INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE CHICAGO, ROCK ISLAND & PACIFIC RAILWAY AT CASTON, OKLA., ON OCTOBER 30, 1931.

December 5, 1931.

To the Commission:

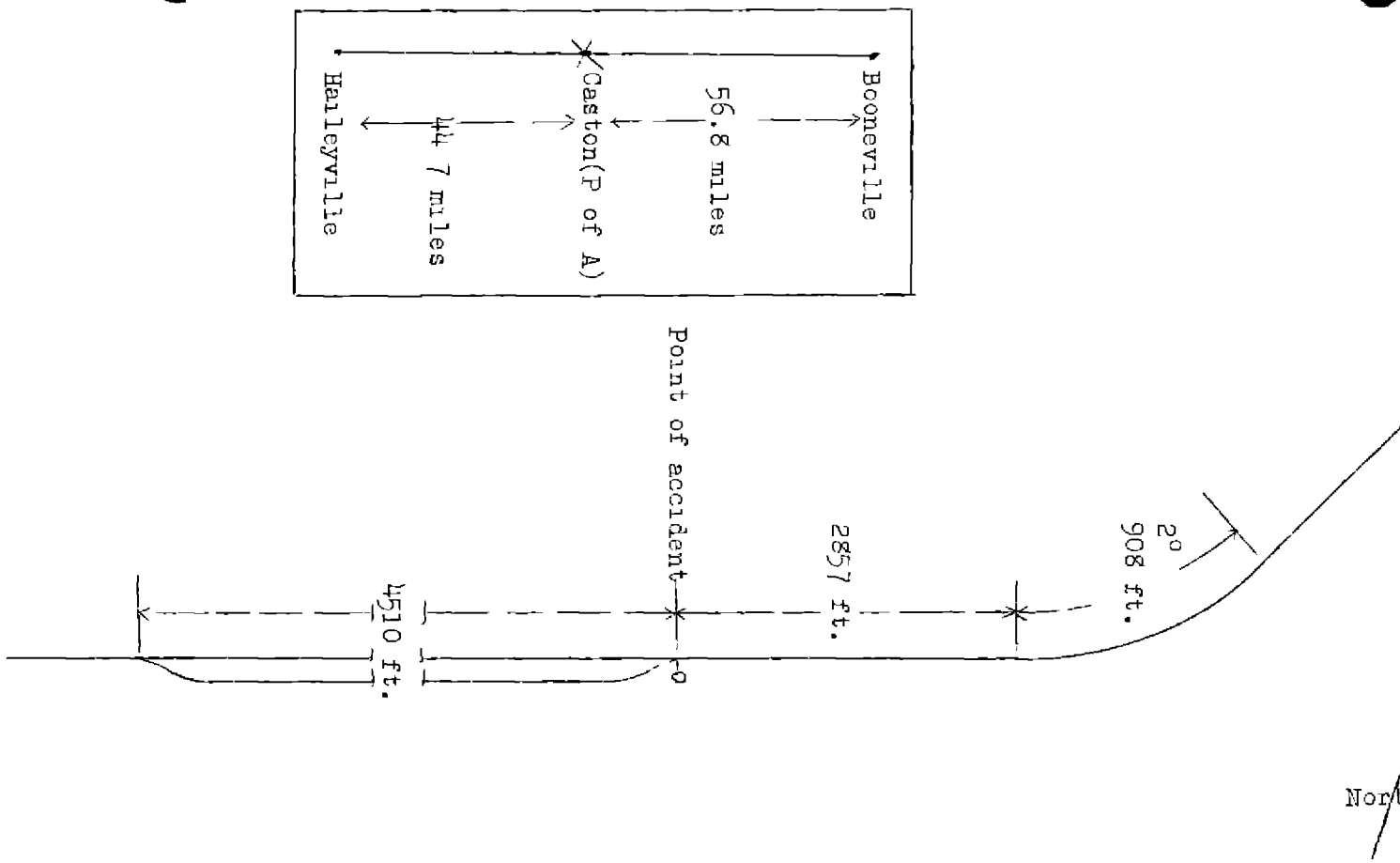
On October 30, 1931, there was a derailment of a passenger train on the Chicago, Rock Island & Pacific Railway at Caston, Okla., which resulted in the injury of two passengers and two employees.

Location and method of operation

This accident occurred on Sub-Division 50, Pan Handle-Indian Territory Division, Second District, which extends between Booneville, Ark., and Heileyville, Okla., a distance of 101.5 miles, this is a single-track line over which trains are operated by time-table, train orders, and a manual block-signal system. The accident occurred at the east passing-track switch at Caston, approaching this point from the east, there is a 2° curve to the right 908 feet in length, from which point the track is tangent to the switch, a distance of 2,857 feet, and for a considerable distance beyond that point. The grade is slightly undulating, it being 0.391 per cent ascending for westbound trains at the point of accident.

The passing track, which is 4,510 feet in length, parallels the main track on the south, and the east switch leads off the main track to the left through a No. 10 turnout, and is a facing-point switch for westbound trains. The switch stand is located on the south side of the track and is 7 feet 8 inches in height, it is equipped with only one target, a red target which is 12 inches in width and 2 feet 1 inch in length, no indication being displayed when the switch is closed. There is a switch lamp mounted above the target, night indications of which are green when the switch is closed and red when it is open.

The track is laid with 90-pound rails, 39 feet in length, with an average of 22 ties to the rail-length, single-spiked, and ballasted with crushed limestone to a depth of about 12 inches, the track is well maintained. The speed limit for passenger trains in the vicinity of the point of accident is 50 miles per hour.



Inv. No 1730
Chicago, Rock Island & Pacific Ry.,
Caston, Oklahoma
Oct. 30, 1931

The weather was clear at the time of the accident, which occurred about 12.10 a. m.

Description

Westbound passenger train No 41 consisted of 1 combination mail and baggage car, 2 coaches, and 1 Pullman sleeping car, all of steel construction, hauled by engine 803, and was in charge of Conductor Simson and Engineman Coulter. This train left Tister, the last open office, 6.3 miles east of Caston, at 12 o'clock midnight, 14 minutes late, and was derailed at the east switch of the passing track at Caston while traveling at a speed estimated to have been between 40 and 45 miles per hour.

The engine, its tender, the first three cars and the forward truck of the fourth car were derailed. The engine came to a stop in an upright position south of the main track with its front end 360 feet west of the switch and 55 feet from the main track. The tender bottom was torn from its frame and came to rest, upright, between the engine and the passing track, the frame was on its right side but remained coupled to the engine. The baggage car stopped north of the main track and was leaning to the right at an angle of about 45 degrees, and the two coaches were upright and on the roadbed practically in line with the track. The engine and first car were badly damaged, the second car had its front vestibule crushed, and the third car sustained only slight damage. The employees injured were the engineman and fireman.

Summary of evidence

Engineman Coulter stated that while the train was rounding the curve east of Caston he observed that the switch lamp at the east passing-track switch was burning and displaying a green indication, he called this indication to the fireman and understood the fireman to remark that it was clear. There was no indication of anything unusual until the engine struck the switch and he then knew something was wrong and immediately applied the brakes in emergency and shut off steam. He estimated the speed of the train at the time it was derailed at 40 miles per hour. He said that the headlight burned continuously and estimated that its rays illuminated the track ahead for a distance of 1,000 or 1,200 feet, but he noticed nothing wrong with the switch while the train was approaching it.

Fireman Kennedy said that the headlight was in good condition and properly focused, that both he and the engineman were riding on their respective seat boxes while approaching the point of accident, and that as soon as the train left the curve east of Caston he noticed that the lamp at the east passing-track switch was showing green, although no mention was made about its indication. The train was then traveling at a speed of 38 or 40 miles per hour and this rate of speed had been increased to between 40 and 45 miles per hour at the time of the accident. His first intimation of anything wrong was when the engine reached the switch and was derailed, the engineman applying the brakes in emergency as soon as the engine started to derail. After the accident, and after seeing that the engineman was taken care of, Fireman Kennedy went back and examined the switch and found the south switch point lying almost in the center of the track, with both bridle rods disconnected from it, and the switch lock hasp on the switch stand broken off, the switch lock still being in locked position and hanging to its chain.

Conductor Simson stated that he was in the forward end of the first coach, engaged in making out a report, when the derailment occurred. He attempted to reach the emergency valve but on account of the motion of the derailed car he was unable to do so. He estimated the speed of the train at the time it rounded the curve east of Caston at 35 miles per hour and at the time of the accident at 45 miles per hour. As soon as he had taken care of the passengers and members of the crew he proceeded to a telephone, about one-half mile west of the point of accident, and reported the derailment to the dispatcher. He then returned to the scene of accident, and upon inspecting the passing-track switch he noticed that the switch point on the south side of the track had been removed from its proper position and was about 14 inches from the stock rail; the north switch point was intact and neither point showed any indication of damage. The bolts, nuts and cotter keys of the bridle rod which held the point to the stock rail had been removed and were lying between the ties, while the bolts on the other tie rods showed marks indicating that they had been tampered with, although the rods were not damaged. The switch lamp was displaying a green indication, the switch lever was in position for a main-line movement although the hasp was broken from the stand, and the switch lock, which was closed, appeared to have been struck by a blunt instrument. He made no examination of the track east of the switch.

Flagman Tynan stated that as soon as the equipment came to rest he went back to protect by flag, and while on his way back he saw a switch point lying in the middle of the track, and upon examining the switch stand he noticed that the hasp was broken off, while the lamp was showing green. He then continued back for a considerable distance, and on his way he examined the track but saw no indication of dragging equipment, or anything that could have contributed to the cause of the accident. The statements of Brakeman Burke added no additional facts of importance.

Section Foreman Fields, who has charge of the section adjoining, that on which the accident occurred, reached the scene about 12 30 a.m. and immediately inspected the passing-track switch. He found the south switch point disconnected and lying about 10 inches from the rail. The bolts had been removed from the angle bars at the heel of the switch point, the clip of the head rod was missing, and one bolt was out of the second switch rod. He later located the clip of the head rod under some grass about 100 feet west of the switch. The hasp on the switch lever was broken off, the switch lock was closed and hanging by the chain, and the switch lamp was burning and displaying green. The switch-point bolts on the north side of the track were in good condition and showed no evidence of having been disturbed. He also inspected the track between Wister and the point of accident, but found nothing to indicate that anything had been dragging.

Section Foreman Sorter, in charge of the section on which the accident occurred, arrived about 2.40 a.m. and found practically the same conditions existing as described by Foreman Fields. He said the switch points were not damaged and were not removed from the track subsequent to the accident. He also examined the track for a distance of about 500 feet east of the switch, but noticed nothing unusual. He had examined this switch during the morning of October 29 and at that time it was in perfect condition. Foreman Sortor further stated that he had not discharged any one from his crew recently and that he had missed no tools from the tool house, although it would require a track wrench, as well as other tools, to remove the switch point.

An examination of the track was made by the Commission's inspectors subsequent to the accident and numerous marks were found west of the east passing-track switch but none east of that point. The first mark appeared to be a flange mark across the top of a tie-plate about 6 inches from the gauge side of the turnout rail, on the south side of the track, and 12½ feet from the switch point. From this point the marks continued westward on the

tie-plates and spike-heads for a distance of about 35 feet, when the flange marks began to appear on the ties, these marks gradually bearing to the left for an additional distance of approximately 183 feet to where the track began to be destroyed; corresponding marks appeared on the north side of the track. The receiving end of the main track rail on the south side of the track at the heel of the switch point was bent downward about 3 inches. There was nothing wrong with the switch stand except that the hasp on the lever was broken through the eye, and the switch lock, still locked, was hanging on the chain and showed evidence of having been hammered.

Conclusions

This accident was caused by the defective condition of a switch, due to malicious tampering.

Subsequent to the accident the south switch point of the east passing-track switch was found to have been disconnected and lying about 10 inches from the stock rail, towards the center of the track, thus leaving a gap between where the heel of the point should have been, and the receiving end of the adjoining rail to the west. The clip of the head rod was missing but was later found some distance from the switch, the bolts of the bridle rod had been removed but the clip remained intact, the rod having been slipped off the clip, and the angle bars at the heel of the switch point also had been removed. The hasp on the switch stand was broken off, and the switch lock, which was in locked position, was damaged. The switch was lined for a main track movement, and, according to the evidence, the light was burning and displaying green for an approaching train. An examination of the equipment as well as the track east of the switch disclosed nothing that could have contributed to the cause of the accident, and in view of the condition of the switch as it was found after the accident it is evident that the switch had been tampered with, but at the time of the investigation it had not been determined when or by whom the tampering was done.

The employees involved were experienced men and at the time of the accident none of them had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND

Director.