

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED
ON THE DENVER & RIO GRANDE WESTERN RAILROAD
NEAR GALE, COLO., ON AUGUST 24, 1921.

September 24, 1921.

On August 24, 1921, there was a derailment of a passenger train on the Denver & Rio Grande Western Railroad near Gale, Colo., which resulted in the death of 1 passenger and 1 employee, and the injury of 63 passengers and 6 employees. After investigation of this accident, the Chief of the Bureau of Safety reports as follows

Location and method of operation.

The road upon which this accident occurred is a single-track line extending between Grand Junction and Newcastle, Colo., a distance of 76.9 miles. Trains are operated by time-table and train orders, no block-signal system being in use. The accident occurred at bridge 59-A, about 1,000 feet east of the east switch at Gale. Approaching this point from the east there is a 4-degree curve to the right about 600 feet in length, followed by about 600 feet of tangent, the grade is 0.5 per cent ascending for westbound trains. The weather was clear at the time of the accident, which occurred at about 3.20 a.m.

Description.

Westbound passenger train first No. 1 consisted of 1 combination mail and baggage car, 1 baggage car, 3 coaches, 5 Pullman sleeping cars and 1 dining car,

all of all-steel construction, hauled by engine 760, and was in charge of Conductor Killen and Engineman Armstrong. It passed De Beque, 15.9 miles from Gale and the last open telegraph office, at 2.40 a m., 2 hours and 25 minutes late, and was derailed at bridge 59-A while traveling at a speed estimated by the crew to have been about 20 miles an hour.

The western end of the bridge apparently was the first to collapse, resulting in the derailment of the engine and first two cars. After projecting over the stream for several minutes, the first coach settled into the water as the eastern end of the bridge gave way, and partly overturned to the left, while the second coach was turned over to the right. The employee killed was the engineman.

Summary of evidence.

Bridge 59-A is 141 feet in length and 13 feet in height, with 8 bents, each of which rested upon concrete foundations spaced 16 feet between centers. These foundations were 20 feet in length and 3 feet in width, with a depth of ⁵ feet. The bents were of 12x12 yellow pine, properly braced and tied. Jerry Creek, the watercourse spanned by bridge 59-A usually is dry. On the night of the accident, however, there had been general rains throughout this territory, with a heavy storm in the territory drained by Jerry Creek, several miles from the railroad. This resulted

in such a volume of water in the creek, estimated to have been from 6 to 9 feet in depth with a strong current, that the concrete foundations under the third and fourth bents of the bridge were undermined, resulting in their giving way under the weight of train first No. 1.

Watchmen are employed for the purpose of patrolling districts considered dangerous, but the bridge where this accident occurred was not considered to be in a dangerous zone. The crew of train first No. 1 had orders calling attention to 13 places where the speed was to be reduced, but none of them applied at this particular point. Train first No. 1 had not been making scheduled time, and according to the crew was not running at scheduled speed at the time of the accident. This probably is partially accounted for by the fact that information had already been given to the crew that their train probably would be indefinitely delayed at Grand Junction on account of washouts beyond that point, also by the fact that one of the orders held by the crew provided in part "do not attempt to make up any time account of heavy rain over the line". The territory in which these extra precautions were prescribed extended only a short distance west of De Beque, from which point westward including the locality of bridge 59-A no trouble had been ex-

perienced or anticipated.

Conclusions.

This accident was caused by a washout.

The evidence indicates that while there had been no heavy rains along the track in the immediate vicinity of where the accident occurred, there had been a heavy storm in the watershed drained by this creek, and that the usually dry watercourse was transformed into a stream of water from 6 to 9 feet in depth, moving with sufficient force to undermine some of the bents in the bridge, resulting in its collapse under the weight of the forward portion of train first No. 1.

All of the employees involved were experienced men, none of them had been on duty in violation of any of the provisions of the Hours of Service Law.