

Dept. of Transportation

JUL 13 1976

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INTERSTATE COMMERCE COMMISSION  
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INVESTIGATION NO. 2601  
THE BALTIMORE & OHIO RAILROAD COMPANY  
REPORT IN RE ACCIDENT  
NEAR BAKERSTOWN, PA., ON  
JULY 13, 1942

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## SUMMARY

Railroad: Baltimore & Ohio

Date: July 13, 1942

Location: Bakerstown, Pa.

Kind of accident: Collision

Equipment involved: 2 engines, coupled : Cut of cars

Train number: Extra 2819-2744  
East

Engine numbers: 2819-2744

Consist: : 15 cars

Estimated speed: Standing : 10 m. p. h.

Operation: Automatic block-signal system

Track: Double; 3° curve to right; 1.55  
percent descending grade eastward

Weather: Slightly foggy

Time: About 2:15 a. m.

Casualties: 2 killed

Cause: Accident caused by failure to  
apply hand brakes on cars left  
standing on descending grade

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2601

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

THE BALTIMORE & OHIO RAILROAD COMPANY

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August 28, 1942.

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Accident near Bakerstown, Pa., on July 13, 1942, caused  
by failure to apply hand brakes on cars left stand-  
ing on descending grade.

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REPORT OF THE COMMISSION<sup>1</sup>

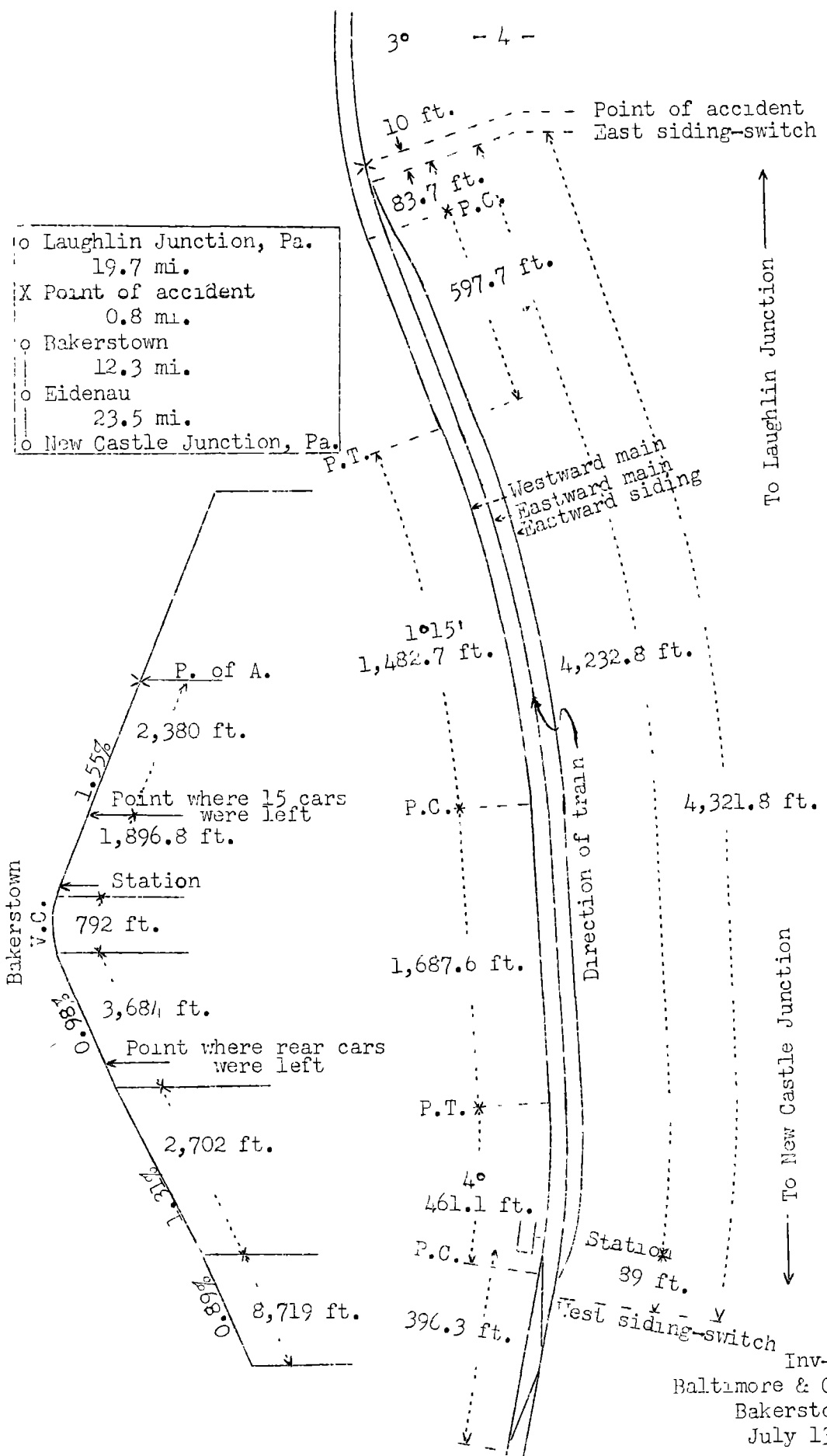
PATTERSON, Commissioner:

On July 13, 1942, there was a collision between two engines, coupled, and a cut of runaway cars on the Baltimore & Ohio Railroad at Bakerstown, Pa., which resulted in the death of two employees.

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<sup>1</sup>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 Laughlin Junction, Pa. 19.7 mi.
- X Point of accident 0.8 mi.
- o Bakerstown 12.3 mi.
- o Eidenau 23.5 mi.
- o New Castle Junction, Pa.



Inv-2601  
 Baltimore & Ohio Railroad  
 Bakerstown, Pa.  
 July 13, 1942

### Location of Accident and Method of Operation

This accident occurred on that part of the Pittsburgh Division designated as the P. & W. Sub-Division and extending between New Castle Junction and Laughlin Junction, Pa., a distance of 56.3 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated with the current of traffic by an automatic block-signal system, the indications of which supersede time-table superiority. At Bakerstown, a siding 4,321.8 feet in length parallels the eastward main track on the south. The east switch of the siding is 4,232.8 feet east of the station. The accident occurred on the eastward main track at a point 10 feet east of the east siding-switch. As the point of accident is approached from the west there are, in succession, a tangent 1,687.6 feet in length, a 1°15' curve to the left 1,482.7 feet, a tangent 597.7 feet and a 3° curve to the right 83.7 feet to the point of accident and 1,113 feet beyond. The grade for east-bound trains varies between 0.89 and 1.31 percent ascending a distance of 2.86 miles, then there is a vertical curve 792 feet, which is followed by a 1.55-percent descending grade a distance of 4,276.8 feet to the point of accident.

Operating rules read as follows:

137. When necessary to detach engine from train on a grade, sufficient number of hand brakes must be applied to hold train before the engine is detached.

Instructions governing the operation of air brakes read in part as follows:

217. When engine is detached from train, or cars set off, trainmen will apply sufficient hand brakes to secure same at all times. Air brakes must not be depended upon to hold detached trains on grades. \* \* \*

In the immediate vicinity of the point of accident the maximum authorized speed for the train involved was 18 miles per hour.

### Description of Accident

Extra 2819-2744 East, an east-bound freight train, consisted of engines 2819 and 2744, coupled, 39 loaded and 2 empty cars and a caboose. At Riker, 91.7 miles west of Bakerstown, a terminal air-brake test was made and the brakes functioned properly. This train departed from Eidenau, 12.3 miles west of Bakerstown, at 1:17 a. m., according to the dispatcher's record of movement of trains, and stalled on the ascending

grade at a point about 0.6 mile west of Bakerstown. The first 15 cars were detached, and this portion of the train proceeded eastward and passed the station at Bakerstown at 2:09 a. m., and stopped on the eastward main track with the first car standing at a point 2,370 feet west of the east siding-switch, where the engines were detached. The engines proceeded eastward and stopped with the rear end of the tender of engine 2744 standing 10 feet east of the east siding-switch, and soon afterward it was struck by the cut of cars, which was moving at an estimated speed of 10 miles per hour.

The force of the impact moved both engines eastward a distance of 410 feet. The Nos. 2, 3 and 4 pairs of driving wheels of engine 2744 were derailed and the cab was demolished. The rear truck of the tender was derailed and the tender frame was bent downward to the rails. The cistern was torn loose from the frame and stopped 37 feet south of the track and 185 feet east of the point of collision. The first car was derailed and stopped east of the tender cistern. This car was demolished. The second to fifth cars, inclusive, were derailed but remained on the roadbed. The front truck of the sixth car was derailed.

It was slightly foggy at the time of the accident, which occurred about 2:15 a. m.

The employees killed were the engineer and the fireman of engine 2744.

#### Data

After the accident, inspection of 13 cars of the 15-car cut disclosed that the hand brakes were efficient.

#### Discussion

The operating rules on the line involved require that when it is necessary to detach an engine from a train standing on a descending grade, a sufficient number of hand brakes must be applied to hold the train before the engine is detached. Dependence must not be placed upon the train air brakes to hold the train. All surviving members of the crew involved understood these requirements.

After the train involved stalled on the ascending grade just west of Bakerstown, the first 15 cars were detached and this portion of the train proceeded eastward and stopped with the front end of the cut of cars standing 1,863 feet east of the station and 2,370 feet west of the east siding-switch. The engines proceeded eastward and stopped with the rear end of engine 2744 standing 10 feet east of the east siding-switch. Soon afterward the tender of engine 2744 was struck by the cut of cars.

The investigation disclosed that in making the first stop east of the station the engineer of the first engine made a brake-pipe reduction of about 40 pounds from an initial brake-pipe pressure of 80 pounds and released the engine and tender brakes by means of the independent brake valve. In order to take slack to permit the engines to be uncoupled from the cars, he placed the automatic brake valve in running position. The investigation indicated that the release was started before the angle cocks between the tender of the second engine and the first car were closed. The front brakeman said he did not hear any of the brakes on the cars release. After the engines were detached, a stop was made a short distance east of the cars so that the front brakeman could apply hand brakes on the standing cars; however, a few seconds later the brakeman gave a proceed signal and the engineer thought the air brakes would hold the cut of cars until after the engines backed into the siding and then the front brakeman could apply the hand brakes while the engines were returning to the rear portion of the train. After the engines stopped east of the east siding-switch and before the front brakeman could line the switch for entry to the siding, he felt vibration from the moving cars. In the light given by the rear headlight of engine 2744 he saw the cut of cars only a short distance away moving down the grade. He gave a proceed signal but before the engines moved the collision occurred. The front brakeman said that it is customary to rely upon the train air brakes to hold a detached train standing on a grade for a short period, not exceeding 10 minutes, before hand brakes are applied. In this instance, since the cut of cars was stopped by an air-brake application, he did not apply hand brakes before the engines were detached. The conductor, who was at the rear of the cut of cars, alighted at the station to line the west siding-switch for movement of the engines returning to the rear portion of the train, and gave no instructions to members of the crew on the engines. Since all members of the crew were experienced he expected the rules to be observed and the work to be performed under the instructions of the engineer of the first engine.

Cause

It is found that this accident was caused by failure to apply hand brakes on cars left standing on a descending grade.

Dated at Washington, D. C., this twenty-eighth day of August, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.