

INTERSTATE COMMERCE COMMISSION

WASHINGTON

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INVESTIGATION NO. 2555

THE ATCHISON, TOPEKA & SANTA FE RAILWAY COMPANY

REPORT IN RE ACCIDENT

AT BARSTON, CALIF., ON

DECEMBER 28, 1941

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## SUMMARY

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Railroad: Atchison, Topeka & Santa Fe

Date: December 28, 1941

Location: Barstow, Calif.

Kind of accident: Side collision

Trains involved: U.P. freight :A.T.& S.F. light  
: engine

Train number: Extra 5070 East :

Engine numbers: 5070 :3900

Consist: 46 cars, caboose :

Speed: 4-6 m.p.h. :1-6 m.p.h.

Operation: Automatic block-signal system  
for movements with the current  
of traffic; accident occurred  
within yard limits.

Track: Double; 2<sup>o</sup>41' curve; 0.33 percent  
descending grade westward

Weather: Raining

Time: 10:10 p.m.

Casualties: 1 killed

Cause: Accident caused by failure to  
operate light engine in accordance  
with the requirements of the yard-  
limit rule

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2555

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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February 20, 1942.

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Accident at Barstow, Calif., on December 28, 1941, caused by  
failure to operate light engine in accordance with the  
requirements of the yard-limit rule.

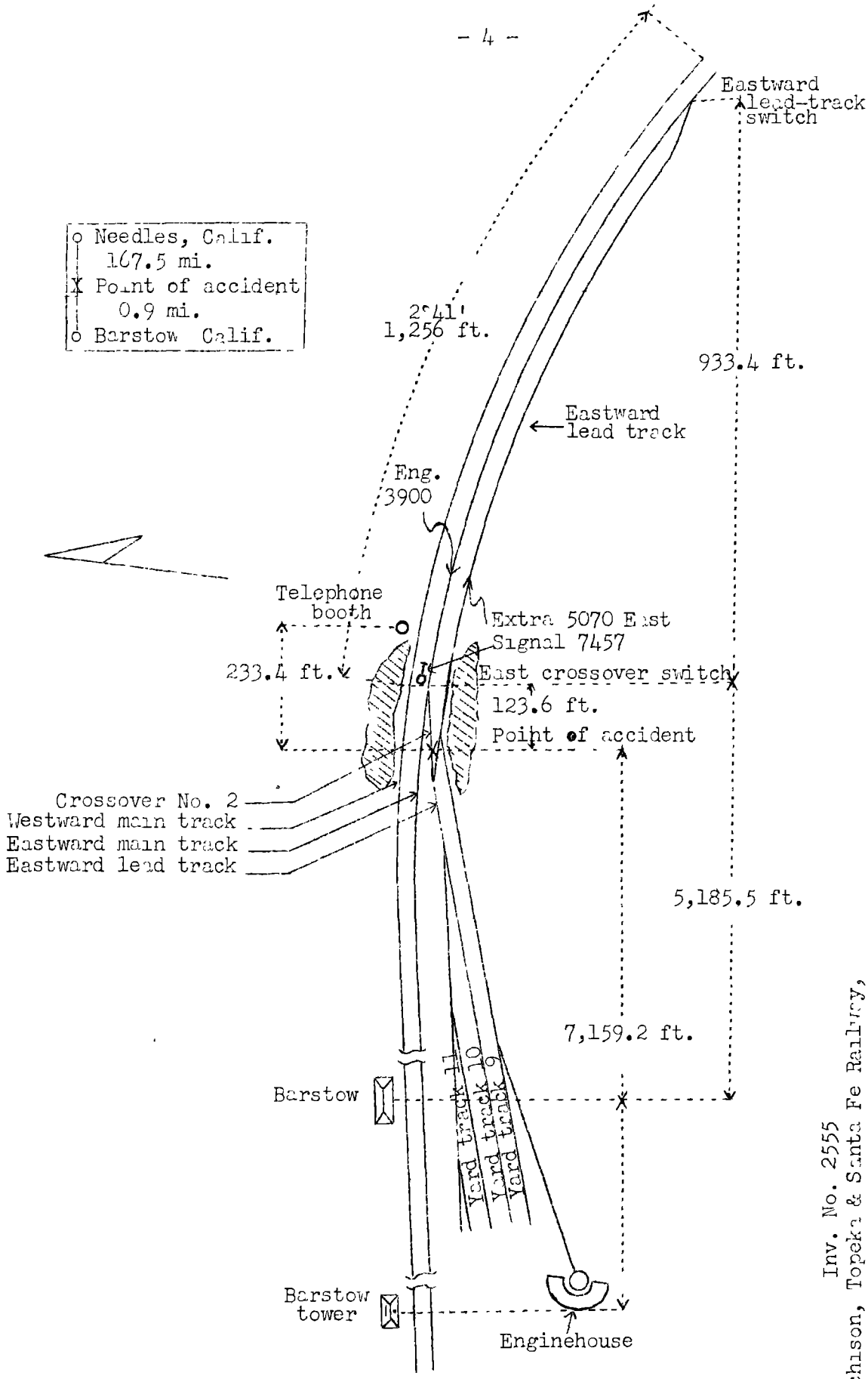
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REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On December 28, 1941, there was a side collision between an Atchison, Topeka & Santa Fe Railway light engine and a Union Pacific Railroad freight train, on the line of the Atchison, Topeka & Santa Fe Railway, at Barstow, Calif., which resulted in the death of one employee. This accident was investigated in conjunction with a representative of the Railroad Commission of California.

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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.

o	Needles, Calif.	167.5 mi.
X	Point of accident	0.9 mi.
o	Barstow Calif.	



Inv. No. 2555  
 Atchison, Topeka & Santa Fe Railway,  
 Barstow, Calif.,  
 December 28, 1941.

Location of Accident and Method of Operation

In Barstow Yard trains of the Union Pacific Railroad, hereinafter referred to as the U.P., are operated over the tracks of the Atchison, Topeka & Santa Fe Railway, hereinafter referred to as the A.T.& S.F. This accident occurred on that part of the Arizona Division designated as the Second District, which extends between Needles and Barstow, Calif., a distance of 168.4 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated with the current of traffic by an automatic block-signal system. Within yard limits at Barstow trains and engines move against the current of traffic by authority granted by signalmen. At Barstow the freight classification yard lies south of the main tracks. The eastward lead track of this yard parallels the main tracks and is connected to the eastward main track at a point 6,118.9 feet east of the station. Crossover No. 2, which is trailing-point for movement with the current of traffic, connects the eastward main track and the eastward lead track. The east switch of this crossover, which is of the spring type, is normally lined for west-bound movements from the eastward main track to the eastward lead track and is located 5,185.5 feet east of the station and 933.4 feet west of the east lead-track switch. The switchstand involved bears the letter "S" to designate that it is a spring switch. It is not equipped with either a lamp or a target. The accident occurred at the fouling point of crossover No. 2 at a point 123.6 feet west of the east crossover switch. As the point of accident is approached from the east on the eastward main track there is a compound curve to the left, which has a maximum curvature of 2°41' and extends 1,256 feet to the east switch of crossover No. 2. At the point of accident the grade is 0.33 percent descending westward.

Automatic signal 7457 is of the dwarf, 2-indication, color-light type, and is located between the eastward and the westward main tracks at a point about 10 feet east of the east switch of crossover No. 2. It displays a green aspect when the east crossover switch is lined for entry to the crossover and a red aspect when this switch is lined for a west-bound movement on the eastward main track.

A telephone booth is located north of the westward main track at a point 233.4 feet east of the east crossover switch.

In the vicinity of the point of accident the tracks are laid in a cut, the walls of which rise to a height of about 40 feet.

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.

93. \* \* \*

Within yard limits all trains and engines may use the main track, not protecting against second or third class trains or extra trains, \* \* \*. All except first class trains will move within yard limits at restricted speed; the responsibility for accident with respect to second or third class or extra trains rests with the approaching train.

104. \* \* \*

When practicable, the engineman must see that the switches near the engine are properly lined.

In the vicinity of the point of accident the maximum authorized speed for trains moving against the current of traffic is 20 miles per hour.

Description of Accident

Extra 5070 East, an east-bound U.P. freight train, consisted of engine 5070, 33 loaded and 13 empty cars and a caboose. This train was proceeding eastward on the eastward lead track at an estimated speed of 4 to 6 miles per hour when the eighth car was struck by engine 3900.

Engine 3900 entered the eastward main track at the east lead-track switch, then, in backward motion, it moved westward against the current of traffic on the eastward main track, entered crossover No. 2 and while moving at an estimated speed of 1 to 6 miles per hour it collided with the eighth car of Extra 5070 East.

Because of track curvature and the lead track being occupied by a train, the view from either side of an engine moving backward against the current of traffic on the eastward main track was considerably restricted.

The rear end of the tender of engine 3900 was slightly damaged. The eighth, ninth and tenth cars of Extra 5070 East were derailed and slightly damaged.

It was raining at the time of the accident, which occurred at 10:10 p.m.

The employee killed was a brakeman, who was on the rear of the tender of engine 3900.

#### Mechanical Data

The tender of engine 3900 is 10 feet 9 inches in width, 46 feet 7-1/16 inches in length and 13 feet 1/4 inch in height. A back-up light is provided at the rear of the tender.

#### Discussion

The rules governing operation on the line involved provide that within yard limits all trains and engines may use the main track, and that all except first-class trains must be operated prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced. In addition, all members of a train or engine crew must, when practicable, communicate to each other the indication of all signals affecting the movement of their train.

Extra 5070 East was proceeding eastward on the eastward lead track at a speed of 4 to 6 miles per hour and the engineer was maintaining a lookout ahead. According to the statement of the engineer, when his engine was about 300 feet east of crossover No. 2 he observed an engine, in backward motion, moving westward on the eastward main track and displaying a lighted red fusee on the rear of the tender. The first he knew of anything being wrong was when he felt a surge of his train and heard a stop signal sounded by an engine whistle. He immediately moved the brake valve to emergency position and the train stopped. Soon afterward he learned that the light engine had collided with his train.

According to the statement of the engineer of engine 3900, he obtained authority from the signalman to occupy the eastward main track and to proceed westward beyond crossover No. 2 to the passenger yard adjacent to the station at Parstow. Because the normal position of the east switch of crossover No. 2 is for movement from the eastward main track to the eastward lead track, he instructed the front brakeman before his engine entered the eastward main track that it would be necessary to line the east switch for movement on the eastward

main track, and, after the engine passed over the switch, to line it back to normal position. In addition, he instructed the front brakeman to station himself at the rear of the tender and to display a lighted fusee. The engineer said that as his engine was approaching crossover No. 2 the speed was about 6 miles per hour, the throttle was closed, and the fireman and he were on their respective sides of the cab maintaining a lookout to the rear. There was no headlight on the rear of the tender but a back-up light illuminated the track about 20 feet to the rear of the tender; however, the light was not sufficient to enable the engineer to observe the position of switch points. Because of rain, the cut, track curvature, the tender being to the rear of the cab, Extra 5070 East moving on the eastward lead and a freight train standing on the westward main track, the engineer said he became lost as to location. He had planned to stop at the telephone located 233 feet east of crossover No. 2, and had instructed the front brakeman to give a stop signal at that location. The engineer kept the front brakeman under observation constantly but did not observe any signal. The first the engineer was aware that his engine was near crossover No. 2 was when the tender entered the crossover. He immediately moved the brake valve to emergency position but the distance was not sufficient to stop short of the fouling point, and the tender collided with Extra 5070 East. Since the front brakeman was killed in the accident it could not be determined if he observed the indication of the signal governing the use of the east switch of the crossover or the position of the switch points of this switch. The fireman was not aware of the instructions given to the front brakeman and the only information he had concerning the movement of his engine was that it was en route to the passenger yard. He did not know that the signal governing the use of the east crossover switch indicated the position of the switch points of this switch; therefore, he did not call its indication to the engineer, nor did the engineer inquire concerning its indication.

The rules require that members of a crew communicate to each other the indications of signals affecting the movement of their train. Had the fireman called the indication of the signal governing the use of the east crossover switch or had the engineer inquired concerning its indication, it is probable this accident would have been averted. The investigation of this accident disclosed that the front brakeman was employed December 19, 1941, and the fireman was employed September 24, 1941. If engine 3900 had been operated prepared to stop short of anything that requires the speed of a train to be reduced, this accident would not have occurred.



Cause

It is found that this accident was caused by failure to operate the light engine in accordance with the requirements of the yard-limit rule.

Dated at Washington, D.C., this twentieth day of February, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.