

## INTERSTATE COMMERCE COMMISSION.

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REPORT OF THE CHIEF OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE LINE OF THE SOUTHERN PACIFIC CO., AT MONTALVO, CALIF., ON SEPTEMBER 22, 1922.

November 6, 1923.

To the Commission:

On September 22, 1922, there was a side collision between two passenger trains on the line of the Southern Pacific Co., at Montalvo, Calif., resulting in the death of 2 employees, and the injury of 29 passengers and 7 employees. This accident was investigated in conjunction with a representative of the Railroad Commission of the State of California

Location and method of operation.

This accident occurred on the Los Angeles Division, which in the vicinity of the point of accident is a single-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. The Santa Paula Branch connects with the main line at Montalvo, and about half a mile east of the station there is a track connecting these two tracks, forming a wye, the accident occurring at the junction of this wye track with the main line. This switch is a trailing-point switch for eastbound trains.

The automatic block signals on the main line are of the two-position semaphore type; there is a home signal about 2,100 feet west of the point of accident, while about 3,200 feet farther west is another home signal, and 2,295 feet west of this point is the distant signal; these signals work in conjunction with the switch involved, the home signals displaying danger indications, and the distant signal a caution indication, when either the switch is opened or a train on the wye fouls the main track. There is a double switch indicator located 42 feet east of this switch for the purpose of indicating whether the main track is occupied, one indicator governing the track east and the other the track west of the switch. The setting point for the latter is at the distant signal

Approaching the point of accident from the west there are more than 3,000 feet of tangent, followed by a 4-degree curve to the right about 1,150 feet in length, then about 1,300 feet of tangent to the point of accident. The grade is level for eastbound trains for a considerable distance, extending to about 1,250 feet from the point of accident, it then descends, varying from 0.5 to 0.8 per cent, being at its minimum at the point of accident. On account of the curvature of the wye, it is customary to transmit signals from the switchman operating the switch through the fireman. A highway parallels the main track on the left, crossing the wye track 353 feet from the switch. There was a dense fog at the time of the accident, which occurred at about 8.35 p. m.

#### Description.

Eastbound passenger train No. 38 consisted of 1 baggage car, 1 coach, and 1 chair car, all of wooden construction, hauled by engine 1405. This train left Los Angeles as westbound train No. 37 and arrived at Montalvo, via the Santa Paula Branch, at 8.23 p. m., on time. Departing from Montalvo as eastbound train No. 38, at 8.25 p. m., on time, it made a back-up movement on the Santa Paula Branch and headed in on the wye in order to turn the train for the trip on the main line to Oxnard, 4.6 miles distant. After heading in on the wye, the train apparently was brought to a stop before it reached the fouling section at the main line, 67 feet from the point of the frog, and after standing at this point a very short time, it proceeded toward the main track, the engine being about at the frog of the main-line switch when it was struck by train No. 78.

Eastbound passenger train No. 78, moving over the main line, consisted of 1 mail and baggage car, 1 baggage car, 4 coaches, 1 dining car, and 2 Pullman parlor cars, hauled by engine 2373, and was in charge of Conductor Wandling and Engineman Bradley. The cars were of all-steel construction with the exception of the parlor cars, which were of wooden construction. It departed from Ventura, 5 miles west of Montalvo, at 8.24 p. m., 21 minutes late, and collided with train No. 38 while traveling at a speed variously estimated to have been between 35 and 50 miles an hour.

Engine 1405 was derailed to the left and came to rest on its left side, 13 feet east of the switch frog. Engine 2373 was derailed to the right and came to rest on its left side, 245 feet east of the switch frog, while its tender remained upright, across the track, 122 feet farther east. The first five cars, and the forward truck of the sixth car, were derailed, but remained upright. The employees killed were the engineman of train No. 78 and the fireman of train No. 38.

Summary of evidence.

On the arrival of train No. 38 at the wye switch on the Santa Paula Branch, Head Brakeman Robbins opened the switch, and as the train headed in on the wye he boarded the left side of the engine pilot. After the train pulled in on the wye, Conductor Sammons closed the switch, then caught up to the train and got on the rear end, these employees maintaining these positions until the engine reached the highway crossing. At this point, as was the custom, Head Brakeman Robbins jumped off the engine while the train was moving, and ran forward for the purpose of looking at the switch indicator. Shortly afterwards Engineman Barto, according to his statement, received a proceed signal from Fireman Feeley. While moving ahead, Engineman Barto heard the sound of the engine whistle of train No. 78, brought his train to a stop, and reversed the engine, but the accident occurred while the engine was on the frog of the switch. Engineman Barto said his train was standing into clear about 1½ or 2 minutes before Fireman Feeley shouted "come ahead." Owing to the dense fog he did not see the headlight of train No. 78 until it was only 2 or 3 car-lengths away. The first intimation Head Brakeman Robbins had of anything wrong was when the accident occurred, at which time he had not yet reached the switch indicator, being about 10 or 15 feet from it. He emphatically stated he had not given any signals, or looked back, nor could Fireman Feeley have seen his lantern while he was running forward. It was his impression the accident was caused by his train drifting over the fouling point before coming to a stop. Conductor Sammons stated his train first stopped into clear on the wye, at which point it stood for about 30 seconds, then started forward, and after having moved 50 or 60 feet again came to a stop, he did not think this was a sudden stop, and noticed nothing to indicate the engine had been reversed. In his estimation his train moved ahead before Head Brakeman Robbins had time to reach the indicator, observe its indications, and then return to the switch, and therefore that no proceed signal was given by the brakeman. He estimated the speed of train No. 78 at 45 or 50 miles an hour. He further stated that on examining engine 1405, immediately after the accident, he found that it had been reversed.

The first knowledge members of the train crew of train No. 78 had of anything wrong was when the accident occurred. Conductor Wandling stated that he felt an air brake application, which was released in the immediate vicinity of the last home signal approaching the point of

accident. He estimated the speed of his train at the time of the accident to have been 35 miles an hour, and thought the engine was working steam at that time. Flagman Gundry said he was riding on the steps on the right side of the front platform of the rear car as train No. 78 passed the first signal east of the point of accident, and stated at that time it was displaying a clear indication. Owing to injuries sustained in the accident, no statement could be obtained at the time this investigation was held from Foreman Phillips of train No. 78. It seems probable, however, that train No. 78 was passing the last automatic signal at about the time train No. 38 reached the fouling point.

#### Conclusions.

This accident was caused by train No. 38 fouling the main track without it being first ascertained that there was no other train approaching.

Rules 83 and 510 of the Rules and Regulations of the Transportation Department, effective August 1, 1916, read as follows:

Rule 83. "A train must not leave its initial station on any division (or subdivision), or a junction, or pass from double to single track, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left."

Rule 510. "Trains on sidings or diverging routes desiring to come out on the main track must be governed by signals at sidings or signal controlling movement of trains from branch or spur. If signal is at danger, switch can be used only under protection of flagman."

Train No. 78 does not register at Montalvo, which office was closed at the time this accident happened, and when Conductor Summons registered the departure of train No. 38 he had no way of knowing whether or not train No. 78

had gone. Under these circumstances the crew of train No. 38 had to depend on the switch indicator for knowledge as to whether or not it was safe to occupy the main track. Engineman Barto claimed the fireman said to go ahead, and that this was after the train had stopped long enough for the brakeman to have reached the switch, examined the switch indicators and opened the switch. Conductor Sammons, however, did not consider that the train had stopped long enough for the brakeman to have performed these duties and the fact that the brakeman had not even reached the switch when the accident occurred would indicate that after the engineman had brought the train to a stop he at once began to move it slowly ahead towards the switch, resulting in fouling the main track as train No. 78 approached. Whether or not the fireman actually told Engineman Barto to go ahead can not be determined as the fireman was killed; the brakeman said he gave no signals of any kind, and if this statement is correct then all the fireman could have seen would have been the swinging of the lantern carried by the brakeman, although even as to this the brakeman said he was carrying it in such a position that it could not have been seen by the fireman.

All of the employees involved were experienced men, At the time of the accident the crew of train No. 38 had been on duty less than 4 hours, and the crew of train No. 78 less than 6 hours, after having been off duty for periods of 10 hours and 27 hours, respectively.

Respectfully submitted,

W. P. Borland,

Chief, Bureau of Safety.