INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2590

THE KANSAS CITY SOUTHERN RAILWAY COMPANY

REPORT IN RE ACCIDENT

NEAR ACORN, ARK., ON

MAY 25, 1942

SUMMARY

Railroad:	Kansas City Southern	
Date:	May 25, 1942	
Location:	Acorn, Ark.	
Kind of accident:	Head-end collision	
Trains involved:	Passenger	: Wrecking
Train numbers:	16	: Extra 497 South
Engine numbers:	Diesel-electric 4	: 497
Consist:	7 cars	: 7 cars
Speed:	12 m. p. h.	: 15 m. p. h.
Operation:	Timetable and train orders	
Track:	Single; 3°09' curve; 1.1 percent ascending grade northward	
Weather:	Cloudy	
Time:	11:25 p. m.	
Casualties:	2 killed; 34 injured	
Cause:	Accident caused by inferior train occupying the main track on the time of an opposing superior train	
Recommendation:	That the Kansas City Southern Railway Company establish an adequate block-signal system on the line involved in this accident	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2590

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

THE KANSAS CITY SOUTHERN RAILWAY COMPANY

July 28, 1942

Accident near Acorn, Ark., on May 25, 1942, caused by an inferior train occupying the main track on the time of an opposing superior train.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On May 25, 1942, there was a head-end collision between a passenger train and a wrecking train on the Kansas City Southern Railway near Acorn, Ark., which resulted in the death of 2 train-service employees, and the injury of 16 passengers, 2 railway-mail clerks, 2 Pullman employees, 3 dining-car employees, 8 railroad employees and 3 train-service employees.

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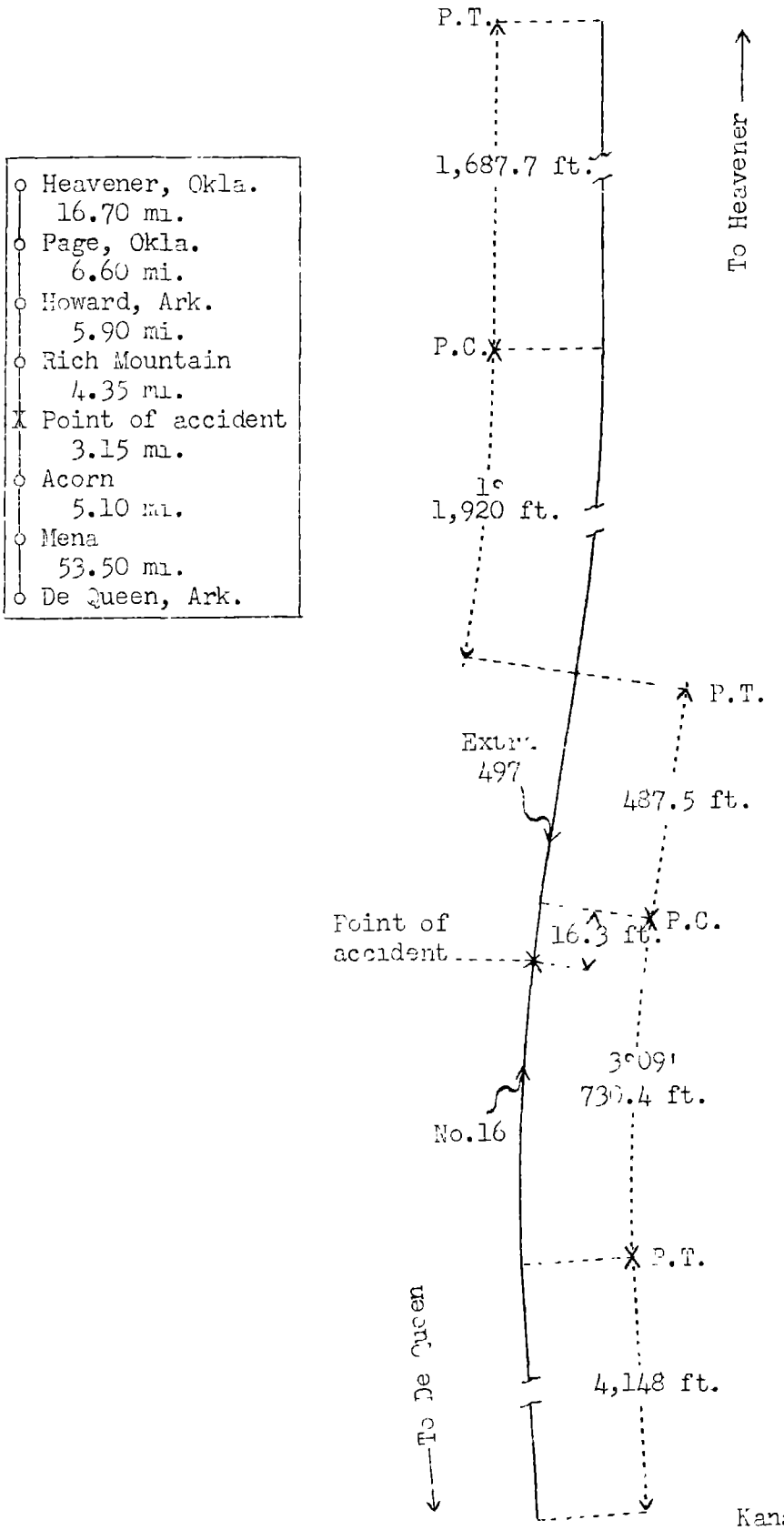
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2590
Kansas City Southern Railway
Acorn, Ark.
May 25, 1942

Location of Accident and Method of Operation

This accident occurred on that part of the Northern Division designated as the Fourth District, which extends between DeQueen, Ark., and Heavener, Okla., a distance of 95.3 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. The accident occurred at a point 3.15 miles north of the station at Acorn. As the point of accident is approached from the south there is a tangent 4,148 feet in length, which is followed by a 3°09' curve to the right 730.4 feet in length. The accident occurred on this curve at a point 16.3 feet south of its northern end. As the point of accident is approached from the north there are, in succession, a tangent 1,687 feet in length, a 1° curve to the right 1,920 feet, a tangent 488 feet, and the curve on which the accident occurred. The grade for north-bound trains is ascending 1.35 percent a distance of 4,225 feet and then 1.1 percent ascending 678 feet to the point of accident. The grade for south-bound trains is 1.1 percent descending a distance of 4,422 feet to the point of accident. Starting at a point 200 feet north of the point where the accident occurred and extending 1,600 feet northward, the track is laid in a hillside cut. The west slope of the hill rises to a maximum height of about 15 feet and is covered with vegetation.

Operating rules read in part as follows:

> 87. An inferior train must keep out of the way of opposing superior trains and failing to clear the main track by the time required by rule must be protected as prescribed by Rule 99.
>
> Extra trains must clear the time of opposing regular trains not less than five minutes * * *

On the curve involved the maximum authorized speed for passenger trains hauled by Diesel-electric engines is 60 miles per hour. The maximum authorized speed for trains handling steam wrecking cranes is 25 miles per hour.

Description of Accident

No. 16, a north-bound first-class passenger train, consisted of Diesel-electric engine 4, two baggage cars, one mail-baggage car, two chair cars, one diner-coach and one Pullman sleeping car, in the order named. The first, second and fourth cars were of steel-underframe construction and the remaining cars were of all-steel construction. At DeQueen, 58.6 miles south of Acorn, an air-brake test was made, and the brakes functioned properly en route. This train departed from DeQueen at 9:47 p. m., according to the dispatcher's record of movement of trains, 25 minutes late, passed Acorn at 11:21 p. m., 31

minutes late, and while moving at an estimated speed of 15 miles per hour it collided with Extra 497 South at a point 3.15 miles north of the station at Acorn.

Extra 497 South, a wrecking train, consisted of engine 497, one derrick car, three loaded flat cars, one box-car diner, one coach and one loaded box car, in the order named. At Heavener, 36.7 miles north of Acorn, an air-brake test was made, and the brakes functioned properly en route. Extra 497 South departed from Heavener, the last open office, at 9:55 p. m., according to the dispatcher's record of movement of trains, passed Howard, 13.4 miles north of Acorn, at 11:01 p. m., passed Rich Mountain, 7.5 miles north of Acorn, at 11:15 p. m., and while moving at an estimated speed of 12 miles per hour it collided with No. 16.

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 is restricted to a distance of about 550 feet, because of track curvature and the hill on the west side of the track.

Engines 4 and 497 stopped, badly damaged, upright and in line with the track. The front ends were telescoped together and all wheels of engine 497, except the rear pair of driving wheels, were above the rails. The first, fourth and fifth cars of No. 16 were badly damaged and the second, third and sixth cars were slightly damaged. The first, second, fifth and seventh cars of Extra 497 were slightly damaged.

The weather was cloudy at the time of the accident, which occurred about 11:25 p. m.

The train-service employees killed were the engineer of Extra 497 South and the fireman of No. 16. The train-service employees injured were the conductor of No. 16 and the fireman and the front brakeman of Extra 497 South.

Data

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 16.13 trains.

Discussion

The rules governing operation on the line involved provide that an inferior train must keep out of the way of opposing superior trains, and extra trains must clear the time of opposing regular trains not less than 5 minutes.

No. 16, which was a north-bound first-class train, was due to leave Acorn at 10:50 p. m., Rich Mountain, 7.5 miles north of Acorn, at 11:01 p. m., and Howard, 13.4 miles north

of Acorn, at 11:09 p. m. There are sidings at each of these stations. No train order restricting the movement of No. 16 nad been issued. No. 16 passed Acorn at 11:21 p. m., 31 minutes late, and about 11:25 p. m., when it was 3.15 miles north of Acorn, it collided with Extra 497 South.

As No. 16 was approaching the point where the accident occurred, the speed was about 45 miles per hour, and the enginemen were maintaining a lookout ahead from their respective positions in the control compartment. The enginemen's view of the track ahead was restricted because of track curvature, the cut and the vegetation. The first the engineer knew of the opposing train was when his engine reached a point about 550 feet south of the point where the accident occurred and he observed the reflection of the headlight on the engine of Extra 497 South. He immediately moved the brake valve to emergency position. The speed of No. 16 was about 15 miles per hour at the time of the collision.

Under the rules, Extra 497 South was required to be clear at Acorn at 10:45 p. m., at Rich Mountain at 10:56 p. m. or at Howard at 11:04 p. m., if it proceeded to one of these stations to clear for No. 16. Since Extra 497 did not reach Howard until 11:01 p. m., it had no authority to proceed beyond that station for No. 16, which was due to leave Rich Mountain, the first station south of Acorn, at 11:01 p. m. Extra 497 not only proceeded beyond Howard but also passed Rich Mountain, and collided with No. 16 40 minutes after it was required to be into clear at Acorn, if it proceeded to that station for No. 16.

As Extra 497 was approaching the point where the accident occurred, the speed was about 25 miles per hour. The front brakeman, who was in the gangway on the right side of the engine, and the fireman, who was engaged in tending the fire, knew that their train was inferior to No. 16 and that it was required to clear the schedule time of that train, but they depended upon the engineer to comply with the rules. Just prior to the collision they heard the engineer call a warning, and they immediately jumped. They did not observe what action was taken by the engineer to stop their train. It is not known why the engineer failed to take action to clear the time of No. 16, as he was killed in the accident. The conductor and the flagman, who were in the car next to the rear car, understood that their train was inferior to No. 16 and was required to clear the schedule time of that train. The conductor stated that he consulted his timetable and observed the time as his train passed Page, 20 miles north of Acorn, as 9:45 p. m., Howard as 10:01 p. m. and Rich Mountain as 10:15 p. m. He intended that his train would clear for No. 16 at Acorn. The flagman stated he was aware that when his train was passing Howard No. 16 was overdue, but he did not inform the conductor. After the train passed Rich Mountain the flagman told an engineer who was deadheading on the train that he had not seen any order permitting his train to proceed on the time of No. 16. The deadhead engineer immediately compared time with the conductor, and it was 11:25 p. m.

The conductor then realized that he had previously misread his watch and he immediately opened the conductor's emergency valve. The collision occurred almost immediately thereafter.

On the line involved in this accident trains are operated by timetable and train orders only. Recently the Commission investigated three other accidents which occurred on the line of this carrier in territories on which trains were operated by timetable and train orders only. The first, which resulted in the injury of 8 persons, was a rear-end collision between a freight train and a passenger train at Shoreline, La., on August 18, 1941. The second, which resulted in the injury of 11 persons, was a side collision between a freight train and a passenger train at Holly, La., on September 28, 1941. The third, which resulted in the death of 1 employee and the injury of 11 employees, was a rear-end collision between two freight trains at Joplin, Mo., on January 19, 1942. The reports of the Commission covering the investigation of these accidents stated that if an adequate block system had been in use on this line these accidents would not have occurred. At the time the reports covering the investigation of the accidents that occurred at Holly and at Joplin were released, a rule to show cause why the carrier involved should not establish an adequate block-signal system was served on the carrier. In the instant case, if an adequate block system had been in use on the line involved, the accident would not have occurred.

Cause

It is found that this accident was caused by an inferior train occupying the main track on the time of an opposing superior train.

Recommendation

The Kansas City Southern Railway Company should establish an adequate block-signal system on the line involved in this accident. A rule to show cause, if any, why it should not do so will be served on said carrier.

Dated at Washington, D. C., this twenty-eighth day of July, 1942.

By the Commission, Commissioner Patterson.

W. P. BARTEL,
Secretary.

(SEAL)