# INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE GREAT NORTHERN RAILWAY NEAR ELK PARK, MONT., ON NOVEMBER 12, 1929.

February 21, 1930.

To the Commission.

On November 12, 1929, there was a collision between a passenger train and a light engine on the Great Northern Railway near Elk Park, Mont., which resulted in the death of 1 employee and the injury of 17 passengers, 8 employees and 1 express messenger.

## Location and method of operation

This accident occurred on the Second Sub-division of the Butte Division which extends between Great Falls and Butte, Mont., a distance of 163.74 miles, and is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. Helper engines are used at different points on account of the heavy grades but operate mostly out of Butte and between Butte and Clancy where the heaviest grades are encountered, Clancy is located 57.37 miles east of Butte. Wyes are located at Woodville and Elk Park, 9.43 miles and 17.79 miles east of Butte, respectively. The eastward movements of helper engines between Elk Park and Clancy, a distance of approximately 40 miles, are made backing up so that the engine will be headed in the proper direction when coupled to the train to be helped at Clancy. The accident occurred at a point 1 mile east of Elk Park, Mont., approaching this point from the east there is a compound curve to the right 1,225 feet in length, the curvature varying from 3° 30' to 5°, followed by tangent track for a distance of 235 feet, the accident occurring at a point 13 feet from the eastern end of this tangent. Approaching from the west there is a 7° curve to the right 910.4 feet in length, tangent track for a distance of 463 feet, then a 5° 30' curve to the right 380 feet in length, followed by the tangent track on which the accident occurred. The grade for westbound trains is 1.2 per cent ascending from a point about one-half mile east nearly to the point of accident where it reaches a maximum of 2.0 per cent. The grade for eastbound trains approaching the point of accident is descending and varies from 1.95 to 2.2 per cent.

The view had by an engineman of a westbound train is limited on account of a cut on the inside of the curve approaching the point of accident, the range of vision being about 1,100 feet from a point about 480 feet from the leaving end of the curve to a point at about the center of the 5° 30' curve immediately west of the tangent track on which the accident occurred. The view had by an engineman on eastbound light engine, backing up, is restricted to the length of the tangent on which the accident occurred.

The weather was clear at the time of the accident which occurred at 7.38 p.m.

## Description

Westbound passenger train No. 237 consisted of one combination mail and baggage car, one smoking car, one coach and one cafe and parlor car, in the order named, all of wooden construction, hauled by engine 1721 and was in charge of Conductor Huestis and Engineman Sieben. This train departed from Great Falls at 2.00 p.m., left Basin, the last open office, 12 miles east of Elk Park, at 7.15 p.m., two minutes late, and collided with extra 1968 while traveling at a speed estimated to have been from 25 to 30 miles per hour.

Extra 1968 consisted of engine 1968, running light, and was in charge of Engineman Powell and Fireman Hastie. The crew of this train received train order No. 56, Form No. 19, directing them to run as extra from Butte to Clancy and to meet No. 673, engine 1356, at Clancy. Extra 1968 departed from Butte at 6.30 p.m., with the engine headed east, on arriving at Elk Park the engine was turned and it proceeded eastward, backing up, until it collided with passenger train No. 237.

Engine 1721 penetrated the tender of engine 1968 and mounted the tender frame, stopping about halfway through the tender in an almost upright position, engine 1721 and the rear end of 1968 sustained considerable damage. The remaining equipment of train No. 237 was not derailed and received only slight damage. The employee killed was the fireman of engine 1968.

Summary of evidence

Engineman Sieben, of train No. 237, stated that after leaving Basin his train was running on schedule time. Approaching the point where the accident occurred, as the train rounded the curve the headlight of his engine shone on the tender of engine 1968 which he thought was about 2 or 3 car lengths ahead. He immediately applied the air brakes in emergency but he did not think that the speed of his train was materially reduced before the collision occurred. He estimated the speed of his train at the time of the accident to have been about 30 miles per hour. Engineman Sieben stated that the air brakes had been tested at Great Falls and they worked properly en route. He further stated that due to the headlight of his own train shining so brightly on the tender of engine 1968 he could not tell whether there were any lights of any kind on the rear of that engine. In the last week or ten days he had met helper engines once or twice at Elk Park.

Fireman Crawford, of train No. 237, stated that the first he knew of anything wrong was when Engineman Sieben called to him. He then looked out and saw the tender of engine 1968 ahead. He estimated the speed of their train at the time of the accident to have been about 27 or 28 miles per hour. Conductor Huestis and Brakeman Fleming also estimated the speed of their train to have been between 25 and 30 miles per hour.

Fireman Hastie, of engine 1968, was killed as a result of the accident and Engineman Powell sustained such serious injuries that it was impossible for him to be interviewed until December 17, more than a month after the occurrence of the accident. At this time Engineman Powell's memory of what occurred was not entirely clear, he stated that he looked at his watch before leaving the wye at Elk Park and he figured he had time to reach Spur 5, which is located 2.89 miles east of Elk Park, before the arrival of train No. 237, although he could not remember the time shown by his watch. He stated that very often he had reached Spur 5 while in helper service before the arrival of train No. 237, and he expressed the opinion that on the day of the accident something must have gone wrong with his watch. A subsequent statement was obtained from Engineman Powell on January 31, 1950, in which he reiterated his belief that his watch must have failed. He said that when

he departed from Elk Park he pulled out his watch and said to the fireman that they had 15 minutes before train No. 237 was due out of Bernice, 8.04 miles beyond, and that they could reach Spur 5. Engineman Powell said that the fireman did not look at his own watch, and in fact he did not know whether or not he had one. He further stated that he had always relied on his watch, that it had been compared six days prior to the occurrence of the accident, and that so far as he knew he had never misread it.

Chief Dispatcher Huhn stated that it is the practice to call helper engines at Butte to go to Clancy to assist heavy freight trains over the mountain from Clancy to Butte, but it was not the practice to use pilot conductors or brakemen with helper engines and that if any train orders were necessary between Butte and Clancy the engine-man would get them from the dispatcher over the telephone.

Traveling Engineer Stone stated that engine 1968 was not a regularly assigned helper engine and that the tender of that engine was not equipped with a back-up headlight, but that engines regularly assigned to this service were so equipped.

## Conclusions

This accident was caused by extra 1968 failing to clear for an opposing superior train as required by the rules.

It is apparent from the evidence that either Engineman Powell's watch was wrong or that he misread it. According to his statement Engineman Powell looked at his watch at Elk Park and figured that he had 15 minutes before train No. 237 was due out of Bernice, 8.04 miles beyond, and that he had plenty of time to reach Spur 5, 2.89 miles east of Elk Park. The collision occurred, however, when he had travelled a distance of only about one mile. Fireman Hastie was killed as a result of the accident but it appears from the engineman's statement that he did not check the time by his own watch when it was decided to proceed to Spur 5 to meet train No. 237.

Had a block signal system been in service on this line this accident would probably not have occurred. There was an average of about 12 train movements daily over this line during the 30-day period preceding the date of this accident.

All of 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 . . BORLAND

Director.