

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3068
THE PENNSYLVANIA RAILROAD COMPANY
REPORT IN RE ACCIDENT
NEAR GARLAND, PA., ON
FEBRUARY 2, 1947

SUMMARY

Railroad: Pennsylvania
Date: February 2, 1947
Location: Garland, Pa.
Kind of accident: Derailment
Train involved: Passenger
Train number: 580
Engine number: 6845
Consist: 9 cars
Estimated speed: 50 m. p. h.
Operation: Timetable, train orders and
manual-block system
Track: Single; 1°30' curve; 0.23 percent
descending grade eastward
Weather: Clear
Time: 8:25 p. m.
Casualties: 1 killed; 13 injured
Cause: Broken rail

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3068

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

THE PENNSYLVANIA RAILROAD COMPANY

February 28, 1947

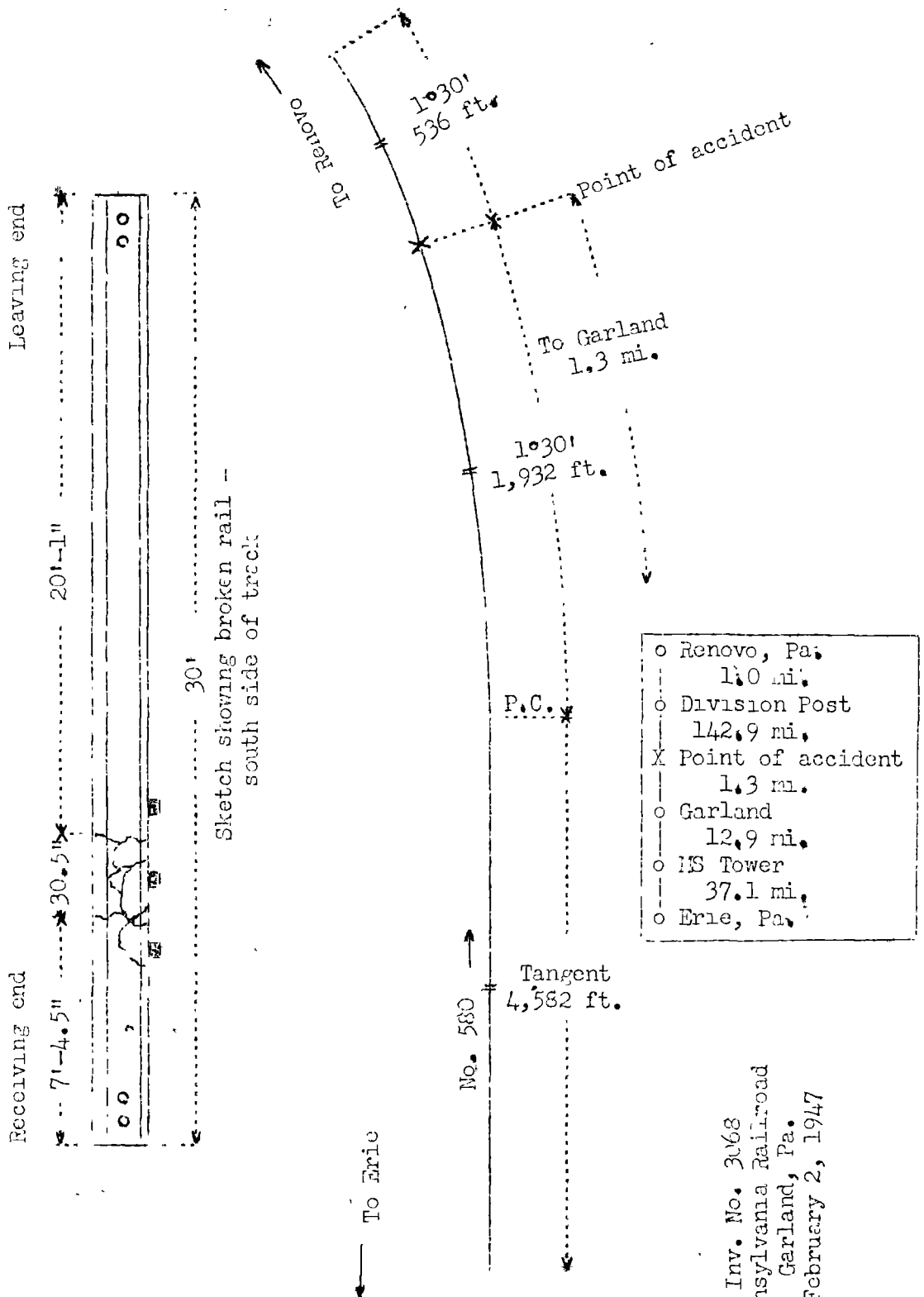
Accident near Garland, Pa., on February 2, 1947, caused
by a broken rail.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On February 2, 1947, there was a derailment of a passenger train on the Pennsylvania Railroad near Garland, Pa., which resulted in the death of one train-service employee, and the injury of seven passengers, four dining-car employees and two train-service employees.

¹Under 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.



Location of Accident and Method of Operation

This accident occurred on that part of the Renovo Division extending between Erie and Division Post, near Renovo, Pa., 194.2 miles, a single-track line in the vicinity of the point of accident, over which trains are operated by timetable, train orders and a manual-block system. The accident occurred on the main track 51.3 miles east of Erie and 1.3 miles east of the station at Garland. From the west there is a tangent 4,582 feet in length, then a 1°30' curve to the left 1,932 feet to the point of accident and 536 feet eastward. The grade is 0.23 per-cent descending eastward.

The track structure consists of 130-pound cropped rail, 30 feet in length, rolled new during 1922 and relaid at the point of derailment during 1929, on an average of 15 ties to the rail length. It is fully tieplated, spiked with two rail-holding and two anchor spikes per tieplate, except that there is one anchor spike per tieplate at approximately 20 percent of the tieplates, provided with 4-hole angle bars 24 inches in length, an average of 4 rail anchors per rail length, and is ballasted with cinders to a depth of about 36 inches.

The maximum authorized speed for passenger trains is 50 miles per hour.

Description of Accident

No. 580, an east-bound first-class passenger train, consisted of engine 6845, a 4-8-2 type, one milk car, one mail car, one baggage car, one passenger-baggage car, one coach, one dining car and three sleeping cars, in the order named. The first car was of steel-underframe construction, and the remainder of the cars were of all-steel construction. This train passed MS Tower, the last open office, 14.2 miles west of the point of accident, at 7:46 p. m., 27 minutes late, passed Garland, and while it was moving at an estimated speed of 50 miles per hour the engine, the first six cars and the front truck of the seventh car were derailed.

The engine and tender, remaining coupled, stopped on their right sides about 5 feet south of the track and practically in line with it, with the front of the engine 459 feet east of the point of derailment. The first car stopped upright, off its trucks, about 20 feet south of the track and at an angle of about 45 degrees to it, with the front end about 20 feet west of the engine. The second car stopped on its left side, about 13 feet south of the track and at an angle of about 45 degrees to it. The third car stopped practically upright, about 30 feet south of the track and at an angle of about 45 degrees to it. The fourth and fifth cars stopped upright, about 20 feet south of the

track and practically in line with it. The sixth car stopped upright on the roadbed. The engine and the first five cars were considerably damaged, and the sixth and seventh cars were slightly damaged.

The engineer was killed, and the fireman and the front brakeman were injured.

The weather was clear at the time of the accident, which occurred about 8:25 p. m.

The rail involved was a 130-pound rail, manufactured by the Carnegie Steel Company during 1922. It was cropped to a length of 30 feet and relaid in the track at the point of derailment during 1929.

Discussion

No. 580 was moving on a 1°30' curve to the left at a speed of about 50 miles per hour, in territory where the maximum authorized speed was 50 miles per hour, when the derailment occurred. The headlight was lighted brightly, and the enginemen were maintaining a lookout ahead. The members of the train crew were in various locations throughout the cars of the train. Prior to the time of the accident, the engine and the cars had been riding smoothly, and there was no indication of defective equipment or track, nor of any obstruction having been on the track. The fireman said that the first he knew of anything being wrong was when he felt a sudden downward movement of the front end of the engine. At that moment the engineer moved the brake valve to emergency position and closed the throttle, then the engine overturned. The engineer was killed. The brakes of this train had functioned properly en route.

After the accident a broken rail was found on the south side of the track. This rail was broken through the head, the web and the base at two locations. The first break occurred between two ties at a point 7 feet 4.5 inches east of the receiving end of the rail. The second break occurred between two ties at a point 30.5 inches east of the first break. The breaks were new. There were batter marks on the leaving ends of these breaks, but none on the receiving end of either break. Marks on the flange of the right front driving wheel of the engine of No. 580 indicate that it had been in contact with the end of a broken rail and that this was the first wheel to become derailed. Apparently the failure of the rail occurred some time prior to the derailment, but the broken piece remained in normal alinement until the right engine-truck wheels of the engine of No. 580 passed over it, then this piece of rail became displaced between the right rear engine-truck wheel and the right front driving wheel, and the derailment occurred.

The track involved was last inspected by members of the track force about 36 hours before the derailment occurred, and no defective condition was observed. An east-bound freight train passed over this track about 1 hour 35 minutes before the derailment occurred, and the crew did not observe any abnormal condition of the track. A rail detector car was last operated over this territory on November 6, 1944. This test did not disclose any defect in the rail in question, The breaks in the rail did not disclose any defect, and there was no indication that the rail had been struck an exceptionally heavy blow. There were 30 rail failures in this territory, a distance of 7.5 miles, during the past 13 months,

Cause

It is found that this accident was caused by a broken rail.

Dated at Washington, D. C., this twenty-eighth day of February, 1947.

By the Commission, Commissioner Patterson,

W. P. BARTEL,

Secretary.

(SEAL)