

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE
INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
GULF, COLORADO & SANTA FE RAILWAY AT HEIDENHEIMER,
TEXAS, ON JULY 15, 1926.

September 11, 1926.

To the Commission:

On July 15, 1926, there was a head-end collision between a passenger train and a freight train on the Gulf-Colorado & Santa Fe Railway at Heidenheimer, Texas, resulting in the death of 1 employee, and the injury of 30 passengers, 1 employee and 3 Pullman porters.

Location and method of operation

This accident occurred on the Second District of the Southern Division, extending between Belleville Yard and Temple, Texas, a distance of 111.6 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and an automatic block-signal system, equipped with approach lighting. The accident occurred on the passing track at Heidenheimer, at a point 347.9 feet south of the north passing-track switch, the passing track is approximately 4,000 feet in length and parallels the main track on the east. The switch-stand at the north switch is located on the engineman's side of a southbound engine; it is equipped with a red disk, 18 inches in diameter, located 6 feet above the head block, the disk being displayed only when the switch is lined for the passing track. There is also a switch lamp, mounted 1 foot 8 inches above the disk, but at the time of the accident this lamp was not burning.

The automatic signals involved are signals 2122, 2121, and 2141; southbound signals 2121 and 2141, of the three-position, corner-quadrant type, are located 53.1 and 7,513.7 feet, respectively, north of the north passing-track switch, while northbound signal 2122 is located east of the passing track and 227.9 feet south of the north switch. The signals are so arranged that with the north switch lined for the passing track all three signals display caution indications, southbound signal 2121 displays a stop indication only when the main track circuit is disturbed south of the north passing-track switch.

Approaching from the north, beginning at signal 2141, the track is tangent for 783.4 feet and then there is a 10° curve to the left 999.9 feet in length, following which the track is tangent to the north switch, a distance of

5,730.4 feet, and for a considerable distance beyond. The view is unobstructed. The grade for southbound trains is generally descending, being 0.12 per cent at the point of collision. The weather was clear at the time of the accident, which occurred at about 2.50 a.m.

Description

Northbound freight train extra 967 consisted of 56 cars and a caboose, hauled by engine 967, and was in charge of Conductor Schultz and Engineman Thompson. On passing Rogers, the last open office, 7.6 miles south of Heidenheimer, at 1.57 a.m., the crew received a copy of train order No. 12, Form 19, reading in part as follows.

"No 17 Eng 1284 wait at Heidenheimer until
two forty five 245 AM for extra 967 north***".

On arrival at Heidenheimer at 2.25 a.m., according to the train sheet, extra 967 headed in at the south switch of the passing track and was brought to a stop clear of the main track with the engine 347.9 feet south of the north switch, it being intended to wait at this point until two northbound passenger trains passed and also to meet two southbound passenger trains. About five minutes after the extra had stopped, the first northbound passenger train passed, No. 16, and about four or five minutes later, Head Drakeman Walker, of extra 967, an inexperienced employee, opened the north switch of the passing track on his own initiative. After the switch had remained open for about 15 minutes southbound passenger train No. 17 entered it and collided with extra 967.

Southbound passenger train No. 17 consisted of one combination baggage and mail car, one baggage car, one coach, one chair car, and six Pullman sleeping cars, hauled by engine 1284, and was in charge of Conductor Sullivan and Engineman Fleck. At Temple, the last open office, 5.8 miles north of Heidenheimer, the crew received among others, a copy of train order No. 12, previously mentioned. Train No. 17 departed from this point at 2.27 a.m., according to the train sheet, 32 minutes late, and was brought to a stop at double track junction, 1.1 miles beyond, at which point it met northbound passenger train No. 16. Train No. 17 then proceeded, passed signal 2141, which was displaying a caution indication, passed signal 2121, which was also displaying a caution indication, entered the north switch of the passing track at Heidenheimer at a speed variously estimated to have been between 45 and 65 miles an hour, and collided with extra 967.

Both engines were overturned and badly damaged, engine 1284 being on its left side and engine 967, which was driven backwards a distance of about 21 feet, being on its right side. The first three cars and the forward truck of the fourth car in train No. 17 were derailed, the first car coming to rest on its left side while the others remained practically upright on the roadbed of the passing track. The first car in the freight train was demolished, while the head end of the second freight car was badly damaged, although this car was not derailed. The employee killed was the engineer of train No. 17.

Summary of evidence

On the arrival of extra 967 at Heidenheimer, Head Brakeman Walker opened the south switch and the train headed in on the passing track; Head Brakeman Walker then rode the engine until the train was brought to a stop in the clear, at about 2.25 a.m. Engineer Thompson noticed that the northbound signal displayed a clear indication and then began working around the engine, and he did not again notice the indication displayed by this signal prior to the accident, nor did he notice that the switch lamp was not burning the switch stand being on the opposite side of the track. Engineer Thompson thought he was on the engine at the time northbound train No. 16 passed, but he did not see Head Brakeman Walker go forward and open the switch. Shortly afterwards Conductor Schultz came forward from the rear end and he saw him talking with the head brakeman, this was the first time he had seen the head brakeman since the arrival of his train at Heidenheimer. Conductor Schultz then boarded the engine and secured some grease in order to pack some over-heated journals, and Engineer Thompson lighted a torch, left the engine in charge of Fireman Turek, who was taking his first trip as a regular fireman, and started back with the conductor; it was while they were on their way back that the accident occurred.

Head Brakeman Walker stated that he had made two trips as a student brakeman and the trip in question was his first one since being promoted to brakeman; he is 21 years of age, entered the service of this railroad on July 6, 1926, and had no previous railroad experience. He said that about four or five minutes after train No. 16 had passed he proceeded to the north switch and opened it, being of the impression that his train was ready to depart, or would be after the hot boxes were given attention, saying he did not know any other trains were to be met or passed at this point. Returning to the engine Head Brakeman Walker asked Fireman Turek, whom he knew was also an inexperienced employee, as to whether or not there were any more trains to be met and he said the fireman replied in

the negative. Conductor Schultz then arrived at the engine from the rear end and instructed him to assist with the hot boxes, whereupon Head Brakeman Walker immediately went back accordingly. While working on the first hot box Flagman Smith told him to be careful in going back and forth across the main track as train No. 17 was approaching, and then for the first time he realized what he had done. He immediately started to run toward the open switch although at this time it was too late to avert the accident as the engine of train No. 17 was then only three or four car-lengths from the switch. Head Brakeman Walker further stated that the reason he did not say anything to Conductor Schultz about having opened the switch was because he was of the impression his train was ready to depart. He knew Engineman Thompson had received a train order at Rogers, but said he was unaware of its contents. Head Brakeman Walker also said that at Cameron, 24.4 miles south of Heidenheimer, he heard the engineman and fireman taking about meeting train No. 17 at Heidenheimer, but he did not know anything what-ever about train No. 16, and he could not account for overlooking the fact that train No. 17 was to be met at Heidenheimer unless it was because he confused that train with train No. 16. He had a copy of the current time-table, but did not have a watch. Head Brakeman Walker also said that it was his understanding that he should have been acquainted with all train orders received en route.

Fireman Turak stated that after the engine came to a stop on the passing track he saw Head Brakeman Walker standing on the ground, on the left side of the engine, and the next time he saw him was about 10 minutes after the accident. He had no conversation with Head Brakeman Walker, had not noticed the indication displayed by northbound signal 2122, which would have shown either that a train was approaching or that the switch was open, nor had he noticed the position of the switch or the fact that the switch lamp was extinguished. He was watching train No. 17 just before it reached the switch but noticed no fire flying to indicate that the air brakes were applied, and his first knowledge of anything wrong was when he saw the train head in at the north switch.

Conductor Schultz stated that as soon as this train came to a stop on the passing track he walked forward inspecting the train and on arriving at the engine he saw Head Brakeman Walker and instructed him to carry some water to Flagman Smith to be used in cooling the hot boxes. Conductor Schultz said that he had not instructed Head Brakeman Walker to open the north switch after train No. 16 passed, nor did the head brakeman tell him he had done so;

he did not notice that the switch lamp was extinguished or that the switch points were lined for the passing track, and was unaware of anything wrong until the accident occurred, at which time he and the engineer were walking back toward the hot boxes, having reached a point about 12 or 14 car-lengths from the engine. Conductor Schultz further stated that he knew everything had been all right at the time train No. 16 passed and therefore he had no occasion for concern in regard to the approach of train No. 17. Had he noticed the northbound signal displaying a caution indication after train No. 16 passed he would have known that something was wrong and would have inspected the north switch, in addition to sending out a flagman.

Flagman Smith said that the first intimation he had of anything wrong was when he told Head Brakeman Walker to look out for train No. 17 while walking back and forth across the track carrying water to the hot boxes; Head Brakeman Walker looked bewildered, and informed him that he had opened the north switch, but it was then too late to avert the accident.

Fireman Cason, of train No. 17, said that signal 2141 was in the clear position, while signal 2121 was displaying a caution indication. These signal indications caused him to believe that the switch was closed but that the succeeding automatic signal would be found in the stop position; had both of these signals been displaying caution indications, he would then have expected to find the passing track switch in the open position. He observed the indication of signal 2121 just as the engine came around the curve to the left at the top of the hill; at this time the engineer could not see the signal, and Fireman Cason therefore called "caution block", the engineer acknowledging his warning and closing the throttle. The train then was about 1 mile from the signal, and when it had reached a point about 300 or 350 feet north of the north switch Fireman Cason observed the stop indication of the switch target, by the reflection from their headlight, the switch lamp being extinguished, he estimated the speed of his train at this time to have been about 65 miles an hour. Fireman Cason shouted a warning of danger and Engineer Flew immediately applied the air brakes in emergency, the fireman saying that he thought he felt the air brakes apply when the engine was about at the frog of the switch. Fireman Cason further stated that the air brakes on his train had been tested and had worked properly en route, that there was nothing about the condition of the engine to interfere with maintaining a lookout ahead, and that the headlight on his

engine was burning brightly, while the headlight on engine 967 was extinguished. None of the other members of the crew of train No. 17 was aware of anything wrong prior to the accident. Conductor Sullivan was examining transportation in the eighth car, he felt the air brakes apply in emergency just before the accident, and estimated the speed to have been about 50 miles an hour. The statements of Brakeman Kinard and Train Porter Mack practically corroborated those of Conductor Sullivan; Brakeman Kinard estimated the speed to have been between 45 and 50 miles an hour just prior to the accident.

Switch Lamp Tender Stamp stated that the switch lamps will burn four days with one filling of the fount, but that he attends to them every third day. He had last attended the lamp in question on the night of July 13, while on the evening of July 14, between dusk and dark, he had noticed that this lamp was burning properly; this was the last time he had observed it prior to the occurrence of the accident.

Signal Supervisor McKithan stated that on receiving a caution indication the speed of a train should be brought under proper control immediately and in his opinion the accident was the result of the failure of Engineman Flew, of train No. 17, ~~to~~ properly ^{to} govern the speed of his train according to the indication of signal 2141, saying that on receiving a caution indication an engineman should reduce speed so as to be able to stop within the distance seen to be clear.

A thorough test made of the signal apparatus subsequent to the accident showed that it was functioning properly.

Conclusions

This accident was caused by an open switch, for which Head Brakeman Walker, of extra 967, is primarily responsible, and it is believed that Engineman Flew, of train No. 17, contributed to the extent that he failed properly to observe and obey automatic block-signal indications.

Head Brakeman Walker, a new and inexperienced employee, admitted his responsibility for the accident. While at Cameron he heard Engineer Thompson and Fireman Turek talking about meeting train No. 17 at Heidenheimer, but he said he knew nothing about train No. 16 and thought that when that train passed he might have had it confused with train No. 17 and thinking it was the only train to be met or passed, he had proceeded to open the switch on his own initiative.

Fireman Gason said that had signal 2141 been displaying a caution indication he would have expected to find the passing track switch in the open position, but that as a matter of fact the signal was displaying a clear indication; the evidence however is to the contrary, and would make it appear that the proper caution indication was displayed at signal 2141 and that this indication either was misread or was not observed.

As previously stated, when the passing track switch has been opened, signals 2141 and 2121 display caution indications. Such an arrangement does not provide as much protection as would be the case did these signals display caution and stop indications, respectively. Had the switch been open after train No. 17 passed signal 2141, then the only protection for this open switch would have been the caution indication displayed at signal 2121, located only 56 feet in advance of the switch. In this connection, it might be noted that the other main-track switches were wired so as to cause the display of a stop indication should they be opened.

Had an adequate automatic train stop or train control device been in use, this accident would have been prevented.

With the exception of the fireman, head brakeman and flagman of extra 967, all of the employees involved were experienced men. At the time of the accident the crew of extra 967 had been on duty about 13½ hours and the crew of train No. 17 had been on duty 4 hours or less, previous to going on duty all of these employees had had 8 or more hours off duty.

Respectfully submitted,

W. P. DORLAND,

Director.