

January 4, 1911.

**MEMORANDUM TO COMMISSIONER McCHORD  
relative to accident on the Northern Pacific Railway,  
November 16, 1911.**

Draft submitted by the Chief Inspector of Safety Appliances  
as a basis for the report of the Commission.

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On November 17, 1911, the Northern Pacific Railway reported by telegraph a collision occurring at 2:20 P. M., November 16, near Spire Rock, Mont., between east-bound passenger train second No. 174 and west-bound work extra No. 41. This accident was investigated by Inspector Winter, and a synopsis of his report is given below.

Work extra No. 41, in charge of Conductor Rudiger and Engineman Rugamer, consisted of two flat cars and a caboose, hauled by engine No. 41. During the day this train had been working at various points on the road, and at about 2:10 P. M. it left Pipestone, Mont., west-bound, the two cars and caboose being pushed ahead of the engine. The train was within three miles of Spire Rock when the collision occurred.

Passenger train second No. 174, consisting of engine No. 2131 and one passenger coach, east-bound from Butte, Mont., to Logan, Mont., in charge of Conductor Mudgett and Engineman Stapp, passed Spire Rock at 2:10 P. M., the same time that work extra No. 41 left Pipestone, and collided with the extra at a point about three miles east of Spire Rock. This collision caused the death of the conductor of work extra No. 41, 1 road-

master, 1 section foreman, 1 interpreter, and 2 laborers, the first four of whom were cremated. One brakeman and 3 laborers were injured. All of the dead and injured were riding in the caboose of work extra No. 41. The speed of the work train at the time of the collision was about 18 miles per hour, while that of the passenger train was about 7 miles per hour.

The accident happened in a deep rock cut on an 11° curve. The grade at the point of the accident is 2.2% sloping towards the east. On account of the sharp curve and the narrow walls of the cut it is impossible to secure a view of the track for a distance of more than one hundred feet. The weather at the time of the accident was clear and cold.

This division of the Northern Pacific Railway is a single track line. Block signals are not used, trains being operated by means of train orders. At 5:29 A. M. the crew of work extra No. 41 received the following order:

"Form 31, Train Order No. 215.  
To C. & E. -- All exas and Helpers east & Eng. 41:  
Eng. 41 will work extra 6:40 a.m. until 7:00 p.m. between Homestake and Pipestone, and will protect against Eng. Extra 3002 and 3001 east after 11:00 a.m., and against Eng. Extra 3007 east after 3:30 p.m. 11/16/11.

A. V. B.  
Comp 5:29 a.m. Tietz."

Homestake and Pipestone, the stations between which this train was to work, are 15.6 miles apart.

At 10:55 A. M. the crew of the work extra received train order No. 224, reading as follows:

"Form 19, Train Order No. 224, Nov. 16, 1911.  
To C. & E. Work Extra 41, at Pipestone.  
Second No. 174 will run two hours and fifteen minutes late.  
Comp 10:55 a.m.

A. V. B."

At 11:50 A. M., work extra No. 41 let first No. 174 pass and met west-bound freight No. 651 at Spire Rock, and then proceeded eastward. Brakeman Wolf states that, at a point about two miles east of Spire Rock, he asked Conductor Rudiger if he should get off there and flag, and that the conductor said, "Yes, flag the helpers," that is, east-bound extras Nos. 3002, 3001 and 3007, mentioned in order No. 215, which were the engines used to assist trains up the steep grades on this division. Brakeman Wolf then left the train, which proceeded to Pipestone. At 2:10 P. M. Conductor Rudiger signalled Engineman Rugamer to proceed westward again, and when the latter called his attention to second No. 174, the conductor replied that he had a flag protecting his train. The extra then started back toward Spire Rock, a distance of 4.9 miles, colliding with second No. 174 at a point nearly half way between the two stations.

Second No. 174 passed Spire Rock at 2:10 P. M., two hours and fifteen minutes late, as required by order No. 224, and met Brakeman Wolf at a point about two miles east of Spire Rock. He boarded the engine, and Engineman Stapp asked him what he was doing there. He replied that he was flagging the helpers. Thereupon the engineman asked him if he was to hold him, to which the brakeman replied in the negative, and after looking at his watch stated that the work extra should be into clear at Pipestone. This was about 2:18 P. M. Brakeman Wolf then left the engine, which was running at that time at a speed of about 12 miles per hour, at a point nearly a mile east of where he boarded it and only about 1,000 feet from the point

of the collision. When Engineman Stapp saw the caboose of work extra No. 41, within about 100 feet of his train, he applied the air brakes in emergency and had reduced the speed of his train to about 7 miles per hour when the collision occurred.

The evidence taken at the Coroner's inquest shows conclusively that Brakeman Wolf and Conductor Rudiger did not understand each other with reference to protecting by flag, and that Conductor Rudiger thought his train was being protected against second No. 174. Standard operating rules require that work trains shall at all times keep clear of first class trains, and the conductor and engineman in charge of this extra both knew that they were leaving Pipestone on the time of second No. 174, under order No. 224.

All of the employees involved were experienced railroad men of good character. They had had the required amount of rest and had not been on duty in excess of the statutory period.

This accident was caused by work extra No. 41 occupying the main track when the conductor and engineman both knew that second No. 174, a passenger train, had the right of track, together with the misunderstanding of the flagging instructions given to Brakeman Wolf by Conductor Rudiger.

It is recommended that an adequate block signal system be installed. Had a block signal system been in use, this accident would probably have been prevented, notwithstanding

ing the misunderstanding of the flagging instructions involved.

Respectfully submitted,

Chief Inspector of  
Safety Appliances.