

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 3258  
THE ATCHISON, TOPEKA AND SANTA FE  
RAILWAY COMPANY  
REPORT IN RE ACCIDENT  
NEAR WETTICK, KANS., ON  
JUNE 9, 1949

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SUMMARY

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Date: June 9, 1949

Railroad: Atchison, Topeka and Santa Fe

Location: Wettick, Kans.

Kind of accident: Collision

Equipment involved: Track motor-car : Passenger train  
16768C

Train number: : 19

Engine number: : Diesel-electric  
units 34, 34A,  
34B, and 34C

Consist: : 13 cars

Estimated speeds: Standing : 75 m. p. h.

Operation: Timetable, train orders and  
automatic block-signal system

Track: Single; tangent; 0.16 percent  
ascending grade westward

Weather: Cloudy

Time: 3:45 a. m.

Casualties: 2 killed

Cause: Failure to provide adequate protection  
for movement of track motor-car

Recommendation: That the Atchison, Topeka and Santa Fe  
Railway Company provide adequate  
protection for movement of track  
motor-cars on its line

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 3258

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

THE ATCHISON, TOPEKA AND SANTA FE  
RAILWAY COMPANY

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August 17, 1949

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Accident near Wettick, Kans., on June 9, 1949, caused  
by failure to provide adequate protection for  
the movement of a track motor-car.

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

PATTERSON, Commissioner:

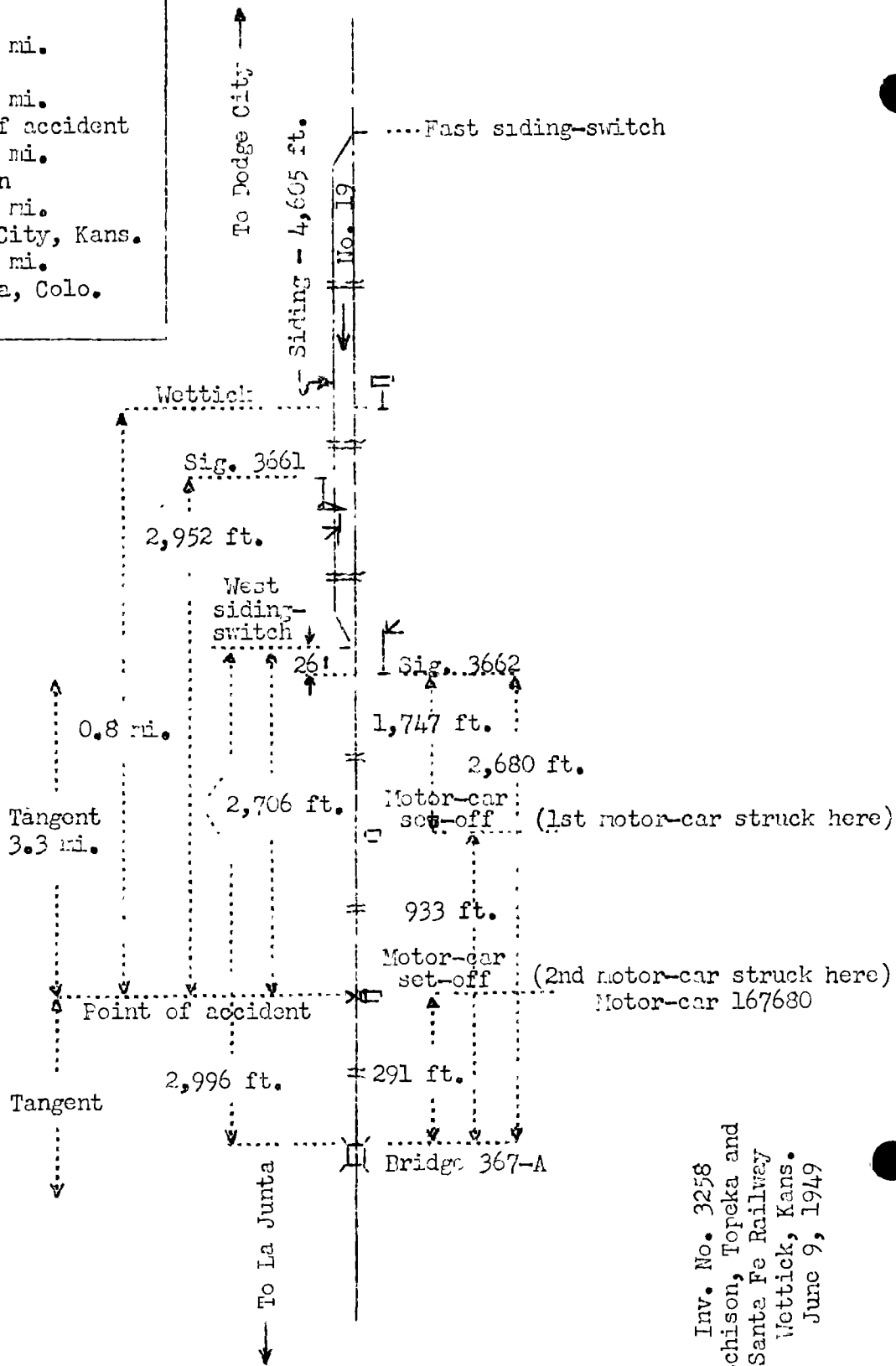
On June 9, 1949, there was a collision between a  
passenger train and a track motor-car on the Atchison,  
Topeka and Santa Fe Railway near Wettick, Kans., which  
resulted in the death of two maintenance-of-way employees.

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

- Dodge City, Kans.
- | 9.0 mi.
- Howell
- | 4.8 mi.
- Wettick
- | 0.8 mi.
- X Point of accident
- | 4.1 mi.
- Cimarron
- | 31.2 mi.
- Garden City, Kans.
- | 152.5 mi.
- La Junta, Colo.



Inv. No. 3258  
 Atchison, Topeka and  
 Santa Fe Railway  
 Wettick, Kans.  
 June 9, 1949

Location of Accident and Method of Operation

This accident occurred on that part of the Colorado Division extending between Dodge City, Kans., and La Junta, Colo., 202.4 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders and an automatic block-signal system. At Wettick, Kans., 13.8 miles west of Dodge City, a siding 4,605 feet in length parallels the main track on the north. The accident occurred on the main track at a point 2,706 feet west of the west siding-switch. The main track is tangent throughout a distance of 3.3 miles immediately east of the point of accident and a considerable distance westward. The grade for west-bound trains is, successively, an average of 0.40 percent ascending a distance of 1,900 feet, level 400 feet, an average of 0.33 percent descending 2,700 feet and 0.16 percent ascending 640 feet to the point of accident and 360 feet westward.

Automatic signal 3662, governing east-bound movements, and automatic signal 3661, governing west-bound movements, are located, respectively, 2,680 feet and 2,952 feet east of the point of accident. These signals are of the one-arm, upper-quadrant, semaphore type. They display three aspects and are approach lighted. The involved aspects and corresponding indications and names are as follows:

<u>Signal</u>	<u>Day Aspect</u>	<u>Night Aspect</u>	<u>Indication</u>	<u>Name</u>
3661, 3662	Vertical	Green	PROCEED.	CLEAR
3662	45° above horizontal	Yellow	PROCEED PREPARING TO STOP AT NEXT SIGNAL; IF EXCEED- ING MEDIUM SPEED, IMMEDIATELY REDUCE TO THAT SPEED.	APPROACH
3662	Horizontal	Red	STOP; THEN PROCEED * * *	STOP AND PROCEED

The controlling circuits are arranged on the overlap principle. When a west-bound train occupies any portion of the main track between points 4.22 miles and 1.37 miles east of signal 3662, the signal will indicate APPROACH. When a west-bound train occupies any portion of the main track throughout a distance of 1.37 miles immediately east of signal 3662, the signal will indicate STOP AND PROCEED.

This carrier's Rules and Regulations for the Maintenance of Way and Structures read in part as follows:

SECTION FOREMEN.

58. Train Line-up.--They must, when practicable, before going to work and before doing work on track which might delay trains, ascertain the location of trains and whether all overdue trains have passed.

59. Lookout for Trains.--They must keep a sharp lookout for trains from either direction and must not assume that a train may not come for a certain time, nor act on the assurance of any person to that effect, but must at all times protect themselves and their men with proper signals, bearing in mind that a train may pass at any moment.

SIGNALS AND INTERLOCKING.

153. Insulation of Gages, Cars, Etc.--Track gages and motor, hand and push cars used in bonded territory must be insulated. Lining bars or any other metal must not be allowed to come in contact with both rails at the same time as this would set signals against trains.

MOTOR, HAND, VELOCIPEDA AND PUSH CARS.

284. Safety.--Safety is of first importance. Employees using motor or other cars must understand that trains or other cars may be run on any track in either direction at any time and must not depend on information given by other employees or on "Line-ups," but must at all times keep sharp lookout and take such other measures as will insure safety.

285. Flagging.--Employees operating track cars must carry with them standard watches, current time-tables and Flagman's signals. When two or more men are with a car they should flag curves and other points where the view is obstructed. \* \* \*

286. Cautious Use of Car.--Cars must be run with great caution at all times, and particularly at night and in fogs or severe storms. Motor cars must, whenever possible, be run forward; that is, with front of car and safety rail in advance in order to guard against accidents. When operating at night, two white lights must be used, and so placed that one can be seen clearly from each direction.

Instructions for Care and Operation of Motor Cars read in part as follows:

14. Understanding in Handling of Car.--Every possible safeguard should surround the operation of motor cars, and there should be a thorough understanding as to what part each person will take in handling the cars, and the side of track to which car will be removed should an emergency arise, necessitating prompt action.

16. Knowledge of Train Movements.--Parties in charge of motor cars will be required at all times to keep themselves informed as to train movements in the vicinity of their operations to avoid unnecessary hazards from running on short time ahead of trains, or in the face of traffic on single track territory. \* \* \* Dispatchers will give line-up to Section Foremen, extra gangs and other parties operating motor cars when requested. Parties receiving this information must understand that they are given as a matter of information only, and does not relieve them of responsibility. They must protect themselves by flagging whenever and wherever necessary. Operating conditions may require running additional trains or light engines at any moment after line-up has been given.

The maximum authorized speeds were 100 miles per hour for the train involved and 25 miles per hour for track motor-cars.

#### Description of Accident

Track motor-car 167680, occupied by a maintenance-of-way foreman and seven employees, departed east-bound from Bridge 367-A about 3:42 a. m. It was stopped at a point 291 feet east of Bridge 367-A, and was struck by No. 19.

No. 19, a west-bound first-class passenger train, consisted of Diesel-electric units 34, 34A, 34B, and 34C, coupled in multiple-unit control, two baggage cars, one buffet car, four sleeping cars, one lounge car, one dining car, and four sleeping cars, in the order named. This train departed from Dodge City, the last open office, at 3:30 a. m., 10 minutes late, passed signal 3661, which indicated CLEAR, and while moving at an estimated speed of 75 miles per hour it struck track motor-car 167680.

The track motor-car was demolished.

The maintenance-of-way foreman, who was operating the track motor-car, was killed, and another employee who was on the car was fatally injured.

The weather was cloudy and day was breaking at the time of the accident, which occurred about 3:45 a. m.

According to data furnished by the railroad, track motor-car 167680 was of the four-wheel type, equipped with four-wheel brakes, powered by a four-cylinder, 17-horse-power gasoline motor and was insulated to prevent the shunting of track circuits. It was constructed with a bolted structural steel frame and a wooden deck, and had seating capacity for eight persons. The weight of the car was 1,500 pounds. It was not equipped with a headlight.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 19.2 trains.

#### Discussion

About 9:30 p. m., June 8, the section foreman at Howell, 4.8 miles east of Wettick, was called by the dispatcher to patrol the track, because a heavy rainfall had been reported between Dodge City and Cimarron, respectively 13.8 miles east and 4.9 miles west of Wettick. He assembled a force of four men to assist in patrolling the track on a track motor-car. He then obtained from the dispatcher a line-up of train movements reading as follows:

No. 20, No. 18, No. 2 leave  
Garden City about 11:30 p. m.

No freight trains in sight

Other passenger trains on time.



Garden City is 36.1 miles west of Wettick. Nos. 20, 18 and 2 were east-bound passenger trains. The next east-bound passenger train after these trains was due to leave Garden City at 7:15 a. m. No. 19 was the next west-bound passenger train, and was due to leave Dodge City at 3:20 a. m. After the line-up of train movements was obtained, track motor-car 167680 was operated westward to Bridge 367-A. An inspection disclosed that a considerable amount of ballast had been washed from the deck of the bridge by an overflow of water. The foreman first sent a flagman westward from the bridge to stop eastward trains, then the foreman rode on a highway truck to Wettick to inform the dispatcher of track conditions at Bridge 367-A. At Wettick the foreman requested the dispatcher to hold trains at Cimarron and at Dodge City until the track was patrolled and necessary repairs made. The dispatcher instructed him to use the extra force stationed at Wettick to assist him. The section foreman then called the foreman of the extra force, who was instructed to patrol the track east of Wettick. He read the line-up of train movements to the foreman of the extra force, and informed him that trains were being held at Cimarron and at Dodge City until the dispatcher was notified that the track was safe for their movement. The foreman of the extra force proceeded eastward on a track motor-car to patrol the track. The section foreman then procured another track motor-car, which was assigned to the extra force at Wettick, and, with several employees of the extra force, proceeded to Bridge 367-A. Some time later he patrolled the track to Cimarron. Upon arrival at Cimarron he told the dispatcher that trains could be permitted to proceed to Bridge 367-A. His motor-car preceded Nos. 20, 18 and 2 to Bridge 367-A.

About 3 a. m., after trains No. 20, No. 18, and No. 2 had passed Wettick, the extra-force foreman on one motor-car and a track motor-car repairman on another motor-car arrived at Bridge 367-A, and both track motor-cars were left on the main track. An assistant roadmaster, who had previously inspected the track at Bridge 367-A, returned to the bridge and informed the section foreman and the extra-force foreman that trains had been released, and then he departed eastward by automobile.

After the surfacing of track at Bridge 367-A was completed, the section foreman's track motor-car departed eastward. It was occupied by the section foreman and four employees. Day was breaking and the day aspect of signal 3662 could be seen. The section foreman said that he did not observe the aspect of signal 3662 when the track motor-car started eastward, and that he overlooked the fact that

No. 19 was overdue. The other two motor-cars proceeded eastward immediately behind the first car. After the first car was under way, the section foreman reminded the other occupants of the car that No. 19 was overdue. When the motor-car was passing the motor-car set-off located 933 feet east of Bridge 367-A, the foreman observed that signal 3662 indicated APPROACH. When the aspect of signal 3662 changed to indicate STOP AND PROCEED, the foreman immediately stopped the motor-car about 600 feet west of the west siding-switch at Wettick, where it was removed from the track barely in time to avoid its being struck by No. 19. None of the occupants had sufficient time to give stop signals to the train or to warn the occupants of the cars in the rear. The second car was operated by the track motor-car repairman, and was occupied by six other employees. The repairman said that when the car departed eastward from the bridge he observed that signal 3662 indicated CLEAR. A white light was displayed both at the front and at the rear of the car. He had no information of approaching trains. He first saw No. 19 after it had passed the west siding-switch at Wettick and instructed one of the occupants to give stop signals to the train. He immediately stopped the car at the motor-car set-off located 933 feet east of Bridge 367-A. The employee who was instructed to give stop signals to the approaching train had an unlighted red fusee and a flashlight. However, the fusee failed to ignite and he gave stop signals with the flashlight. When the car stopped, the occupants attempted to remove it from the track but the front end was between the track rails when it was struck by No. 19. No warning was given by the occupants of the second car to the occupants of the third car. The third car was operated by the extra-force foreman, and was occupied by seven other employees. It was headed west when it departed eastward from Bridge 367-A immediately behind the second car. Two white lanterns were displayed on the east end of the car. The surviving employees on this car neither observed signal 3662 before they departed eastward nor were they warned that No. 19 was overdue. They first observed the approaching train when it was only a few hundred feet distant, and the car was stopped immediately at the motor-car set-off located 291 feet east of Bridge 367-A, where an attempt was made to remove it from the track. It was at right angles to the track when it was struck by No. 19. The extra-force foreman was killed, and one of the other employees who had been on the car was fatally injured.

As No. 19 was approaching the point where the accident occurred the speed was 85 miles per hour, as indicated by the tape of the speed recording device. The headlight and the oscillating signal light were lighted brightly. The enginemen were maintaining a lookout ahead from their positions

in the control compartment of the first Diesel-electric unit, the conductor was in the third car, and the flagman was in the rear car. No train order restricting the movement of No. 19 either with respect to track conditions or to track motor-cars had been issued to the crew of this train. No member of the crew had information that track motor-cars were occupying the main track. The engine-whistle signal was sounded when the train was approaching Wettick and again when approaching the west siding-switch. The signal governing movements into the block in which the accident occurred indicated CLEAR. When the front of the train was about 50 feet west of the west siding-switch the enginemen observed a track motor-car on the track and stop signals being given with a flashlight. The engineer immediately placed the brake valve in emergency position and opened the sander valve. The enginemen estimated that the speed of the train had been reduced to about 75 miles per hour at the time of the collision.

The rules of this carrier require operators of track motor-cars to maintain a lockout and to keep themselves informed at all times concerning train movements in the vicinity of their operations. When requested, train dispatchers must issue a line-up of train movements, but these line-ups are issued as information only and do not confer authority over trains or other track motor-cars. Employees must not depend on the information contained in a written line-up, or given by other employees. A line-up does not confer authority for a track motor-car to occupy the main track. A line-up does not relieve the operator of a track motor-car of responsibility for collision if the movement of a train is omitted from the line-up or if the line-up is otherwise erroneous, and a train may be authorized at any time after a line-up has been issued without the issuance of a superseding line-up by the train dispatcher. Track motor-car operators are required to provide the same degree of protection when they have a line-up as when they do not have it. Train dispatchers and train crews are not informed when a track motor-car is occupying the main track, and motor-car operators are not informed when another motor-car is occupying the main track. Track motor-cars are insulated to prevent them from shunting track circuits, and automatic block-signal systems do not indicate to train crews or to the operators of other track motor-cars that the track is occupied by a track motor-car.

In the instant case, the section foreman obtained a line-up of train movements when he started to patrol the track about 6 hours 15 minutes before the accident occurred and all trains shown by number on the line-up had passed Wettick at least 45 minutes before the accident occurred. The main track was occupied by three track motor-cars, without protection being provided, on the time of No. 19, a first-class passenger train authorized to operate at a speed of 100 miles per hour. Each of the two track motor-cars struck by No. 19 weighed 1,500 pounds. A west-bound train moving at the maximum authorized speed causes signal 3662 to indicate APPROACH during a period of 1 minute 43 seconds, and to indicate STOP AND PROCEED during a period of 50 seconds before the train passes the signal. This signal is approach lighted and does not display a night aspect until the track circuit west of the signal is occupied by a train.

During the past six years the Commission has investigated 22 collisions, including the instant case, in which track motor-cars were involved. These accidents resulted in the death of 46 persons and in the injury of 81 persons, and were caused by failure to provide adequate protection for the movement of track motor-cars. In the instant case, if an adequate block system had been provided to protect the movement of track motor-cars, both the train and the track motor-cars would not have been permitted to occupy the same block simultaneously. If adequate train-order protection had been provided for the movement of the track motor-cars, the members of the crew of No. 19 and the employees on the track motor-cars would have had a uniform understanding with respect to the movements in question.

#### Cause

It is found that this accident was caused by failure to provide adequate protection for the movement of track motor-cars.

#### Recommendation

It is recommended that the Atchison, Topeka and Santa Fe Railway Company provide adequate protection for the movement of track motor-cars on its line.

Dated at Washington, D. C., this seventeenth day of August, 1949.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.