

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
PENNSYLVANIA RAILROAD NEAR JOHNSTOWN, PA., ON NOVEMBER
7, 1931.

December 10, 1931.

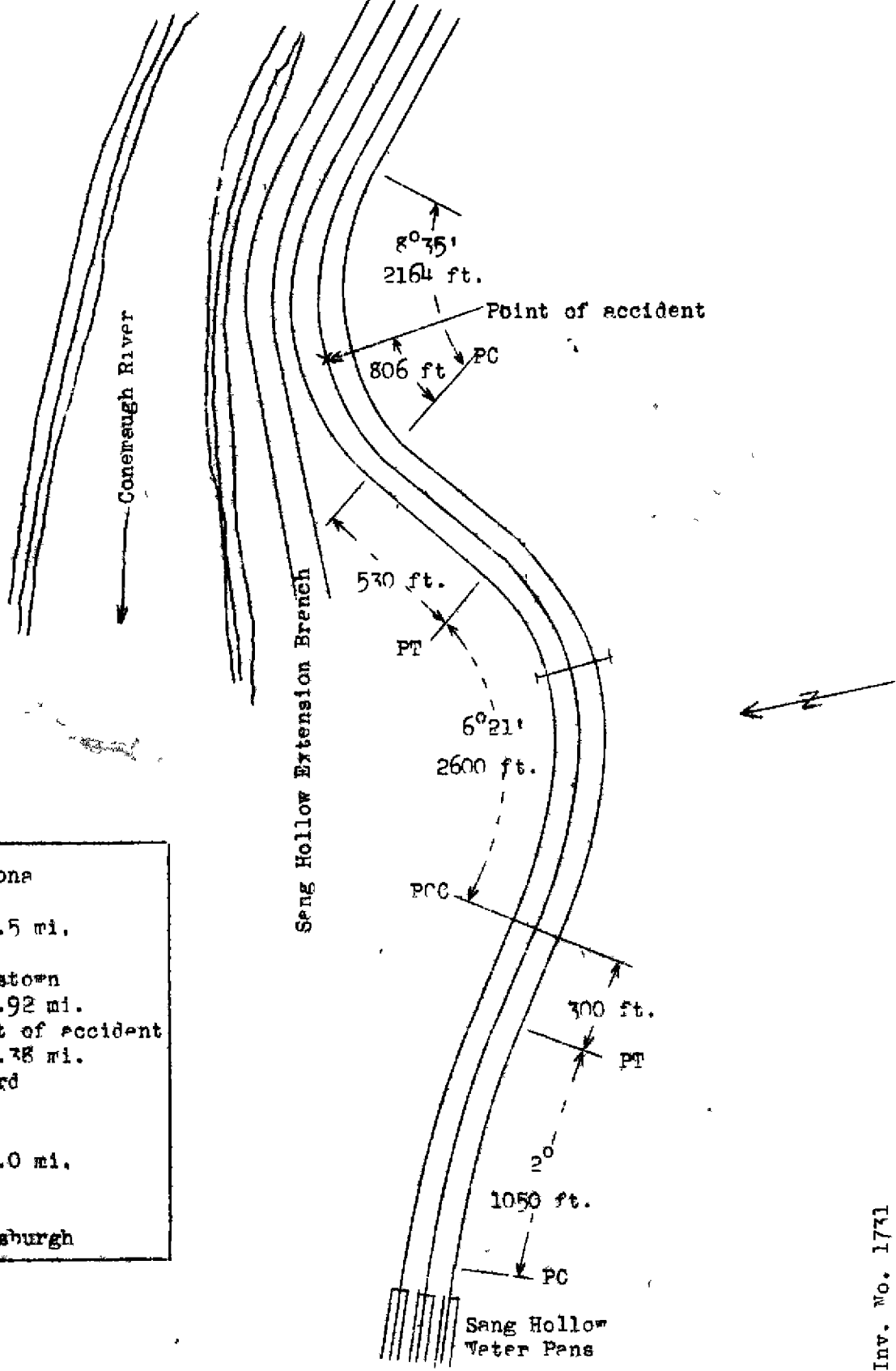
To the Commission.

On November 7, 1931, there was a derailment of an eastbound passenger train, the derailed equipment colliding with a passing westbound freight train, on the Pennsylvania Railroad near Johnstown, Pa., which resulted in the death of 2 employees, and the injury of 11 passengers, 1 Pullman porter, 1 express messenger, and 1 employee. The investigation of this accident was made in conjunction with a representative of the Public Service Commission of Pennsylvania.

Location and method of operation

This accident occurred on that part of the Pittsburgh Division extending between Altoona and Pittsburgh, Pa., a distance of 113.8 miles. In the immediate vicinity of the point of accident this is a five-track line over which trains are operated by time-table, train orders, and an automatic block-signal system, supplemented by a cab-signal system. The tracks are numbered from south to north, 1, 2, 3, 5, and 6, tracks 1 and 2 are for eastward trains, and tracks 3, 5, and 6 for westward trains. The accident occurred on track 2, on an $8^{\circ} 35'$ curve, 2.92 miles west of Johnstown and 6.38 miles east of Seward; approaching this point from the west, beginning at the eastward end of the water troughs at Sang Hollow, the track is tangent for a short distance followed by a 2° curve to the right 1,050 feet in length, 300 feet of tangent, a compound curve to the left 2,600 feet in length with a maximum curvature of $6^{\circ} 21'$, 530 feet of tangent, and an $8^{\circ} 35'$ curve to the right 2,164 feet in length, the first wheel marks being found on the last-mentioned curve 806 feet from its receiving end. The grade is slightly ascending for eastward trains to the first mark of derailment, at which point begins a slightly descending grade.

Track 2 is laid with 139-pound rails, 39 feet in length, with 22 or 23 hardwood ties to the rail-length, fully tie-plated with heavy duty tie-plates and anchor



○	Altoona
	39.5 mi.
○	Johnstown
	2.92 mi.
X	Point of accident
	6.78 mi.
○	Seward
	67.0 mi.
○	Pittsburgh

Inv. No. 1741
 Pennsylvania R.R.
 Johnstown, Pa.
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spiked, with 16 to 18 inches of rock ballast under the ties, and is well maintained. The speed of trains on the curve on which the accident occurred, when running on track 2, is restricted to 35 miles per hour.

The weather was cloudy, but the visibility was good at the time of the accident, which occurred about 10.44 a.m.

Description

Eastbound passenger train No. 510, which was being operated on track 2, consisted of 1 baggage car, 2 coaches, 1 parlor-cafe car, 1 Pullman parlor car, and 2 deadhead coaches, all of steel construction, hauled by engine 3852, and was in charge of Conductor Cowie and Engineman McFadden. This train passed Conpitt Junction, 5.8 miles west of Seward, at 10.27 a.m. according to the train sheet, seven minutes late, made regular station stops at New Florence and Seward, and was derailed, on what is known as Dornock Point curve, 6.38 miles east of Seward, while traveling at a speed variously estimated to have been between 47 and 60 miles per hour.

Westbound freight train extra 2954 consisted of 7 loaded cars, 16 empty cars, and a caboose, hauled by engine 2954, and was in charge of Conductor Ruffner and Engineman Kolb. This train passed SG Block Station on track 6 at 10.43 a.m., and was collided with by the derailed cars of train No. 510 at Dornock Point curve, 3,514 feet west of SG Block Station, while traveling at a speed estimated to have been between 20 and 25 miles per hour.

Engine 3852, of train No. 510, came to rest on its left side across tracks 1, 2, 3, and 5, about 480 feet east of where the first wheel marks were found on the ties, while the tender remained coupled to the engine, and also was on its left side, parallel with, and on track 3. The baggage car was 128 feet back from the tender, on its side and in reverse position to the way it stood in the train, and all of the remaining equipment, with the exception of the last car in the train, was derailed, but remained in practically an upright position at various angles across and on the tracks, the second and third cars continuing on past the baggage car and stopping between that car and the engine. Part of the derailed equipment of train No. 510 collided with westbound extra 2954, striking the fifteenth car behind its engine, de-

railing that car and the following four cars. The employees killed were the engineman and fireman of train No. 510, and the employee injured was the baggage-man.

Summary of evidence

Conductor Cowie, of train No. 510, stated that he was seated in the parlor-cafe car when the train entered upon the second curve east of the water pans at Sang Hollow at such a high rate of speed as to throw him over against the seat with sufficient force to cause him to make the mental observation, "My God, that is too fast", and he rose and attempted to reach the signal cord, to signal the engineman to reduce speed, but before he could reach it he was thrown against the side of the car and the train was wrecked. He estimated the speed at which the train was traveling when he was thrown against the seat, at between 55 and 60 miles per hour, and stated that no reduction was made in the speed between that time and the time the accident occurred. Conductor Cowie further stated that prior to the departure of the train from Pittsburgh he had a conversation with Engineman McFadden and that he appeared to be in a perfectly normal condition. He also stated that the air brakes had functioned properly at all times prior to the accident.

Brakeman Tobin, of train No. 510, who was riding in the rear of the parlor-cafe car, estimated that the train was traveling at a speed of about 50 miles per hour while passing over the water troughs. He did not notice the air brakes being applied or any reduction in the speed of the train between that point and the point of derailment. He stated that he was watching the engine across the curve and saw it at the time it was derailed; it seemed to raise up at an angle of about 45 degrees and turn to the left. He did not observe the tender of the engine at that time, but said that just previous to that time it had seemed to be riding all right.

Flagman Dripps, of train No. 510, stated that he was riding in the rear car when the derailment occurred and that while the speed of the train appeared excessive, he did not think it was dangerous. He estimated the speed the train was traveling when passing Sang Hollow water troughs to have been about 50 miles per hour, and did not notice that the speed was reduced between that point and point of accident. As soon as he got on the

ground after the derailment occurred he looked at his watch and it was then 10.44½ a.m. He also stated that he checked his time before leaving Pittsburgh that morning and at that time his watch was 12 seconds fast.

Brakemen Liberty and Stormer, Hostler Pringle, Operator Roth, and Yard Clerk Wingard, who were dead-heading on train No. 510, were riding in the smoking car when the accident occurred, and the train struck the curve east of Sang Hollow at such a high rate of speed that they became concerned about it and several remarks were made regarding it, Hostler Pringle stating that he felt that something would happen if the train struck the next curve at the same rate of speed. All of these men, with the exception of Operator Roth, who was not interrogated, stated that they did not feel any application of the air brakes between Sang Hollow and point of accident. Their various estimates as to the speed at which the train was traveling at the time of the derailment ranged between 45 and 60 miles per hour.

Engineman Kolb, of extra 2954, said he was moving westward on track 6 at a speed of about 20 to 25 miles per hour when his attention was attracted to what in his opinion was the excessive speed of train No. 510 approaching, and the train passed his engine at such a high rate of speed that he was on the point of directing a remark to his fireman covering the danger of rounding Dornock Point curve at such speed, when the fireman called to him to stop as train No. 510 had been wrecked. Engineman Kolb estimated the speed of train No. 510 when it passed him as about 60 miles per hour.

Fireman Decker, of extra 2954, stated that he observed the approach and passing of train No. 510 and exchanged salutes with the fireman as they passed. After one or two cars had passed him he looked back at them and noticed fire flying from under the tender of the engine and at the same time saw the tender sway, at which time, in his opinion, it was derailed. He was unable at that time to see the engine, due to the sharp curve, and could not say if it was still on the rails. He did not observe any application of the air brakes from the time he first noted the approach of train No. 510 until he saw the fire flying from under the tender, nor had he noticed anything wrong with the engine or tender, and he stated further that if anything had been wrong with them he would have observed it. He also stated that due to the fact that his train was moving in the opposite

direction to train No. 510 he could not estimate the speed at which train No. 510 was traveling.

Head Brakeman Riddell, also of extra 2954, was riding on the left side of the engine, and on looking back after the head end of train No. 510 had passed, he saw fire flying from under the tender and a shovel fall from the tender, the accident occurring immediately afterwards. He was unable to estimate the speed of train No. 510 except to say it was in excess of the maximum permissible speed of 35 miles per hour.

Section Foreman Amorosa, on whose section the accident occurred, stated that he was working on the east end of Dornock Point curve when he heard train No. 510 approaching. The first view he obtained of the engine was at the point of derailment, at which time the engine was in the act of turning over, and he stated that the engine appeared to twist and then turn over. He made an inspection of the track from the point of derailment back to the water troughs at Sang Hollow, but did not find anything wrong with the track or any parts of broken equipment that might have dropped from the engine.

Supervisor Boyer stated that he arrived at the scene about 10 minutes after the accident occurred, and inspected the track from that point back to the west end of the second curve east of the water troughs, but found nothing wrong. He also checked the gauge, elevation, etc. of the track at point of derailment and stated that it was in perfect condition for the speed permitted on that curve.

The Commission's inspectors found by their own examination of the track that the first marks of derailment were wheel marks on a tie at a point 17 inches outside the high rail. This mark continued to the fifth tie to the east, and then there were marks made by two or more wheels. The first mark on the ties on the inside of the low rail was on the twenty-third tie, at a point $7\frac{1}{2}$ inches from the gauge side. East of this point the track was destroyed up to where the equipment came to rest. There were no marks on the rails at the point of derailment, and the measurements made of the track west of that point showed it to be in good condition. Examination was also made of the equipment, but nothing was found that could have contributed to the occurrence of the accident.

Conclusion

This accident was caused by excessive speed on a sharp curve.

Under special instructions contained in the time-table, all trains operating over track 2 are required to reduce speed to 40 miles per hour over the curves west of Dornock Point, and to 35 miles per hour over Dornock Point curve, when running on track 2; time-table instructions also restrict the speed of passenger trains to 45 miles per hour when taking water from track troughs. The statements of witnesses were to the effect that Engineman McFadden failed to reduce the speed of his train at any of these points and entered upon Dornock Point curve at a rate of speed variously estimated to have been between 45 and 60 miles per hour. The fact that the speed was high is verified by the fact that the distance from the water troughs at Sang Hollow to the point of derailment is well over a mile, and the record at the water troughs show that train No. 510 scooped water there at about 10.43 a.m., and with the time the accident occurred fixed at approximately 10.44 a.m., it indicates that the train traveled the intervening distance at a speed of about 60 miles per hour. That this was the approximate speed when the derailment occurred is further borne out by the position in which the derailed equipment came to rest, while the absence of marks on the rails at the initial point of derailment, coupled with the fact that there was no defective condition of track or equipment, simply adds further weight to the conclusion that the accident was due to excessive speed.

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. P. BORLAND,

Director.

