

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT NO. 3341

ST. LOUIS-SAN FRANCISCO RAILWAY COMPANY

IN RE ACCIDENT

AT HOLLAND, MO., ON

JULY 23, 1950

SUMMARY

Date: July 23, 1950
Railroad: St. Louis-San Francisco
Location: Holland, Mo.
Kind of accident: Derailment
Train involved: Passenger
Train number: 806
Engine number: 1067
Consist: 7 cars
Speed: 57 m. p. h.
Operation: Timetable and train orders
Track: Single; tangent; level
Weather: Cloudy
Time: 1:09 a. m.
Casualties: 1 killed; 22 injured
Cause: Malicious tampering with switch

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3341

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

ST. LOUIS-SAN FRANCISCO RAILWAY COMPANY

August 31, 1950

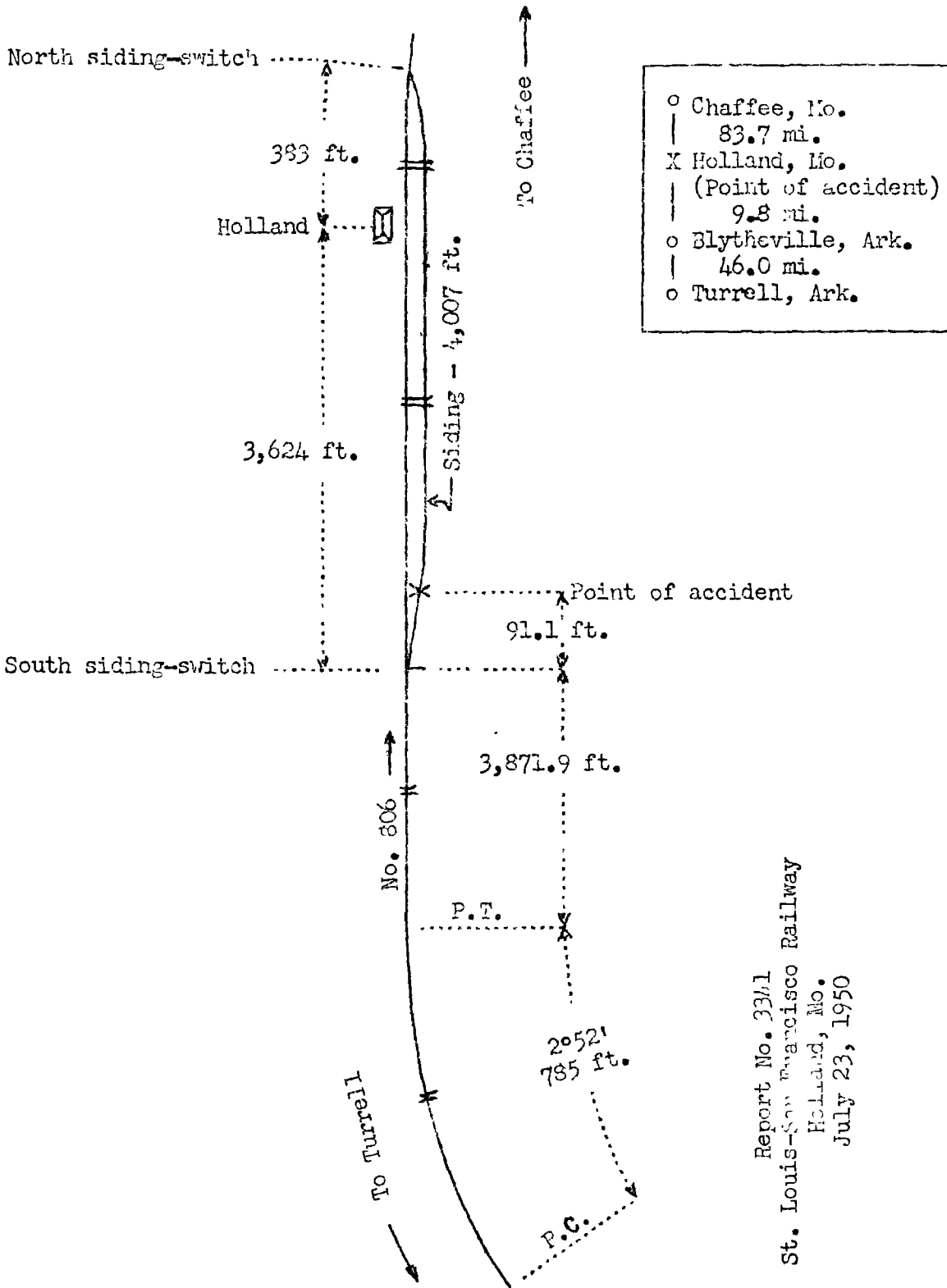
Accident at Holland, Mo., on July 23, 1950, caused by
malicious tampering with a switch.

REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On July 23, 1950, there was a derailment of a passenger train on the St. Louis-San Francisco Railway at Holland, Mo., which resulted in the death of 1 train-service employee, and the injury of 18 passengers, 1 mail clerk, 1 steward, and 2 train-service employees.

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.



- o Chaffee, Mo.
| 83.7 mi.
- X Holland, Mo.
| (Point of accident)
| 9.8 mi.
- o Blytheville, Ark.
| 46.0 mi.
- o Turrell, Ark.

Report No. 3361
St. Louis-San Francisco Railway
Holland, Mo.
July 23, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the River Division extending between Turrell, Ark., and Chaffee, Mo., 139.5 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. At Holland, 55.8 miles north of Turrell, a siding 4,607 feet in length parallels the main track on the east. The switches of this siding are, respectively, 3,624 feet south and 586 feet north of the station. The accident occurred on the turnout at the south end of the siding. From the south there is a 2°52' curve to the right 785 feet in length, and then a tangent 3,871.9 feet to the south siding-switch. The grade is level.

In the vicinity of the point of accident the track is laid on a fill about 3 feet in height. The structure of the main track consists of 90-pound rail, 33 feet in length, rolled in 1924 and laid in the track the same year on an average of 20 treated ties to the rail length. It is fully tieplated with single-shoulder tieplates, single-spiked, and is provided with 4-hole 24-inch head-free toolless joint bars, and an average of 7 rail anchors per rail. It is ballasted with cists to a depth of 6 inches on a sub-ballast of 4 inches of crushed rock. The south turnout of the siding is constructed of 90-pound rail, and is provided with a No. 10 spring-rail type frog and 15-foot switch rails. The turnout is not superelevated. The derailment occurred 91.1 feet north of the point of switch. The switch stand is of the hand-throw intermediate-stand type and is spiked to one tie at a distance of 9 feet east of the center-line of the track. It is equipped with an oil-burning lamp and one target. The lamp has two green and two red lenses, 5 inches in diameter. When the switch is lined for movement on the main track, a green light is displayed in the direction of approaching trains. When the switch is lined for entry to the siding, a red light and a red circular target, 16 inches in diameter, are displayed. The centers of the lenses and the center of the target are, respectively, 6 feet 7 inches and 5 feet 5 inches above the level of the tops of the rails. The operating lever is of the horizontal-throw type and is hinged so that it will drop into either of two slots cut in the rim of the switch-stand table. These slots are placed to correspond with full-throw positions of the switch. A U-shaped keeper of round metal stock, 1/4 inch in diameter, is riveted to the lever above the fulcrum. When the lever is dropped into position in either of the slots, the keeper projects through an opening provided

in the table of the stand. The switch is locked in position by inserting the shackle of a switch lock through this keeper. The switch lock had a shackle $3/8$ inch in diameter and was secured to the switch stand by a chain.

The maximum authorized speed for the train involved in this accident was 70 miles per hour.

Description of Accident

No. 806, a north-bound first-class passenger train, consisted of engine 1067, a 4-6-4 type, two baggage cars, one mail car, two coaches, one buffet-lounge car, and one sleeping car, in the order named. All cars were of all-steel construction except the first car, which was of steel-underframe construction. This train departed from Blytheville, the last open office, 9.8 miles south of Holland, at 12:55 a. m., 8 minutes late, and while moving at a speed of 57 miles per hour it entered the south turnout of the siding at Holland, and the engine, the tender, and the first five cars were derailed.

The engine and the tender were derailed to the right and stopped with the engine on its right side, practically in line with the track and 15 feet east of the center-line of the siding. The front end was 454 feet north of the point of derailment and 544 feet north of the point of switch of the turnout. The tender remained coupled to the engine and stopped upside down and in line with the engine. Separations occurred at both ends of the first two cars. The first car stopped upside down, across both tracks and at right angles to them. The second car stopped on its left side, across both tracks and approximately parallel to the first car. The third car stopped upright, east of the siding, with its north end adjacent to the south end of the second car. The fourth car stopped upright, with its north end east of the siding and its south end on the track structure. The north truck of the fifth car was derailed. The engine and the tender were badly damaged, the first car was demolished, the second car was badly damaged and the other derailed cars were slightly damaged.

The engineer was killed. The conductor and the fireman were injured.

The weather was cloudy at the time of the accident, which occurred at 1:09 a. m.

During the 30-day period preceding the day of the accident, the average daily movement over this line was 10 trains.

Discussion

As No. 806 was approaching Holland, it was moving on tangent track at a speed of 57 miles per hour in territory where the maximum authorized speed was 70 miles per hour. The enginemen were in the cab of the engine, the conductor was in the sixth car, the flagman was in the rear car, and the porter was in the fourth car. Before the accident occurred the engine and the cars were riding smoothly. The brakes had been tested and had functioned properly when used en route.

Examination of the equipment of No. 806 after the accident occurred disclosed no defective condition which could have contributed to the cause of the accident. Examination of the main track throughout a considerable distance immediately south of the point of accident disclosed no indication of dragging equipment nor of any obstruction having been on the track. The first mark on the track structure was a cut on the gage side of the head of the west rail of the siding, starting at a point 90.6 feet north of the point of switch and extending northward about 15 inches. The first mark of derailment was a flange mark on a spike head outside the west rail of the siding, 91.1 feet north of the point of switch. Flange marks then appeared on the next northward tie 6 inches west of the west rail. These marks and corresponding marks west of the east rail extended northward on the ties, intermittently and at varying distances from the rails, throughout a distance of 122 feet. Then they veered sharply to the east. From this point northward the track was destroyed a distance of about 350 feet. The switch of the south turnout of the siding was found to be lined for entry to the siding. The operating lever was seated in the slot corresponding to that position, and the switch point fitted properly against the stock rail. A piece of metal about 3/4 inch in length had been sawed from the center of the shackle of the switch lock, and the south and west lenses of the switch lamp had been broken. The lamp was not lighted, and the target was bent in such manner that it indicated that the switch was lined for movement on the main track. ←

The engineer was killed and the fireman was too severely injured to be questioned in this investigation. Therefore, it could not be determined when they first became aware that the switch was not properly lined. Examination of the engine

controls after the accident occurred disclosed that the sander valve, the reverse lever, and the independent brake valve were so badly damaged that their positions prior to the accident could not be determined. The automatic brake-valve handle was in emergency position. The throttle was about one-third open but its position could have been changed as a result of the derailment. Each train-service employee questioned in this investigation said he did not know whether the brakes were applied before the derailment occurred. However, sand was found on the tops and sides of the rails a distance of about 300 feet south of the switch point. This condition indicates the probability that the brakes were applied before the engine entered the turnout.

The switch was last examined by the section foreman on July 21, at which time he replaced two of the switch-lamp lenses, which were broken, and he straightened the target, which had been bent. When he left the switch it was properly lined and locked. On Thursday, July 20, 1950, the crew of a north-bound freight train reported that two of the switch-lamp lenses at the south siding-switch were broken, and that the target was bent to indicate that the switch was lined for entry to the siding. However, at this time, the switch was properly lined for movement on the main track and securely locked in that position. After the accident occurred, a boy, about 15 years of age, was taken into custody by the authorities on suspicion that he had tampered with the switch. He confessed that he had tampered with the switch on July 20, and that on the afternoon of July 22 he had obtained a hack saw, sawed the shackle of the switch lock, lined the switch for entry to the siding, broke the lenses of the switch lamp, and bent the target so that it indicated that the switch was lined for movement on the main track.

Cause

It is found that this accident was caused by malicious tampering with a switch.

Dated at Washington, D. C., this thirty-first day of August, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,

Secretary.