the brakes by making a 12 to 15-pound brake-pipe reduction. In passing the distant signal he operated the train-stop device permitting his train to proceed, and upon reaching a point about one car-length west of this signal he made a further reduction of about 10 pounds, the brakes not being used after that time. As soon as the home signal came into view he saw that it was displaying a stop indication, and at that time he had no doubt but that the train would stop before reaching the signal, but when the engine was about three or four car-lengths from the signal, he felt a surge from the rear of the train and immediately moved the brake-valve handle into

emergency position, but was unable to stop before reaching the derail. He estimated the speed of his train at the time of the accident at 8 miles per hour. Engineman Gaul was of the opinion that his train approached the home signal under control, and he was unable to account for the action of the rear end in surging ahead other than the fact that, due to the cold weather, he thought some of the brakes might have become frozen since he had last used them.

Fireman Carlson, although an experienced man, was making his first trip over the Detroit Division. He noticed no unusual handling of the train prior to the time it reached the distant signal east of Ann Pere. He was looking ahead while approaching this signal and saw that it was displaying a caution indication; the engineman and head brakeman also apparently saw the indication it displayed as they both remarked about it, the engineman making a service application of the brakes before reaching the signal. Fireman Carlson then went back in the tender, and while so engaged he heard the exhaust of another brake-pipe reduction. He was still in the tender when he heard the head brakeman shout something to the engineman but was unable to understand what was said. After the train had traveled a short distance farther, however, the engineman applied the brakes in emergency, but the fireman thought that on account of a considerable amount of air having been drawn off previously, the exhaust of the emergency application was slight. He then returned to the cab to learn what the difficulty was, and looked ahead, but saw nothing out of the ordinary, although he did see the engineman and head brakeman preparing to get off. He also stepped off when the engine went over the derail, and at that time the train was moving at a speed of not more than 8 miles per hour.

Head Brakeman Sharitt stated that before reaching Plymouth he discovered fire flying from the wheels of a car in about the center of the train and upon arriving at the next station he went back and cut out the brakes on this car. He was riding on the fireman's seatbox as the train approached the distant signal east of Ann Pere, and when he noticed it was in caution position he called its indication to the engineman, who in turn acknowledged the signal and then made an air-brake application, which was followed later by a second application, and to his knowledge the brakes were not released prior to the accident. While approaching the home signal he saw that it was displaying a stop indication, which he also called to the attention of

the engineman, but he did not hear the engineman answer him. He estimated the speed of the train at 20 or 25 miles per hour at the time the first application of the brakes was made, which was about 20 car-lengths east of the distant signal, he got off the engine about one car-length east of the home signal and at that time the train was traveling approximately 8 miles per hour.

Conductor Wise stated that before departing on the trip on which the accident occurred, he was informed that the brakes were in proper working order. The first stop was made at Romulus, where the brakes on about the twentieth car from the engine were cut out on account of their having been sticking. Upon arrival at Plymouth, he looked the train over in company with the rear brakeman, but there was nothing found to be wrong. He was riding in the cupola of the caboose approaching Ann Pere, but was unable to distinguish signal indications clearly due to frost on the windows, although outside visibility was good. He felt the brakes on the caboose apply before reaching the distant signal; they seemed to hold properly and were still applied at the time of the accident. While he was not certain of it, he thought the rear end of the train passed the distant signal at about 20 miles per hour, the rear of the train came to an easy stop, and he did not know that anything was wrong until he looked at the air gauge in the caboose and noticed that it did not register any pressure. He also said that he had looked at the gauge on numerous occasions during the trip and it had registered 70 pounds pressure, but he did not look at it at the time the brakes were applied near the distant signal.

Rear Brakeman Young was also riding in the cupola of the caboose as the train approached Ann Pere and felt an air-brake application before the train reached the distant signal; the train was then traveling at a speed of between 20 and 25 miles per hour. The brakes were not released, and after the caboose passed the distant signal they appeared to take further hold, although the caboose came to a smooth stop.

Operator Miller, on duty at Ann Pere at the time of the accident, stated that he had orders to head extra 1041 into the siding in order to meet an opposing superior train. When he attempted to line the switch, however, the interlocking lever would not latch for the switch in the open position, so he left the tower and

upon examining the switch he found it to be in a frosted condition. He procured a piece of iron and was scraping the frost from the switch when extra 1041 came into view around the curve east of that point. He said the train approached the home signal slowly, the engineman apparently intending to stop, but he also gave a hand signal to stop, so the crew would not be expecting to get a clear indication when close to the signal.

Road Foreman of Engines Roberts stated that he arrived at the scene of accident at 12 15 p.m., and made a thorough inspection of the engine, both before and after it was rerailed, and found the brakes in proper working condition. After the train was reassembled using this same engine, he rode the engine, hauling the entire train except the first four cars, from Howell to Wyoming; while en route he also operated the engine himself at different times, but did not notice any improper working of the brakes at any time.

Conclusions

This accident was caused by the failure of Engineman Gaul properly to control the speed of his train so as to stop before passing a home interlocking signal which was in stop position.

According to the statements of Engineman Gaul, he made a 12 or 15-pound reduction at a speed of 25 miles per hour when about 6,000 feet from the point of accident, following this with an additional reduction of about 10 pounds when 4,100 feet from the point of accident. With the air brakes in proper working order, and there was nothing to indicate that they had not been working properly at all times, these brake-pipe reductions should have brought the train to a stop before it reached the home interlocking signal; in fact, the engineman said it appeared that the train was going to stop and that it was moving at a speed of only 8 miles per hour when there was a sudden surge from the rear which pushed the head end of the train off the derail. These various statements are not consistent with each other; the weather was cold, and the fact that the brakes had not been used for some time previously, undoubtedly interfered to some extent with their proper holding power until they had become warmed up, but had the brakes been manipulated as stated by Engineman Gaul, the distance traveled after the first application should have been sufficient to take care of this difficulty. It is believed, therefore, that Engineman Gaul did not begin braking as soon as he thought he did, or else the speed at the time he began braking was much higher than has been estimated, and it is possible that a combination of these factors may account for the occurrence of the accident.

The employees involved were experienced men, and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.