

## INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING  
AN ACCIDENT WHICH OCCURRED ON THE TEXAS & PACIFIC RAIL-  
WAY AT DALLAS, TEX., ON OCTOBER 11, 1932.

December 12, 1932.

To the Commission:

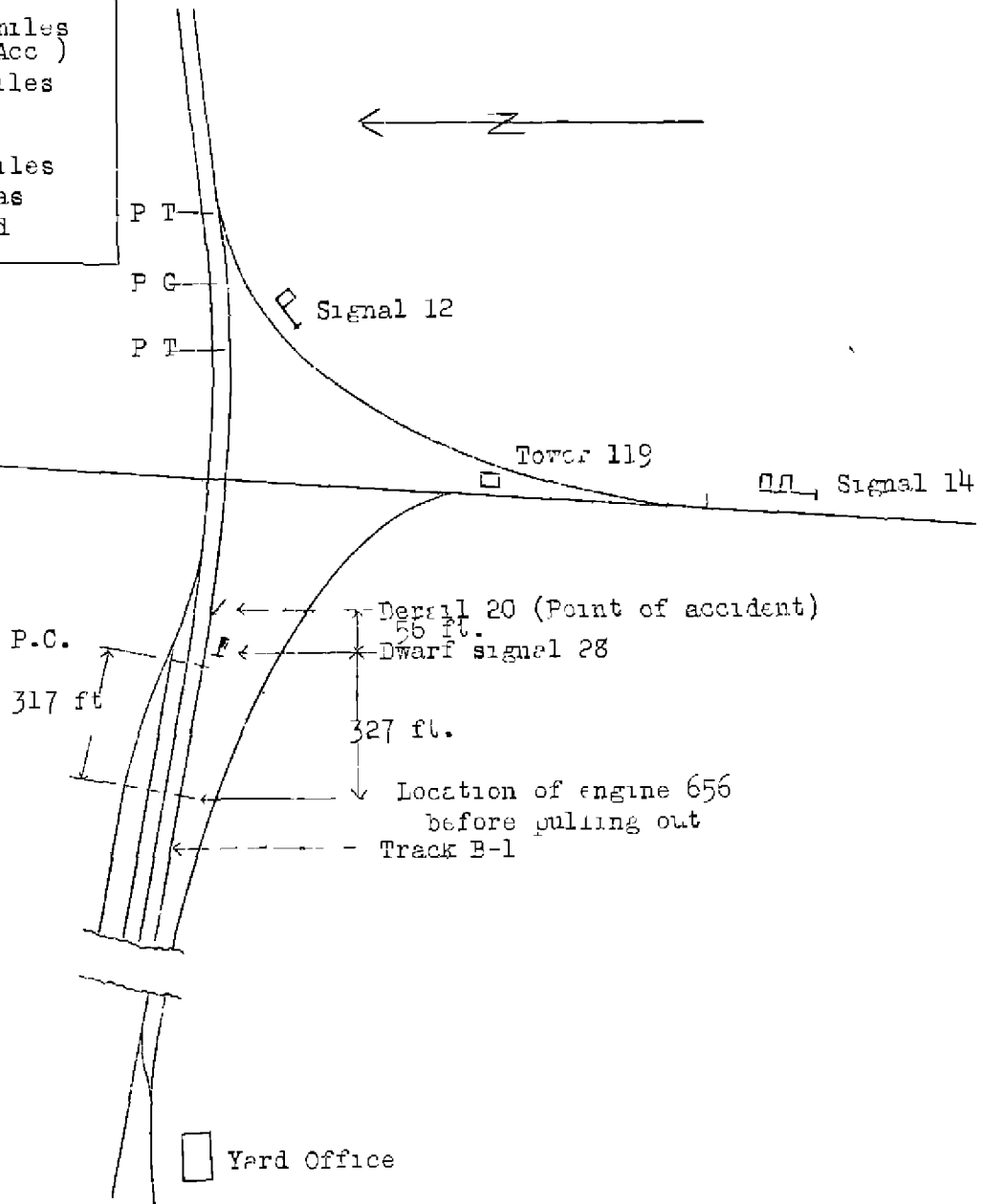
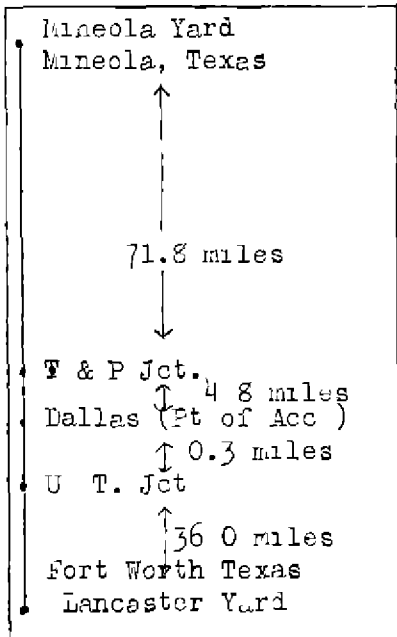
On October 11, 1932, there was a derailment of a freight train on the Texas & Pacific Railway at Dallas, Tex., which resulted in the injury of four employees.

## Location and method of operation

This accident occurred on the Dallas Subdivision of the Fort Worth Division, extending between Lancaster Yard, Ft. Worth, Tex., and Mineola Yard, Mineola, Tex., a distance of 112.9 miles, between U.T.Jct., and T.P.Jct., Tex., a distance of 7.58 miles, both of which points are in the vicinity of Dallas and within which territory the accident occurred, this is a belt line composed of sections of single and double-track over which trains are operated by time-table and an automatic block-signal system. The accident occurred within interlocking limits at T. & P. Jct., at derail 20, of the switch-point type, located 56 feet east of dwarf signal 28, approaching from the west on yard track B-1, beginning at a point 327 feet west of signal 28, the track is tangent for a distance of 317 feet, or almost to the signal, and then there is a  $1^{\circ}$  curve to the left extending for a considerable distance beyond the derail, the accident occurring on this curve at a point 86 feet from its western end. The grade is descending for eastbound trains, varying from 0.80 to 1.33 per cent, being 0.85 per cent at the derail. East of signal 28 there is a dip in the track and then a long ascending grade and trains pulling out on track B-1 make a run for this grade.

Tower 119 is located within the southern part of the wye, near the junction of the west leg with the east leg, the telegraph office is located in the tower. Signals and switches are controlled by an electric interlocking plant, detector bars are not used but detector track circuits are in use on all tracks and approach and route locking are used on certain tracks. Signal 28, however, is direct lever-controlled, and it is possible to change its indication to stop and to open derail 20 directly in front of an approaching eastbound train, the signal can not be cleared unless the derail is reversed. The track circuit on track B-1 extends eastward from a point about 9 feet east of signal 28, and also extends in on the east leg of the wye as far as signal 12. Signal 12 is located 430 feet from the junction of the east leg with track B-1,

Inv No. 1789  
Texas & Pacific R.R.,  
Dallas, Texas  
Oct 11, 1932



and 1,260 feet from the north end of tower 119. Signal 14 is located 225 feet south of the south switch of the east leg of the wye. The mechanical locking is such that lever 12 can not be reversed unless lever 30 is normal, with the derail in derailing position. Night indications are red, yellow, and green, for stop, caution, and proceed, respectively

The weather was clear at the time of the accident, which occurred about 2.03 a.m.

#### Description

Northbound switch engine 463, hauling 11 cars and a caboose, was in charge of Engine Foreman Looney and Engineman Freeman. After the route around the east leg of the wye had been lined for this train it passed signal 14, which was displaying a proceed indication, and continued at a low rate of speed. As the engine approached signal 12 a proceed indication was at first displayed, but on nearing that signal the indication changed to stop, this being caused by extra 656 passing signal 28 on track B-1, and Engineman Freeman at once stopped his train.

Eastbound freight train extra 656 consisted of 67 cars and a caboose, hauled by engine 656, and was in charge of Conductor Turbin and Engineman Elliott. After switching had been completed, the train started to pull out eastward on track B-1, it being intended to make a run for the hill, passed dwarf signal 28, which was displaying a stop indication, and was derailed at derail 20 while traveling at a speed estimated to have been between 6 and 12 miles per hour.

Engine 656, its tender and the first four cars were derailed to the south. The engine stopped on its right side, parallel with the track, its forward end being 278 feet east of the derail, the tender and first car were also on their right sides, but the other three derailed cars remained upright or practically so. The employees injured were the engineman, fireman and two brakemen, all of whom were riding on the engine.

#### Summary of evidence

Engineman Elliott, of extra 656, stated that shortly before starting to pull out, he observed signal 28 displaying a proceed indication, called the indication to the fireman, and acknowledged the signal with two blasts on the whistle. On starting down the hill he opened the throttle wide, using both hands to do this. Afterwards he noticed the switch engine on the east leg of the wye, and when about three car-lengths from signal 28 he observed that it was displaying a stop indication, the speed of his train was about 8 or 10 miles per hour, and he at once applied the air brakes in emergency,

opened the sanders and reversed the engine, but was unable to stop. Approaching signal 28 Engineman Elliott thought he was prepared to stop, and said the reason he did not do so was because of the descending grade and the heavy train of oil and gravel.

Fireman Moorman stated that the signal was at proceed when the train started, he did not again observe it and the first he knew of anything wrong was when he felt the engine on the ties.

Head Brakeman Butler stated that signal 28 was displaying a proceed indication when he boarded the engine, just before the train started, he did not again look at the signal, assuming that it was still in the proceed position, and, like the fireman, the first he knew of anything wrong was when he felt the engine on the ties, at which time he estimated the speed to have been about 6 or 7 miles per hour. He estimated that about three minutes elapsed from the time he got on the engine until the train started.

Brakeman Hughes boarded the engine after it started and had just stepped up in the gangway when the engineman did something that attracted his attention, what it was he did not know, and by that time the engine was on the ground. The last time he observed signal 28 was several minutes before the train started and at that time it was displaying a proceed indication.

Engineman Freeman, of switch engine 463, stated that as his train approached signal 14, about 1.59 a.m., it was displaying a stop indication, so he reduced speed to about 5 miles per hour, following which the route around the east leg of the wye was lined for his train and he proceeded. When his engine was about three or four car-lengths beyond tower 119 he observed the indication of signal 12 change from stop to proceed, but on reaching a point about 8 or 10 car-lengths from that signal its indication changed to stop again, he applied the air brakes and brought the train to a stop without incident. Fireman Britt stated that signal 14 displayed a stop indication as his train approached the wye, and that it changed to proceed about the time he heard the freight train whistle off. Fireman Britt did not see signal 12 as his train approached it.

Operator-Towerman Hagewood stated that he placed signal 28 in proceed position for extra 656 while it was switching. At about 2 a.m., however, switch engine 463 approached and whistled for a signal, and the towerman placed signal 28 in stop position, so that extra 656 would be required to call for the route in the event it was ready to depart, and then telephoned the yard office and informed Switchman Taylor, who answered the telephone, that engine 463 was coming.

Shortly afterwards Operator-Towerman Hagewood again telephoned and inquired what the yard office wanted done, and he said he was told that extra 656 was not moving and instructed to have engine 463 proceed and then back into the yard. Accordingly, the towerman set derail 20 against extra 656 and changed signals 14 and 12 to permit the movement of engine 463 around the east leg of the wye, this being accomplished when that engine was about 50 feet from signal 14; he then went down stairs to get the register check as the caboose passed the tower, at 2.02 a.m., and about one minute later he was informed of the accident. Towerman Hagewood did not hear extra 656 whistle off. There is a track indication chart in the tower and when a train is on the track circuit it extinguishes the light on the chart representing that circuit, at the time he changed the route and lined it for engine 463, the light on the chart covering the circuit for signal 28 was burning, which showed that that circuit was clear, while the light showing the condition of the circuit west of signal 28 was out, showing that extra 656 was on that particular circuit at that time. Towerman Hagewood thought signal 28 had been displaying a stop indication two or three minutes before he opened derail 20, and about three or four minutes before he cleared signal 14.

Signal Supervisor Belvin stated that after the wreckage was cleared away the day following the accident he tested the derail and signal apparatus and found them to be in proper working order, the only damage caused to the track circuits by the accident was the breaking of numerous bond wires. The interlocking plant is so arranged that conflicting routes can not be set up, in the event it is desired to change the route with a train occupying the locking circuits it is necessary to operate a time-release mechanism, requiring two minutes to function. It is possible, however, to change the indication of dwarf signal 28 to stop and open derail 20 directly in front of an approaching eastbound train, as the track circuit does not commence until a point approximately 9 feet east of dwarf signal 28 is reached.

Various tests were made of the interlocking plant in an endeavor to set up conflicting routes, but it was not possible to accomplish any such result, and it was demonstrated that the plant operated as intended.

Vision tests made with an engine of the same class as engine 656 disclosed that the indication of dwarf signal 28 could be plainly seen from the point where engine 656 stood, 327 feet west of the signal, until a point 75 feet west of the signal was reached, where the indication disappeared from view.

Attention is called to the fact that Engineman Elliott said he applied the brakes in emergency when he first saw the stop indication of signal 28 three car-lengths distant, and

yet his fireman and also the head brakeman said their first knowledge of anything wrong was when they felt the engine drop to the ties, the statements of Brakeman Hughes also indicated that not until about the time the engine was derailed did he notice that there was anything wrong.

#### Conclusions

This accident was caused by the failure of Engineman Elliott, of extra 656, properly to observe and obey the stop indication of signal 28.

Engineman Elliott said signal 28 was at proceed just before his train started to pull out, and that he did not again observe the indication of this signal until his engine was about three car-lengths from it, at which time it was in the stop position. Engineman Elliott thought that he was approaching signal 28 prepared to stop, and as the reason for failure to do so, he said he had a heavy train of oil and gravel and was traveling down grade.

It is impossible to state just when signal 28 was placed at stop and the derail opened. The towerman first placed the signal at stop and then telephoned the yard office, after which he opened the derail and reversed the signals for engine 463. Judging from the statement of the engineman of engine 463, as to the distance traveled by his engine after signal 12 went to proceed, it is apparent that the derail in front of extra 656 must have been opened at or just before the time extra 656 began to move. Signal 28 was at stop before the derail was opened.

Respectfully submitted,

W.P.BORLAND,

Director.