

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3690

THE BALTIMORE AND OHIO RAILROAD COMPANY

IN RE ACCIDENT

NEAR CORNWALLIS, W. VA., ON

MAY 31, 1956

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SUMMARY

Date: May 31, 1956
Railroad: Baltimore and Ohio
Location: Cornwallis, W. Va.
Kind of accident: Derailment
Train involved: Passenger
Train number: 1
Locomotive number: Diesel-electric units 52-0 and 62-X
Consist: 11 cars
Speed: 45 m. p. h.
Operation: Signal indications
Track: Single; tangent; level
Weather: Clear
Time: 2:22 a. m.
Casualties: 2 killed; 45 injured
Cause: Rock slide

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3690

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

THE BALTIMORE AND OHIO RAILROAD COMPANY

July 2, 1956

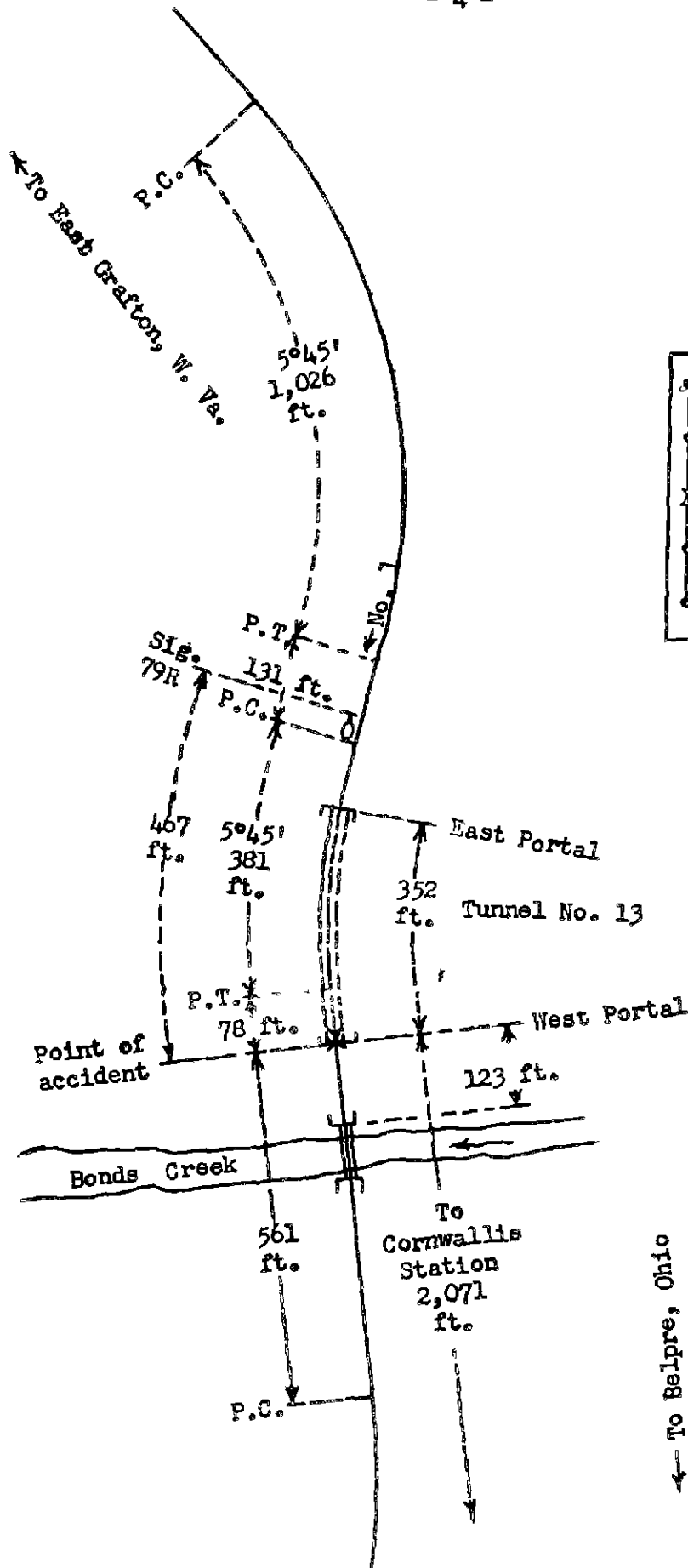
Accident near Cornwallis, W. Va., on May 31, 1956, caused
by a rock slide.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On May 31, 1956, there was a derailment of a passenger train on the Baltimore and Ohio Railroad near Cornwallis, W. Va., which resulted in the death of 2 train-service employees, and the injury of 29 passengers, 4 postal employees, 6 Pullman Company employees, 1 club-car attendant, 2 dining-car employees, 1 train attendant, and 2 train-service employees.

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



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|---|----------------------|----------|
| • | East Grafton, W. Va. | 2.2 mi. |
| • | Grafton | 71.9 mi. |
| X | Point of accident | 0.4 mi. |
| • | Cornwallis, W. Va. | 32.6 mi. |
| • | Belpre, Ohio | |

Report No. 3690
 Baltimore and Ohio Railroad
 Near Cornwallis, W. Va.
 May 31, 1956

Location of Accident and Method of Operation

This accident occurred on that part of the Monongah Division extending between East Grafton, W. Va., and Belpre, 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 at the west portal of Tunnel No. 13, 74.1 miles west of East Grafton and 2,071 feet east of the station at Cornwallis, W. Va. From the east there are, in succession, a 5°45' curve to the right 1,026 feet in length, a tangent 131 feet, a 5°45' curve to the left 381 feet, and a tangent 78 feet to the point of accident and 561 feet westward. The grade is practically level at the point of accident.

Tunnel No. 13 is 352 feet in length. It is 14 feet 3 inches in width, and 17 feet 7 inches in height from the tops of the rails to the top of the tunnel. The ground above the tunnel rises to a maximum height of about 200 feet above the level of the track. The hillside above the west portal is cut back on a slope which extends from the top of the west portal to a point 45 feet back of the portal and 72 feet above the level of the track.

West of Tunnel No. 13 the track crosses Bonds Creek on an I-beam bridge approximately 79 feet in length. The east end of the bridge is 123 feet west of the west portal of the tunnel. The surface of the stream is approximately 26 feet below the level of the tops of the rails.

In the vicinity of the point of accident the track structure consists of 115-pound rail, 39 feet in length, laid new in 1950 and 1955 on an average of 22 to 24 ties to the rail length. It is fully tieplated with double-shoulder canted tie plates, spiked with four spikes per tie plate, and is provided with 6-hole 36-inch joint bars and an average of eight rail anchors per rail. It is ballasted with slag to a depth of 12 inches below the bottoms of the ties.

Semi-automatic signal 79R, governing west-bound movements, is located 467 feet east of the point of accident.

The maximum authorized speed for passenger trains in the vicinity of the point of accident is 45 miles per hour.

Description of Accident

No. 1, a west-bound first-class passenger train, consisted of Diesel-electric units 52-0 and 62-X, coupled in multiple-unit control, one mail car, one lounge-dormitory-baggage car, three coaches, one dining car, and five sleeping cars, in the order named. The seventh, ninth, tenth, and eleventh cars were of lightweight construction, and the other cars were of conventional all-steel construction. This train departed from Grafton, 2.2 miles west of East Grafton, at 12:28 a. m., on time, and while moving at a speed of 45 miles per hour, as indicated by the tape of the speed recording device, it struck a rock slide at the west portal of Tunnel No. 13.

The Diesel-electric units, the first to the sixth cars, inclusive, and the front truck of the seventh car were derailed. The first Diesel-electric unit was broken in two. The front portion stopped in the center of Bonds Creek about 40 feet north of the bridge. The rear portion stopped in the creek with the west end against the west abutment of the bridge. The second Diesel-electric unit stopped on its right side with the front end on top of the rear portion of the first unit and the rear end on the east abutment of the bridge. The first car stopped several feet north of the track and parallel to it. It leaned to the north at an angle of approximately 45 degrees. The other derailed cars remained upright and approximately in line with the track. With the exception of the separation between the two Diesel-electric units, there were no separations between the units of the train. The third car did not pass the portal of the tunnel. This car and the following cars were derailed as a result of the shock of the impact. The first Diesel-electric unit was destroyed, the second unit was badly damaged, the first three cars were considerably damaged, and the other derailed cars were somewhat damaged.

The engineer and the fireman were killed. The conductor and the flagman were injured.

The weather was clear at the time of the accident, which occurred at 2:22 a. m.

Discussion

As No. 1 was approaching the point where the accident occurred the enginemen were on the locomotive. The members of the train crew were in the cars of the train. According to the indication on the control machine of the traffic-control system, signal 79R indicated Proceed. The members

of the train crew said there had been nothing unusual in the handling of the train. They said that there was no brake application before the impact occurred.

After the accident occurred it was found that approximately 615 tons of rock had become dislodged from the hillside above the portal of the tunnel and had fallen on and near the track. This rock had become dislodged from a horizontal stratum of hard sandstone approximately 35 feet in thickness. It had fallen from an area about 25 feet back of the portal of the tunnel, between 35 feet 9 inches and 71 feet above the top of the portal, and between 12 feet 6 inches and 40 feet 5 inches south of the center-line of the track. The slide contained a number of large rocks, the largest of which measured 22 feet by 15 feet by 15 feet. The conductor of No. 1 said that rock continued to fall on the track for some time after the accident occurred.

Tunnel No. 13 was constructed about 1855. The section foreman had been employed in this territory since 1917, and he said that he had no knowledge of a slide having occurred at this location prior to the time of the accident. The hillside above the west portal had been hand scaled on February 14, 1956. Rain had fallen more frequently than usual during the month before the accident occurred, but there had been no unusually hard rain. The section foreman had inspected the west end of the tunnel 6 days before the accident occurred and had passed on his track motor-car 2 days before the accident occurred. He had detected no indication that a slide might occur. An east-bound freight train passed through the tunnel about 1 hour 45 minutes before the accident occurred. The crew of this train observed no rocks along the track or other unusual condition in the vicinity of the tunnel.

Cause

This accident was caused by a rock slide.

Dated at Washington, D. C., this second day of July, 1956.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.