

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
CHICAGO, ROCK ISLAND & PACIFIC RAILWAY AT ELMONT, KAN.,
ON DECEMBER 20, 1919

February 11, 1920.

On December 20, 1919, there was a head-end collision between a passenger train and a freight train on the Chicago, Rock Island & Pacific Railway at Elmont, Kansas, which resulted in the death of 1 employee and the injury of 68 passengers and 10 employees. After investigation of this accident, the Chief of the Bureau of Safety reports as follows.

This accident occurred on Sub-division 36-A of the Kansas Division of the Second District of the Chicago, Rock Island & Pacific Railway, which sub-division is known as the St. Joseph Line and extends from St. Joseph, Mo., to Topeka, Kan., a distance of 89.3 miles. It is a single-track, branch line, running east and west, and train movements are governed by time-table and train orders transmitted by telephone. No form of block signal system is in use.

The point of accident is about 1,730 feet east of the passing track switch at Elmont. Approaching this point from the west, there is a 1-degree curve to the left about 2,800 feet in length, a tangent 2,170 feet in length and then a 50-minute curve to the right about 2,800 feet in length, the accident occurring about 1,000 feet east of the western end of this curve. Approaching the point of accident from the east there are about 3,100 feet of tangent track, followed by 1,800 feet of the 50-minute curve mentioned above. This curve is cut through the side of a hill and the embankment on the inside of the curve is about 20 feet high, restricting the view of the track ahead from an approaching engine to about 1,100 feet. The grade in the vicinity of the point of accident is about .5 per cent descending for westbound trains. The weather at the time of the accident was cloudy.

Eastbound passenger train No. 412, in charge of Conductor Sumner and Enginemen Hartigan, consisted of engine 1005, 1 baggage car and 2 coaches. This train left Topeka, Kansas, at 3.50 p.m. 20 minutes late on its schedule time. The crew held a bulletin order, which has no bearing on the accident, a proper clearance card and train order No. 81 reading as follows:

No. Four Twelve 412 Engine 1005 wait at Elmont
until Four Fifteen 415 p.m. for No. Eighty One
81 Eng 1987.

Train No. 412 arrived at Elmont, 7.9 miles east of Topeka at 4.06 p.m. according to the train sheet and departed at 4.07 p.m., 21 minutes late on its schedule, but 8 minutes ahead of the time specified in train order No. 81. At 4.08 p.m., while traveling at a speed of about 20 miles an hour this train collided with westbound freight train No. 81.

Westbound freight train No. 81, was in charge of Conductor Kinney and Engineman Duncan and left St. Joseph, Mo., at 6.50 a.m. on time. This was a local train and it picked up and set out cars at various points en route. At Hoyt, which is located 6.2 miles east of Elmont and which was the last open telegraph office east of the point of accident, the crew received a copy of train order No. 81, above quoted. The train left Hoyt at 3.55 p.m., 50 minutes late on its schedule time, consisting at that time of engine 1987, 22 loaded cars, 18 empty cars and a caboose, and while it was traveling at a speed of from 10 to 12 miles an hour collided with eastbound passenger train No. 412.

Engine 1005 of the passenger train was derailed and came to rest upright and interlocked with engine 1987. The tender of engine 1005 had its cistern shoved off its frame and up into the cab of the engine. The baggage car body became severed from its trucks and was shoved forward about 6 feet onto the tender frame. The two coaches were not derailed and only one was slightly damaged. Engine 1987 of the freight train was derailed and its front end was crushed in. The first three freight cars were completely destroyed, the body of the fourth car was torn from its trucks and the fifth car of the freight train was derailed. The employee killed in this accident was Engineman Hartigan of the passenger train.

Conductor Sumner, of train No. 412, stated that before leaving Topeka on the day of the accident, both he and Engineman Hartigan compared their watches with Standard Time and neither of the watches was more than 30 seconds from the correct time. He also received train order No. 81, directing his train to wait at Elmont until 4.15 p.m. for train No. 81. He signed this order, read it back to the operator and then took a copy to Engineman Hartigan, who at the time was engaged about the engine. He gave the engineman's copy of the order to the fireman who passed it to the engineman and the engineman read it aloud. The conductor was unable to say whether or not the fireman heard it, but that the engineman read loudly enough so that the fireman might have heard had he been listening attentively. Conductor Sumner stated that as he started away from the engine, he said, "Wait until 4.15 at Elmont for 81," and the engineman nodded his head in acknowledgement, the train left Topeka at about 3.52 p.m. He was in the habit of putting his orders under a ticket box which he kept on the front seat of the smoking car and the brakeman invariably read them when he came through the train after it started. On the day of the accident, however, the train was over-crowded with passengers and he found it necessary to place the box behind the stove. He kept his copy of the train order in his pocket and forgot to show it to his brakeman on account of being exceedingly busy collecting tickets from the large number of passengers. About fifteen passengers were discharged at Elmont, the train standing at that station about 2 minutes, after which he informed his brakeman that that was all and he believed the brakeman gave the engineman a signal to proceed. The conductor acknowledged that his train left Elmont before 4.15 p.m. and that due to the crowded condition of the train,

he overlooked the train order, not thinking of it until the emergency application of the brakes was made just before the collision occurred. He stated that the collision occurred at 4.10 p.m. and he estimated the speed at that time at about 20 miles per hour.

Brakeman Miller, of train No. 412, corroborated the testimony of his conductor relative to their custom concerning train orders and stated that on the day of the accident he had no knowledge of the existence of train order No. 81. He stated that approaching Elmont he heard the engineman sound the station whistle but did not hear whistle signal 14-S, two short and one long blast, which is required to be sounded by the engineman after the station whistle to indicate to the train crew that time-table restrictions to be observed or train orders to be executed at that station have not been forgotten. Brakeman Miller further stated that after the Elmont passengers were discharged, the conductor said to him, "All passengers out," whereupon he gave the engineman a signal to proceed. He stated that the train order board at Elmont was in the clear position and that he had no warning of the accident before it occurred.

Fireman Huey, of train No. 412, stated that just prior to leaving Topeka, the conductor came to the engine and handed him an order and clearance card and he immediately handed them to the engineman without looking to see what they were. He then engaged himself with the setting of the lubricator and did not pay attention to Engineman Hartigan when he read the order to the conductor. He stated that it was Engineman Hartigan's custom after reading orders to hand them to him to read, but on the day of the accident he became busy with the fire and remained so until some distance from Topeka. He therefore did not read the order and did not know its contents. Fireman Huey further stated that he did not know at what time his train arrived at Elmont or at what time it departed. Approaching the point of collision he was working on his fire and the first intimation he had of the accident was an emergency application of the brakes. He immediately looked up, saw the engine of train No. 81 about 2 car lengths away, and then jumped, he estimated the speed of his train at the time of the collision at about 25 miles per hour.

Engineman Duncan, of train No. 81, stated that Elmont was the time-table meeting point with train No. 412, but on the day of the accident he would not have been able to make it without an order giving his train more time on train No. 412. He received train order No. 81 at Hoyt, this order giving his train until 4.15 p.m. to reach Elmont for train No. 412. He stated that his train left Hoyt at 3.55 p.m. and this gave him ample time in which to reach Elmont at 4.10 p.m., 5 minutes before train No. 412 was due to leave on its run-late order. He stated further that he had made an application of the brakes preparatory to taking the siding at Elmont and had just released the brakes when his fireman shouted, "They're coming there," the trains at that time being between 300 and 400 feet apart. He immediately applied the air brakes in emergency and got off his engine. He

thought the speed of his train at the time of the collision was about 10 or 12 miles an hour, having been reduced from 15 or 18 miles an hour by the emergency application of the brakes. Upon looking at his watch immediately after the accident he found it was between 4.07 and 4.08 p.m.

The statements of the entire crew of train No. 81, corroborated those made by Engineman Duncan.

Dispatcher Carter stated that he was familiar with that part of rule No. 208, which requires, when practicable that a train order be sent to the operator at the meeting point simultaneously with sending it to the operators who are to deliver the orders to the train crews. While it was his custom to follow the requirement of the rule, he did not think it was mandatory and on the day of the accident he did not consider it practicable to place the order with the operator at Elmont on account of difficulty encountered with the ringing apparatus of his selector clock. He said that he thought this trouble was due to the attachment of a field telephone to the dispatcher's wires by a steel gang which was working on the division, and that he twice reported the trouble to the wire chief. At 3.30 p.m. when ready to place train order No. 81 with the operator at Topeka for train No. 412, he tried twice to ring the operators at Elmont and Hoyt for the purpose of placing the order with them simultaneously, but was unable to get a response from either office. He therefore placed the order with the operator at Topeka, after which he tried again to get the operators at Elmont and Hoyt, but with the same result. By means of the Morse circuit he succeeded in getting the operator at Hoyt to the telephone and gave him the order for train No. 81. He stated that inasmuch as he had tried three times to ring the operator at Elmont he decided it was not practicable to place the order there. He further stated that Elmont being the first station east of Topeka and only a short distance therefrom, he thought it was perfectly safe to omit sending the order there. He said that had the office at Elmont been closed for any reason, as on Sundays or holidays, it would have been in accordance with the rules to omit placing the order at that point.

Wire Chief Jones corroborated the majority of the statements of Dispatcher Carter relative to the trouble with the ringing apparatus of the dispatcher's selector clock and the probable cause of it. He stated, however, that he knew of no trouble between the hours of 2.00 and 5.00 p.m. on the day of the accident.

Operator Layman, located at Elmont, stated that he had no knowledge of any wire trouble, but could not recall that the dispatcher's bells in his office had rung at any time on December 20th prior to the accident. He stated that he was in his office continuously from 2.00 to 4.00 p.m., with the exception of between 3.10 and 3.20 p.m., when he went to the post office, a distance of about 1,000 feet, after the mail. He further stated that train No. 412 arrived at his station at 4.06 p.m. and departed at 4.07 p.m. He stated also that he had no orders for

the crew of this train and knew nothing of their having an order which required them to wait there until 4.15 p.m. for train No. 81. He said that his signal board was in the clear position when train No. 412 arrived and departed from his station.

This accident was caused by the failure of the crew of train No. 412 to wait until 4.15 p.m. at Elmont as required by train order No. 81.

The testimony of Conductor Sumner disclosed that the crowded condition of his train and the large amount of work involved in collecting tickets caused him to forget train order No. 81. Why Engineman Hartigan failed to comply with train order No. 81 cannot be explained as he was killed in the collision. However, inasmuch as his watch was not more than 30 seconds from correct and inasmuch as the evidence indicates that he did not sound whistle signal 14-S a proaching Elmont, it is believed that he also forgot the order.

Rule 210-A of the Rules and Regulations of the Operating Department of the Chicago, Rock Island & Pacific Railway Company reads as follows:

"Conductors must show all train orders to their Flagman and Brakemen, and Enginemen to their Fireman and, when practicable, to the Head Brakeman, who are required to read and bear them in mind. Conductors will also inform their Porters of the contents of their orders."

Had this rule been observed by Conductor Sumner and Engineman Hartigan, it is probable that the accident would not have occurred. Fireman Huey showed a lack of the proper appreciation for the responsibilities resting upon his position in failing to pay strict attention to the engineman's reading of the train order, and then failing to read it himself afterward. He was cognizant of the fact that his engineman had received an order at Topeka and it was his duty to ascertain its contents. Brakeman Miller evidently did not even know of the existence of train order No. 81 and it was his duty to inquire about train orders if his conductor failed to mention the matter to him. Under systems where time-table and train orders are the sole methods by which train movements are governed, no duties should be allowed to interfere with the firemen and brakemen learning the contents of all train orders.

This accident is another example of the weakness of the train order systems of operation and serves to call attention again to the necessity of adopting some form of block signal system. Had an adequate block system been in effect on this line this accident undoubtedly could have been averted.

Conductor Sumner entered the service of the Chicago, Rock Island & Pacific Railway as brakeman in September, 1887, and was promoted to conductor in December of the same year. His service record was clear. Engineman Hartigan entered the service as fireman in December, 1874, and was promoted to engineman in October, 1886. His record was also clear.

At the time of the accident the crew of train No. 81 had been on duty 9 hours 45 minutes, after off-duty periods amounting to 11 hours and 55 minutes. The crew of train No. 412 had been on duty 5 hours and 38 minutes in a period of 8 hours, prior to which all had had off-duty periods amounting to at least 11 hours and 45 minutes.