INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE COLORADO AND SOUTHERN RAILWAY AT PEABODYS, COLO., ON MARCH 6, 1928.

March 31, 1928.

To the Commission:

On March 6, 1928, there was a derailment of a light engine on the Colorado and Southern Railway at Peabodys, Colo., which resulted in the death of one employee and the injury of one employee.

Location and Method of Operation

This accident occurred on the Como and Leadville Sub-division of the South Park Division, extending between Como and Leadville, a distance of 62.9 miles. This is a narrow-gauge single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. The accident occurred approximately 1,200 feet west of Peabodys; approaching this point from the west there is a series of sharp curves and short tangents, the accident occurring on a 24° curve to the left 537.5 feet in length, at a point 130 feet from its western end. The grade is descending for eastbound trains for a distance of several miles, varying between 2.8 and 4 percent; it is 2.8 percent at the point of accident. The maximum speed for freight trains in the vicinity is restricted to 12 miles per hour, while that for passenger trains is limited to 22 miles per hour. The track is laid with 56-pound rails, 30 feet in length, with 17 ties to the rail-length, single-spiked, and it is tie-plated on the curve on which the accident occurred; the track is maintained in fair condition.

The weather was clear at the time of the accident, which occurred at about 7:30 p. m.

Description

Eastbound engine 7, running light, was in charge of Engineman Nichols and Fireman Vanderback. This engine left Dillon, the last open office, 28.2 miles west of Peabodys, at 5:25 p. m., and was approaching Peabodys when it was derailed while traveling at an undetermined rate of speed.

The engine and tender were derailed to the right, turning entirely over and coming to rest in nearly an upright position at the bottom of a 15-foot embankment approximately 100 feet beyond the point of derailment; both were badly

damaged. The employee killed was the engineman.

Summary of Evidence

Fireman Vanderbeck stated that when his engine arrived at Boreas, which is at the summit of the grade on which the accident occurred, 7.8 miles from Peabodys, the engineman stopped and oiled around before departing from that point. The speed was then maintained at a uniform rate of about 12 miles per hour until the engine had reached a point approximately 6 miles beyond Boreas, when the speed was increased to 16 or 18 miles per hour, with the result that the engineman reversed the engine and opened the throttle slightly. This retarded the speed to some extent and he then heard the air brakes applied and released several times, and he said that upon reaching a point about 1/2 mile west of the point of accident the engineman released the brakes, and the engine immediately appeared to get beyond control, gaining momentum very rapidly. As soon as he realized that the engine was running away, Fireman Vanderbeck became alarmed and for his own safety he left the cab, went back over the tender and got down on the rear sill step, where he remained until the accident occurred. He was unable to estimate the speed of the engine at the time of the accident. Fireman Vanderbeck further stated that no trouble had been experienced with the brakes prior to the time the engine got beyond control, that the pump was working properly and that there had been no difficulty in maintaining 90 pounds main-reservoir pressure and 70 pounds brake-pipe pressure. He also stated that after releasing the brakes the engineman allowed sufficient time for the auxiliary to recharge before again applying the brakes, and that the retainer was set up on the tender, and he expressed the opinion that the brakes were handled properly by the engineman and was unable to account for the fact that the engine got beyond control, although he did not know whether any part of the brake rigging had broken, so as to render it inoperative. He stated, however, that he thought it would have been possible for the engineman to have stopped at the time he reversed the engine.

Engineman Whitney stated that he operated engine 7, light, westward from Como to Dillon on the day of the accident, encountering descending grades similar to that on which this accident occurred. He then returned to Como eastbound, hauling a passenger train with the same engine, and he stated that on neither of these trips did he have any difficulty with the air brakes; on the westbound trip he used the retainer on the tender and it was not necessary to reverse the engine at any time in order to control its speed, while on the eastbound trip, with a train, no difficulty was experienced.

Roadmaster Melin stated that he made an examination of the track in the vicinity subsequent to the accident and found the first marks of derailment to consist of flange marks on the ties which appeared about 9 rail-lengths from the western end of the curve; no marks appeared on the rails. He also said that the surface of the track was fair, with an elevation of 2½ inches on the curve. He stated that he passed over the track during the morning of the day of the accident and noticed no irregularities, and that during the night before the accident he passed over it on a light engine, eastbound, at about 22 miles per hour and there was no unusual motion of the engine. It was his opinion that a light engine could round this curve safely at a speed of 25 or possibly 30 miles per hour.

Roundhouse Foreman Duffy stated that after engine 7 arrived at Como at 1:10 p. m., March 6, he made the usual inspection and found the brake rigging intact; an application and release of the air brakes also failed to develop any defect. He examined the engine after the accident but found nothing which appeared to have anything to do with the derailment; a rod on the tender, connecting the floating lever, was broken but he thought it resulted from the derailment of the engine, at the time the trucks were torn from the tender frame. Roundhouse Foreman Duffy also found the reverse lever about half way back in the reverse position, with the lever bent and the latch out of the quadrant. It further appeared from his statements that the first mark on th track was found on the end of a tie, some 15 inches from the rail.

Superintendent of Motive Power Ridgway stated that engine 7, which is of the 2-6-0 type, with a total length engine and tender of 47 feet 7 inches, received a general overhauling in April, 1925; since that time it had traveled a distance of 8,379 miles, up to February 15, 1928. During this period it had received light repairs in October, 1927.

Subsequent to the accident a test was made of the brake and feed valves with which engine 7 was equipped. This test disclosed that the feed valve functioned properly, while during the test of the brake valve the only exception noted was in the test for leakage from chamber D to brake pipe; this test indicated a leakage of 16 pounds per minute, whereas the railway company's maximum permissible leakage was 15 pounds per minute.

Conclusions

This accident was caused by the fact that Engineman Nichols lost control of his engine on a heavy descending grade.

At the time of the investigation the physical condition of Fireman Vanderbeck was such that nothing

tangible as to the reason for the engine getting beyond control was developed. According to his statements, a stop was made at Boreas, at which time the engineman went around the engine for the purpose of oiling it. The engine then proceeded down the grade on which the accident occurred traveling several miles at a speed of about 12 miles per hour; approaching the point of accident the speed increased to 16 or 18 miles, being checked to some extent by the action of the engineman in reversing the engine and opening the throttle. It appeared from his statements that the engineman then applied and released the brakes several times instead of bringing the engine to a stop, with the result that finally he lost all control. The fireman thought the engineman handled the brakes properly, but it is believed that had the engineman kept the brakes applied at the time he had the engine in reverse, there would have been no difficulty in stopping had he so desired. As it is, it seems probable that he allowed the speed to increase to such an extent that it was impossible to again bring the engine under control.

On March 6 Engineman Nichols made a trip with engine 7 from Como to Dillon, hauling a passenger train of three cars; his last trip over the Como and Leadville Sub-division prior to that time was in June, 1922. He had been working, however, on another sub-division where the grades are almost as steep and with curves greater than the one on which the accident occurred.

Engineman Nichols entered the service in 1891 and had been employed as an engineman since 1899, while Fireman Vanderbeck entered the service in 1916, and was a promoted man. At the time of the accident neither of these employees had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.