In re investigation of an accident which occurred on the Southern Pacific Railway near Snyder, Calif., on June 11, 1917.

July 2, 1917.

On June 11, 1917 there was a derailment of a work extra on the Southern Pacific Railway near Snyder, Calif., which resulted in the death of one track laborer and the injury of 5 track laborers. After investigation of this accident, the Chief of the Division of Safety reports as follows:

The Santa Rosa Branch, on which this accident occurred, is a single-track line, over which train movements are governed by time-table and train orders. The speed of freight trains hauled by locomotives backing up is restricted to 20 miles an hour. The accident occurred on straight track on a slight descending grade for westbound trains. The weather at the time of the accident was clear.

The track was in fairly good condition, new ties having been applied in 1915 while the rails had recently been changed from very light rails to 75-pound rails. The track was well spiked and tie plates were used on each tie with heavy splice bars at each joint, but with only one bolt on each end of the splice bars. The track is laid on a dirt roadbed and while there was evidence of ballast having been used at one time, it was scarcely noticeable at the time of the investigation. The track had not been re-surfaced since the rails were changed and while the track was in proper gauge, the surface was uneven and irregular. At the point of derailment the north rail was seven-eighths of an inch low, while 15 feet further back the north rail was three-eighths inch low; 30 feet and 45 feet back from the point of derailment the track was level while 60 feet and 75 feet back the north rail was one inch low; 90 feet back the south rail was one-half inch low, 105 feet back the south rail was three-fourths inch low, 120 feet back the south rail was three-eighths inch low and 135 feet back the south rail was one-eighth inch low.

Work extra 1366, in charge of Conductor Landis and Engineman McElroy, left South Vallejo, Calif., at 6.55 a.m. and ran to Schellville, a distance of 19 miles, where they picked up an extra track gang and worked as a work train. At about 12.45 p.m. the train started to return to Schellville from El Verano, a station 4.5 miles east of Schellville, at that time the train consisting of locomotive 1366, backing up, a caboose, one empty flat car and one flat car partly loaded with old rails; at 12.50 p.m. it was derailed at a point about 1 1/2 miles west of El Verano or one-half mile west of Snyder.

The tender was the first part of the train to be derailed, which was followed by the derailment of the entire train. The first marks of the derailment were on the ties on the inside of the south or left rail, while the bolts were sheared off a splice bar on the outside of the north rail. There were no marks on the rails that would indicate that the flange had crossed the rail and it is evident that the tender jumped the rail at the point where the first marks were found. Measurements taken after the derailment showed a distance of 265 feet from the first marks of derailment to the point where the rear end of the tender stopped, which was 40 feet from the center of the track and down a slight embankment. The track laborers who were riding on the first flat car fell off to the ground while the rails on the rear car skidded forward to the car ahead and then fell off on to the laborers, killing one and injuring five.

Engineman McElroy stated that his train left El Verano at 12.43 p.m. Upon reaching Snyder the speed began to increase slightly on account of a little hump at that point and he applied the air brakes, using 6 or 7 pounds of air. The tank then commenced to jump and he applied the brakes in emergency, but on account of the brakes having already been applied the emergency application did not have the desired effect. He felt certain that at the time of the derailment he was not running in excess of 20 miles, the maximum allowed on this branch for trains being hauled by locomotives backing up, but he was unable to explain the fact that the locomotive traveled 265 feet before stopping after it had been derailed. He admitted that it did not seem possible that it could go that distance with the brakes applied if the speed had been only 20 miles an hour, but said that it might have been due to the fact that he lost the braking power of the tender and to the fact that there was an old rail laying along the side of the track on which the locomotive slid, keeping the wheels on one side from cutting into the ground.

Fireman Taylor stated that he filled the tank full of water before leaving El Verano and that the train left that point at about 12.42 p.m. He stated that on account of the tank being full there was not much opportunity for the water to splash around and the tender ran smoothly; he did not know what caused it to leave the rails. He further stated that the speed of the train at the time of the derailment was 18 or 20 miles an hour and he agreed with his engineman as to the manner in which the brakes were handled.

Conductor Landis and Brakemen Smith and O'Donnel all stated that the speed at the time of the derailment was not in excess of 20 miles an hour.

Extra Gang Foreman Doyle stated that he was riding in the caboose when he felt it leave the rails. He estimated the speed at the time to be not less than 30 miles an hour and said that possibly it was even more. He stated that he felt no unusual jolts prior to the derailment although occasionally there were little jolts, the only one of any importance, however, being when the train jumped the track. According to his opinion, the accident was due to the tender being too light for the speed at which the train was traveling and he thought that the splashing of the water in the tender caused it to roll to such an extent that it was derailed. He stated that a broken rail was found 65 feet beyond the point of derailment and he believed this allowed the remainder of the train to leave the rails.

Roadmaster Corrigan, who was riding on the caboose at the time of the accident, stated that the train left El Verano between 12.40 and 12.45 p.m. and was derailed at 12.50 p.m., at which time the speed was between 25 and 30 miles an hour. He stated that after the derailment the enginemen told him that he was running at a speed of about 25 miles an hour. He stated that in his opinion the accident was due to excessive speed which caused the tender to roll, this rolling being aggravated by the unevenness of the track, to such an extent that it jumped the rails. He thought, however, that the track was perfectly safe for a speed of 20 miles an hour. Roadmaster Corrigan further stated that he noticed the excessive speed just prior to the application of the brakes and said that if the speed had kept up for any distance it would have been his duty to call the crew's attention to the fact that they were exceeding the maximum speed allowed.

A very careful examination of the locomotive and tender failed to disclose any defect that could in any way contribute to the cause of this accident, except there were no lateral splash plates in the tender.

A test was made for the purpose of determining how far this same class of locomotive with two coaches would run when going at a rate of 20 miles an hour after an emergency application of the brakes. A stop was made in 171 feet which would indicate that a stop should have been made by the derailed train in a much less distance than it ran after the derailment, had the speed been not greater than 20 miles an hour.

This accident was caused by locomotive 1633 being operated backing up at an excessive rate of speed over uneven and irregular track.

The direct responsibility for this derailment rests with the enginemen and conductor for exceeding the speed permitted by the time card rule of the company. Failure properly to observe speed restrictions has been the subject of comment in several previous reports and until such restrictions as are provided to insure safety when trains are backing up, or where irregular and uneven track conditions exist, are observed, such accidents as this may be expected to occur.

Engineman McElroy was employed as switch fireman in July, 1906, was promoted to main line fireman in September, 1906, and to engineman in July, 1913. Conductor Landis was employed as a brakeman in June, 1907, and promoted to conductor in June 1913. At the time of the accident the crew of extra 1366 had been on duty 6 hours and 20 minutes after a period off duty of 11 hours and 50 minutes.

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