

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3730  
THE BALTIMORE AND OHIO RAILROAD COMPANY  
IN RE ACCIDENT  
NEAR WEST CUMBO, W. VA., ON  
JANUARY 1, 1957

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## SUMMARY

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Date: January 1, 1957

Railroad: Baltimore and Ohio

Location: West Cumbo, W. Va.

Kind of accident: Head-end collision

Trains involved: Freight : Freight

Train numbers: Extra 6498 West : Extra 245 East

Locomotive numbers: Diesel-electric units 6498 and 6500 : Diesel-electric units 245-A, 370-X, and 271-0

Consists: 160 cars, caboose : 154 cars, caboose

Speeds: 33 m. p. h. : 21 m. p. h.

Operation: Movements with the current of traffic by signal indications; movements against the current of traffic by train orders and a manual block-signal system

Tracks: Three; 2° curve; 0.21 percent descending grade westward

Weather: Clear

Time: 1:42 a. m.

Casualties: 3 killed; 6 injured

Cause: Failure to deliver right-of-track order, and failure to hold a train clear of a block which was occupied by an opposing train

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3730

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

THE BALTIMORE AND OHIO RAILROAD COMPANY

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February 8, 1957

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Accident near West Cumbo, W. Va., on January 1, 1957, caused by failure to deliver a right-of-track order, and failure to hold a train clear of a block which was occupied by an opposing train.

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

TUGGLE, Commissioner:

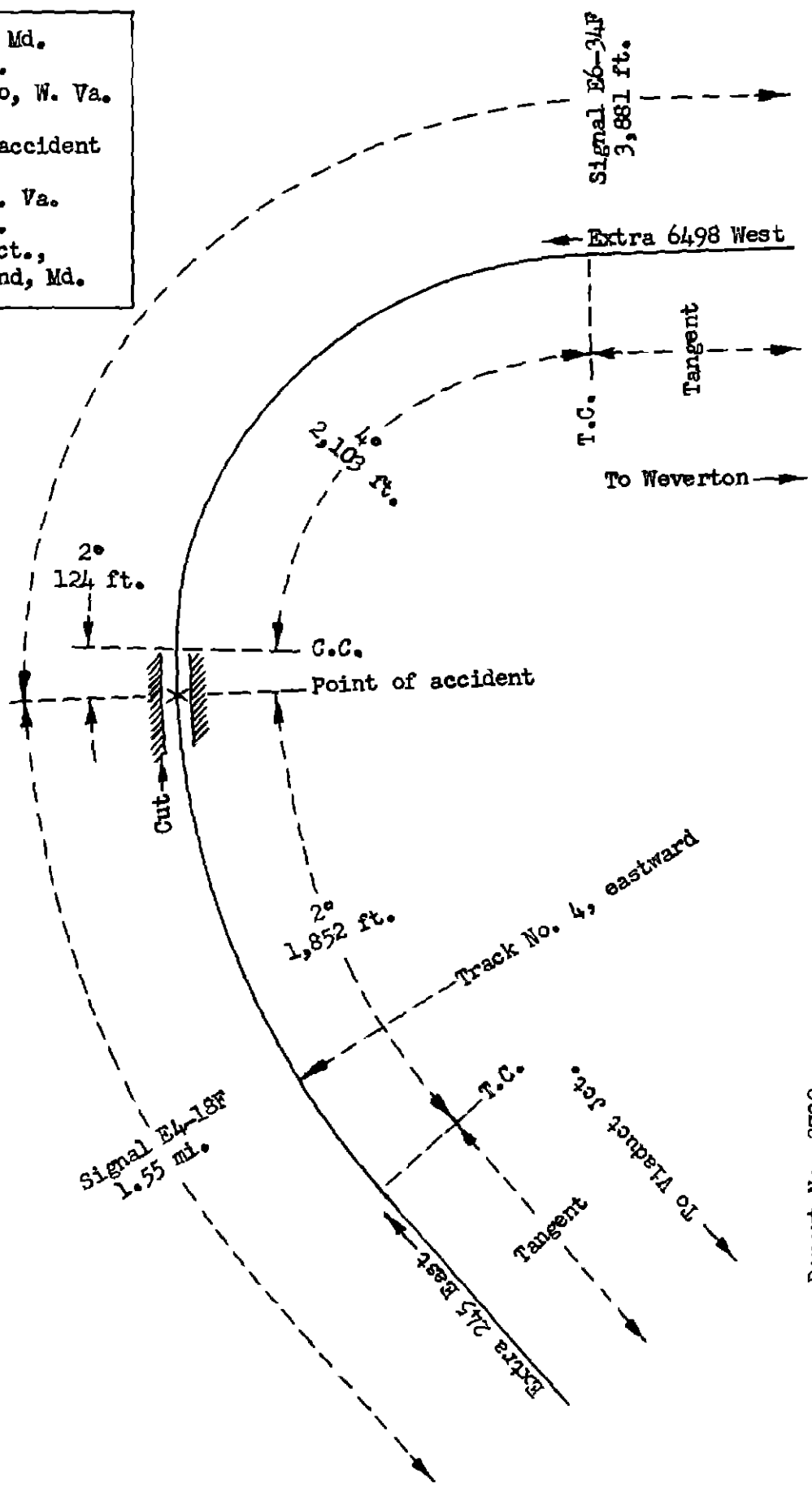
On January 1, 1957, there was a head-end collision between two freight trains on the Baltimore and Ohio Railroad near West Cumbo, W. Va., which resulted in the death of three train-service employees, and the injury of one employee not on duty and five train-service employees.

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

- Weverton, Md. 26.4 mi.
- West Cumbo, W. Va. 5.7 mi.
- X Point of accident 5.9 mi.
- Miller, W. Va. 64.5 mi.
- Viaduct Jct., Cumberland, Md.



Report No. 3730  
 The Baltimore and Ohio Railroad  
 West Cumbo, W. Va.  
 January 1, 1957

### Location of Accident and Method of Operation

This accident occurred on that part of the Cumberland Division extending between Weverton, Md., and Viaduct Jct., Cumberland, Md., 102.5 miles. In the vicinity of the point of accident this is a three-track line, over which trains moving with the current of traffic are operated by signal indications. Trains moving against the current of traffic are operated by train orders and a manual block-signal system. From north to south the main tracks are designated as No. 4, eastward; No. 1, westward; and No. 2, eastward. In the vicinity of the point of accident track No. 4 is a considerable distance north of tracks Nos. 1 and 2. The accident occurred on track No. 4 at a point 32.1 miles west of Weverton and 5.7 miles west of West Cumbo, W. Va. From the east there is a tangent more than 2,500 feet in length and a compound curve to the left consisting of a  $4^{\circ}$  curve 2,103 feet and a  $2^{\circ}$  curve 124 feet to the point of accident and 1,852 feet westward. From the west there is a tangent 1,333 feet in length and the curve on which the accident occurred. Throughout a distance of several miles on each side of the point of accident the grade varies between level and 0.40 percent descending westward, and it is 0.21 percent descending westward at that point.

In the immediate vicinity of the point of accident the track is laid in a cut. The range of vision between opposing movements is materially restricted by curvature of the track and the walls of the cut, which rise to a height of 25 feet.

Automatic signals E4-18F and E6-34F, governing east-bound movements on track No. 4, are located respectively, 1.55 miles west and 3,881 feet east of the point of accident.

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

42. When trains are moved against the current of traffic, Rules 305 to 330 inclusive, are effective.

\* \* \*

207. To transmit a train order, the signal "31" or the signal "19", followed by the direction, must be given to each station addressed. The number of copies will be stated. For example, "31 West copy 5" or "19 East copy 3."

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Operators at stations addressed must see that the fixed signal indicates "Stop," display the train order board, and then reply to the Train Dispatcher "stop displayed (direction)."

Delivery of Train Orders at Stations Where  
the Operator Controls the Semi-Automatic  
Block or Interlocking Signals.

222. Before copying a train order for a train the operator must--

- (a) See that the home signal is in "Stop" position for the track and in the direction of the train to which the train orders are addressed, and place reminder on the signal lever.
- (b) Display on the train order board--  
For "31" train orders:  
By day--a red flag;  
By night--a red flag and a red light.  
\* \* \*

\* \* \*

236. Operators \* \* \*

When relieved, they will make written transfer of all train orders not delivered and will see that such orders and all information pertaining thereto, and other unfinished business, is understood by the relieving operator. The relieving operator will compare the train orders with the transfer.

After a full understanding, he will record the time and sign the block sheet in the place provided, which will acknowledge the transfer.

FORMS OF TRAIN ORDERS

D-R. (Two or More Tracks) Providing for a Movement Against the Current of Traffic.

- (1) No 1 Eng 67 has right over opposing trains on No 2 two track C to F.

The designated train must use the track specified between the points named and has right over opposing trains on that track between those points. Opposing trains must be addressed in the train order, and must not leave the point last named or any intermediate point until the designated train arrives.

\* \* \*

303. A block record must be kept at each block station. \* \* \*

317. To admit a train to a block, the operator must examine the block record; if block in advance is clear of opposing trains and preceding passenger trains, he must request operator at block station in advance to "Block for....." If it is proper for the train to be admitted, the operator in advance will reply--"O.K., blocking for..... Block is....." Operator requesting block must then display the proper block indication or deliver Clearance Card Form A.

A train must not be admitted to a block which is occupied by an opposing train \* \* \*

The maximum authorized speed for freight trains in the vicinity of the point of accident is 40 miles per hour.

#### Description of Accident

On the day of the accident the train dispatcher transmitted train order No. 1 to the operators at Miller and West Cumbo. Miller is 11.6 miles west of West Cumbo. This train order, which was addressed to C. & E. Eastward Trains No. 4 Four Track and Operator at Miller and to C. & E. Extra 6498 West at West Cumbo, read as follows:

Extra 6498 West has right over opposing trains  
on No 4 four track West Cumbo to Miller

It was repeated by both operators and was made complete to both offices at 12:01 a. m.

Extra 6498 West, a west-bound freight train, consisted of Diesel-electric units 6498 and 6500, coupled in multiple-unit control, 160 cars, and a caboose. This train originated at West Cumbo. At West Cumbo the members of the crew received copies of train order No. 1 and copies of a Clearance Card Form A reading in part as follows:

\* \* \*

Manual Block is clear to Miller. Proceed.

\* \* \*

The train departed from West Cumbo on track No. 4 at 1:35 a. m., and while moving at a speed of 33 miles per hour it collided with Extra 245 East at a point 5.7 miles west of West Cumbo.

Extra 245 East, an east-bound freight train, consisted of Diesel-electric units 245-A, 370-X, and 271-0, coupled in multiple unit control, 154 cars, and a caboose. This train passed Miller on track No. 4 at 1:33 a. m. The train-order signal at Miller was not displayed, and the crew did not receive copies of train order No. 1. The train passed signal E4-18F, which indicated Proceed-prepared-to-stop-at-next-signal, and while moving at a speed of 21 miles per hour it collided with Extra 6498 West.

The locomotive, the first 18 cars, the one hundred and thirty-second car, the one hundred and thirty-third car, and the one hundred and thirty-seventh to the one hundred and forty-third cars, inclusive, of Extra 6498 West, and the locomotive and the first 13 cars of Extra 245 East were derailed. The first Diesel-electric unit of Extra 245 East stopped at an angle of about 45 degrees to the track with the side against the south wall of the cut. The second Diesel-electric unit stopped upright and approximately in line with the track, and the third unit stopped upright with the front end on the track structure and the rear end about 20 feet south of the track. The first Diesel-electric unit of Extra 6498 West stopped with the front end on the front end of the first Diesel-electric unit of Extra 245 East. The rear end was on the track structure. The second unit stopped upright and approximately in line with the track. The derailed cars stopped in various positions on or near the track. Both Diesel-electric units of Extra 6498 West and the first Diesel-electric unit of Extra 245 East were badly damaged. The second and third Diesel-electric units of Extra 245 East were considerably damaged. Twenty-eight of the derailed cars were badly damaged, and the other derailed cars were somewhat damaged.

The engineer, the fireman, and the front brakeman of Extra 245 East were killed. The engineer, the fireman, the front brakeman, and the conductor of Extra 6498 West, the conductor of Extra 245 East, and a fireman not on duty who was on the rear Diesel-electric unit of Extra 245 East were injured.



The weather was clear at the time of the accident, which occurred at 1:42 a. m.

### Discussion

The yard tracks at West Cumbo are not of sufficient length to permit a train the length of Extra 6498 West to be assembled on one track, and it was necessary to use the main track in doubling the train together. The train was operated against the current of traffic on track No. 4 to avoid delay to trains on track No. 1. It entered track No. 4 at a hand-operated switch about 1 mile west of the train-order office at West Cumbo.

The train dispatcher said that soon after he went on duty the operator at West Cumbo informed him that the crew of Extra 6498 West was ready to double the train together. The dispatcher then called the operator at Miller and issued train order No. 1. He said that before he issued the order he transmitted the signal "31 East" to the operator at Miller, but he could not remember afterward whether the operator indicated to him that the train-order signal was displayed. About 12:45 a. m. the operator at West Cumbo reported that Extra 6498 West was being delayed because of defective brake equipment on one of the Diesel-electric units. The dispatcher thought that this was the last information he received concerning the train until the train was departing from West Cumbo. He said that about 1:25 a. m. the operator at Miller reported that Extra 245 East had entered the approach circuit. The dispatcher overlooked the fact that Extra 6498 West had been authorized to move against the current of traffic on track No. 4 and told the operator that Extra 245 East was to be routed to that track. About 1:35 a. m. the operator at West Cumbo reported that Extra 6498 West had departed. The dispatcher then called the operator at Miller and found that Extra 245 East had passed at 1:33 a. m. He then made an unsuccessful attempt to arrange for maintenance-of-way employees or other employees to stop one or both of the trains before they collided.

The third-trick operator at West Cumbo said that immediately after train order No. 1 was made complete he arranged with the third-trick operator at Miller for block authority for the movement of Extra 6498 West. He then delivered copies of the order and a Clearance Card Form A to a member of the crew of Extra 6498 West. He said that he talked with both the operator at Miller and the train dispatcher several times with reference to the movement of the train. He reported the train as departing from West Cumbo at the time the rear end of the train entered the main track west of his office. It

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was then impossible for employees at West Cumbo to attract the attention of the crew.

The second-trick operator at Miller received and repeated train order No. 1. He said that at the time the dispatcher instructed him to copy the order he began to transmit it immediately. The train-order office at Miller is located in an interlocking station, and it is necessary for the operator to leave his seat at the desk in order to display the train-order signal. Because the operator did not want to interrupt the dispatcher, he copied and repeated the order without the display of the signal. He said he did not inform the dispatcher that the signal was displayed. The third-trick operator entered the office as the order was being transmitted. The second-trick operator did not make a written transfer of the order to the third-trick operator, but he said the third-trick operator told him he understood the order and that he would attend to the train-order signal. At this time the interlocking signals indicated Stop for east-bound movements. Neither operator placed a reminder on the signal lever to prevent a signal from being displayed for movement to track No. 4. The second-trick operator said that he did not arrange with the operator at West Cumbo for block authority for Extra 6498 West and that he left the office several minutes after train order No. 1 was made complete.

The third-trick operator at Miller said that he entered the office as the second-trick operator was copying train order No. 1 and that he stood behind the second-trick operator as the order was repeated. He was under the impression that the second-trick operator then arranged for block authority for Extra 6498 West. There was no record on the block sheet at Miller of the time that block authority for the movement of this train was granted. After the train order was made complete the two operators went to a window and watched a west-bound passenger train pass at 12:04 a. m. The second-trick operator left the office as the third-trick operator was reporting the train to the dispatcher. The third-trick operator said that a short time later the furnace in the interlocking station failed. He spent considerable time in contacting various officials in order to arrange for repairs to the furnace, and during this time he overlooked the fact that the train-order signal was not displayed. When Extra 245 East entered the approach circuit the operator was still engaged in arranging for repairs to the furnace, and when the dispatcher told him that the train was to be routed to track No. 4 he lined the route and permitted the train to proceed.

When the locomotive of Extra 6498 West was coupled to the forward portion of the train at West Cumbo it was found that the brake equipment on one of the Diesel-electric units was defective. The conductor called the operator on the telephone and asked the operator whether it would be necessary to call again when he was ready to double the train together. The operator told him that this would not be necessary and that the train should proceed when the trouble was corrected. The train was doubled together a short time later, and after the brakes had been tested it departed from West Cumbo. As this train was approaching the point where the accident occurred the enginemen and the front brakeman were maintaining a lookout ahead from the control compartment of the first Diesel-electric unit. The conductor and the flagman were in the caboose. The headlight was lighted brightly. The Diesel-electric units were of the road-switcher type, and the headlight of Extra 245 East first became visible from the left side of the control compartment. The front brakeman was so seriously injured in the accident that he could not be questioned during this investigation. The fireman said that he and the brakeman saw the headlight at approximately the same time. When he saw the light he called a warning to the engineer and then alighted from the locomotive. The engineer immediately made an emergency application of the brakes. He estimated that he made the brake application at a point about 600 feet east of the point at which the collision occurred. According to the tape of the speed-recording device the train was moving at a speed of approximately 33 miles per hour, and there was no appreciable reduction in the speed before the collision occurred.

As Extra 245 East was approaching the point where the accident occurred the enginemen and the front brakeman were on the locomotive. The conductor and the flagman were in the caboose. The conductor and the flagman said that they saw the operator in the interlocking station at Miller as the rear of the train passed that point. They said that the train-order signal was not displayed and that the operator gave them no hand signal. They said that there was an emergency application of the brakes in the vicinity of the point of accident, but they could not estimate the distance the train moved after the brakes were applied. According to the tape of the speed-recording device the speed was approximately 21 miles per hour when the brakes were applied, and it had been slightly reduced when the collision occurred.

Inspection of the relays of the signal system after the accident occurred disclosed that signal E4-18F indicated Proceed-prepared-to-stop-at-next-signal for the movement of Extra 245 East, the proper indication while the block of signal E6-34F was occupied by Extra 6498 West.

The rules of this carrier provide that at points at which the operator controls the interlocking signals the operator must, before copying a train order for a train, see that the home signal is in stop position for the track and in the direction of the train to which the train order is addressed, place a reminder on the signal lever, and, by night, display a red flag and a red light in the place provided. He must indicate to the train dispatcher that the train-order signal is displayed. The rules provide that when trains are moved against the current of traffic a train must not be admitted to a block which is occupied by an opposing train. In the instant case the train dispatcher and the operators involved understood these requirements. However, the train-order signal at Miller was not displayed and a reminder was not placed on the signal lever at the time train order No. 1 was issued. The third-trick operator's attention was then distracted by other matters, and when he lined the route for Extra 245 East he overlooked the train order and the fact that Extra 6498 West had received block authority to move westward on track No. 4.

#### Cause

This accident was caused by failure to deliver a right-of-track order, and failure to hold a train clear of a block which was occupied by an opposing train.

Dated at Washington, D. C., this eighth day of February, 1957.

By the Commission, Commissioner Tuggle.

(SEAL)

HAROLD D. McCOY,

Secretary.