INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE VIRGINIA CENTRAL RAILWAY NEAR FREDERICKSBURG, VA., ON SEPTEMBER 14, 1934.

November 13, 1934.

To the Commission:

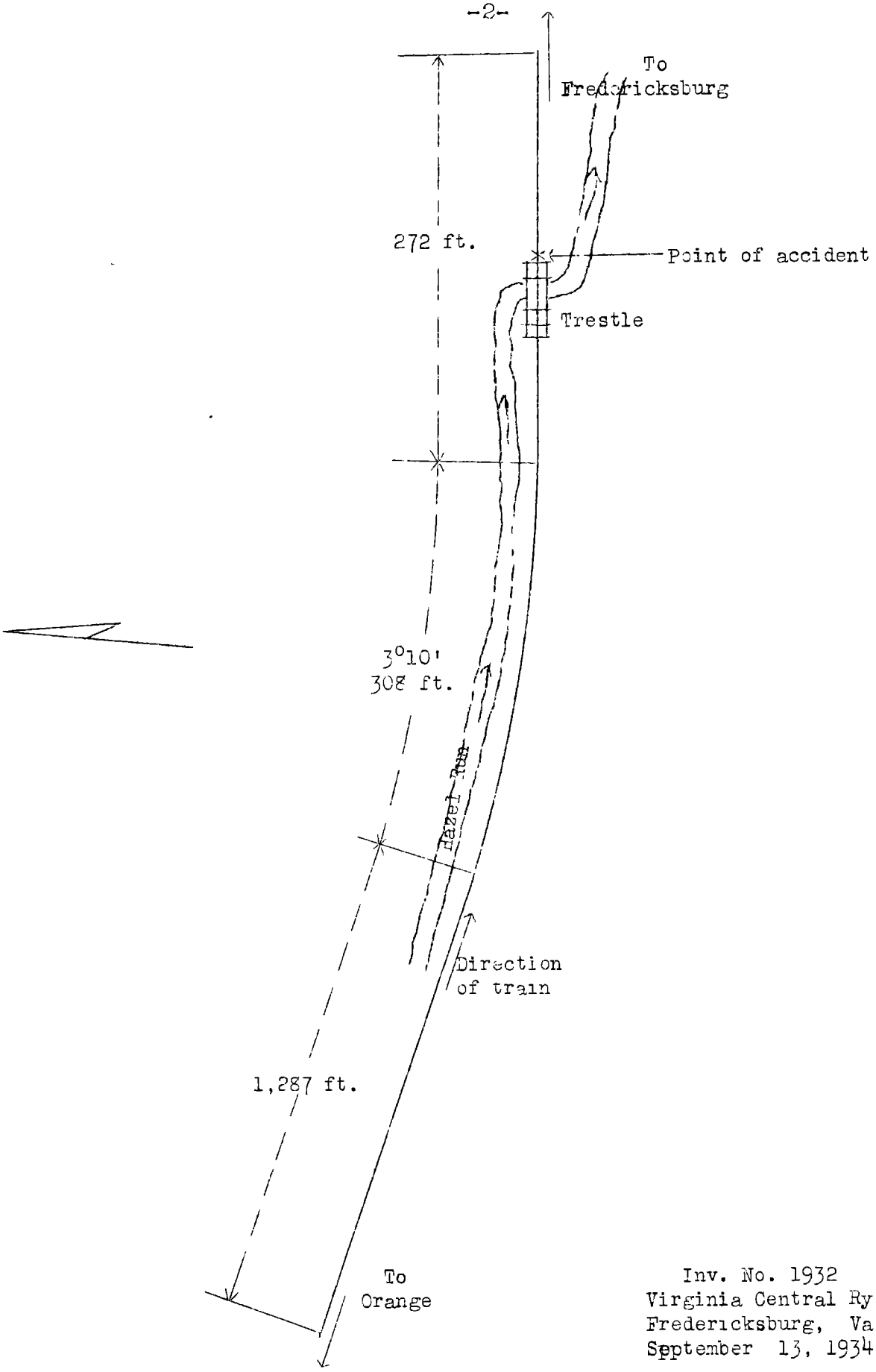
On September 14, 1934, there was a derailment of a freight train on the Virginia Central Railway near Fredericksburg, Va., which resulted in the death of 1 employee and the injury of 1 employee.

Location and method of operation

This railway extends between Fredericksburg and Orange, Va., a distance of 38 miles, and is a single-track line over which trains are operated by time table and oral orders communicated by telephone, no form of block-signal system being in use. The accident occurred about 4 miles west of Fredericksburg at the eastern approach to a trestle which spans a stream known as Hazel Run. This stream flows from west to east along the north side of the track, passes under the trestle from north to south, and then parallels the south side of the track and flows into the Rappahannock River at Fredericksburg. Approaching the point of accident from the west, the track is tangent for a distance of 1,287 feet, followed by a 3°10' curve to the left 308 feet in length and then tangent track for a distance of 272 feet, the accident occurring on this latter tangent approximately 121 feet from its western end. The grade for eastbound trains is 0.805 percent descending at the point of accident.

The trestle is a frame-bent trestle 39.8 feet in length between the faces of the back walls and approximately 17 feet above the stream bed; at the east end there is a concrete abutment extending down below the stream bed, but no wing walls were provided. The fill at the east end of the bridge is approximately 17 feet in height at the abutment and about 30 feet wide at its base. The channel is clearly defined, approximately 13 feet in width beneath the trestle, and on the day following the accident the water was less than 2 feet in depth. At the point of accident the track is laid with 67-pound rails, 30 feet in length, with about 16 ties to the rail length, and is ballasted with gravel, cinders and clay, and is sodded between the ties.

It was dark and misty at the time of the accident, which occurred about 1:30 a.m.



Inv. No. 1932
Virginia Central Ry.
Fredericksburg, Va.
September 13, 1934.

Description

The east-bound freight train involved in this accident, hauled by engine 945, in charge of Conductor Martin and Engineman Pollard, departed from Orange about 10:30 p.m. After setting off cars at Chancellor, about 5 miles west of the point of accident, this train consisted of three cars and a caboose, and was proceeding toward Fredericksburg when it was derailed at the leaving end of the trestle across Hazel Run while traveling at a speed estimated to have been 10 or 11 miles per hour.

The embankment at the east end of the trestle, back of the concrete abutment, had been washed away for a distance of 36 feet to a depth of about 17 feet; the engine dropped into this washout and stopped in upright position in line with the track, with its front end on the embankment at the east end of the washout and its rear end at the bottom of the washout, while the tender was held suspended with its rear end on the bridge and its front end telescoping the engine cab. None of the cars was derailed. The fireman was killed and the brakeman injured.

Summary of evidence

Engineman Pollard stated that on approaching the trestle he was operating the train at a speed of 10 or 11 miles per hour; the headlight was burning brightly and he was on his seatbox looking ahead, but he saw nothing that would indicate there had been water on the track and the first intimation he had of anything wrong was when the engine dropped down and stopped. Later he found that the embankment had been washed out and on walking beneath the suspended tender he saw about 2 or $2\frac{1}{2}$ feet of water at some places, but there was no water where the fill had been washed out. Engineman Pollard stated that he had passed over this trestle on his west-bound trip about 5:40 p.m., at which time there appeared to be 2 or 3 feet of water in the stream bed. During the evening there had been several hard showers but nothing unusual, and after leaving Orange the rain did not seem to be as heavy, and at no time had there been enough to cause him any anxiety as to track or briages. Engineman Pollard had never seen water more than 4 or 5 feet in depth at this point, although he had been operating over this territory since 1917, and the embankment that was washed out had stood there for many years.

Brakeman Martin stated that he was sitting on his seat box in front of the fireman looking ahead; just as they reached the trestle he saw some rubbish on the track about 200 feet beyond the trestle, but before he could warn the engineman the engine dropped into the washout. He estimated the speed of the train to have been 8 or 10 miles per hour.

Conductor R. A. Martin stated that there had not been any unusual amount of rainfall from the time they left Fredericksburg west-bound to the time of the accident on the east-bound trip and there was nothing to indicate the possibility of a washout.

Superintendent A. E. Martin, in charge of maintenance of track and structures, stated that he was at his home in Fredericksburg on the evening and night preceding the accident, that rain fell between 7 and 9 p.m., the heaviest occurring about 8 p.m., but he did not consider it to be unusual. As soon as he was advised of the accident, about 2:45 a.m., he proceeded to the scene on a motor car with three others and on observing trash and ties on the rails they proceeded with caution and at a point about 2½ miles west of Fredericksburg they found that a fill had been washed out for a distance of 55 feet east of an open culvert through which Hazel Run also passed. Superintendent Martin then walked westward from this point and found debris on the track at various points indicative of high water, while the rails had been carried out of line at two points; there also were several ties lying on the track about 150 feet east of the point of accident which indicated that the water had been over the tops of the rails, these ties having been piled along the embankment below the track. The trestle at the point of accident had not been damaged by high water, but as a result of the accident itself the stringers back to the second bent from the concrete abutment were raised approximately 4 or 5 feet and the first bent was turned over, the foundation of this bent still being in the sand. Superintendent Martin stated that during the 26 years he had been employed by this railway no washout had occurred between Fredericksburg and the point of accident and the embankment had been in place during that period; the concrete abutment at the east end of the trestle was placed there about 3 years prior to the time of the accident. Superintendent Martin further stated that on the night of the accident he did not think there would be any unusual high water or he would have taken steps to have the track patrolled.

Section Foreman Lumpkin, who lives at Fredericksburg, stated that the rain fell intermittently and he did not consider it sufficient to do any damage and therefore did not have the track patrolled.

The official record of the United States Weather Bureau at Fredericksburg showed a precipitation of 0.90 inch which fell in from 30 to 50 minutes in the late afternoon of September 13, and 2.35 inches which fell in heavy showers principally between sunset and 8 or 9 that night. A local newspaper referred to the storm as producing results unequaled since the time of the Johnstown flood in 1889; a new highway bridge over Hazel Run within the limits of Fredericksburg was also washed out.

Conclusions

This accident was caused by a washout.

The evidence indicated that an unusually heavy rain fell in the early part of the evening and that the water rose to such an extent that it overflowed the banks of the stream and cut a course diagonally through the fill east of the concrete abutment at the east end of the trestle, undermining the roadbed and leaving a large opening under the rails into which the engine dropped. East of the point of accident there was abundant evidence to show that the water had been unusually high at various points and at one point there was another washout of considerable size. This same engine and crew had passed over the track on its west-bound trip at about 5:40 p.m., at which time the water in the stream was only 2 or 3 feet deep and as the train approached the point of accident on its east-bound trip the trestle appeared to be intact and there was no warning of danger until the brakeman saw the ties lying on the track beyond the trestle, too late to warn the engineman. The fill in question had stood for many years and there had not been any previous washouts in that vicinity.

The weather bureau records showed that there had been heavy rains in Fredericksburg in the evening, especially after sunset, while press reports termed the storm as the worst in its effects since 1889, the damage including the destruction of a highway bridge over Hazel Run within the city limits. The superintendent and section foreman, however, both of whom were in Fredericksburg at the time, did not consider the rain to have been unusually heavy in the city and consequently no provision was made for a patrol of the track.

Respectfully submitted,

W. J. PATTERSON,

Director.