

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 2467  
THE CHICAGO, ROCK ISLAND & PACIFIC RAILWAY  
COMPANY

REPORT IN RE ACCIDENT  
AT MAPELLO, IOWA, ON  
DECEMBER 15, 1940

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SUMMARY

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Railroad: Chicago, Rock Island & Pacific  
Date: December 15, 1940  
Location: Wapello, Iowa  
Kind of accident: Side collision  
Trains involved: Passenger : Passenger  
Train numbers: 64 : 61  
Engine numbers: 911 : 931  
Consist: 5 cars : 5 cars  
Speed: 12 m. p. h. : 15 m. p. h.  
Operation: Timetable and train orders  
Track: Single; 1°54' left curve; 0.01  
percent ascending grade westward  
Weather: Sleet  
Time: 9:39 p. m.  
Casualties: 12 injured  
Cause: Accident caused by failure to  
control speed of train properly  
when approaching meeting point.

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2467

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS  
UNDER THE ACCIDENT REPORTS ACT OF MAY 3, 1910.

THE CHICAGO, ROCK ISLAND & PACIFIC RAILWAY COMPANY

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January 25, 1941.

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Accident at Wapello, Iowa, on December 15, 1940, caused by  
failure to control speed of train properly when approach-  
ing meeting point.

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

PATTERSON, Commissioner:

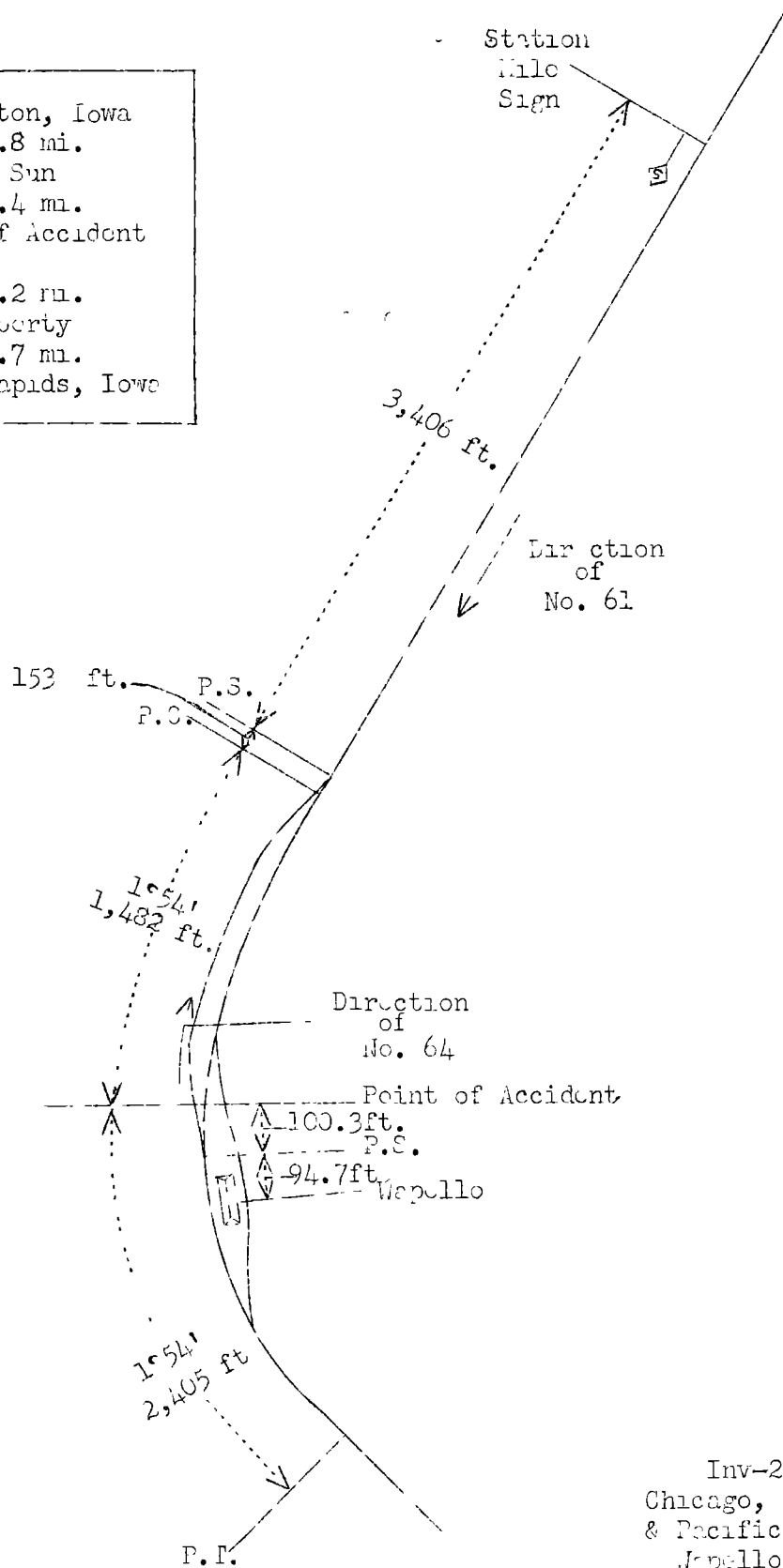
On December 15, 1940, there was a side collision between two passenger trains on the Chicago, Rock Island & Pacific Railway at Wapello, Iowa, which resulted in the injury of 10 passengers and 2 employees. The investigation of this accident was made in conjunction with a representative of the Iowa State Commerce Commission.

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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 Patterson for consideration and disposition.

○	Burlington, Iowa	22.8 mi.
○	Morning Sun	6.4 mi.
⊗	Point of Accident	Wapello
○	West Liberty	32.2 mi.
○	Cedar Rapids, Iowa	36.7 mi.



Inv-2467  
 Chicago, Rock Island  
 & Pacific Railway  
 Wapello, Iowa  
 December 15, 1940

### Location and Method of Operation

This accident occurred on that part of the Cedar Rapids Division designated as Sub-Division 15 which extends between Burlington and Cedar Rapids, Iowa, a distance of 98.1 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 Wapello a siding 1,734.6 feet in length parallels the main track on the north; the west switch of the siding is located 94.7 feet east of the station. The accident occurred approximately 195 feet east of the station at the fouling point of the turnout at the west end of the siding. The east siding-switch is equipped with a High Star switch-stand having a single target and an oil-burning lamp. The lenses of the lamp are 4-1/2 inches in diameter and are located 8 feet 2 inches above the head-block. The target is a steel plate 24 inches by 12 inches, painted red; the center is 7 feet 8 inches above the head-block. The lamp and the target both display red aspects when the switch is lined for the siding.

As the point of accident is approached from the east there is a tangent a distance of more than 2 miles and then a 1°54' curve to the left 1,482 feet to the point of accident and 2,495 feet beyond. The grade for west-bound trains is, successively, 0.02 percent descending 2,100 feet, 0.06 percent descending 1,000 feet and 0.01 percent ascending 1,145 feet to the point of accident.

The westward station-mile-sign is located 3,406 feet east of the east siding-switch and 7 feet north of the north rail. The sign, the center of which is 3 feet 4 inches above the level of the rail, consists of a steel plate 14-7/8 inches square mounted diagonally on a post. The plate has a white background on which is painted in black a 12-inch letter "S."

Rules of the Uniform Code of Operating Rules in use on this line read in whole or in part as follows:

#### 14. Engine Whistle Signals.

NOTE.- The signals prescribed are illustrated by "o" for short sounds; "\_\_\_" for longer sounds. \* \* \*.

Sound	Indication
* * *	* * *
(n) ___ - o	Approaching meeting or waiting points. See Rule S-90.

16. Communicating Signals.

\* \* \*.

Sound * * *	Indication * * *
(1) _____	Approaching meeting or waiting points. See Rule S-90.

S-89.(a) \* \* \*.

At train order meeting points, the train holding the main track must stop clear of the switch used by the train to be met in going on siding, unless the train to be met is clear of the main track and switch is properly lined.

\* \* \*.

S-90. On trains equipped with communicating signal system, the conductor must give signal 16(1) to the engineman after passing the last station but not less than one mile preceding a schedule meeting point with a train of the same or superior class, or a point where by train order it is to meet, or wait for, an opposing train. The engineman will immediately reply with signal 14 (n). If the engineman fails to answer by signal 14 (n), the conductor must take immediate action to stop the train.

\* \* \*.

Eastward trains are superior to westward trains of the same class. The time-table meeting point of the trains involved was Wapello.

The maximum authorized speed for passenger trains is 45 miles per hour on tangent track and 40 miles per hour on curves.

It was sleeting at the time of the accident, which occurred at 9:39 p. m.

Description

No. 64, an east-bound first-class passenger train, with Conductor Lindsley and Engineman Sullivan in charge, consisted of engine 911, one mail car, three baggage cars and one coach,

in the order named; all cars were of steel construction except the second and the third cars, which were of steel underframe and wooden superstructure construction. This train departed from Cedar Rapids, 68.9 miles west of Wapello, at 7:22 p. m., according to the train sheet, 2 minutes late. At West Liberty, 32.2 miles west of Wapello, the crew received copies of train order No. 26, Form 19, which read as follows:

No. 64 eng 911 meet No. 61 eng 931  
at Wapello. No. 61 hold main track  
at Wapello.

No. 64 departed from West Liberty at 8:42 p. m., 12 minutes late, arrived at Wapello at 9:30 p. m., departed from the station at 9:37 p. m., according to the statements of the crew, and was entering the siding through the west switch at a speed of about 12 miles per hour when it was sideswiped by No. 61.

No. 61, a west-bound first-class passenger train, with Conductor Stonebraker and Engineman Ludwig in charge, consisted of engine 931, one mail car, two baggage cars, one coach and one observation car, in the order named; all cars were of steel construction except the second and the third cars, which were of steel underframe and wooden superstructure construction. At Burlington, 29.2 miles east of Wapello, the crew received copies of train order No. 26, Form 19, previously quoted. This train departed from Burlington, the last open office, at 8:45 p. m., according to the train sheet, on time, passed the clearance point of the west siding-switch at Wapello where it was required to wait until No. 64 was clear on the siding and, while moving at a speed estimated to have been 15 miles per hour, struck the side of No. 64.

The right cylinder and the pilot beam of engine 931 struck the fourth car of No. 64 at a point 23 feet from its front end, scraped the side of this car and then cornered the front end of the fifth car. The east truck of the fifth car was derailed and the front end of the car stopped 90 feet west of the point of collision; throughout a distance of 22-1/2 feet the left side was crushed inward about one half the width of the car. Engine 931 and its tender were derailed to the south and stopped with the front end of the engine opposite the west siding-switch. The engine was practically parallel with the track but leaned to the left at an angle of about 50 degrees. The pilot and the pilot beam were demolished. The right cylinder and the left side of the engine were slightly damaged. The tender leaned to the left at an angle of about 35 degrees.

The employees injured were the engineman and the fireman of No. 61.

### Summary of Evidence

Engineman Sullivan, of No. 64, stated that he received a copy of train order No. 26 at West Liberty and understood its contents. His train arrived at Wapello at 9:35 p. m. and soon afterward the headlight of No. 61 appeared in the distance. The fireman lined the switch for the siding, his train departed from the station about 9:37 p. m., and it was entering the siding at a speed of about 12 miles per hour when the engine of No. 61 passed. The engineman of No. 61 was sounding stop signals on the engine whistle and sparks were flying from the wheels of that train. The accident occurred at 9:39 p. m. He said that it was freezing and there was a heavy mist, but his vision was not restricted by weather conditions. Considering the condition of the rails at the time of the accident he was of the opinion an emergency application of the brakes would have stopped a train similar to No. 61 from a speed of 25 to 30 miles per hour within a distance of 400 or 500 feet and from a speed of 15 miles per hour within a distance of about 50 feet.

Fireman Hankins, of No. 64, corroborated the statement of his engineman in all essential details.

Conductor Lindsley, of No. 64, stated that he received a copy of train order No. 26 at West Liberty and that his train was entering the siding at Wapello when the fourth car was struck by No. 61. It was misty and the ground was very slippery.

Brakeman Christian, of No. 64, corroborated the statement of his conductor.

Engineman Ludwig, of No. 61, stated that at Burlington an air-brake test was made and when a running test was made soon after the train departed from that point the brakes functioned properly. He received train order No. 26 at Burlington and understood that his train was to meet No. 64 at Wapello and that No. 61 would hold the main track at that point. It was raining and the air brakes were not so effective as usual in stopping the train at stations. He stopped the train at Morning Sun, 6.8 miles east of Wapello, and it departed from that point at 9:30 p. m., 5 minutes late. At Morning Sun he cleaned mud and rain from the front cab-window and thereafter the highway-crossing whistle-signs could be seen clearly for some distance. After the train left Morning Sun the conductor sounded the meeting-point signal on the train air-signal system and the engineman sounded the engine whistle in acknowledgment. Since the headlight of No. 64 was not in sight, he reduced the brake-pipe pressure about 7 pounds at a point approximately 1/4 mile east of the east siding-switch at Wapello to consume more time. This application of the brakes did not seem to be as effective as it should be and he further reduced the brake-pipe pressure about



8 pounds. The speed of the train at this time was about 40 miles per hour. When he started to sound the road-crossing whistle-signal for what he thought was the middle crossing, located 355 feet east of the station mile-sign, he observed the switch light of the east siding-switch and knew then that he was mistaken concerning the location of his train. He immediately applied the air brakes in emergency, closed the throttle and opened the sand valve. When his train rounded the curve near the west end of the siding he observed that No. 64 was entering the siding and he sounded stop signals on the whistle to warn the crew of No. 64. The speed of his train at the time of the collision was about 15 miles per hour. He stated that he had been taking 40 grains of sulfanilimide each day since December 4 under the direction of his physician and that he thought this had caused his mental faculties to function slower than usual.

Fireman Radebaugh, of No. 61, stated that he was on the left seat-box when his train was approaching Wapello. The Engineman made a brake-pipe reduction at the usual place to stop the train at Wapello. His train was moving over the road crossing 160 feet east of the east siding-switch at a speed of 35 to 40 miles per hour when he observed the headlight of No. 64. He called a warning to the engineman and thought that it was understood as the engineman was making another brake-pipe reduction at the time. When his engine was passing the house-track switch, located 429 feet east of the point where the accident occurred, he called a second warning to the engineman but the engineman had seen No. 64 and was applying the air brakes in emergency.

Conductor Stonebraker, of No. 61, stated that at Burlington an air-brake test was made. He received a copy of train order No. 26 at Burlington and understood that No. 61 was to meet No. 64 at Wapello and that No. 61 was to hold the main track. After his train left Morning Sun he sounded the meeting-point signal on the train air-signal system and the engineman acknowledged it on the engine whistle. The conductor then went to the rear seat of the fourth car. He felt the speed being reduced as his train was nearing Wapello and he started to the front end of the car to identify No. 64, but the accident occurred before he reached the front end. He did not feel an emergency application of the brakes. The accident occurred at 9:39 p. m. He said he had no warning that an accident was about to occur.

Brakeman Mead, of No. 61, stated that after his train passed over a girder bridge located about 1-1/2 miles east of Wapello he went to the front end of the fourth car and opened the door on the left side but on account of smoke and steam was unable to see anything. He opened the door on the right

side and stood on the first step but was still unable to see the rails of the siding. When the smoke cleared for an instant he observed the headlight of No. 64 and realized there would be a collision, but the accident occurred before he could take any action to stop his train. He said that it was sleeting at the time of the accident. After the accident, when he was going back to flag, he observed that the east siding-switch-lamp was coated with ice which caused the light displayed to be so dim that it was invisible from a point 1/4 mile distant. He also observed that he could see the headlight of No. 64 from a point 1/2 to 3/4 mile distant. He did not remember of any emergency brake application prior to the accident.

During the 30-day period prior to the occurrence of the accident, the average daily movement over the point involved was 7.7 trains.

#### Discussion

According to the evidence, No. 64 was entering the west switch of the siding at Wapello when No. 61 passed the clearance point at a speed of about 15 miles per hour and struck the side of the fourth car of No. 64.

Both crews held a train order providing that these trains meet at Wapello and that No. 61, the inferior train by direction, hold the main track. These provisions required No. 64 to enter the siding at the west switch and No. 61 not to pass the clearance point at the west switch until No. 64 was clear of the main track; all the employees involved understood these provisions. According to the statement of the engineman of No. 61, he was confused concerning the location of his train until his engine was about 1,800 feet east of the west siding-switch, at which point he made an emergency application of the brakes, but according to the fireman's statement, the emergency application was made at a point about 550 feet east of the west siding-switch. Since the speed of No. 61 was about 40 miles per hour when the emergency application of the brakes was made and about 15 miles per hour when the accident occurred, it appears probable that the location given by the fireman is more accurate than that given by the engineman. The air brakes had functioned properly en route except that the engineman said they did not hold well when he made two light brake-pipe reductions as the train neared the east siding-switch at Wapello. The weather was misty but lights could be seen at distances of 1/2 to 3/4 mile. The fireman saw the headlight of No. 64 at a distance of about 2,000 feet and warned the engineman, but the engineman did not hear the warning. The engineman thought his failure to be alert in the vicinity of Wapello was caused by the effects of medicine he had been taking since December 4.

The conductor of No. 61 did not realize that an accident was about to occur, as he was walking toward a door to identify No. 64 when the accident occurred. When the train was 1-1/2 miles east of the meeting point, the brakeman began to look from one vestibule door and then from the one on the other side, but because of smoke and steam he could not definitely locate his train until it was only a short distance from No. 64.

Cause

It is found that this accident was caused by failure to control the speed of a train properly when approaching a meeting point.

Dated at Washington, D. C., this twenty-fifth day of January, 1941.

By the Commission, Commissioner Patterson.

W. P. BARTEL,

Secretary.

(SEAL)