

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 2868  
THE ATCHISON, TOPEKA & SANTA FE RAILWAY COMPANY  
REPORT IN RE ACCIDENT  
AT STAFFORD, KANS., ON  
FEBRUARY 10, 1945

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SUMMARY

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Railroad: Atchison, Topeka & Santa Fe  
Date: February 10, 1945  
Location: Stafford, Kans.  
Kind of accident: Rear-end collision  
Trains involved: Passenger : Passenger  
Train numbers: 68 : Extra 1473 East  
Engine numbers: Gas-electric M-182 : 1473  
Consist: Motor-car : 17 cars  
Estimated speed: Standing : 25 m. p. h.  
Operation: Timetable, train orders and  
automatic block-signal system  
Track: Single; tangent; 0.162 percent  
descending grade eastward  
Weather: Clear  
Time: 10:43 p. m.  
Casualties: 1 killed; 11 injured  
Cause: Failure properly to control speed  
of following train in accordance  
with signal indications

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2868

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

THE ATCHISON, TOPEKA & SANTA FE RAILWAY COMPANY

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April 3, 1945.

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Accident at Stafford, Kans., on February 10, 1945, caused  
by failure properly to control the speed of the  
following train in accordance with signal indications.

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

PATTERSON, Commissioner:

On February 10, 1945, there was a rear-end collision between two passenger trains on the Atchison, Topeka & Santa Fe Railway at Stafford, Kans., which resulted in the death of one passenger, and the injury of nine passengers, one Pullman employee and one employee off duty.

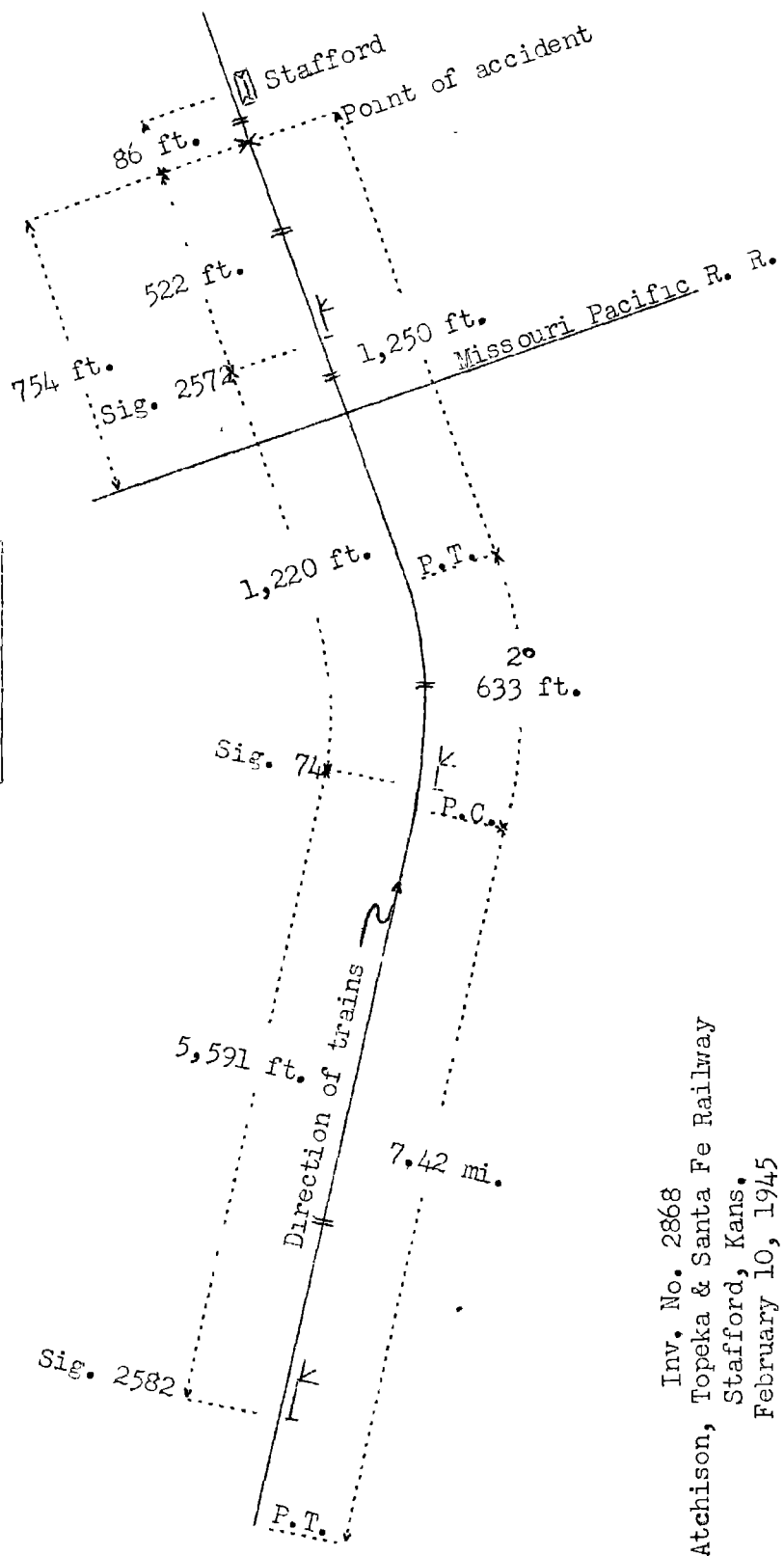
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<sup>1</sup>Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

↑ To Hutchinson

↓ To Dodge City

- Hutchinson, Kans. 39.0 mi.
- X Stafford (P. of A.) 9.0 mi.
- St. John 72.2 mi.
- Dodge City, Kans.



Inv. No. 2868  
 Atchison, Topeka & Santa Fe Railway  
 Stafford, Kans.  
 February 10, 1945

Location of Accident and Method of Operation

This accident occurred on that part of the Western Division designated as the Second District and extending eastward from Dodge City to Hutchinson, Kans., 120.2 miles. In the vicinity of the point of accident this was a single-track line over which trains were operated by timetable, train orders and an automatic block-signal system. The accident occurred on the main track 81.2 miles east of Dodge City, at a point 86 feet west of the station at Stafford. From the west there were, in succession, a tangent 7.42 miles in length, a 2° curve to the left 633 feet, and a tangent 1,250 feet to the point of accident and a considerable distance eastward. The grade was 0.162 percent descending eastward.

Signals 2582, 74 and 2572, governing east-bound movements, were, respectively, 7,333, 1,742 and 522 feet west of the point of accident. The involved night aspects and corresponding indications and names of these signals were as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>	<u>Name</u>
2582 and 74	Yellow	Proceed at restricted speed.	Restricted Speed Signal.
2572	Red over number plate	Stop-Then proceed in accordance with Rule 830.	Stop and Proceed Signal.

The controlling track circuits were so arranged that, when an east-bound train occupied the main track in the block immediately east of signal 2572, signal 2572 would display stop-and-proceed and signals 74 and 2582 would display proceed-at-restricted-speed.

Operating rules read in part as follows:

DEFINITIONS.

\* \* \*

Restricted Speed.--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

36. All members of train and engine crews must, when practicable, communicate to each other by its name the indication of all signals affecting the movement of their train.

37. The following signals will be used by flagmen:

\* \* \*

Night signals--A red light,  
A white light,  
Torpedoes and  
Fusees.

99. When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure full protection, placing two torpedoes and, when necessary, in addition, displaying lighted fuseses.

\* \* \*

830. When a train is stopped by a stop and proceed signal it may:

(a) On single track, send flagman ahead immediately, wait five minutes and follow at restricted speed \* \* \*

The maximum authorized speed for the following train was 100 miles per hour. However, over the Missouri Pacific Railroad crossing located 754 feet west of the point of accident the maximum authorized speed for all trains was 40 miles per hour.

#### Description of Accident

No. 68, an east-bound first-class passenger train, consisted of gas-electric motor-car M-182. The motor-car was of all steel construction, and consisted of a control-power compartment, a railway post office compartment, a baggage compartment and a passenger compartment. This train departed from St. John, 9 miles west of Stafford, at 10:26 p. m., 40 minutes late, and stopped at Stafford at 10:35 p. m. About 8 minutes later the rear end was struck by Extra 1473 East.

Extra 1473 East, an east-bound passenger train, consisted of engine 1473, two baggage cars, four troop sleeping cars, three Pullman sleeping cars, two kitchen cars and six Pullman sleeping cars, in the order named. All cars were of steel construction. This train passed St. John at 10:35 p. m., passed signals 2582 and 74, which displayed proceed-at-restricted speed, passed signal 2572, which displayed stop-and-proceed, and while moving at an estimated speed of 25 miles per hour it struck No. 68 at a point 522 feet east of signal 2572.

The force of the impact crushed the passenger compartment of motor-car M-182 a distance of 13 feet 8 inches, and the car was moved eastward about 470 feet. The front end of engine 1473 was considerably damaged.

It was clear at the time of the accident, which occurred about 10:43 p. m.

Discussion

The crew of No. 68 consisted of an engineer, a conductor and one brakeman. The conductor and the brakeman were engaged in handling baggage, mail and express when they observed the reflection of the headlight of the following train. Then the conductor immediately proceeded westward to provide flag protection. He was giving stop signals with a lighted red fusee from a point about 500 feet west of the rear of his train when the engine of Extra 1473 East passed him. The conductor of No. 68 thought the flag protection furnished his train was sufficient.

As Extra 1473 East was approaching signal 2582 the speed was about 65 miles per hour. The brakes had functioned properly at all points where used en route. The headlight was lighted brightly, and the enginemen were maintaining a lookout ahead. When the engine was in the vicinity of signal 2582 the enginemen saw the proceed-at-restricted-speed indication displayed by the signal, and they called the indication. The engineer made a 10-pound brake-pipe reduction. The brakes were not released. When the engine was in the vicinity of signal 74 the speed was about 45 miles per hour. This signal displayed proceed-at-restricted-speed, and the enginemen called the indication. The engineer thought he had the train under proper control and no further application of the brakes was made in the vicinity of signal 74. After the engine had reached a point about 1,000 feet west of signal 2572 the fireman called the stop-and-proceed indication displayed by that signal. Then the engineer realized that the speed was excessive and he moved the brake-valve to emergency position in an attempt to stop short of the signal. However, the train was not stopped and the speed was about 25 miles per hour when the engine struck No. 68 at a point 522 feet east of signal 2572. After the accident there was no condition found that would prevent the proper application of the train brakes. If the speed of Extra 1473 had been controlled in accordance with the indications displayed by the signals involved, this accident would not have occurred.

Cause

It is found that this accident was caused by failure properly to control the speed of the following train in accordance with signal indications.

Dated at Washington, D. C., this third day of April, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.