

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3703

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY

IN RE ACCIDENT

AT ROBINSON, N. MEX., ON

SEPTEMBER 5, 1956

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SUMMARY

Date: September 5, 1956

Railroad: Atchison, Topeka and Santa Fe

Location: Robinson, N. Mex.

Kind of accident: Head-end collision

Trains involved: Passenger : Passenger

Train numbers: 8 : 19

Locomotive numbers: Diesel-electric units 41, 41A, 41B, and 41C : Diesel-electric units 30C, 30B, 30A, and 30

Consists: 15 cars : 14 cars

Estimated speeds: Standing : 63 m. p. h.

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

Track: Single; tangent; 1.08 percent descending grade eastward

Weather: Clear

Time: 3:01 a. m.

Casualties: 20 killed; 4 injured

Cause: Fireman of train on a siding stationing himself near main track switch in violation of rule and then becoming confused and opening the switch immediately in front of approaching train

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3703

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

October 2, 1956

Accident at Robinson, N. Mex., on September 5, 1956, caused by the fireman of a train on a siding stationing himself near a main track switch in violation of rule and then becoming confused and opening the switch immediately in front of an approaching train.

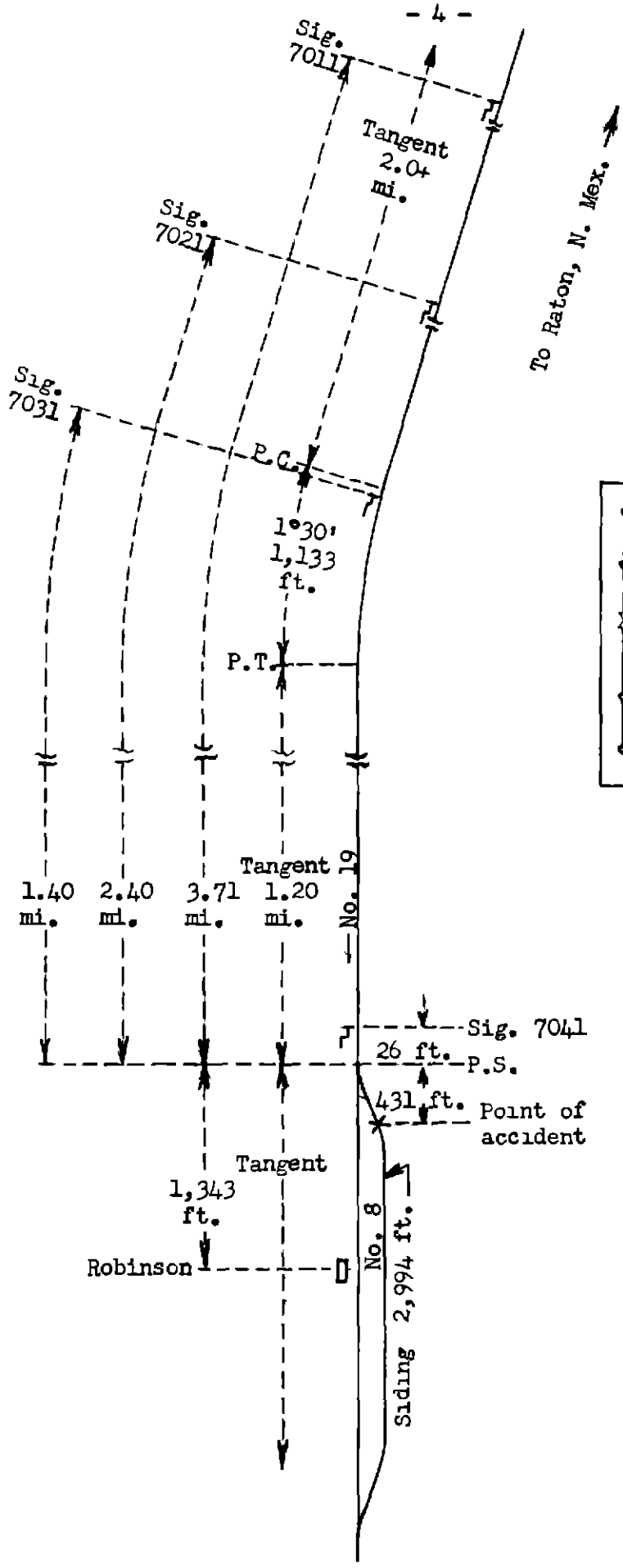
REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On September 5, 1956, there was a head-end collision between a mail and express train and a passenger train on the Atchison, Topeka and Santa Fe Railway at Robinson, N. Mex., which resulted in the death of 15 dining car and lounge car employees and 5 train-service employees, and the injury of 1 passenger, 2 dining-car employees, and 1 train-service employee. This accident was investigated in conjunction with a representative of the State Corporation Commission of New Mexico.

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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 Clarke for consideration and disposition.



○	Raton, N. Mex.	39.6 mi.
○	Springer	6.1 mi.
X	Robinson	(Point of accident)
		20.0 mi.
○	Wagon Mound	44.1 mi.
○	Las Vegas, N. Mex.	

Report No. 3703
 Atchison, Topeka and Santa Fe Railway
 Robinson, N. Mex.
 Sept. 5, 1956

Location of Accident and Method of Operation

This accident occurred on that part of the New Mexico Division extending between Las Vegas and Raton, N. Mex., 109.8 miles, a single-track line, over which trains are operated by timetable, train orders, and an automatic block-signal system. At Robinson, 64.1 miles east of Las Vegas, a siding 2,994 feet in length parallels the main track on the south. The east siding-switch is 1,343 feet east of the station sign. The accident occurred on the siding at a point 431 feet west of the east switch. From the east on the main track there are, in succession, a tangent in excess of 2.00 miles in length, a 1°30' curve to the left 1,133 feet, and a tangent 1.20 miles to the east siding-switch and a considerable distance westward. The grade is 1.08 percent ascending westward at the point of accident.

There is a No. 14 turnout at the east end of the siding at Robinson. The switch stand is of the horizontal-throw intermediate-stand type and is located about 7 feet north of the north rail of the main track. It is provided with a circular red target 18 inches in diameter and with reflector lenses at the top of the spindle. When the switch is lined for movement on the main track the banner is parallel to the track and green reflector lenses are displayed in the direction of approaching trains. When the switch is lined for entry to the siding the banner is at right angles to the track and red reflector lenses are displayed in the direction of approaching trains. The switch is provided with a switch-point lock which must be released by means of a treadle near the base of the switch stand before the switch can be opened. Both the operating lever and the treadle are locked with standard switch locks.

Automatic signals 7011, 7021, 7031, and 7041, governing west-bound movements on the main track, are located, respectively, 3.71 miles, 2.40 miles, 1.40 miles, and 26 feet east of the east siding-switch at Robinson. These signals are of the semaphore type and are approach lighted. The controlling circuits are arranged on the overlap principle with double approach signals. When the east siding-switch at Robinson is lined for entry to the siding, signals 7011 and 7021 each indicate Proceed-preparing-to-stop-at-next-signal, and signals 7031 and 7041 each indicate Stop-then-proceed.

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This carrier's operating rules read in part as follows:

104(A). At meeting or passing points, the employe attending the switch must not unlock derail or main track switch, nor station himself nearer to main track switch than the clearance point, and, when safe to do so, on opposite side of track, until expected train has been met or passed.

* * *

The maximum authorized speed for passenger trains in the vicinity of the point of accident is 79 miles per hour.

Description of Accident

No. 8, an east-bound first-class mail and express train, consisted of Diesel-electric units 41, 41A, 41B, and 41C, coupled in multiple-unit control, 11 baggage cars, 1 express refrigerator car, 1 combination baggage-coach, 1 smoking car, and 1 business car, in the order named. At Las Vegas the members of the crew received copies of train order No. 508 reading as follows:

No. 8 Eng. 41 meet No. 19 Eng. 30 at Robinson
No. 8 take siding

This train departed from Las Vegas at 1:23 a. m., 28 minutes late, and departed from Wagon Mound, 20.0 miles west of Robinson and the last open office, at 2:21 a. m., 17 minutes late. It entered the siding at Robinson and stopped at 2:54 a. m. with the front of the locomotive 431 feet west of the east siding-switch. Seven minutes later it was struck by No. 19.

No. 19, a west-bound first-class passenger train, consisted of Diesel-electric units 30C, 30B, 30A, and 30, coupled in multiple-unit control, one baggage car, one baggage-dormitory car, two sleeping cars, one dining car, one dome chair-lounge car, one sleeping car, two chair cars, one lunch counter dining car, three chair cars, and one chair-observation car, in the order named. All cars were of lightweight construction. The Diesel-electric units, the first six cars, the eighth car, the eleventh car, and the thirteenth car were equipped with controlled slack couplers. The seventh car was equipped with tightlock couplers. At Raton the members of the crew received copies of train order No. 508. This train departed from Raton at 2:20 a. m., 7 minutes late, and passed Springer, 6.1 miles east of Robinson and the last open office, at 2:55 a. m., 1 minute late. While it was moving at a speed of about 63 miles per hour it entered the siding at Robinson and struck No. 8.

No. 8 was moved westward a distance of about 40 feet by the force of the impact. The first and second Diesel-electric units and the front truck of the third unit were derailed. Separations occurred between the first and second Diesel-electric units and between the eighth and ninth cars. The first unit was turned end for end and stopped upright on the south side of the track with the front end opposite the rear end of the second unit. It was demolished. The other units stopped upright and in line with the track. The main frame of the second unit was broken, and the unit was badly damaged. The third and fourth units, and the eighth, ninth, eleventh, twelfth, and thirteenth cars were somewhat damaged.

The four Diesel-electric units, the first six cars, and the front truck of the seventh car of No. 19 were derailed. Separations occurred between each of the Diesel-electric units and at each end of each of the first five cars. The first unit was turned end for end and stopped at an angle of about 45 degrees to the track. The rear end was against the rear end of the first unit of No. 8, and the front end was toward the southeast. It was demolished. The second and third units stopped in diagonal positions across the track structure of the siding. The fourth unit stopped across the siding and at right angles to it, with the rear end on the track structure of the main track. These units were badly damaged. The first car stopped on its left side. The front end was against the side of the fourth Diesel-electric unit, and the rear end was toward the southeast. The second car stopped on its side. The top of the second car was crushed against the underside of the first car throughout the length of the car. None of the other cars overturned. The third car stopped with the north end several feet north of the main track, and the side against the underside of the second car. The fourth car stopped with the front end against the south end of the underside of the second car, and the rear end on the track structure of the main track. The fifth car stopped with the front end against the rear end of the fourth car, and the rear end on the track structure of the siding. The other derailed cars stopped approximately in line with the siding. The first two cars were destroyed, the third and fourth cars were badly damaged, and the fifth and sixth cars were considerably damaged.

The engineer of No. 8, the engineer, the fireman, and the conductor of No. 19, and one employee not on duty who was on No. 19 were killed. The front brakeman of No. 19 was injured.

The weather was clear and it was very dark at the time of the accident, which occurred at 3:01 a. m.

Discussion

The crews of both trains held copies of train order No. 508, which established Robinson as the meeting point between these trains and provided that No. 8, the superior train by direction, take siding at the meeting point. The surviving members of the crews of both trains so understood.

When No. 8 stopped at the west siding-switch at Robinson the enginemen were on the locomotive, the train porter, who would ordinarily operate the siding switch, was in the tenth car, and the conductor and the flagman were in the thirteenth car. The fireman alighted and opened the switch. After the train entered the siding the flagman closed and locked the switch. The train then proceeded to the east end of the siding and stopped with the front of the locomotive 431 feet west of the east switch. The fireman said that the engineer had instructed him that he was to operate the switch. After the train stopped, the engineer extinguished the headlight. The fireman then proceeded to the switch and unlocked the padlock which secures the treadle of the switch-point lock. He said he then crossed the track and took a position opposite the switch stand and about 25 feet south of the track. After crossing the track he extinguished his light. He said that as No. 19 was approaching he was looking toward that train and that when No. 19 reached a point which he thought was about 1/4 mile east of the switch he heard the engineer of No. 8 sound the pneumatic horn several times. He said that prior to this time he had been positive that No. 8 was on the siding and that the switch was properly lined for the movement of No. 19 on the main track. When he heard the pneumatic horn he became confused and thought that the engineer intended the sounds as a signal to him to line the switch for entry to the siding. At this time No. 19 was closely approaching. The fireman crossed the track and unlocked and opened the switch. The locomotive of No. 19 passed immediately afterward. When No. 8 stopped on the siding at Robinson the members of the train crew alighted on the north side of the train. These employees said that as No. 19 was approaching they heard a short blast on the pneumatic horn on the locomotive of No. 8, and several seconds later they heard another short blast. The conductor and the train porter said that the engineer of No. 8 then lighted the headlight, and the conductor said that after being lighted the headlight was extinguished. The flagman said that he glanced toward the front of the train as No. 19 was entering the siding and that the headlight of No. 8 was lighted at that time. Both the conductor and the flagman said that the sound of the exhaust from the locomotive of No. 19 indicated that the Diesel engines were shut down when the locomotive was in the vicinity of the east siding-switch. The flagman said that he could see that the brakes

of No. 19 were applied as the front of that train entered the siding. None of these employees saw the fireman operate the switch. After the accident occurred the switch was found to be lined and locked for entry to the siding. The engineer of No. 8 was killed in the accident, and his reason for sounding the horn as No. 19 was approaching is not known. It is probable that he was attempting to call the fireman's attention to the fact that he should not remain in the immediate vicinity of the switch.

As No. 19 was approaching Robinson the enginemen were on the locomotive, the conductor and the front brakeman were in the vestibules at the rear of the second car and the front of the third car, and the flagman was in the rear car. The headlight was lighted brightly. The front brakeman said that the engineer sounded the station-approach whistle signal as the train approached Robinson. The conductor then sounded the meeting-point signal on the communicating signal system, and this signal was acknowledged by the engineer. The brakeman said that a short time later the conductor, who was looking out the vestibule door, called a warning and that at approximately the same time the brakes became applied. The collision occurred several seconds later. The flagman said that there was no brake application until a few seconds before the collision occurred. He said that at that time the brakes became applied in emergency.

The dining car and lounge car employees who were killed were in AT&SF 1382, the second car of No. 19. The side and roof of this car were demolished. Apparently the first car of the train was the first to overturn, and after the two cars were turned at an angle to the track the side and top of the second car were forced against the underside of the first car and crushed as the second car overturned.

AT&SF 1382, which was of lightweight construction, was built in 1937. At the time it was built it met or exceeded the strength requirements of the Post Office Department for railway mail cars. Subsequently the current specifications of the Association of American Railroads were formulated and adopted for new passenger cars, and these specifications provided for certain strength requirements in excess of those covered by the specifications of the Post Office Department at the time the car was built. The car was shopped in 1950, and at that time the underframe, end frame, and collision posts were reinforced to bring the car into conformity with the current specifications of the Association of American Railroads.

When the first Diesel-electric unit of No. 19 was inspected after the accident occurred it was found that the

handle of the automatic brake valve was broken off. The stem, which was bent, was in emergency position. The throttle was in "stop" position. The tape of the speed-recording device indicated that at a point about 0.8 mile east of the point of accident the speed of No. 19 was 65 miles per hour. The portion of the tape indicating the speed between this point and the point of accident was destroyed. A representative of the carrier estimated that on the ascending grade east of Robinson the speed of No. 19 would have been reduced to about 63 miles per hour at the time the locomotive reached the east siding-switch.

The signal apparatus in the vicinity of the point of accident was inspected and tested after the accident occurred. It was found that the involved signals functioned properly.

The rules of this carrier provide that at meeting points the employee attending the switch must not station himself nearer to main track switch than the clearance point until the expected train has been met. The manner in which this accident occurred indicates the importance of this requirement. The clearance point at the east end of the siding at Robinson is approximately 295 feet west of the switch. An interval of time would elapse before an employee at this distance from the switch could reach the switch, and if he should become confused momentarily it would be impossible for him to operate the switch on impulse. The fireman of No. 8 said that when operating switches at meeting points he ordinarily complied with this rule. He said that on this occasion he first went to the switch to unlock the padlock which secures the treadle of the switch-point lock, and that he could not explain his failure to return to the clearance point before the arrival of No. 19. The fireman was employed in this capacity on the New Mexico Division in 1942 and was promoted to the position of engineer in 1947.

Cause

The accident was caused by the fireman of a train on a siding stationing himself near a main track switch in violation of rule and then becoming confused and opening the switch immediately in front of an approaching train.

Dated at Washington, D. C., this second day of October, 1956.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.