

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3335
THE BALTIMORE AND OHIO RAILROAD COMPANY
IN RE ACCIDENT
NEAR EATON, W. VA., ON
JUNE 30, 1950

SUMMARY

Date: June 30, 1950

Railroad: Baltimore and Ohio

Location: Eaton, W. Va.

Kind of accident: Derailment

Train involved: Express

Train number: 29

Engine numbers: 5301 and 5048

Consist: 16 cars

Speed: 48 m. p. h.

Operation: Signal indications

Track: Single; 4°45' curve; 0.98 percent descending grade westward

Weather: Clear

Time: 3:25 p. m.

Casualties: 1 killed; 4 injured

Cause: Broken rail

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3336

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

THE BALTIMORE AND OHIO RAILROAD COMPANY

August 3, 1950

Accident near Eaton, W. Va., on June 30, 1950, caused by a
broken rail.

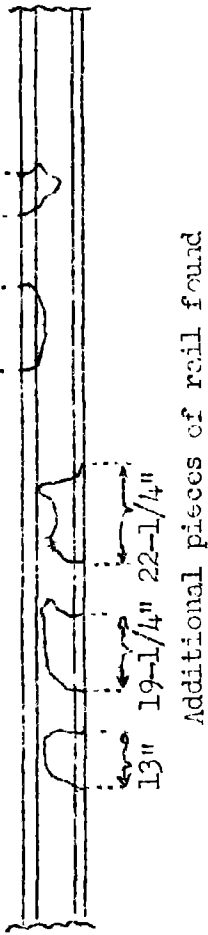
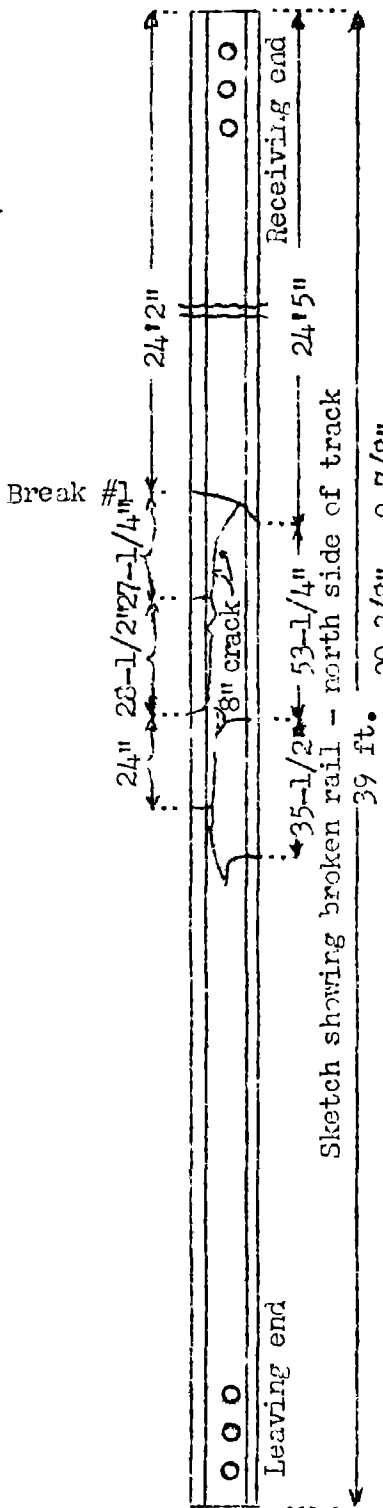
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

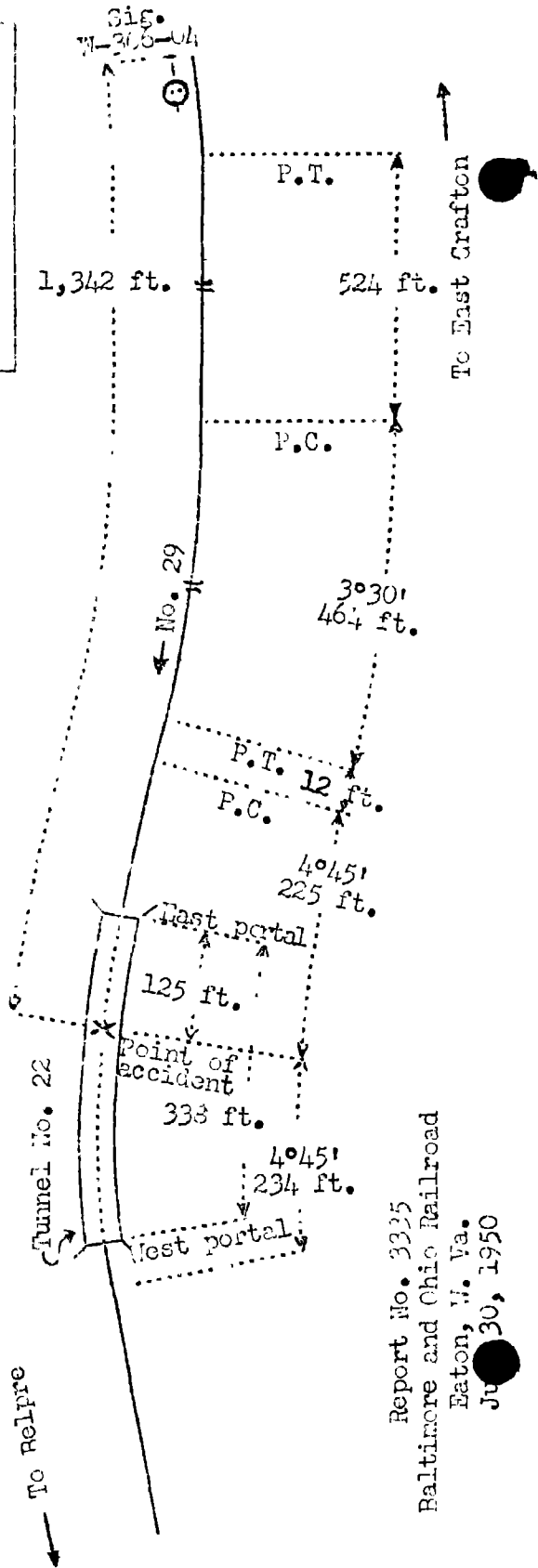
On June 30, 1950, there was a derailment of an express train on the Baltimore and Ohio Railroad near Eaton, W. Va., which resulted in the death of one employee, and the injury of one railway-express agent and three employees.

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.

- o East Grafton, W. Va. 2.20 mi.
- o Grafton 81.90 mi.
- o Petroleum 3.00 mi.
- o Eaton, W. Va. 1.64 mi.
- X Point of accident 18.36 mi.
- o Belpre, Ohio



Additional pieces of rail found



Report No. 3225
 Baltimore and Ohio Railroad
 Eaton, W. Va.
 June 30, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the Monongah Division extending between East Grafton, W. Va., and Belpue, Ohio, 107.1 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by signal indications. The accident occurred on the main track 83.74 miles west of East Grafton and 1.64 miles west of the station at Eaton. From the east there are, in succession, a tangent 524 feet in length, a 3°30' curve to the right 464 feet, a tangent 12 feet, and a 4°45' curve to the left 235 feet to the point of accident and 234 feet westward. The grade for west-bound trains is 0.98 percent descending.

The accident occurred in tunnel No. 22, 338 feet in length, at a point 126 feet west of the east portal. The track structure consists of 112-pound RE rail, 39 feet in length, laid new in 1943, on an average of 24 treated ties to the rail length. It is fully tieplated with double-shoulder canted tieplates, spiked with 2 hold-down and 2 anchor spikes per tieplate, and is provided with 6-hole 36-inch toeless joint bars and 6 rail anchors per rail length. It is ballasted with crushed slag to a depth of 12 inches below the ties.

Automatic block signal W-366-04, governing west-bound movements, is located 1,342 feet east of the point of accident. It is of the color-position-light type and displays four aspects.

This carrier's instructions governing the maintenance-of-way department read in part as follows:

541. The track foreman shall, once each week, make a careful personal inspection of all tracks, * * * also, his entire section and everything pertaining to it, and will take necessary action to have prompt repairs made to everything which the condition justifies.

543. The Supervisor shall, once each month, make a careful inspection over his entire sub-division of * * * all parts of the track, * * * and will note the condition of * * * everything pertaining to track on his sub-division.

544. Frequent inspection should be made of rail in tunnels by the Supervisor. In making the inspection, the rail should be thoroughly cleaned by removing sand, scale, etc., from the rail with a broom, and the under side of the head examined with a magnifying mirror.

The maximum authorized speed for the train involved in this accident was 45 miles per hour.

Description of Accident

No. 29, a west-bound first-class express train, consisted of engines 5301 and 5048, coupled, of the 4-6-2 type, one baggage car, two coaches, one express car, three baggage cars, one refrigerator-express car, one baggage-express car, one express car, one baggage-express car, three refrigerator-express cars, one express car and one coach, in the order named. All cars were of all-steel construction except the eighth, twelfth, thirteenth, and fourteenth cars, which were of steel-underframe construction. This train departed from Grafton, 84.9 miles east of Eaton, at 12:09 p. m., 24 minutes late, departed from Petroleum, the last open office, 4.64 miles east of the point of accident, at 3:18 p. m., 57 minutes late, passed automatic block signal W-36b-04, which indicated Proceed, and while moving at a speed of 48 miles per hour, both engines and their tenders, the first five cars and the front truck of the sixth car were derailed. The initial point of derailment was 125 feet west of the east portal of tunnel No. 22.

Both engines were derailed to the right, moved along the north wall of the tunnel to the west portal and then overturned to the right. Both engines and their tenders remained coupled and stopped parallel to the track, with the first engine 519 feet west of the point of derailment. The tender of the second engine stopped across the track at an angle of 80 degrees, with its cistern off the frame. Separations occurred at each end of the first car. The first car stopped across the track and at an angle of 60 degrees to it. The second car stopped parallel to the track and leaned at an angle of 60 degrees. The third, fourth and fifth cars stopped upright and parallel to the track. The front truck of the sixth car was derailed. Both engines and the first three cars were considerably damaged, and the next three cars were slightly damaged. The track structure was destroyed throughout a distance of 330 feet. The north wall of the tunnel was damaged throughout a distance of about 150 feet.

The engineer of the second engine was killed. The engineer of the first engine and both firemen were injured.

The weather was clear at the time of the accident, which occurred at 3:25 p. m.

Discussion

No. 29 was moving on a 4°45' curve at a speed of 48 miles per hour, in territory where the maximum authorized speed was 45 miles per hour, when the accident occurred. As the train approached the point where the accident occurred the engine-men of both engines were in their respective positions in the cabs of the engines, and the enginemen of the first engine were maintaining a lookout ahead. The conductor and the flagman were in the sixteenth car at the rear of the train. The air brakes had been tested and had functioned properly when used en route. They were being controlled from the first engine. At tunnel No. 21, 0.75 mile east of the point where the accident occurred, the throttle of the first engine was closed. When the train passed signal W-366-04, which indicated Proceed, the speed was 46 miles per hour, and the train was drifting on the descending grade. Before the accident occurred the engines and the cars were riding smoothly and there was no indication of defective equipment or track, nor of any obstruction having been on the track. The engineer of the first engine said that the speed was increased to about 48 miles per hour when the train entered tunnel No. 22. Immediately afterward he heard a sound which indicated that the engine had struck a broken rail. The derailment occurred before he could take action to stop the train.

After the accident occurred a broken rail was found on the north or high side of the curve. This rail was broken into many pieces, eleven of which, measuring from 9-7/8 inches to 53-1/4 inches in length, were recovered. The most easterly break occurred at a point 24 feet 2 inches west of the receiving end of the rail. Westward from this break, the rail was broken horizontally through the web a distance of 27-1/4 inches and then vertically through the head. Between points 12 inches and 20 inches west of the most easterly break, the adjacent surfaces of the horizontal break were worn smooth. This condition indicates that a break 8 inches long had existed for some time prior to the accident. All of the other breaks were new and apparently occurred as a result of the derailment. This rail was manufactured by the Illinois Steel Company in September, 1943, and was laid in the track the same year. The heat number was not legible.

No. 12, an east-bound first-class passenger train, passed through tunnel No. 22 about 44 minutes prior to the derailment of No. 29, and no unusual riding conditions were observed by the crew of that train.

On June 16, 1950, the section foreman inspected the rail in tunnel No. 22 with a magnifying mirror, and found no defects. The track through the tunnel was surfaced on June 23 and was last inspected by the section foreman on that date. It was last inspected by the track supervisor from a track motor-car about 4 hours before the derailment occurred, and no defective condition was observed. A rail-defect detector car was operated over this line on September 30, 1949, and no defective condition was indicated in the rail in question.

Cause

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

Dated at Washington, D. C., this third day of August, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.