INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2466

THE PENNSYLVANIA RAILROAD COMPANY

REPORT IN RE ACCIDENT

AT HALL, PA., ON

DECEMBER 15, 1940

SUMMARY

Railroad:	Pennsylvania	
Date:	December 15, 1940	
Location:	Hall, Pa.	
Kind of accident:	Side collision	
Trains involved:	Freight	: Freight
Train numbers:	Extra 3491 West	: Extra 4647 East
Engine numbers:	3491	: 4647
Consist:	93 cars, caboose	: 95 cars, caboose
Speed:	Standing	: 15-30 m. p. h.
Operation:	Timetable, train orders and manual block system	
Track:	Single; 0°32' right curve; 0.29 percent descending grade eastward.	
Weather:	Cloudy	
Time:	6:01 a. m.	
Casualties:	1 killed; 3 injured	
Cause:	Accident caused by train fouling main track without authority, as a result of failing to control speed properly	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2466

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE PENNSYLVANIA RAILROAD COMPANY

January 31, 1941

Accident at Hall, Pa., on December 15, 1940, caused by train fouling main track without authority, as a result of failing to control speed properly.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On December 15, 1940, there was a side collision between two freight trains on the Pennsylvania Railroad at Hall, Pa., which resulted in the death of one employee and the injury of three employees.

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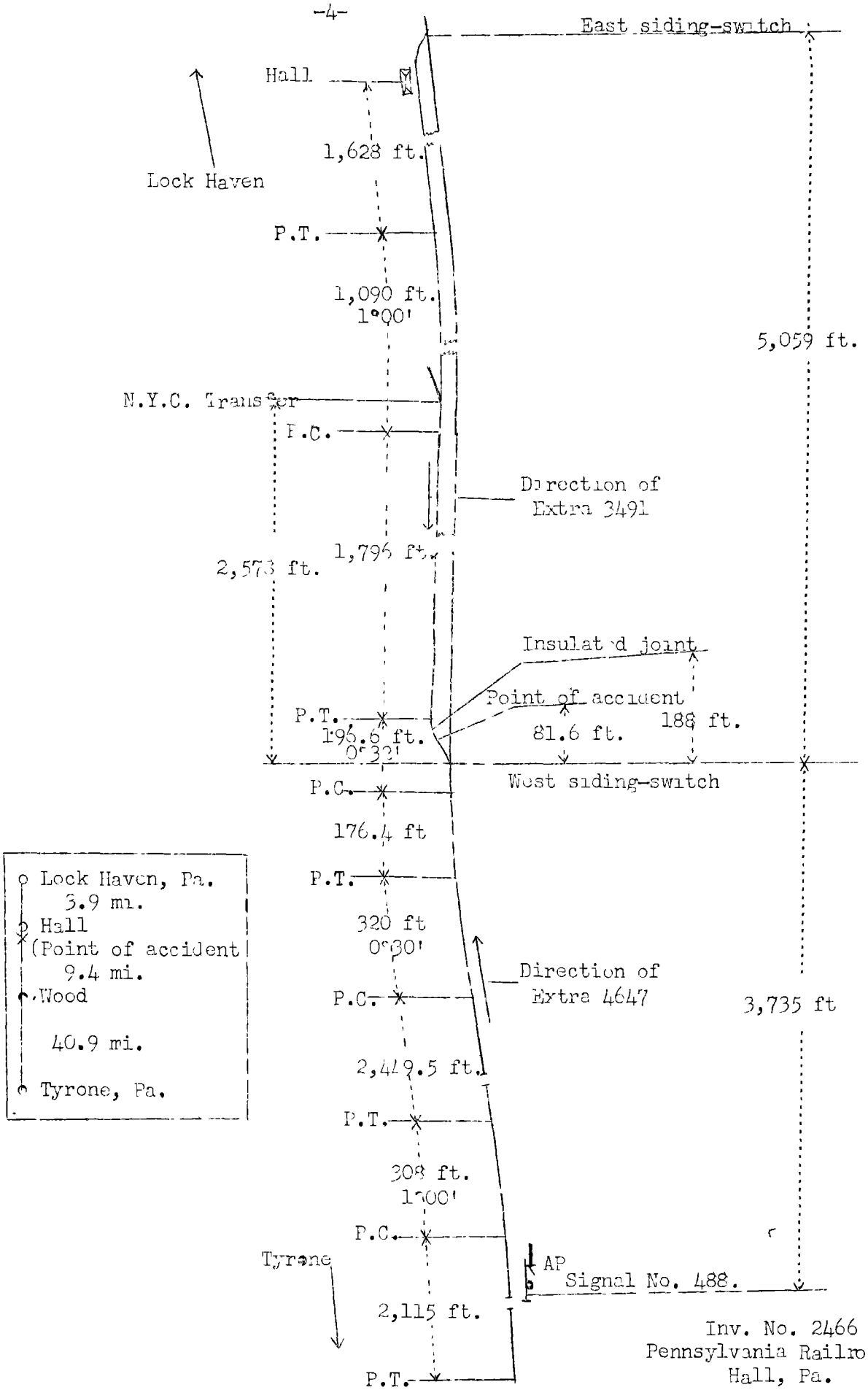
[1] Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2466
Pennsylvania Railroad
Hall, Pa.
December 15, 1940.

Location and Method of Operation

This accident occurred on that part of the Middle Division designated as the Bald Eagle Branch which extends between Tyrone and a point 0.7 mile east of Mill Hall, Pa., a distance of 52 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable, train orders and a manual block system. At Hall a siding 5,059 feet in length parallels the main track on the north; its capacity is 101 cars, based on an average of 45 feet per car. The accident occurred at the fouling point of the turnout of the west switch of this siding at a point 81.6 feet east of the switch points and 4,588 feet west of Hall interlocking tower. As the point of accident is approached from the east on the siding there are, in succession, a tangent 1,628 feet in length, a 1°00' curve to the right 1,090 feet, a tangent extending 1,796 feet to the clearance point, and the turnout on which the accident occurred. As the point of accident is approached from the west on the main track there are, in succession, a tangent 2,115 feet in length, a 1°00' curve to the left 308 feet, a tangent 2,449.5 feet, a 0°30' curve to the right 320 feet, a tangent 176.4 feet, and a 0°32' curve to the right extending 81.6 feet to the point of accident and 115 feet beyond. On the siding the grade for west-bound trains varies between 0.016 and 0.62 percent ascending, and at the point of accident it is 0.62 percent. On the main track the grade for east-bound trains is, successively, 0.081 percent descending a distance of 2,353 feet, 0.155 percent descending 1,075 feet, and 0.290 percent descending 389 feet to the point of accident.

The east switch of the siding is controlled from the interlocking tower at Hall; the west switch of the siding is of the hand-throw type. The switch lamp is located on the south side of the main track. Entry to the siding at the west switch is made through a No. 10 turnout. Signal No. 488, a distant switch signal, is located 3,735 feet west of the west siding-switch. This signal is of the position-light type, approach lighted. The control circuit for this signal extends from a point about 1,200 feet west of the signal to a point on the turnout at the west end of the siding 188 feet east of the switch points. The circuit is arranged so that when the west switch is lined for entry to the siding or when any part of the turnout is occupied, the signal displays caution.

Rules of the operating department read in part as follows:

88. (SINGLE TRACK)

* * *

At meeting points between extra trains, the train in the inferior time-table direction must take the siding, unless otherwise provided.

* * *

90a. Trains using a siding must proceed with caution, expecting to find it occupied by other trains, and on a siding used by trains in both directions, must run expecting to meet opposing trains.

Special time-table instructions read in part as follows:

S12 SUPERIORITY OF TRAINS

D1201. Eastward and Southward trains are superior by direction to trains of the same class in the opposite direction unless otherwise specified.

* * *

D1631. * * *

At a number of locations, derails are being removed. Clearance point designated by a ten inch yellow stripe, painted outside, on head, web, and base of both rails.

On the main track the maximum authorized speed for freight trains is 45 miles per hour.

It was dark and the weather was cloudy at the time of the accident, which occurred at 6:01 a. m.

Description

Extra 3491 West, symbol PG-13, a west-bound freight train, with Conductor Spaid and Engineman Jacoby in charge, consisted of engine 3491, 22 loaded and 71 empty cars and a caboose. At Lock Haven, 3.9 miles east of Hall, the crew received copies of train order No. 215, Form 19, which read as follows:

Eng 3491 run extra Lock Haven to Wood and Sand to Park. Extra 3491 West meet Extra 4647 East at Hall and Extra 1651 East at Milesburg.

This train departed from Lock Haven at 5:50 a. m., according to the train sheet, passed the westward home signal at Hall, which displayed caution-slow-speed, entered the east switch of the siding at a speed estimated to have been 12 to 15 miles per hour, passed the fouling point at the west end of the siding where it was required to stop until the opposing train had passed, stopped with the engine fouling the main track, and soon afterward was struck by Extra 4647 East.

Extra 4647 East, an east-bound freight train, with Conductor Cromis and Engineman Brougham in charge, consisted of engine 4647, 95 loaded cars and a caboose. At Wood, 9.4 miles west of Hall and the last open office, the crew received copies of train order No. 213, Form 19, previously quoted. This train departed from Wood at 5:45 a. m., according to the train sheet, passed signal No. 488, which displayed clear, and, while moving at a speed estimated to have been between 15 and 30 miles per hour, struck Extra 3491 West.

The left end of the pilot beam of engine 4647 struck the left end of the pilot beam of engine 3491; both pilot beams were broken. Engine 4647 was derailed and stopped, badly damaged, upright and in line with the main track; the left front-end engine-frame, the engine truck, and the engine-truck center-castings were broken. The cab, the safety valves and the steam pipes at the steam turret were broken off. The inside and the outside back-head sheets of the firebox were punctured. The tender was derailed and stopped about 50 feet behind the engine and 40 feet north of the main track; the tender frame was broken; the tender trucks and the cistern were badly damaged. The rear sheet of the cistern was pushed inward about 5 feet by the first car. The first car was broken in two; one portion stopped north of the main track and the remainder stopped south of the track. The second, sixth, seventh and eighth cars were derailed to the north down an embankment and stopped opposite the engine and at various angles to it. The third, fourth and fifth cars were derailed to the south and stopped opposite the engine and at various angles to it. The ninth and tenth cars were derailed and stopped upright and in line with the track immediately to the rear of the engine. The sixteenth to twentieth cars, inclusive, were derailed and badly damaged. The twenty-first and twenty-second cars were derailed and were slightly damaged. Engine 3491 was derailed and stopped upright and in line with the siding. The left front-end engine-frame and the drawbar between the engine and the tender were broken; the engine truck was demolished. The first car was derailed and the front coupler was broken through the shank.

The employee killed was the engineman of Extra 4647, and the employees injured were the fireman and the front brakeman of Extra 4647 and the conductor of Extra 3491.

Summary of Evidence

Engineman Jacoby, of Extra 3491, stated that a terminal air-brake test was made at Buttonwood, 128.8 miles east of Hall, and the brakes functioned properly. At Lock Haven, 3.9 miles east of Hall, cars were added to the train; the brakes of the cars to be added were tested before they were coupled to the train and the

brakeman reported that each brake applied and released. These cars were coupled to the train and the train crew made an application and release test to determine whether the rear brakes were operative. At Lock Haven the engineman received a copy of train order No. 213 and understood that his train was required to take siding at Hall to meet Extra 4647. When his train was approaching Hall the home signal displayed caution-slow-speed. The train entered Hall siding at a speed of 12 or 14 miles per hour. Because the grade on the siding was ascending it was necessary to work steam. He said that the headlight was lighted, and he experienced no difficulty in locating landmarks as his train proceeded on the siding. When his engine passed the New York Central Railroad transfer switch, located 2,578 feet east of the clearance point at the west end of the siding, steam was still being worked; he used this switch as a landmark indicating a half-way point on the siding. At a point about 750 feet east of the clearance point at the west end of the siding he closed the throttle. At that point the fireman warned him that the engine was nearing the fouling point of the west siding-switch. The engineman applied the independent brake, and speed was reduced to about 12 miles per hour; then, thinking that his train might stall, he released the independent brake and again used steam. The fireman again warned the engineman that the engine was near the fouling point; the engineman applied the independent brake and followed this immediately with a service brake-pipe reduction. The brake application caused the driving wheels to slide. The fireman again warned him that the clearance point was close ahead and the engineman moved the brake valve to emergency position. The train stopped with the engine standing at a point about 81 feet east of the main-track switch points. The engineman dimmed the headlight, then made several attempts to back his train into clear. The front brakeman alighted and, running forward, waved a lighted red fusee in an effort to flag Extra 4647, which was approaching; the collision occurred soon afterward. The engineman said that he had operated over this territory for 2 years and was familiar with the physical characteristics. The manner in which he operated his train on the siding in this instance was customary and this was the first time he had experienced any difficulty in stopping a train short of the fouling point. From his position in the cab he could not see the switch light; therefore, he did not observe if it was lighted. He said that he misjudged the distance to the end of the siding because of being unable to see the switch. A yellow-paint mark on the north rail of the siding was the only mark to indicate the clearance point on the siding but this mark is not visible from an engine cab. In his opinion a clearance-point sign would have aided in determining the position of his train with relation to the clearance point; if a sign had been provided he could have taken action in time to avert the accident.

Fireman Peterman, of Extra 3491, stated that at Lock Haven copies of train order No. 213 were delivered and he understood his train was to take siding at Hall to meet Extra 4647. At Hall his train entered the east siding-switch at a speed of 15 miles per hour. Because of an ascending grade on the siding the engineman worked steam until the engine was midway of the siding. At this point the speed was 10 or 12 miles per hour and the fireman warned the engineman to reduce speed. The fireman was maintaining a lookout and could see the switch lamp, which was lighted. Soon afterward, realizing that the train would not stop short of the fouling point of the west siding-switch, he shouted a warning to the engineman, who applied the air brakes in emergency. The train stopped with the engine fouling the main track. The fireman observed Extra 4647 approaching about 3,500 feet distant; the front brakeman alighted and, running forward, waved a lighted red fusee to warn the approaching east-bound train. His engineman made several attempts to move the train back into clear but was unable to do so. The fireman said that Extra 4647, moving at a speed of about 25 miles per hour, collided with his train about 6 a. m., at which time it was dark and the weather was clear.

Front Brakeman Brecht, of Extra 3491, stated that he read train order No. 213 and understood its requirements. His train entered the siding at Hall at a speed of 10 or 12 miles per hour. When his train was approaching the west switch of the siding he was stationed in the gangway of the engine and heard the fireman warn the engineman that the engine was nearing the fouling point of the west end of the siding. The engineman immediately applied the brakes in emergency. At this time the front brakeman observed the headlight of Extra 4647 approaching about 1,100 feet distant and shouted to the engineman that their engine was fouling the main track. He procured a fusee, alighted from the engine, and running toward the approaching train waved the lighted red fusee; however, Extra 4647 failed to stop and while moving at a speed of about 15 miles per hour collided with his train.

Conductor Spaid, of Extra 3491, stated that at Lock Haven the brakes of cars to be added were tested before they were coupled to the train and the brakes on his train functioned properly en route. He understood that train order No. 213 required his train to take siding at Hall. At Hall, when his caboose cleared the main track, he turned the marker lights to display aspects proper for a train in the clear on a siding. Soon afterward his train stopped abruptly. The weather was cloudy but visibility was unrestricted.

The statement of Flagman Walp, of Extra 3491, added nothing of importance.

Fireman Schwab, of Extra 4647, stated that at Wood train order No. 213 was delivered. He understood that Extra 3491 was to take siding at Hall for his train. When his train was approaching the point where the accident occurred the speed was about 50 miles per hour. Signal No. 488 displayed clear. He observed the headlight of a west-bound train on the siding at Hall and it appeared to be clear of the main track. As steam leaking around the water pump obscured the view ahead on the left side of the engine the fireman crossed over to the right side and looked ahead. He saw a lighted red fusee, which the engineman acknowledged by sounding the engine whistle, and the engineman then applied the air brakes in emergency. The fireman jumped from the engine shortly before the collision occurred. The fireman said that the engineman was maintaining a lookout ahead.

Front Brakeman Camery, of Extra 4647, stated that at Altoona, 61.8 miles west of Hall, the air brakes on his train were tested and the car inspector delivered an air-brake inspection card to the engineman; the brakes functioned properly en route. As his train approached the point where the collision occurred he was in the brakeman's booth on top of the tender and the speed was 25 or 30 miles per hour. The first intimation he had of anything being wrong was the jar of the collision.

Conductor Clouts, of Extra 4647, stated that brake-pipe pressure of 70 pounds was maintained. He understood that train order No. 213 required Extra 3491 to take siding at Hall for his train. As his train was approaching the point where the accident occurred the speed was 20 miles per hour. The first intimation he had of anything being wrong was a slight bump, and at the time it occurred the caboose air-gauge indicated a 20-pound brake-pipe reduction; then the train stopped and the brake-pipe pressure dropped to zero. He observed the reflection of a lighted red fusee near the front end of his train. It was dark and the weather was cloudy at the time of the accident, which occurred at 6:01 a. m.

Flagman Bowers, of Extra 4647, corroborated the statement of his conductor.

Operator Hattwick, on duty at Hall at the time of the accident, stated that he lined the east siding-switch for Extra 3491 to take siding at Hall to meet Extra 4647 East. As Extra 3491 approached the tower, moving at a speed of 15 miles per hour, the headlight was lighted and steam was being worked. When the train stopped in the siding the caboose was standing at a point about 12 or 15 car lengths west of the fouling point of the east siding-switch. Although the weather was cloudy, visibility was good.

Discussion

According to the evidence, Extra 3491 West entered the siding at Hall to meet Extra 4647 East, in accordance with the provisions of a meet order held by the crews of both trains; the crews understood the requirements of the order. Extra 3491 consisted of 93 cars and a caboose and the capacity of the siding was 101 cars, based on an average of 45 feet per car. The engine of this train passed the clearance point at the west end of the siding and stopped with the front of the engine about 81 feet east of the switch points.

Because of an ascending grade, steam was worked until engine 3491 was about half-way through the siding. The engineman was maintaining a lookout to determine the location of his engine with respect to the clearance point at the west end of the siding when the fireman warned him that the engine was closely approaching the clearance point. The engineman applied the independent brake and, when the speed was reduced, released it. The fireman again warned him; the engineman applied the independent brake, started a service brake-pipe reduction, and after he was warned a third time he moved the brake valve to emergency position. The emergency application failed to stop the train short of the clearance point. The fireman could see the switch lamp, which was lighted, and could determine the location of the engine in relation to the clearance point. Throughout a considerable distance immediately east of the west switch the engineman could not see the switch light because of his position in the cab. The only indication of the clearance point at the west end of the siding was a yellow-paint mark on the north rail, but the engineman could not see this mark from the cab of his engine. In the opinion of the engineman, if a distinct sign to indicate the clearance point had been provided he could have controlled the speed of his train to stop short of the fouling point. Becoming aware that his train would foul the main track, the front brakeman lighted a red fusee, ran toward Extra 4647 and waved stop signals; however, the distance was insufficient in which to stop the approaching train short of the engine of Extra 3491. Extra 4647 was closely approaching the west-siding switch at Hall when the fireman of that train observed the headlight of a train in the siding and a red fusee being waved near the switch; the engineman immediately applied the brakes in emergency but too late to avert the accident. At what distance the engineman observed the red fusee could not be determined, as he was killed in the accident.

If Extra 3491 had occupied the turnout before Extra 4647 passed the distant switch-signal, the crew of the latter train would have received a caution indication requiring their train to approach the west siding-switch prepared to stop. Apparently engine 3491 did not enter the turnout before the engine of Extra 4647 had passed this signal as the fireman of the east-bound train observed the signal displaying proceed, and, according to the fireman of the west-bound train, when his engine stopped on the turnout the engine of the opposing train was a short distance east of the signal.

Cause

It is found that this accident was caused by a train fouling the main track without authority, as a result of failing to control speed properly.

Dated at Washington, D. C., this thirty-first day of January, 1941.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

(SEAL) Secretary.