

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON  
THE DENVER & SALT LAKE RAILROAD AT TOLLAND, COLORADO,  
ON JANUARY 24, 1921.

March 17, 1921.

On January 24, 1921, there was a derailment of an engine on the Denver & Salt Lake Railroad at Tolland, Colo., resulting in the death of 1 employee and the injury of 4 employees. After investigation of this accident, the Chief of the Bureau of Safety reports as follows:

Location.

This accident occurred on the first district, which extends between Denver and Tabernash, Colo., a distance of 88.86 miles, and is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. Approaching Tolland from the west, beginning at Newcomb curve, approximately 2.5 miles distant, there is a series of short tangents and sharp curves, the maximum curvature being  $10^{\circ}$ , then there is a tangent 3,078 feet long, followed by a 1-degree 30-minute curve to the left. About 560 feet east of the beginning of this curve there is a facing-point switch for eastbound trains leading to a passing track to the left of the main line. The grade varies from 1.58 to 2 per cent descending from Newcomb curve to Tolland. The track is laid with 85-pound rails on curves and 80-pound rails on tangents, tie-plated, and maintained in good condition. At the time of the accident a severe snow storm was raging, with a very high wind.

Description.

Engine 121, headed west, in charge of Engineman Johnson and Fireman Welly, and engine 122, headed east, in charge of Engineman Sweeney and Fireman Boes, the two engines being coupled tender to tender, left Tolland at 1.45 p.m., en route for Newcomb curve, where engine 104 was stuck in the snow. These engines, both of which were of the 2-8-0 type, approached Newcomb curve at a speed of 8 or 10 miles an hour and on account of the severe weather conditions limiting the range of vision collided with engine 104, slightly damaging the front end of engine 121. Engine 121 then became stuck in the snow and it was necessary for engine 122 to cut off and run into engine 121 several times in the endeavor to move it out of the snow. After several hours spent in doing this and in digging out engine 104 and in trying to jar it loose from the snow, engines 121 and 122 were moved eastward out of the snow and it was found that the pony truck of engine 121 had been derailed. After this truck had been rerailed and just as they were about to start back to Tolland, a shovel was blown off of the tender of engine 122, striking Engineman Bell, of engine 104, and rendering him unconscious; immediately after this accident engines 121 and 122 started for Tolland. The pony truck of engine 122 had also become derailed, but no one discovered this condition, and at about 6.50 p.m., when the switch leading to the passing track near Tolland was reached, engine 122 became entirely derailed and turned over.

Engine 122 followed the turnout and came to rest on its right side, to the north of and at right angles with the track, approximately 150 feet east of the switch; its tender was derailed but remained upright and came to a stop about 35 feet east of the cab of the engine. Engine 121 was not derailed. The employee killed was the injured engineman of engine 104, who was being taken to Tolland on engine 122.

#### Summary of evidence.

According to General Roadmaster Kennedy, about an hour was spent in rerailing the pony truck of engine 121. While this was being done no one noticed anything wrong with engine 122, although Road Foreman of Equipment Kenney had been all the way around both engines about 40 minutes prior to their departure for Tolland. Marks in the snow and on the ties, however, indicated that the pony truck of engine 122 had been derailed at this point, probably while endeavoring to get engine 121 out of the snow, and that then it was operated in this condition from that point to the switch at which the accident occurred, a distance of more than 2 miles. None of the employees riding on the engine had noticed anything to indicate that the pony truck had been derailed, although the marks indicated that the wheels had been from 8 to 10 inches to the left of the rails.

Examination of the track failed to disclose anything which could have contributed to the derailment, with the exception of the snow and ice which was packed around the rails.

### Conclusions.

This accident was caused by the derailment of the pony truck of engine 122 due to snow and ice.

The marks indicate that the pony truck had been derailed while the engine was at Newcomb Curve. Although section men were at the scene, and assisted in making a flange way through the hard-packed snow and ice, a high wind prevented them from being able to keep the flange way clear. This condition resulted in the derailment of the pony truck of engine 121 and undoubtedly caused the derailment of the pony truck of engine 122. Under the circumstances as they ~~existed~~ <sup>existed</sup> at Newcomb Curve, and knowing that the pony truck of engine 121 had been derailed by snow and ice, it is surprising that no one took the precaution of looking at engine 122 for the purpose of seeing whether it had also been derailed.

All of the employees involved were experienced men. Several of them were on duty more than 16 consecutive hours, they had been off duty periods varying from 15 hours to several days.