

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3478
WESTERN MARYLAND RAILWAY COMPANY
IN RE ACCIDENT
NEAR BERLIN JCT., PA., ON
AUGUST 13, 1952

SUMMARY

Date: August 13, 1952

Railroad: Western Maryland

Location: Berlin Jct., Pa.

Kind of accident: Rear-end collision

Trains involved: Freight : Freight

Train numbers: Extra 64 West : Extra 183 West

Engine numbers: Diesel-electric : Diesel-electric
units 64, 63B : unit 183
and 63

Consists: 34 cars : 4 cars, caboose

Speeds: Standing : About 19 m. p. h.

Operation: Timetable and train orders

Track: Single; 4°43' curve; 1.146 percent
ascending grade westward

Weather: Clear

Time: 11:55 a. m.

Casualties: 2 killed

Cause: Failure of crew of Extra 183 West
properly to ascertain that Extra
63 East had arrived at Elm

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3478

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

WESTERN MARYLAND RAILWAY COMPANY

September 26, 1952

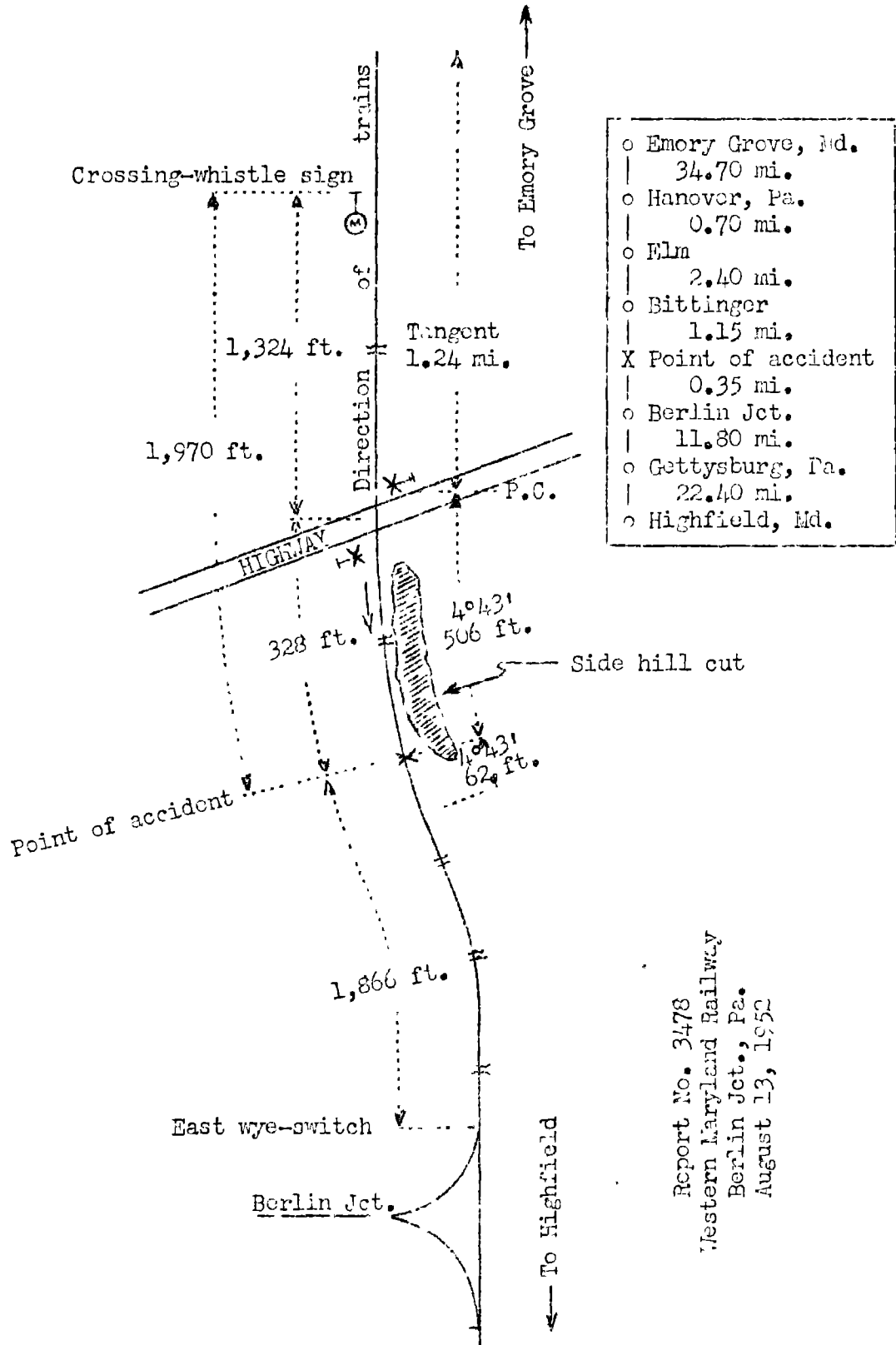
Accident near Berlin Jct., Pa., on August 13, 1952, caused
by failure of the crew of Extra 183 West properly to
ascertain that Extra 63 East had arrived at Elm.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On August 13, 1952, there was a rear-end collision
between two freight trains on the Western Maryland Railway
near Berlin Jct., Pa., which resulted in the death of two
employees. This accident was investigated in conjunction
with a representative of the Pennsylvania Public Utility
Commission.

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



Report No. 3478
 Western Maryland Railway
 Berlin Jct., Pa.
 August 13, 1952

Location of Accident and Method of Operation

This accident occurred on that part of the Hagerstown Division extending between Emory Grove and Highfield, Md., 73.5 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. At Berlin Jct., 39.3 miles west of Emory Grove, the tracks of a wye extend northward from the main track. The accident occurred on the main track at a point 1,863 feet east of the east wye-switch at Berlin Jct. From the east there are, in succession, a tangent 1.24 miles in length and a 4°40' curve to the left 506 feet to the point of accident and 62 feet westward. Throughout a distance of 1.03 miles immediately east of the point of accident the grade for west-bound trains varies between 0.418 percent and 1.693 percent ascending, and at the point of accident it is 1.146 percent ascending westward. In the vicinity of the point of accident the track is laid in a side-hill cut, the south wall of which rises to a height varying from 10 feet to 16 feet above the level of the tops of the rails. Immediately east of the east end of this cut and about 328 feet east of the point of accident a secondary highway crosses the main track at grade. The crossing-whistle sign for west-bound trains approaching this crossing is located on the north side of the track, 1,324 feet east of the crossing and 1,970 feet east of the point of accident.

This carrier's operating rules read in part as follows:

14. Engine Whistle Signals.

Note.--The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds. * * *

Sound.	Indication.
* * *	
(c) — o o o	Flagman protect rear of train.
* * *	

35. The following signals will be used by flagmen:

Day signals--A red flag,
Torpedoes and
Fusces.

* * *

91 Unless some form of block system is used, trains in the same direction must keep not less than five minutes apart, except in closing up at stations. * * *

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes, and when necessary, in addition, displaying lighted fuseses. * * *

* * *

When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure full protection, * * * by day when the view is obscured, lighted fuseses must be thrown off at proper intervals.

* * *

201. For movements not provided for by time-table, train orders will be issued by authority and over the signature of the Superintendent and only contain information or instructions essential to such movements.

They must be brief and clear; in the prescribed forms when applicable; * * *

* * *

220. Train orders once in effect continue so until fulfilled, superseded or annulled. * * *

* * *

FORMS OF TRAIN ORDERS.

* * *

G.

(1.) Eng 99 run extra A to F.

* * *

(3.) Eng 99 run extra A to F and return to C.

The extra must go to F before returning to C.

* * *

The maximum authorized speed for freight trains is 30 miles per hour.

Description of Accident

At Berlin Jct., 39.3 miles west of Emory Grove, the members of the train and the engine crew assigned to a locomotive which consisted of Diesel-electric units 64, 63B and 63, from west to east, respectively, coupled in multiple-unit control and operated from the control compartment of Diesel-electric unit 64, received copies of train order No. 32, which was made complete at 11:14 a. m., reading as follows:

ENGINE 63 RUN EXTRA BERLIN JUNCTION TO ELM. AFTER
EXTRA 63 EAST ARRIVES AT ELM ENGINE 64 RUN EXTRA
ELM TO GETTYSBURG STATION.

Elm and Gettysburg are located, respectively, 3.9 miles east and 11.8 miles west of Berlin Jct. Extra 63 East immediately departed from Berlin Jct. At Bittinger, 1.5 miles east of Berlin Jct., the locomotive was coupled to two cars, which had been left at that point by a wrecking train. It then pushed the two cars to Elm. On arrival at Elm the two cars and the locomotive were coupled to 32 cars, which had been placed on the main track at that point by Extra 183 West for movement in Extra 64 West.

Extra 64 West, a west-bound freight train, consisted of this 3-unit Diesel-electric locomotive and 34 cars, in the order named. After an air-brake test was made this train departed from Elm and stopped at Bittinger to add the caboose to the train. The caboose, which was on an auxiliary track, was coupled to the front end of the locomotive. About 11:50 a. m. the train proceeded westward. At Berlin Jct. the train stopped at the east switch of the wye to perform switching necessary to place the caboose at the rear of the train. The caboose was detached from the locomotive while the train was in motion and it rolled clear of the main track. The train stopped about 11:54 a. m., with the first Diesel-electric unit on the east wye-switch and the rear end of the rear car at a point on the main track 1,866 feet east of the switch. About 1 minute later the rear end was struck by Extra 183 West.

Extra 183 West, a west-bound freight train, consisted of Diesel-electric unit 183, a road-switcher type, headed east and moving in backward motion, three cars, a caboose, and one car, in the order named. Immediately after returning from a westward movement to Elm, members of the crew received instructions at Hanover, the last open office, 4.25 miles east of the point of accident, to place a caboose on the rear of Extra 64 West at Bittinger and also received copies of train order No. 33 reading in part as follows:

AFTER EXTRA 63 EAST ARRIVES AT ELM ENGINE 183 RUN
EXTRA ELM TO GETTYSBURG STATION. * * *

This train departed from Hanover about 11:40 a. m., proceeded westward and passed Elm without stopping, and while moving at a speed of about 19 miles per hour it struck the rear end of Extra 64 West.

The rear truck of the rear car of Extra 64 West was displaced and derailed. The rear end of the rear car was elevated as a result of the impact and overrode the end platform of Diesel-electric unit 183 a distance of about 18 feet. No other equipment of either train was derailed. The rear three cars of Extra 64 West were somewhat damaged. Diesel-electric unit 183 was badly damaged and the rear compartment hood and the cab were demolished.

The engineer and the fireman of Extra 183 West were killed.

The weather was clear at the time of the accident, which occurred about 11:55 a. m.

Diesel-electric unit 183 is provided with 24-RL brake equipment. It is equipped with a safety-control feature actuated by a foot pedal.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 6.93 trains.

Discussion

Early on the day of the accident a derailment occurred when cars were being set off on an auxiliary track at Bittinger by the crew of Extra 64 West. The locomotive was moved to Berlin Jct. to clear the line for the movement of a wrecking train. The caboose was placed on an auxiliary track at Bittinger and the other cars of the train, except the derailed cars, were moved to the siding at Elm by another train.

After the derailment had been cleared, members of the crew at Berlin Jct. received copies of train order No. 32, which authorized the movement of their locomotive as Extra 63 East from Berlin Jct. to Elm and as Extra 64 West from Elm to Gettysburg. They also received information that two rerailed cars had been left on the main track at Bittinger, that the caboose had been left on an auxiliary track at Bittinger, and that the remainder of the train would be on the main track at Elm. Extra 63 East departed from Berlin Jct. and stopped at Bittinger. The flagman alighted and the locomotive was coupled to the two rerailed cars, which were then pushed eastward to Elm. The flagman remained at Bittinger. At Elm the two cars and the locomotive were coupled to 32 cars, which had been placed on the main track. Train order No. 32 had been read by all members of the crew. It was the understanding of these employees, without exception, that this train order authorized their train to use the main track between the designated points, and that until the arrival of Extra 63 East at Elm was reported to the train dispatcher this authority permitted movements in either direction without flag protection. The conductor said that he did not report the arrival of his train at Elm and that there was no other train or engine in the vicinity when it arrived. He said that he intended to report the arrival at Elm to the dispatcher after switching operations were completed at Berlin Jct., so that it would not be necessary to provide flag protection until the caboose had been placed at the rear of the train. After an air-brake test had been made Extra 64 West departed from Elm and proceeded to Bittinger, where the caboose was coupled to the front end of the locomotive. When the train departed westward the flagman boarded the second car from the rear. The rear three cars of the train were gondolas loaded with steel bars.

As Extra 64 West was approaching the point where the accident occurred the conductor was on the front platform of the caboose, which was being pushed ahead of the locomotive. The enginemen and the front brakeman were in the control compartment at the front of the locomotive and the flagman was on the second car from the rear. The engineer said that the speed was reduced gradually by manipulating the throttle and by use of the independent brake. The conductor alighted and ran ahead to line the east switch for entry to the wye at Berlin Jct., and then detached the caboose from the locomotive before the train stopped. Immediately after the train stopped, the brakes became applied in emergency when the collision occurred. The flagman said that the

conductor had informed him that the arrival of the train at Elm had not been reported, and although he thought rear-end protection was not required he threw off a lighted fusee before the train entered the curve on which the accident occurred. Because it might become necessary to provide protection for traffic at the rail-highway grade crossing during switching operations, the flagman alighted with a red flag before the train stopped. He said that when he was in the vicinity of the rear end of the rear car he first observed the following train, which was closely approaching. He did not recall whether he gave stop signals before the collision occurred.

About 10:30 a. m. on the day of the accident Extra 183 West proceeded from Hanover to Elm and moved 32 cars from the siding to the main track for further movement in the train of Extra 64 West. This train then returned to Hanover to obtain waybills which had been left at that point. At Hanover the crew received copies of train order No. 33, which authorized the movement of their train from Elm to Gettysburg after Extra 63 East arrived at Elm, and instructions to place the caboose, which was on an auxiliary track at Bittinger, on the rear end of the train of Extra 64 West. The train then departed from Hanover and proceeded to Elm. When the train reached Elm the crew found that the cars which they had placed on the main track had been removed. This indicated to them that, since Extra 63 East and Extra 64 West were operated by the same crew, Extra 63 East had arrived at Elm and the train had departed westward with the cars as Extra 64 West. Extra 183 West passed Elm without stopping. At Bittinger the crew observed that the caboose had been removed from the auxiliary track and that the preceding train was moving westward. The conductor informed the engineer that he thought Extra 64 West would proceed to Gettysburg before switching the caboose to the rear of the train.

As Extra 183 West was approaching the point where the accident occurred the conductor was maintaining a lookout in the direction of movement from the platform at the west end of the locomotive. The enginemen were in the cab of the locomotive, and the front brakeman and the flagman were in the caboose. The brakes of this train had functioned properly when used en route. The conductor said he observed that the engineer was maintaining a lookout. He said that the preceding train was about 2,000 feet distant when it entered the curve and disappeared from view, and he was certain that the engineer had observed it. The grade-crossing

whistle signal was sounded on the pneumatic horn of the locomotive in the vicinity of the crossing-whistle sign. The conductor said that the speed was about 20 miles per hour in the vicinity of the crossing. He did not observe a lighted fusee. He said that because of the restricted view he did not observe that the preceding train had stopped until his train was about 150 feet from the rear end of that train. He called a warning and alighted from the locomotive. The engineer made an emergency application of the brakes before the collision occurred.

According to the tape of the speed-recording device the maximum speed attained by Extra 183 West between Bittinger and the point of accident was 24.6 miles per hour. The tape indicates that some deceleration was obtained immediately before the accident occurred and the speed was reduced to 19.5 miles per hour at the point of collision. Tests made after the accident occurred disclosed that because of track curvature and vegetation on the south wall of the cut, the view of the track ahead from the engineer's position in the cab of a locomotive of the road-switcher type, headed east and approaching the point of accident from the east, is restricted to a distance of 350 feet.

The investigation disclosed that over a period of years, although the carrier has in its operating rules train-order forms for authorizing work extras, it has been the practice to issue round-trip running orders in creating extra trains without expecting the train to run to the designated turning point. In many of these cases, the train returned to its initial station without going to the designated turning point, although the rules require that the train go to the turning point before starting the return trip. There are no scheduled trains in the territory involved, and all the trains operated are extra trains. It has been the understanding of the operating officials and of the train and engine-service employees that as long as an extra train authorized by a round-trip running order does not go to the designated turning point no other train can be admitted to the territory until the extra train had returned to its initial station, and that during this time flag protection is not required. In the instant case the conductor of Extra 63 East planned to withhold the reporting of the arrival of that train at Elm to the train dispatcher until the train reached Berlin Jet, as Extra 64 West. There is no train-order office or register at Elm. Since no other train could be admitted to the territory covered by train order No. 32 until the first

part of the order was fulfilled, the crew considered that until the arrival of Extra 63 East was reported to the train dispatcher no other train could follow their train from Elm. Therefore, in accordance with past practice, they did not furnish flag protection between Elm and the point of accident. They assumed that their arrival at Elm would be unknown to others until they reported the fact to the dispatcher. However, regardless of the assumption on the part of the crew of Extra 64 West that no train could follow their train from Elm, the rules required that they furnish flag protection, but they were following a long-standing practice and understanding of both the officials and the employees, which led to the present accident.

On a previous trip the crew of Extra 183 West had placed cars at Elm for westward movement by Extra 64 West, and, when Extra 183 West arrived at Elm on the trip involved in the accident, the crew observed that the cars were gone. They assumed that, since Extra 64 West had departed, Extra 63 East unquestionably had arrived at Elm. Extra 183 West then proceeded westward. Since there was no train-order office or register at Elm, the only means available to the crew of Extra 183 West properly to ascertain that Extra 63 East had arrived at Elm was to observe that train at Elm or to obtain information from the train dispatcher by telephone. If the crew of Extra 183 West had called the train dispatcher concerning Extra 63 East, the dispatcher would not have been in position to give this crew any information about the latter train, and consequently Extra 183 West would have been required to stay at Elm until the crew received proper information that Extra 63 East had arrived at Elm.

Cause

It is found that this accident was caused by failure of the crew of Extra 183 West properly to ascertain that Extra 63 East had arrived at Elm.

Dated at Washington, D. C., this twenty-sixth day of September, 1952.

By the Commission, Commissioner Patterson.

(SEAL)

GEORGE W. LAIRD,
Acting Secretary.