

In re Investigation of accident which occurred on the Pennsylvania Railroad near Port Royal, Pa., March 9, 1916.

April 15, 1916

On March 9, 1916, there were two almost simultaneous side collisions on the Pennsylvania Railroad near Port Royal, Pa. These collisions involved an eastbound freight train, a westbound passenger train and some freight cars which were stored on one of the main running tracks between the two tracks on which the colliding trains were moving. These collisions and their resulting derailments resulted in the death of two employees and the injury of two passengers. After investigation of this accident the Chief of the Division of Safety reports as follows:

The Middle Division of the Pennsylvania Railroad, upon which this accident occurred, extending from Harrisburg, Pa., westward to Altoona, Pa., a distance of 130.8 miles, is a four track line. The tracks from north to south are numbered and used as follows: Track No. 4 westward passenger, No. 3 westward freight, No. 2 eastward freight, No. 1 eastward passenger. Train movements are protected on all tracks by automatic block signals. On account of, and in order to relieve, congestion of traffic on this Division, such parts of the main tracks as can be used for that purpose without interfering with the movement of trains are used for the storing of certain

classes of freight trains. At the time of the accident a number of trains were stored on track No. 3, extending from a point 4.2 miles east of, to a point about one mile west of, the point of accident. The accident occurred on a 1-degree 30-minute curve, and there is an ascending grade at that point of .5 per cent for westbound trains. The weather at the time was clear.

The trains involved in this accident were eastbound freight trains extra 21 and extra 1475 and westbound passenger train No. 23.

Eastbound freight train extra 21 consisted of 94 cars and a caboose, hauled by locomotive 21, and was in charge of Conductor Hartscock and Engineer Stewart. This train was running on track No. 2, and when it arrived at Denholm, 51.6 miles west of Harrisburg and 6.4 miles west of the point of accident, the crew in charge received a copy of the following message:

"To Exs. 3473 and 21 east: Cut your eng. off at CB, run around train and push it from Denholm and store on No. 3 east of Mifflin close up to cars already stored, open crossings and leave masts at M."

Locomotive 21 was run around its train at Denholm and pushed the train, using track no. 2 to Mifflin, 2.6 miles east of that point, where it was diverted to track No. 3. When the train passed Port Royal, 2.8 miles east of Mifflin, its speed

was about 4 miles an hour. At a point about 4,000 feet east of Fort Royal it was coupled onto the cars already stored on track No. 3, and the train was brought to a stop at about 10:35 p. m. The crew then got off the engine and returned to Hifflin with the caboose, arriving there at 10:51 p. m.

Eastbound freight train extra 1475 consisted of 79 cars and a caboose, hauled by locomotive 1475, and was in charge of Conductor Walker and Engineman Shell. This train, which was running on track No. 2, passed Hifflin at 10:26 p. m., and at about 10:36 p. m. collided with the wreckage of a buckled car that was fouling track No. 2 about a mile east of Fort Royal, while running at a speed of about 25 miles an hour. As a result of the accident, locomotive 1475 and the first nine cars of extra 1475 were derailed, the train continuing on the roadbed for a distance of 280 feet before coming to a stop with the locomotive and several cars astride the right rail of track No. 2 and leaning toward track No. 1. Four of the derailed cars came to rest at right angles with and extending entirely across both tracks Nos. 1 and 2. Three of the cars that were stored on track No. 3 were found to be wrecked, and two of them were found thrown to the north so as to foul track No. 4.

Westbound passenger train No. 23, known as the Manhattan Flyer, enroute from New York to Chicago, consisted of one combination baggage car and club car, five sleeping cars and one observation car, all of which were Pullman cars

of all-steel construction, hauled by locomotive 61, and was in charge of Conductor Smith and Engineman Trout. This train was running on track No. 4. It passed Vandyke, 4.5 miles east of the point of accident, at 10:32 p. m., on time, and was derailed by colliding with the freight cars fouling track No. 4, while running at a speed estimated to have been about 50 miles an hour. This collision occurred almost at the same place and about one minute after extra 1473 was derailed. As a result of the derailment, the locomotive of train No. 23 and the first five cars of that train, together with one pair of wheels under the sixth car were derailed. The engine and tender were overturned and, at a point several car lengths beyond the immediate point of derailment, went down a 15-foot embankment to the right, the engine coming to rest on its left side, while the remainder of the derailed cars in the train came to a stop without being overturned. Conductor Smith, of train No. 23, stated that at the time of the accident his train was running at a speed of about 50 miles per hour. He was riding in the third car in the train and the first intimation he had of anything wrong was a sudden and severe jar followed by the cars lurching to the north. He stated that he then knew that the cars were derailed and expected them to turn on their side. Both the engineman and fireman of train No. 23 were killed in the accident.

Conductor Hartsock, of extra 21, stated that his locomotive was placed on the rear end of his train at Denholm, and leaving that station he was riding on the head end of his train as it was being pushed eastward on track No. 3. He stated that near the watchbox east of Port Royal and about 1,000 feet west of the point of accident his train coupled on to five cars that were standing about two car lengths from the remainder of the stored cars. He stated further that he gave signals to slow up when about fifteen or twenty car lengths from these five cars, and that when about 250 feet nearer he gave a stop signal; and that his signals were promptly acknowledged and transmitted by the members of his crew, stationed at intervals of 20 car lengths on the train, but on account of the engine being out of sight around the curve there was some delay in the stopping of the train, and that it struck the cut of stored cars just hard enough to close up the opening between the five cars and the remainder of the cars on track No. 3. Conductor Hartsock stated that it had not been his intention to close the opening between the five cars and the rest of the stored cars. He stated that his train was composed largely of old cars that were weak; and, in view of the fact that no part of his train was damaged by the impact, he did not think that his train had struck the stored cars with sufficient force to have caused any of the cars ahead to buckle. He further stated that had he thought there was any possibility of such

having been the case, he would certainly have made an investigation to determine the condition of the train he had coupled onto. No inspection of these cars was made and Conductor Hartscock stated that after some delay in making an opening of two feet in the train for the use of the watchman in crossing the tracks, he started back toward his engine, and that extra 1475 passed him while he was walking along on the north side of his train. He stated that he reached his engine at 10:45 p. m., and that when he arrived at Mifflin at 10:51 p. m., he first learned of the accident.

Engineman Stewart, of extra 21, stated that as his train was scoring the cars that were stored on track No. 3 he was not working steam and his train was drifting slowly when his fireman called to him to stop. He made a 12-pound application of the air brakes, his train coming to a stop in not much more than a car length. He did not notice any jar on the engine and did not know that his train had struck the stored cars.

Fireman Price, of extra 21, stated that when he received the stop signal from the brakeman he immediately called to the engineman to stop, that the engineman applied the brakes at once, and that the train came to a stop within two car lengths. There was a slight jar on the engine.

Track Watchman Mueser stated that he was on the south side of track No. 2 near the watch box when the train of extra 21 was pushed against the cars on track No. 3. He thought its speed was probably three miles an hour, and that it struck the few cars and then the main body of cars with too great a force considering the fact that cars were stored on that track without any openings for a distance of more than a mile. He stated that the train moved about three car lengths after striking the main body of cars, and as he did not know anything was wrong he continued on west.

Engineman Shell, of extra 1475, stated that the automatic signal just east of Port Royal and 2,291 feet west of the point of accident, was in the clear position when his engine passed it. He stated that the first indication he had of any obstruction was when his engine struck something and left the rails. He was unable to remove himself from the wreckage but when his engine came to a stop his fireman at once took a lamp and started to go over to track No. 4 in an effort to stop train No. 23 on account of the possibility of debris having been thrown on that track. Train No. 23 was derailed, however, before the fireman had gotten farther than the front of his engine, three or four seconds after his train came to a stop. He stated that he made an examination of his locomotive and discovered that the left side of his engine cab had been forced upward, and that the left side of the pilot was entirely

tern off. He found on the pilot a quantity of coal and parts of a wooden car and, as there were no wooden cars in his train, it was apparent to him that the car his engine struck must have been one of those stored on track No. 3, and which he thought had buckled and been thrown over so as to obstruct the track on which his train was running. Engineman Shell further stated that his engine left the rails exactly where the wrecked cars from track No. 3 were located, and that there was nothing which would have indicated that his train had left the rails, from any other cause. He thought the speed of his train to have been 20 or 30 miles an hour at the time of derailment. He stated that his engine was equipped with an oil headlight, but as the accident occurred on a curve it was of no aid in noticing anything on the track.

Division Superintendent Smith stated that on account of the congestion of traffic and in order not to block the work in yards, it was necessary to store cars on such sections of the main tracks as can be taken out of service without delay to the movement of trains. He stated that on the day prior to the accident six trains were placed on track No. 3, and that just before the train of extra 21 was coupled onto them, there were 470 cars stored on that track, extending from "VE" Block Station, 4.2 miles east of, to a point about 28 car lengths west of the point of accident. The last train storing cars on this track had left an opening between the cars at the watch box for the trackman, and it was the opinion of



Division Superintendent Smith that extra 21, although moving slowly, struck the few cars west of this opening with sufficient force to close up this gap, and that when the stored cars were struck, three cars had buckled, one of them had obstructed track No. 2 and the other two had obstructed track No. 4. He stated further that the three cars obstructing these tracks were wooden cars and must have been from track No. 3, as there were no wooden cars in extra 1475. He further stated that after the accident no opening was found in the cars on track No. 3, which fact indicated that the cars on that track had been pushed eastward, the three cars forced out of place, and the space, which they occupied, closed up.

This investigation discloses the fact that at about 7:30 p. m. an eastbound extra freight train, No. 3473, stored its train on track No. 3, and that the cars which buckled and caused this accident were in this train. Between the time extra 3473 placed its train on track No. 3 and the time extra 21 placed its train there, two freight trains safely passed the point of accident on track No. 2, and for this reason it appears certain that the cars did not buckle when extra 3473 itself was storing its cars on this track.

While the crew of extra 21 state that their train did not strike the cars on track No. 3 with great force, all of the conditions found to exist after the accident lead to the conclusion that, on account of the impact, three cars

buckled, fouling tracks Nos. 2 and 4, at a point about 26 car lengths east of where they struck the cars. This conclusion is further strengthened by the fact that after the accident no opening was found in the train of cars on track No. 3, which indicates that the three cars which buckled were pushed out of place and the space they had occupied closed up by the cars following. It would appear, therefore, that the crew in charge of extra 21 did not use all possible care in backing their train against the cars stored on track No. 3. Conductor Hartsock knew that, on account of the length of his train and the fact that his engine was out of sight around a curve, a certain amount of time would be consumed in transmitting signals to the enginemen. He should therefore have given a stop signal when at a greater distance from the stored cars, so as to have made certain that his train would be brought to a stop before striking the cars previously stored on the track, for it is apparent that the brakes were not applied on his train until about the time it struck the few cars and started to close the opening of about one and one-half car lengths, because, according to the statements of the engine crew, the train was brought to a stop within less than two car lengths after the brakes were applied. The crew in charge of extra 21 were experienced men with good records.

Conductor Hartsock entered the service as a brakeman April 1, 1890, was promoted to the position of flagman

August 22, 1902, and was promoted to conductor March 18, 1906.  
( Engineman Stewart entered the service as a fireman January 4,  
1899, and was promoted to engineman August 18, 1905.

At the time of the accident these men had been  
on duty about 8 hours.