

FEBRUARY 9, 1918.

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE ATCHISON, TOPEKA & SANTA FE RAILWAY NEAR HESPERIA,
CALIF., ON DECEMBER 30, 1915.

On December 30, 1915, there was a rear-end collision between two eastbound passenger trains on the Atchison, Topeka & Santa Fe Railway near Hesperia, Calif., which resulted in the injury of 4 passengers and 4 employees. After investigation of this accident, the Chief of the Division of Safety reports as follows:

The portion of the Los Angeles Division of the Atchison, Topeka & Santa Fe Railway upon which this accident occurred is single track. No block signal system is in use, trains being operated by time-table and train orders. The accident occurred at a point nearly 1 mile west of Hesperia, approaching which point from the west, the track is straight for at least 1 mile. Approaching the point of accident from Summit, a station a little more than 10 miles west, the average grade is approximately $1\frac{1}{2}$ per cent descending. There were no slow orders or speed restrictions on this part of the line for the class of locomotives on the trains involved in this accident. At the time of the accident there was a blinding snow storm with the wind from the southwest, the snow on the ground being fully 2 feet in depth.

Eastbound passenger train No. 8, consisting of locomotives 1232 and 1500, 1 baggage car, 1 combination baggage and mail car, 1 smoking car, 1 chair car, 1 deadhead Standard Pullman car and 1 deadhead coach, was in charge of Conductor Stearns and Engineer Bursk and Atkinson. At Summit, the crew in charge

received a copy of train order No. 29, reading as follows:

"No. 207 engine 3438 meet No. 8 engine 1300
and No. 8 engine 1370 at Oro Grande, No. 220
engine 3435 at Victorville No. 220 take siding."

This train registered out of Summit at 1:32 p.m., 1 hour and 22 minutes late and passed Lugo, 5.9 miles beyond Summit at 1:45 p.m. After passing Lugo, the heavy snow-storm caused trouble to be encountered with the air pump of the leading locomotive and at 1:54 p.m. the train came to a stop near Mile Post No. 46, which is 4.3 miles east of Lugo. Train No. 8 was 3 minutes slower in traveling the 10.1 miles between Summit and the point where it stopped than schedule time. After the train had stopped, the flagman started back to protect the rear end, but had gone only a short distance when train No. 2 passed him and collided with his train.

Eastbound passenger train No. 2, known as the Tourist Flyer, consisted of locomotive 1370, 1 baggage car, 1 smoking car, 1 chair car, 1 Tourist sleeping car and 2 Standard Pullman cars, and was in charge of Conductor Fuller and Engineman Wallace. At Summit this train received a copy of train order No. 29, quoted above. The flagman's report shows the train to have left Summit at 1:44 p.m., 1 hour and 19 minutes late and to have passed Lugo at 1:52 p.m. At 1:57 or 1:58 it collided with train No. 8, this train having traveled the 10.1 miles between Summit and the point of accident in at least 8 minutes less than schedule time. The estimations made of the speed of train No. 2 at the time of the collision vary from 8 to 20 miles an hour.

As a result of the collision the rear coach of train No. 8, which was of wooden construction, was telescoped and practically

demolished. The Pullman car just ahead of this coach was also somewhat damaged. Locomotive 1370 was badly damaged, its forward trucks being derailed, while the baggage car immediately behind was slightly damaged.

Engineman Bursk, of the leading locomotive of train No. 8, stated that leaving Summit he made a running test of the air brakes and they worked properly. Between Summit and the point of accident it was impossible for him to maintain the speed designated by the time-table as he had to plow the snow and also because the flying snow interfered very materially with his range of vision. He stated that there is a little hill just east of Lugo and as he descended this, he made an application of the air brakes, but had trouble in releasing them. He stated that this was the first trouble he had had and at that time thought it was due to a leaky hose. He made two other applications of the brakes between Lugo and the point of accident and had trouble in releasing, having lost his main reservoir pressure. His pump was working but did not seem to supply the proper amount of air. This condition gradually brought the train to a stop, and upon investigation, he discovered that about 1½ inches of snow had collected on the air strainer which had stopped the air intake of the pump. He stated that he did not signal for the flagman to protect the rear of the train and that had he known what the trouble was before the train stopped, he would have signalled Engineman Atkinson of the second locomotive, so to a charge of the air brakes. He stated that soon after the train stopped Engineman Atkinson came into the cab of the leading locomotive and that he told him what-

the trouble was and asked him to take charge of the air. Engineman Atkinson then returned to his own locomotive, sounded the signal for the flagman to protect the rear of the train and released the brakes. He stated that at 1:57 p.m. they were ready to start when the collision occurred. Engineman Bursk further stated that he did not think train No. 2 would come down from Summit as fast as they did and therefore did not realize the danger in which his own train was.

Engineman Atkinson, of the second locomotive of train No. 2, stated that although the leading locomotive of train No. 2 is usually cut off at Summit, it was decided on the day of the accident to run the leading locomotive through on account of the heavy snowstorm. He stated that when ready to leave Summit he felt the leading locomotive start and gave his own engine steam, but the train failed to start. He then went over to the head locomotive to find out what the trouble was and claims that Engineman Bursk said to him, "The air seems to stick." Engineman Atkinson then went back and looked and upon finding the air to be all right, he informed Engineman Bursk to that effect, and he thinks Engineman Bursk again said, "The air seems to be stuck." Engineman Atkinson stated that he then returned to his own locomotive and when Engineman Bursk tested the brakes again they released properly, and the train left Summit. He further stated that he believes the difficulty which Engineman Bursk encountered at Summit was due to the deep snow on the track rather than to the failure of the brakes to release properly. Engineman Atkinson stated that a running test of the air brakes was made leaving Summit and that the brakes released properly. He noticed nothing unusual in the stop at Mile

Post No. 48 and supposed at first that they were at Hesperia, but upon going to the head locomotive learned that the intake pipe to the air pump was stopped up. He told Engineer Burak that they would have to get started again as soon as possible as train No. 2 was following closely and then went back to his own locomotive, whistled out the flagman, and had just cut in the air when the collision occurred.

The statements made by Fireman Cope of the leading locomotive and Fireman Patterson of the second locomotive practically agree with those made by their respective engineers.

Conductor Stearns, of train No. 2, stated that he was riding on the rear end of the train approaching Mile Post No. 48, and as the train slowed down, he threw off a lighted fuse which dropped into the snow and was buried. He stated that the flagman started back on a run just as the train came to a stop and that he watched the flagman until he had gone about 1 telegraph pole; he then started toward the forward end of the train, going through the train to the front end of the smoking car and getting on the ground there on the left hand side, he went along side of the train until he had reached the baggage car door, where on account of the deep snow he returned and stood on the smoking car platform when the collision occurred. He stated further that his train had been standing about 3 or 4 minutes when the collision occurred. In his judgment train No. 2 was moving at a speed of at least 15 or 20 miles an hour at the time of the collision. Conductor Stearns further stated that before reaching Summit he had had occasion to throw off fuses at two or three different times and all went into the snow and could not be seen, and therefore, although he knew

his train was losing time after leaving Summit, he did not throw off fuses along the way. Conductor Stearns stated that the accident occurred at 1:37 p.m.

Flagman Kempton, of train No. 8, stated that he noticed the air brakes being applied when about a mile and a half from Hesperia, but at first thought that they were arriving at the station. He soon discovered, however, that they were not and threw off a fuse which went into the snow and did not show. As soon as the train came to a stop he started back, running as fast as he could in the snow; when he had gone about 5 telegraph poles he lighted his fuse. He stated that he did not use any torpedoes because of the time he would have lost in digging the snow from the rails. He stated that he ran in the middle of the track and as train No. 2 approached he waved his burning fuse with one hand and his flag with the other and that the engineer answered his signals when about a telegraph pole from him. Flagman Kempton stated that it was snowing hard and that he could not see further than the distance between two telegraph poles. He was not certain as to the distance he had gone from his train when No. 2 passed him but estimated it to have been between 6 and 8 telegraph poles, while he estimated the speed of the Tourist Flyer as it passed him to have been 40 miles an hour. Flagman Kempton further stated that he had been back to flag and had stopped train No. 2 six times since leaving Bernardino at about 10:45 a.m. that day.

Brakeman Piper, who was deadheading on train No. 8, stated that he was riding in the rear coach of train No. 8 when it stopped near Mile Post No. 46 and he saw Flagman Kempton start back immediately. He saw the flagman pick up the fuse which had been

thrown off before the train had stopped and stated that it was still burning at that time. Brakeman Piper further stated that the snow-storm prevented his seeing the flagman after he had gone back about 2 telegraph poles. After the flagman had gone out of sight he heard the locomotive of train No. 2 whistle, immediately after which, it appeared in sight. In his opinion Flagman Kempton had gone back about 4 telegraph poles when the train passed him, but that he might possibly have been back 5 telegraph poles.

Engineman Wallace, of train No. 2, stated that he did not see train No. 3 leave Summit but knew that it left about 10 minutes ahead of his train. He stated that he made pretty good time as far as Lugo, but at that point reduced speed to about 35 miles an hour and claimed that he did not think he exceeded that speed anywhere between Lugo and the point of accident. Upon coming on to the straight track about 7 miles east of Hesperia he made an application of the brakes intending to slow down gradually into Hesperia. Shortly after he had done this he saw the dim outline of a man ahead and then noticed that the man held a fusee. Engineman Wallace stated that he immediately closed the throttle, applied the air in emergency, got down on the floor and went to the gangway; he then made one step back in and caught the safety wire attached to the safety valve in the air tank, but failed to get it; he then returned to the gangway and waiting until within a car length of train No. 3, jumped from his locomotive. He estimated the speed of his train to have been about 8 or 10 miles an hour when the collision occurred. He stated that the snowstorm, together with his great excitement, made it difficult to judge distances, but in his opinion the flagman of train No. 3 could not have been more than 6 or 7 car lengths from

the rear of his train when he passed him, as he thought he could have stopped within 9 or 10 car lengths, or possibly a little more under the existing conditions.

Conductor Fuller, of train No. 2, stated that he did not think his train was making any faster time than usual after leaving Lugo. He stated that he heard his engineman answer the flagman's signals and in his opinion his train traveled about 500 or 600 feet between that time and the time it collided with train No. 3.

Brakeman Whitelidze stated that he was riding in the rear car of train No. 2 when his engineman answered Flagman Kempton's signals and he went to the rear door. He saw Flagman Kempton going back and stated that on account of the blowing snow he could only see about 100 yards distance, but thought that the flagman must have been 5 or 7 telegraph poles back from train No. 2 when the collision occurred.

This accident was caused by the failure of Engineman Wallace of train No. 2 to run his train at a safe rate of speed in a heavy snow storm, knowing that he had left Summit 10 minutes behind train No. 3. Engineman Wallace exceeded his schedule running time between Summit and Mile Post No. 45 by at least 8 minutes, and although he stated that he did not exceed 35 miles an hour between Lugo and the point of accident, it is obvious from the fact that train No. 2 traveled the distance of 4.3 miles in from 5 to 6 minutes that the average speed was at least 43 miles an hour.

The conflicting statements as to the distance Flagman Kempton had gone from his train when train No. 2 passed him make it impossible to state definitely how far he was from the rear of his train, but the preponderance of the evidence indicates that he

started running back immediately as the train stopped, having prior to this thrown off a burning fuse. There was a violent snow-storm at this time and the snow was about 2 feet deep and he knew that train No. 2 was following closely, having on six occasions during this trip flagged that train. It would seem that he would under these circumstances go as fast and as far as he possible could and if the following train had been running with any degree of caution, it is believed it could have been brought to a stop in the distance it was flagged and the accident would not have occurred.

The portion of this division which is double track is equipped with block signals while the single track, where the necessity for protection is greater, is left unprotected to the extent that station block is not used at Summit for spacing trains, that being left entirely to the train register. This portion of the road is used jointly with the San Pedro, Los Angeles & Salt Lake Railroad and at times the traffic is heavy.

Engineman Wallace entered the service of the Atchison, Topeka & Santa Fe Railway as a fireman in November, 1900, and was promoted to engineman in November, 1904. Engineman Bursk entered the service as fireman in July, 1907, having been promoted to engineman in July, 1917, and William Kempton entered the service as brakeman in September, 1909.

The crew in charge of train No. 8 had been on duty 5 hours and 54 minutes at the time of the accident while the crew in charge of train No. 2 had been on duty 5 hours and 32 minutes.