

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO. 2846  
THE GULF, COLORADO AND SANTA FE RAILWAY COMPANY  
REPORT IN RE ACCIDENT  
AT DORMAN, TEXAS, ON  
NOVEMBER 17, 1944

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SUMMARY

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Railroad: Gulf, Colorado and Santa Fe  
Date: November 17, 1944  
Location: Dorman, Texas  
Kind of accident: Derailment  
Train involved: Mixed  
Train number: 116  
Engine number: 1082  
Consist: 26 cars  
Estimated speed: 25 m. p. h.  
Operation: Timetable and train orders  
Track: Single; tangent; level  
Weather: Misting  
Time: 2:22 p. m.  
Casualties: 2 killed; 2 injured  
Cause: Defective switch

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2846

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

THE GULF, COLORADO AND SANTA FE RAILWAY COMPANY

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January 11, 1945.

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Accident at Dorman, Texas, on November 17, 1944, caused  
by a defective switch.

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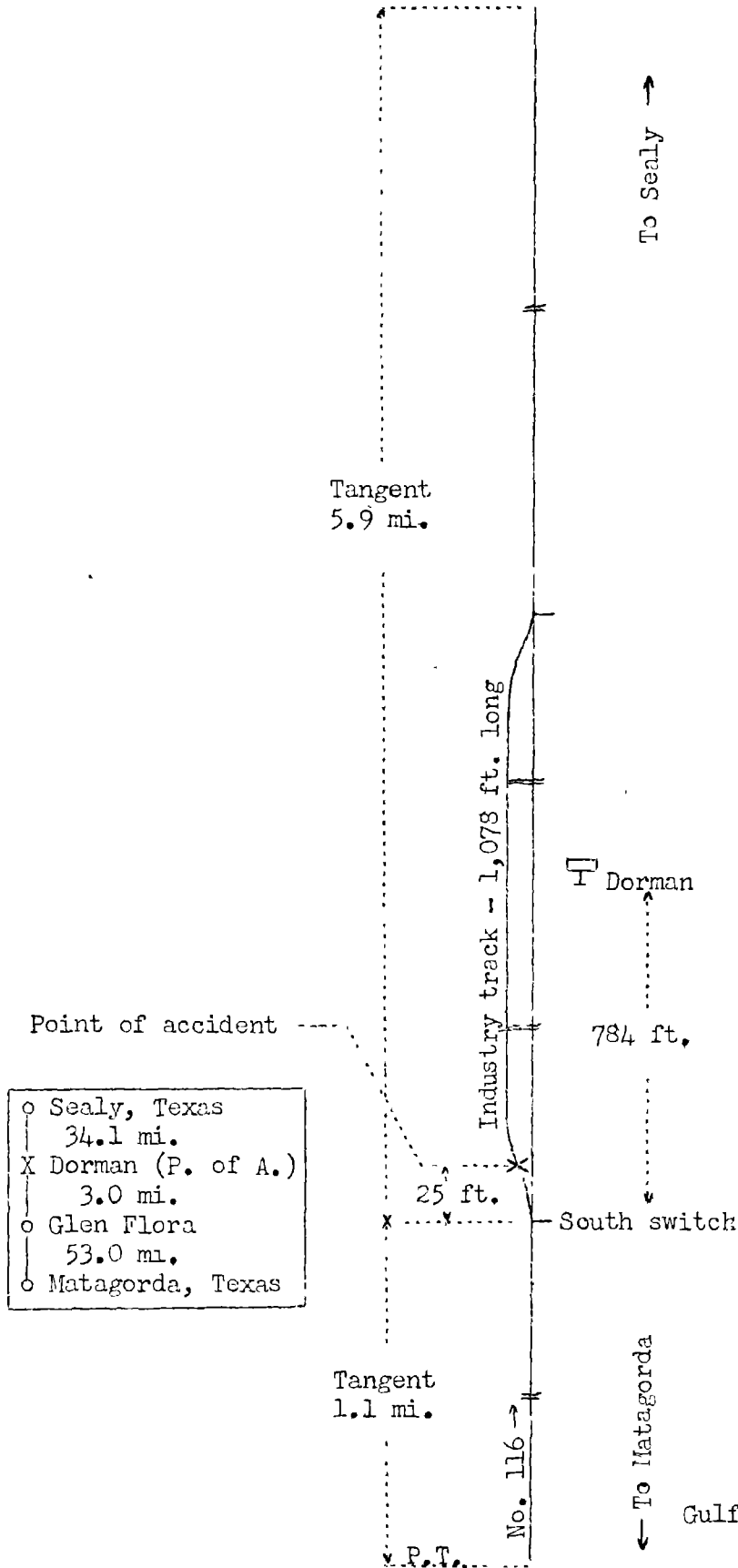
REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On November 17, 1944, there was a derailment of a mixed train on the Gulf, Colorado and Santa Fe Railway at Dorman, Texas, which resulted in the death of two employees, and the injury of two employees.

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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.



Inv-2846  
 Gulf, Colorado and Santa Fe Railway  
 Dorman, Texas  
 November 17, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Gulf Division designated as the Matagorda District and extending northward from Matagorda to Sealy, Texas, 90.1 miles. In the vicinity of the point of accident this was a single-track line over which trains were operated by timetable and train orders. There was no block system in use. At Dorman, 56 miles north of Matagorda, an industry track 1,078 feet long paralleled the main track on the west. The south switch of the industry track was 784 feet south of the station. Entry to the industry track at the south switch was made through a No. 10 turnout. The accident occurred on this turnout 25 feet north of the south switch. From the south the main track was tangent 1.1 miles to the south switch of the industry track and 5.9 miles northward. The grade was practically level.

The main-track structure consisted of 90-pound rail, 33 feet in length, laid on an average of 20 treated ties to the rail length. It was fully tieplated, single-spiked, provided with 4 rail anchors per rail length, and was ballasted with rock screenings to a depth of 6 inches.

The switch structure of the south switch of the industry track consisted of two 16.5-foot switch-points and a No. 10 spring frog. The switch-points were connected by two switch rods. The head rod was connected to the switch-stand by a connecting rod 6 feet long. The connecting rod was connected to a single crank at the base of a spindle. The crank foot was 1-1/2 inches in diameter and 1-5/8 inches high and extended upward. An angle-iron guard projecting over the eye of the connecting rod and the crank foot was provided to prevent displacement of the rod. The angle-iron guard was of 3/8-inch rolled steel and was riveted to the base casting. The base casting was of rolled steel plate construction 22 inches long, 9 inches wide and 3/4 inch thick, and was secured to a single switch tie by 8 spikes. The switch-stand was on the east side of the main track, and was of the hand-throw, intermediate type. It was provided with a red circular target 18 inches in diameter. The center of the target was 6 feet above the ties. When the switch was lined normally the target was parallel to the track. When the switch was lined for entry to the industry track the target was at right angles to the track.

Regulations governing the maintenance-of-way department read in part as follows:

SWITCHES AND FROGS.

147. Inspection.--Careful attention must be given daily to main track switches, frogs, guard rails and derails to see that they are in proper repair, line, gage and surface; that all movable parts work easily and without excessive lost motion;

that all bolts and nuts are tight, cotter pins in place and properly spread, that connecting rods are properly secured so that they cannot drop down and cause derailment, and that switch points fit closely against the rail and otherwise are in safe condition. See that switches are properly lined and locked.

\* \* \*

At regular intervals \* \* \* all No. 1 head rods, also all connecting and head rod bolts in main track switches shall be removed and thoroughly cleaned with gasoline and then painted with whitewash. When dry they shall be thoroughly inspected and immediately renewed when any cracks or defects are found. \* \* \*

\* \* \*

The maximum authorized speed for the train involved was 30 miles per hour.

#### Description of Accident

No. 116, a north-bound second-class mixed train, consisting of engine 1082, a 2-6-2 type, 25 freight cars and one mail-baggage-passenger car, in the order named, departed from Glen Flora, 3 miles south of Dorman and the last open office, at 2:10 p. m., 2 hours 22 minutes late, and while moving at an estimated speed of 25 miles per hour it entered the south switch of the industry track at Dorman, and the engine and the first 10 cars were derailed.

The engine stopped on its left side, headed southward, on the main track and practically parallel to it, and about 260 feet north of the point of derailment. The engine and the first eight cars were considerably damaged.

During the 30-day period preceding the day of the accident, the average daily movement over this line was 1.73 trains.

It was misting at the time of the accident, which occurred about 2:22 p. m.

The front brakeman and the swing brakeman were killed, and the engineer and the fireman were injured.

#### Discussion

No. 116 was moving at an estimated speed of 25 miles per hour, in territory where the maximum authorized speed was 30 miles per hour, when the engine and first 10 cars entered the turnout of the south industry-track switch and were derailed. As the train was approaching Dorman the enginemen were maintaining a lookout ahead. The first they knew of anything being wrong

was when the engine reached a point about 130 feet south of the south industry-track switch where the fireman observed that the left switch-point was open, and he called a warning to the engineer. The engineer immediately moved the brake valve to emergency position, but the engine entered the turnout and over-turned before the brakes became effective.

After the accident, examination of the switch-stand of the south industry-track switch disclosed that the switch-points were in position for entry to the turnout, but the operating lever was latched and locked in position for movement on the main track, and the target was in position for movement on the main track. The angle-iron guard was broken from the base, and the connecting rod was disconnected from the crank foot. A considerable portion of the fracture of the guard had existed for some time prior to the accident. The roadmaster said that the fracture could not have been detected by ordinary inspection so long as the guard remained in place. Marks on the track structure indicated that the switch-points were midway between opened and closed positions as the engine approached the switch, and that the engine-truck wheels moved outside their respective switch-points a short distance and dropped on the ties, then the right switch-point was forced against the stock rail and the driving wheels entered the turnout.

The switch involved was last operated by members of the crew of a north-bound train on June 9, 1944. The switch was last inspected and the parts cleaned by the section foreman six days prior to the accident, but no defective condition was observed. The last train prior to No. 116 to pass the switch was a south-bound train, which passed over the switch about 24 hours before the accident occurred. The crew of this train observed no defective condition of the switch. If this switch had been equipped with a mechanical locking device so designed that it would hold the points in the intended position independently of the connecting rod, the switch-points would have been locked for through movement on the main track after the guard was broken, and this accident would have been averted.

#### Cause

It is found that this accident was caused by a defective switch.

Dated at Washington, D. C., this eleventh day of January, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.