

IN RE INVESTIGATION OF ACCIDENT ON THE
DENVER & RIO GRANDE RAILROAD,
FEBRUARY 15, 1912.

June 1, 1912.

On February 15, 1912, an engine and three cars were derailed on the Denver & Rio Grande Railroad, at Cuprum, Utah, a short distance from Bingham, resulting in the death of the engineman and three other persons and in the injury of eight others, three of whom were members of the train crew.

This accident was reported by telegraph by the Denver & Rio Grande Railroad Company on the date of its occurrence, and after investigation, the Chief Inspector of Safety Appliances reports as follows:

The accident was caused by Denver & Rio Grande locomotive No. 3, Shay type, and three steel gondola cars, heavily loaded with ore, running away on a steep mountain grade.

Engineman Annis, Fireman Goodnough, Yard Foreman Brown and Switchmen West and Wickers were in charge of this train, which was bound from the Utah Copper Sulphide Bin in the Cuprum yard for Wamsutter Mill at Bingham. After coupling the engine to the cars in the yard, the air brakes were inspected, tested and found to be in good working condition, the air brake retainers were turned up, and the back sanders were tested and found in good working condition. On this trip the engine was being run backward. After pulling the cars out on to the main line, the engineman made an application of the air brakes, reducing the train

line pressure about eight pounds; there was a slight dip in the track at this point and the engineman, to avoid stopping the train, used steam. The grade varies from five to seven per cent and the train quickly gained speed. The engineman made another application of the air brakes, this time making a reduction of about twenty-five pounds; failing to check the speed of the train, he immediately made an emergency application of the air brakes. This locked the wheels of the locomotive, causing them to slide; the engineman then released the driver brakes and reversed his engine, but this did not check the speed of the train. The brakes having been called for by the engineman, two of the three hand brakes were set as soon as possible. When it was realized that the train was beyond control, all of the employes jumped off, two of them being killed and all the others sustaining injuries.

The train ran a distance of about 2,100 feet; then the engine left the rails at a curve of about 21 degrees, and fell down a forty-five degree incline on the northwest side of the track, crashing through the roof of a rooming house in which several men were sleeping, down to the floor below, which was occupied by a cleaning and dyeing company, and thence into a bank building. The tender was torn loose from the locomotive and crashed through a building occupied as a shoe and harness shop, entirely demolishing it, and into the rear of another small building. The three cars went off on the opposite

side of the track and ran into the side of the mountain.

The rules of the company regarding the use of brakes on heavy grades are as follows:

Rule 470. "In descending heavy grades, all retainers must be used. On cars not heavy enough to require the use of all retainers, the trainmen will ascertain from the engineer how many will be required and turn up the retainers on alternate cars, commencing at the head end of the train, and frequently change the retainers, using them on the intervening cars."

Rule 471. "In descending heavy grades, trainmen must assist in holding the train by use of the hand brakes on non-air cars and those with inoperative air brakes or retainers. Hand brakes on other cars must not be used unless absolutely necessary to control the speed of train."

Rule 473. "Before descending grades, trainmen and inspectors must test air and hand brakes on the entire train, and must not attempt to descend grades unless satisfied that train can be safely controlled."

Rule 475. "Trainmen and inspectors will be held responsible for the test of brakes at terminals and summit of grades."

The investigation discloses the fact that every precaution was taken by the crew to ascertain the condition of the air brakes on the train before starting; also, that the air brakes were in good working order and that the piston travel was adjusted so that the maximum braking power was available. The hand brakes were not examined by the crew prior to leaving the yard, as required by Rule 473.

Near the top of this grade there is a coal chute on a higher track and the overflow from the tender falls upon the track upon which this train was running. At this point the rails were very slippery. In addition, it was a cold, frosty morning. The engineman had had only

five days experience on this division of the road, although he had had more than four years experience as an engineman. The fireman had had one month and three days experience on this division, the yard foreman three months and fifteen days, one of the switchmen six days, and the other switchman but two days. It would therefore appear possible that the principal cause of this accident was the inexperience on heavy mountain grades of the employees handling this train. The fact that so many inexperienced men were employed in this service was due to trouble which had occurred between officers and employes at this place, eight enginemen, four firemen and five switchmen who had been employed there having recently left the service on account of a dispute with the yardmaster, and in order to carry on the work in their places were filled by employees brought from other parts of the road.

The accident occurred at 7.25 a. m. The employees involved had been on duty but twenty-five minutes, after a period off duty of 13 hours and 25 minutes.