

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO 2824  
THE CHICAGO, ROCK ISLAND & PACIFIC  
RAILWAY COMPANY  
REPORT IN RE ACCIDENT  
NEAR NORTON, KANS., ON  
SEPTEMBER 3, 1944

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SUMMARY

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Railroad: Chicago, Rock Island & Pacific  
Date: September 3, 1944  
Location: Norton, Kans.  
Kind of accident: Head-end collision  
Trains involved: Freight : Passenger  
Train numbers: Extra 2310 West : First 96  
Engine numbers: 2310 : 5061  
Consist: 39 cars, cabooses : 11 cars, cabooses  
Estimated speed: 30 m. p. h. : 25 m. p. h.  
Operation: Timetable and train orders, and  
manual-block system for follow-  
ing movements only  
Track: Single; tangent; 0.25 percent  
ascending grade westward  
Weather: Clear  
Time: 6:40 p. m.  
Casualties: 57 injured  
Cause: Failure to deliver meet order  
Recommendation: That the Chicago, Rock Island &  
Pacific Railway Company establish  
an adequate block system on the  
line on which this accident occurred

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2824

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

THE CHICAGO, ROCK ISLAND & PACIFIC RAILWAY COMPANY

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October 13, 1944.

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Accident near Norton, Kans., on September 3, 1944, caused  
by failure to deliver a meet order.

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REPORT OF THE COMMISSION

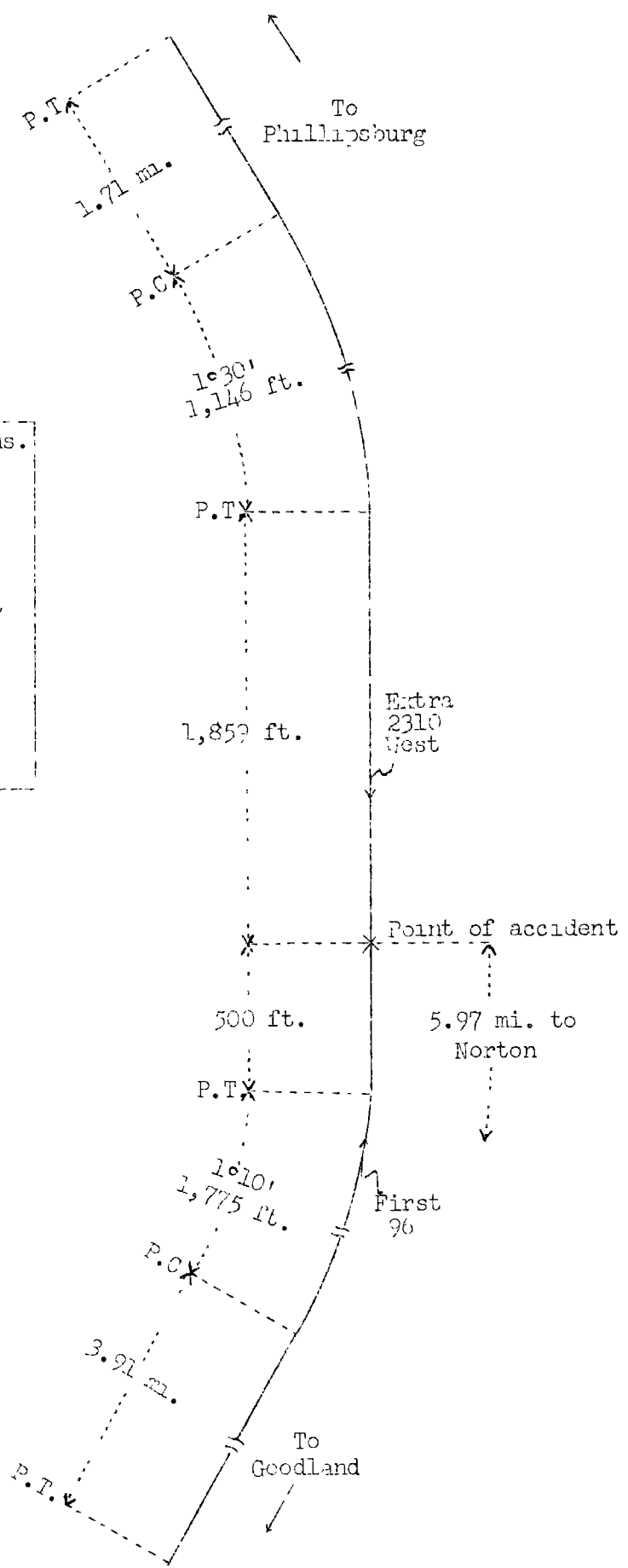
PATTERSON, Chairman:

On September 3, 1944, there was a head-end collision between a freight train and a passenger train on the Chicago, Rock Island & Pacific Railway near Norton, Kans., which resulted in the injury of 47 passengers, 7 Pullman employees and 3 train-service 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 Chairman Patterson for consideration and disposition.

- Phillipsburg, Kans. 14.40 mi.
- Prairie View 8.20 mi.
- Almena 5.53 mi.
- ✕ Point of accident 5.97 mi.
- Norton 42.20 mi.
- Selden 63.00 mi.
- Goodland, Kans.



Inv. No. 2824  
 Chicago, Rock Island & Pacific Railway  
 Norton, Kans.  
 September 2, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Western Division designated as Subdivision 8 and extending westward from Phillipsburg to Goodland, Kans., 139.9 miles. This was a single-track line over which trains were operated by timetable and train orders, and a manual-block system for following movements only. The accident occurred 28.13 miles west of Phillipsburg, at a point 5.97 miles east of the station at Norton. From the west there were, in succession, a tangent 3.91 miles, a 1°10' curve to the left 1,775 feet and a tangent 500 feet to the point of accident. From the east there were, in succession, a tangent 1.71 miles, a 1°30' curve to the right 1,146 feet and a tangent 1,859 feet to the point of accident. At this point the grade was 0.25 percent ascending westward.

The train-order signal at Norton was of the three-indication, upper-quadrant, semaphore type, and was electrically lighted. It was mounted on a mast located on the south side of the main track in front of the station. This signal was used also as a manual-block signal. The involved day aspects and corresponding indications and names of the train-order signal were as follows:

<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
Vertical	PROCEED "NO ORDERS"	CLEAR TRAIN ORDER SIGNAL.
Horizontal	STOP-ORDERS FOR TRAIN.	STOP TRAIN ORDER SIGNAL * * *

As a manual-block signal, when it was in vertical position the indication was proceed and when in horizontal position the indication was stop.

Operating rules read in part as follows:

DEFINITIONS.

\* \* \*

Fixed Signal.--A signal of fixed location indicating a condition affecting the movement of a train or engine.

\* \* \*

207. To transmit a train order, the signal "31" or the signal "19" followed by the direction must be given to each office addressed, the number of copies being stated, thus: "31, South, copy 5," or "19, North, copy 7."

B-208. \* \* \*

A train order must not be sent to a train at the meeting or waiting point if it can be avoided. When an order is so sent, the fact will be stated in the order and special precautions must be taken to insure safety.

211. When a "19" train order has been transmitted, operators must, unless otherwise directed, repeat it at once from the manifold copy, in the succession in which the several offices have been addressed. Each operator receiving the order should observe whether the others repeat correctly. When the order has been repeated correctly, the response "complete," and the time, with his initials, will be given by the train dispatcher. The operator receiving this response will then write on each copy the abbreviation "Com" for the word "complete," the time, and his last name in full and personally deliver a copy to each person addressed without taking his signature. But when delivery to engineman will take the operator from the immediate vicinity of his office, the engineman's copy will be delivered by the conductor or brakeman.

When a "19" train order restricting the superiority of a train is issued for it at the point where such superiority is restricted, the train must be brought to a stop before the clearance is OK'd by the train dispatcher and the order delivered.

215. When clearing a train, the operator must fill out clearance, with proper address of train and the numbers of all train orders addressed to the train, if any; then, transmit the address and order numbers from the clearance to the train dispatcher, who will check, and if correct, will reply "OK," with the time and his initials, which the operator must enter on clearance, after which clearance with orders will be delivered. The record of orders with which train is cleared and the time of "OK" will be recorded by train dispatcher on clearance record.

\* \* \*

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

\* \* \*

221. Unless otherwise provided, a fixed signal must be used at each train order office which shall indicate "stop" when trains are to be stopped for train orders. When there are no orders, the signal must indicate "proceed," except when blocking trains \* \* \*

221 (b). \* \* \*

When an operator at an intermediate station receives the signal "31" or "19" followed by the direction, he must immediately display the train order signal at "stop" indication for the direction indicated and then reply "stop displayed," adding the direction; and until the orders have been delivered or annulled the signal must not be restored to "proceed" indication.

223. The following signals and abbreviations may be used:

\* \* \*

31 or 19--to clear the line for train orders, and for operators to ask for train orders.

S D--for "stop displayed."

\* \* \*

FORMS OF  
TRAIN ORDERS.

\* \* \*

S-A.

Fixing Meeting Points For Opposing Trains.

(1) \* \* \*

No 5 Eng 58 meet Extra 95 north at B.

\* \* \*

\* \* \*

Trains receiving these orders will run with respect to each other to the designated point and there meet in the manner prescribed by the rules.

\* \* \*

When a train order is sent to a train at the meeting or waiting point, or at a point where its superiority is restricted, the fact will be stated in the order, by adding (1) \* \* \*

Order to No \* \* \* at B.

\* \* \*

Time-table special instructions read in part as follows:

26. The following Manual Block rule is in effect \* \* \*

When block is not clear of preceding train, the Train Dispatcher will authorize operator to issue Permissive Form "C", accompanied by clearance, for the following train in non-automatic block signal territory. This form to be used for following movements only. \* \* \*

Instructions to train dispatchers read in part as follows:

\* \* \*

\* \* \*

211

Extra precautions.

The train dispatcher must instruct the operator to take special precautions, using stop signals (red flag, red light or fusee) in addition to train order signal if view is in any manner obstructed, \* \* \*

Instructions to operators read in part as follows:

Special precautions.

S-208

When a train order \* \* \* is issued to a train at meeting or waiting point, \* \* \* the operator must take necessary precautions for safety. The train must be stopped by the operator, using hand signals in addition to train order signal, when required, and \* \* \* the operator must advise train dispatcher when train is stopped, before clearance is OK'd.

\* \* \*



The maximum authorized speed for the trains involved was 50 miles per hour.

Description of Accident

At Phillipsburg the crew of Extra 2310 West, a west-bound freight train, received copies of train order No. 291, Form 19, reading in part as follows:

Eng 2310 run Extra Phillipsburg  
to Goodland meet First 96 eng  
5061 at Alma \* \* \*

Alma was 11.5 miles east of Norton. At Prairie View, 19.7 miles east of Norton, the last open office east of Norton, the crew received copies of train order No. 295, Form 19, reading as follows:

First 96 eng 5061 meet Extra  
2310 West at Norton East siding  
instead of Alma Order to first  
96 at Norton

Extra 2310 West, consisting of engine 2310, 39 cars and a caboose, departed from Prairie View at 6:10 p. m., and while moving at an estimated speed of 30 miles per hour it collided with First 96.

First 96, an east-bound second-class passenger train, consisted of engine 5061, 1 passenger-box car, 1 baggage car, 1 Pullman troop-sleeping car, 3 Pullman tourist cars, 1 kitchen car, 1 Pullman tourist car, 1 Pullman sleeping car, 2 Pullman tourist cars and a caboose, in the order named. The second and seventh cars and the caboose were of steel-underframe construction and the remainder were of all-steel construction. At Selden, 42.2 miles west of Norton, the last open office west of Norton, the crew of this train received copies of train order No. 291, Form 19. First 96 departed from Selden at 5:41 p. m., 3 hours 38 minutes late, passed Norton, where the crew should have received copies of train order No. 295, Form 19, about 6:36 p. m., and while moving at an estimated speed of 25 miles per hour it collided with Extra 2310 West.

The engine of each train, the first five cars of First 96 and the first seven cars of Extra 2310 were derailed and damaged.

From an engine moving in either direction in the vicinity of the point of accident, the view of a train approaching from the opposite direction was restricted to a distance of about 600 feet, because of an embankment and vegetation on the inside of the curve.

It was daylight and clear at the time of the accident, which occurred about 6:40 p. m.

The engineer and the fireman of First 96 and the front brakeman of Extra 2310 West were injured.

During the 31-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 17.84 trains.

### Discussion

The rules governing operation on this line provide that when an operator at a train-order office receives instructions to copy a train order, the train-order signal must immediately be displayed to indicate stop and the signal must remain so displayed until the train order has been delivered to all trains addressed. Before train orders and the prescribed clearance form are delivered to a train, the operator must transmit to the train dispatcher the number of each order to be delivered to that train, then the dispatcher must check his record to ascertain if the operator has included the correct numbers of all orders on the clearance form before he authorizes the operator to clear the train. Train orders must not be sent to a train which is to be restricted at the meeting or waiting point, if it can be avoided. When the order is so sent, the fact must be stated in the order and the operator must give stop signals with a red flag during daytime, and, before delivery of the train order and the clearance form is authorized, must notify the train dispatcher that the train has been stopped. Train orders once in effect continue so until fulfilled, superseded or annulled. An operator must not display the manual-block signal at proceed when the block is occupied by a preceding train. The dispatcher and the operator concerned in this investigation understood these requirements.

The crew of each train held copies of train order No. 291, which established Alma as the meeting point between First 96 and Extra 2310 West. Later, the issuance of train order No. 295 changed the meeting point for these trains from Alma to Norton. The crew of Extra 2310 West received copies of train order No. 295 at Prairie View, 8.2 miles east of Alma. The order was sent to the operator at Norton for delivery to First 96, but it was not delivered to the crew of that train when it passed that station. This resulted in an overlapping of authority of the trains involved, as the crew of Extra 2310 West held an order authorizing its train to proceed to Norton to meet First 96 at that station, and the crew of the latter train held an order authorizing its train to proceed to Alma, about 11 miles east of Norton, to meet Extra 2310 West. These trains

collided at a point 5.97 miles east of the station at Norton. Because of an embankment and vegetation on the inside of the curve, the members of the crew on the engine of each train were unable to see the other train more than a few hundred feet. The accident occurred before effective action could be taken to stop either train.

The train dispatcher said that just prior to the departure of First 96 from Selden, the last open office west of Norton, the conductor informed him that First 96 would probably be delayed at Norton because of an overheated journal. In order to avoid further delay to First 96 at Selden, the dispatcher sent order No. 295 to the operator at Norton for delivery to First 96. The order contained information that First 96 was to receive the order at Norton. Later, when the operator at Norton asked for authority to issue the clearance form and to deliver the order to First 96, the dispatcher understood that the train had been stopped at Norton. The operator at Norton said that prior to the time he received instructions from the train dispatcher to display the train-order signal at stop and to copy order No. 295, he had placed the signal in stop position to hold east-bound trains until No. 8, an east-bound train which had departed from Norton a few minutes previously, had arrived at Phillipsburg, in compliance with the manual-block rule. Soon after the operator at Norton copied order No. 295 the operator at Phillipsburg reported No. 8 clear of the block, and, momentarily forgetting that the signal should continue to display stop for delivery of the order to First 96, he changed its indication to display a proceed manual-block indication and thereby unintentionally caused it to display a proceed train-order indication. Then the operator was engaged in waiting on passengers at the ticket window until he heard First 96 approaching. While he was asking the dispatcher for authority to issue a clearance form and to deliver the order, he observed that First 96 was passing the station and that the signal displayed proceed. He made an unsuccessful attempt to attract the attention of the crew. If one signal for train orders and another signal or a form for the manual block had been provided, the oversight in the clearing of the train-order signal would not have occurred.

The manual-block system used on this line applies to following movements only. There is no provision for the blocking of opposing movements. If an adequate block system had been in use, these opposing trains would not have been permitted to occupy the same block simultaneously, and the accident would not have occurred.

Cause

It is found that this accident was caused by failure to deliver a meet order.

Recommendation

It is recommended that the Chicago, Rock Island & Pacific Railway Company establish an adequate block system on the line on which this accident occurred.

Dated at Washington, D. C., this thirteenth day of October, 1944.

By the Commission, Chairman Patterson.

(SEAL)

W. P. BARTEL,  
Secretary..