January 13, 1913.

In re Investigation of Addident on the Western Karyland Railroad at Pen Mar, Pa., December 6, 1912.

On December 6, 1912, there was a head-end collision between a freight train and a train consisting of empty passenger cars on the Western Maryland Hailway, at Pen Mar, Pa., resulting in the death of four employees and one trespasser and the injury of six employees and two trespassers.

After investigation, I beg to submit the following report:

At the place where the accident occurred the Western Maryland Railway is a single-track road running east and west. No block system is in use; trains are operated under the timetable and train order system, east-bound trains being superior by direction; trains following one another are spaced 10 minutes apart at open telegraph offices.

Approaching the point where the collision occurred from the west there is a tangent about 1050 feet in length, followed by a 7 degree curve leading toward the couth. On this curve there is an ascending grade of 1.46 per cent for east-bound trains and the track passes through a cut 20 feet deep which obstructs the view in both directions. The collision occurred in this cut, about 500 feet from the west end of the curve.

On the date of the accident west-bound freight extra
757 left Baltimore at about 1:00 p. m.; at the time of the
accident this train consisted of engine 757, 11 loaded and
25 empty cars, and helper engine 510, which was coupled in
behind the fourth car from the head end. Conductor Elchelberger and Engineman Helbig were in charge of this train,
which arrived at Highfield at 10:52 p. m. There order No.
118 was received, reading as follows:

Engine 757 will run extra Highfield to Hagerstown. Extra 757 west will meet let No. 204 at Blue Mountain and has right over 4th No. 204 and No. 322 Highfield to Chewsville.

Extra 757 left Highfield at 11:31 p.m., and collided with let 204 at a point 1.8 miles west of Highfield at about 11:43 p.m. Employees in charge of this train stated that at the time of the collision the speed of this train was 18 or 20 miles per hour.

Conductor Sutts and Engineers Staub were in charge of freight train lat No. 204 when it left Hagerstown on the night of the accident. After doing some work at Edgement, this train went in on the passing siding to meet west-bound passenger train No. 7. The train order signal was in the stop position, and Conductor Sutts went to the telegraph office where he was given train Order No. 118, qubted above, which was addressed to the conductor and engineers of lat No. 204. This order was made complete at 10:57 p.m. He was also given a *19* order, No. 119, addressed to lat, 2nd and 3rd No. 204, at Edgement, the order reading:

3rd No. 204, engine 157, will pass lat and 2nd No. 204 at Edgement and change numbers accordingly.

This order was made complete at 11:00 p. m., 3 minutes after order 118 was completed, and Conductor Sutts received these orders at the same time. Order No. 119 made his train 2nd No. 204 east of Edgement; Conductor Sutts accepted both orders without comment and left the office. He gave one copy of each order to his brokeman to deliver to Engineers Staub and then went to the Caboose.

East-bound train 3rd 204, consisting of engine No. 157, a combination bayrage and mail car and two coaches, with Conductor Fauver and Engineman Cook in charge, left Hagerstown at 10:25 p.m., for Highfield. At Hagerstown Conductor Fauver received order No. 115, reading as follows:

Engines 325 and 167 will display eignals and run as 2nd and 3rd No. 204, Hagerstown to Highfield.

Then this train arrived it Agement at 11:05 p.m., the train order board was in the stop position and Conductor Fauver went into the teleproph office where he was given a copy of order No. 119, directing his train to pass the latent 2nd sections.

At this time let and 2nd No. 204 were on Edgement passing siding to meet meet-bound passenger train No. 7. The west switch of this siding is just east of the telegraph station. To meet No. 7 2rd No. 204 pulled in on the storage track which is a short siding opposite the passing siding, the main track running between the storage and the passing siding.

Conductor Fauver delivered copies of order No. 119 to Enginemen Cook and Fl gran Item of his train, and then under an arrangement made among the crew of this train, without the knowledge or consent of officers of the company, he and Firemen Pearl left thi train and returned to Hagerstown on No. 7, leaving the train in charge of Engineman Cook, Baggagemaster Leiter and Flagman Stem who was a qualified conductor. After No. 7 passed, this train, which by order No. 119 was then let 204, left Edgement at 11:30 p.m. and proceeded about 4.7 miles. While running at a speed of approximately 25 miles per hour it collided with extra 757, west, at a point about 500 feet east of Pen Mar station.

Dispatcher Reigh who issued the orders in question stated that while had had order No. 119 in mind when he completed order No. 110, he did not issue order No. 118 to 3rd No. 204 as he expected Conductors Fauver and Butts to exchange orders. He also stated that he told Operator Smith to be sure that Fauver got order 118 from Butts; he did not receive any response from Smith, however, and Operator Smith stated that he did not receive any such instructions from the dispatcher.

Conductor Butts and Engineman Staub stated that as order No. 119 was received and became effective at an open telegraph station they considered it the dispatcher's duty to provide the passing train with order No. 118. Both, however, stated that had it been at a non-telegraph station they would have delivered order No. 118 to this train before allowing it to pass. Conductor Fauver stated that he did not inquire of the crews of the trains which order No. 19 gave him the right to pass whether or not they held orders which would affect his train, for the reason that the rules did not require it. He stated that had the passing point been at a non-telegraph station he would have exchanged orders with the crew of the train which he passed.

A proper regard for the safe sovement of their trains would have required the crews involved to confer concerning this movement, for the purpose of ascertaining whether or not any orders were held by them which would affect their trains after the rearrangement of sections had been made, even though the rules did not require them to do so.

Rule No. 94 of the Western Maryland Railroad reads as follows:

94. A train which overtaxes a superior train or a train of the same class, so disabled that it cannot proceed will pass it, if practicable, and if necessary will seeme the schedule and take the train orders of the disabled train, proceed to the next open telegraph office, and there report to the Train Master. The disabled train will assume the schedule and take the train orders of the last train with which it has exchanged, and will when able proceed to and report from the next open telegraph office.

The statements of employees indicate that under this rule it was customary, when a train passed a superior train, or one section passed another section of the same train, at a non-telegraph station, for the crews to confer regarding the movement and the exchange of signals and orders. By inference this rule covers conditions arising only at non-telegraph stations. The statements of all the employees questioned regarding the practice in making a movement of this kind by train order at an open telegraph station indicate that they did not consider it incumbent upon them to exchange orders, but depended upon the dispatcher to provide each of the trains involved with copies of all orders affecting them. The movement in question being made at an open telegraph station by direction of the train dispatcher, they believed it his duty to make provision for supplying all the trains affected with orders which would insure their safe movement from that place.

This accident was caused by failure of Dispatcher Fleigh when he issued order No. 119 to make definite errangements for providing the train which by that order became lat No. 204 with order No. 118 which vitally affected it. The rules governing the operation of trains and the forms of orders used on the Western Maryland Railroad are printed in the timetable and designated as "standard code". Had Dispatcher Fleigh handled the movement in accordance with the forms prescribed by these rules, it would have been necessary to annul the three trains as sections of 204 and issue a new order rearranging the sections. This would have necessitated the relacue of order No. 118 which rould have been signed by first No. 204 leaving Edgement, thus insuring its delivery to the train that was to execute it.

None of the employees involved in this accident was on duty contrary to any of the injulations of the hours of service law. Dispatcher Fleigh had been employed by this company as an operator for two years, and as a dispatcher for five years. Conductor Feuver had been employed by this company as a brakeman for three years and as conductor for 19 years. His record shows that during the past 7 years he had received 65 demorit marks and had been suspensed 59 days. Engineman Cook had been employed by this company 30 years; he had been an engineman for 27 years. Conductor butts had been employed six years, two years of which were as conductor. Engineman Staub had been in the employ of the company six years, about 8 months of which had been as engineman.

while this accident was due directly to the failure of an employee properly to erform his duty, it was rendered possible by the system of train operation employed, and displays the inherent weakness of such a system. A large proportion of the accidents which have been investigated has been due to mistakes

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which have occurred under the train order method of train operation. Under the block system fewer opportunities for errors likely to lead to disaster are presented, and it is believed that the volume of traffic over this road is large enough to warrant the installation of the block system.