

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE NORTHERN PACIFIC RAILWAY AT SPOKANE, WASH.,
ON MAY 17, 1929.

September 30, 1929.

To the Commission:

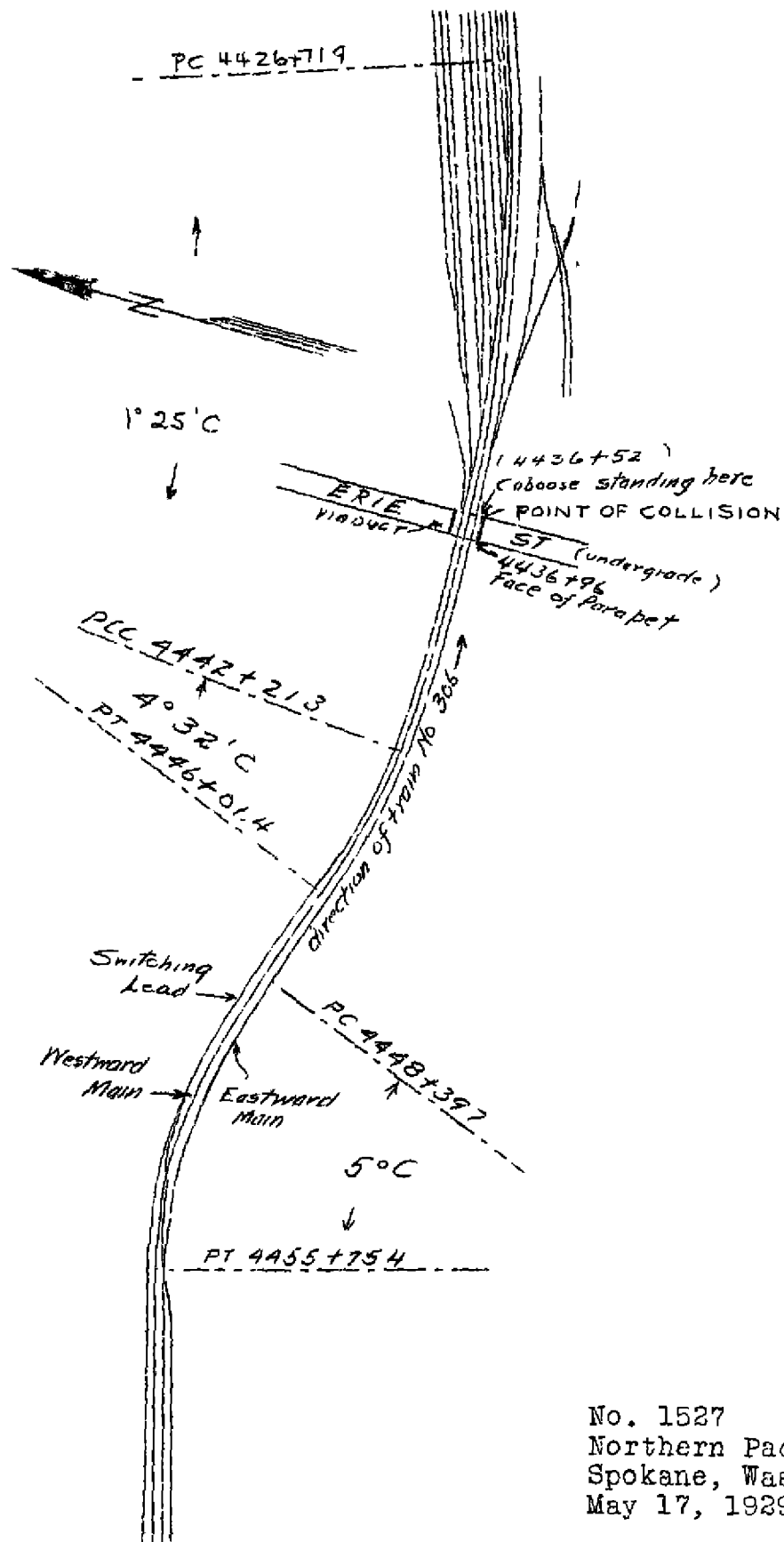
On May 17, 1929, there was a rear-end collision between a freight train and a passenger train on the Northern Pacific Railway at Spokane, Wash., resulting in the death of 1 employee, and the injury of 7 passengers and 19 employees, 16 of whom were not on duty. This accident was investigated in conjunction with representatives of the Department of Public Works, State of Washington.

Location and method of operation

This accident occurred on the Second Subdivision of the Idaho Division, which extends between Cheney and Yardley, Wash., a distance of 19.8 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by time-table and train orders, with no block-signal system in use in the immediate vicinity of the point of accident, which was within yard limits on the viaduct over Erie Street, at a point about $2\frac{3}{4}$ miles east of the west yard-limit board or about 1 mile east of the depot. Approaching this point from the west there is a compound curve to the left 2,029.5 feet in length; the curvature of the first 380.1 feet of this curve is $4^{\circ}32'$, while the remainder of the curve, upon which the accident occurred at a point 1,080.1 feet from its leaving end, has a curvature of $1^{\circ}25'$. The grade at the point of accident is practically level.

Under special instructions contained in time-table 54A, effective July 29, 1928, trains may run ahead of superior class trains without orders, in the particular territory where the accident occurred. There are industry tracks on both sides of the main tracks, while a short distance east of the viaduct there are numerous yard tracks on the north side of, and paralleling, the main tracks. Passenger trains are restricted to a speed of 20 miles per hour between the west yard-limit board at Spokane and Yardley, a distance of about 5 miles.

The weather was clear at the time of the accident, which occurred at about 7.03 or 7.04 a.m.



No. 1527
Northern Pacific Ry.
Spokane, Wash.
May 17, 1929.

Description

Eastbound second-class freight train No. 602, running as extra 1820, consisted of 66 cars and a caboose, hauled by engines 1613 and 1820, and was in charge of Conductor Cooper and Enginemen Sampson and Penny. This train passed the depot at Spokane at 6.48 a.m. and on reaching a point about $1\frac{1}{4}$ miles east thereof it was brought to a stop, at about 6.55 a.m., at the OWRR&NCo. crossing. After it had been standing at this point about eight minutes the rear end of extra 1820 was struck by train No. 306.

Eastbound first-class passenger train No. 306 consisted of gas-electric motor car B-6, of steel construction, and was in charge of Conductor Knowles and Motorman Harrison. This train left Spokane at 7 a.m., on time, and collided with extra 1820 while traveling at a speed variously estimated to have been from 6 to 35 miles per hour.

The ends of the caboos~~e~~ of extra 1820 were badly damaged, and some of the side sheeting and floor boards broken. The front end of the motor car was damaged while many of the seats were torn loose and broken off. The employee killed was the conductor of extra 1820, who was crushed on the platform of the caboose.

Summary of evidence

Flagman Mueller, of extra 1820, stated that he was riding on the rear platform of the caboose as his train passed the depot at Spokane and that he saw train No. 306 at that point. When his own train came to a stop at the OWRR&NCo. crossing, with the caboose on the Erie Street viaduct, Conductor Cooper came down out of the cupola and informed him that train No. 306 was due out of Spokane, but the conductor was not sure whether it was due out at 7 or 7.05 a.m. Flagman Mueller said he told the conductor that he was not sure as to the time either, but thought it might be 7.05 a.m., and the conductor then went back into the cupola. Flagman Mueller got his red flag and two torpedoes and went back about two car-lengths, thinking that it was not necessary to go out very far in restricted speed territory. On seeing the motor car rounding the curve, however, the flagman started running back, waving stop signals with his flag and hat, saying that he did not have time to put down torpedoes. He got back seven or eight car-lengths and as the motor car passed him he noticed that the motorman had his head down and shouted to him, and he said the motorman raised up, with train orders in his hand,

and looked at him, but at this time the flagman realized that the accident was inevitable. He estimated the speed of the motor car to have been about 35 miles per hour or more when the accident occurred, no attempt having been made by the motorman to set the brakes. Flagman Mueller who was from the Pasco Division, the same as the other members of this crew, further stated that he was familiar with the schedule of all trains and knew just when they were due, that there was an Idaho Division time-table in the caboose which the conductor would leave on the table, and that they all used it, sometimes the conductor would put the time-table in his pocket, however, which was the case on this particular occasion. Flagman Mueller felt that he had complied with the flagging rule in going back only seven or eight car-lengths, saying that had the following train been a steam train he probably would have gone back farther, and he had assumed also that train No. 306 would approach at a speed not to exceed 20 miles per hour, in accordance with the rules, and that it could be brought to a stop without incident. He was fully aware of the fact that it was his duty to afford proper protection against first-class trains within yard limits, but said he was relying on the safety restrictions and his supposition that the motorman would obey the rules.

Middle Brakeman Graham, of extra 1820, stated that he knew train No. 306 was due to leave Spokane at 7 a.m., and that on looking out of the cupola window he saw it approaching around the curve, about forty-seven or forty-eight car-lengths distant, traveling at a speed of at least 30 miles per hour. Middle Brakeman Graham got down out of the caboose and proceeded to the north side of the track, about one car-length back of the caboose, but the conductor remained in the cupola. At this time Flagman Mueller was about six or seven car-lengths in the rear of the caboose and going westward, and shortly afterwards the accident occurred, at which time the speed of train No. 306 in his estimation had not been reduced. Middle Brakeman Graham said that there was no thought in his mind that the motor car would strike the caboose when he got down out of the cupola.

Motorman Harrison, of train No. 306, stated that the only train order he received was a slow order, which he received and read at Spokane, and it related to a point located east of Yardley. After departing from the depot a speed of between 18 and 20 miles per hour was attained and he said he permitted the motor car to drift in second gear around the curve approaching the point of accident. He saw what he thought was a string of cars and did not realize that it was the rear end of extra 1820 until it was

not more than 400 feet distant. About the same time he noticed the flagman, who was about 75 feet in the rear of the caboose, and he said that the flagman started to run, waving his arms and the unfurled flag, whereupon he applied the air brakes in emergency, but too late to avert the accident. He thought that the wheels skidded but estimated that the speed of the motor car had been reduced to about 6 or 8 miles per hour when the collision occurred. The air brakes had been tested before departing from Spokane and worked properly. Motorman Harrison denied that he had his head down or was reading the train order when approaching the point of accident, but thought that smoke from a switch engine which ^{was} working on a track on the inside of the curve might have obscured his view of the caboose, although he was not certain as to this nor did he recall whether the sun affected his vision.

Conductor Knowles, of train No. 306, stated that he was busy taking up transportation and the first he knew of anything wrong was when the accident occurred; he felt no air-brake application made. Conductor Knowles said that the speed of the motor car was not excessive and he estimated it to have been about 20 miles per hour at the time of the accident, saying that there would have been no object in running at a speed of 35 miles per hour as they left Spokane right on time and had 11 minutes in which to make Yardley, the next station, 3.5 miles distant.

Engineman Sampson, of extra 1820, said he did not whistle out a flag when stopping at the OWR&N Co. crossing, it not being customary in view of a city ordinance against unnecessary whistling; this ordinance, however, specifically provides for signalling to flagman. Statements of other members of the crew of extra 1820, added nothing additional of importance. Fireman Quimby, of a nearby switch engine, saw train No. 306 drifting at a speed of 20 miles per hour, did not think it was reducing speed as it approached, and called to his own engineman to whistle them down, which was done. This statement was corroborated by the engineman of the switch engine. Master Mechanic Blake said that shortly after the accident he found the brake valve on the motor car in the emergency position. Tests made subsequent to the accident, with the same motor car that was involved in the accident, developed that the rear end of the caboose could first be seen a distance of 1,539 feet, although from that point it could not be determined on which track the caboose was standing. On reaching a point 809 feet from the caboose, however, it could be definitely determined that the caboose was on the eastbound main track. Tests with another gas-electric motor car, similar to motor car B-6, disclosed that with the engine shut off and the car drifting in second gear, it could be brought to a stop from a speed of 20 miles per hour by means of an emergency application in a distance of 137 feet, while at

a speed of 15 miles per hour it could be brought to a stop in a distance of 70 feet.

Conclusions

This accident was caused by the failure of Conductor Cooper and Flagman Mueller, of extra 1820, to afford proper protection for the rear end of their train, and by the failure of Motorman Harrison, of train No. 306, to maintain a proper watch of the track ahead.

Under the rules of this railroad flagmen are required to go back immediately and protect their train without waiting for a signal or instructions to do so. Flagman Mueller knew full well that he should have afforded proper protection against first-class trains within yard limits, but said that he did not deem it necessary to go back very far as this was restricted speed territory and he assumed that the following train, which he knew to be a motor car, would be operated in accordance with the rules. There was no ground for any such assumption on his part; instead of practically ignoring the rules as they related to his own actions and depending on the other man to be 100 per cent perfect, he should have made sure that his own conduct was according to rule, going back a sufficient distance to provide full protection and then putting down two torpedoes.

There was testimony to the effect that Conductor Cooper called the attention of Flagman Mueller to the fact that train No. 306 was due out of Spokane, but that the conductor was not sure whether it was 7 or 7.05 a.m., although there was a time-table in the caboose and the matter could have been easily determined. Why the conductor did not make it his business to see to it that the flagman actually went back a sufficient distance to afford proper protection is not known, as he was killed in the accident, but the fact that apparently he went back up into the caboose cupola after having cautioned the flagman about the following train would indicate that he placed implicit confidence in the flagman to comply fully with the flagging requirements.

Motorman Harrison said that the speed of his train was not more than 20 miles per hour, that he did not realize that the train ahead was on the eastbound track until it was only about 400 feet distant, and that he then applied the air brakes in emergency. Not only did the conductor of this train say that he did not feel any application of the air brakes prior to the occurrence of the accident, but the tests conducted subsequently showed that from a distance of 809 feet it could be determined that the caboose

was standing on the eastbound track, and also that a motor car similar to the one involved in the accident could be stopped from a speed of 20 miles per hour within a distance of 137 feet with an emergency application of the air brakes. The results of these tests can not be reconciled with the motorman's statements in any way, and can only lead to the conclusion that he was not paying proper attention to the operation of his train, otherwise he would have been able to stop without difficulty regardless of the negligence of Flagman Mueller.

There was evidence to the effect that it was the practice not to whistle out a flag within the city limits. The city ordinance mentioned, however, merely provided that it should be unlawful for any person operating a locomotive within the limits of the City of Spokane to sound or permit to be sounded the whistle thereof, except to prevent accident not otherwise avoidable, or to signal an interlocking plant or to communicate with a flagman. Instructions had also been issued by the railroad company against the unnecessary use of steam whistles on locomotives. Undoubtedly the practice arose as a result of a misunderstanding of the ordinance and of the instructions; neither of them, however, contained anything against whistling out a flag, and steps should be taken to have those concerned informed accordingly.

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

Respectfully submitted,

W. P. BORLAND,

Director.