

Chairman

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CIRCULATED 6/16/19
IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
SEABOARD AIR LINE RAILROAD NEAR LILESVILLE, N.C.,
MAY 2, 1919.

June 11, 1919.

On May 2, 1919, there was a derailment of a passenger train on the Seaboard Air Line Railroad near Lilesville, N.C., which resulted in the death of 2 employees and injuries to 6 passengers and 2 employees. After investigation the Chief of the Bureau of Safety reports as follows:

The Monroe District of the North Carolina Division of the Seaboard Air Line Railroad is a single track line extending between Hamlet, N. C., and Monroe, N. C., a distance of 52.6 miles, over which trains are operated by time table, train orders transmitted by telegraph, and an absolute manual block signal system. From Lilesville southward the track is tangent 3,800 feet, then there is a $1^{\circ}15'$ curve to the left 3,340 feet long, followed by several miles of tangent. The derailment occurred approximately 977 feet after passing from the curve onto the tangent. Beginning at a point 2,800 feet south of Lilesville and continuing for about $\frac{3}{4}$ mile beyond the point of derailment, there is an average descending grade of 1.13%.

The track at and in the vicinity of the accident was laid in 1910 with 75 pound rails, 33 feet in length, with 21 untreated ties of pine, oak or cypress under each rail, ballasted with 12 or 15 inches of gravel ballast. At the point of derailment the track was on a fill of nearly 12 feet in depth and was in good condition.

The train involved was southbound passenger train No. 13, en route from Wilmington, N. C., to Charlotte, N. C. At Hamlet, N. C., a change of engines and engine crews was made and leaving there the train consisted of locomotive 613, 1 express car, 1 combination mail and baggage car, 2 coaches and 1 Pullman car, in the order named. This train, in charge of Conductor Fountain and Engineman Hill, left Hamlet at 9.47 p.m., 7 minutes late, left Lilesville, 19.8 miles south of Hamlet, at 9.24 p.m., 3 minutes late. At Mile Post 274.6, about 1.6 miles south of Lilesville, the train encountered an obstruction on the track which caused its derailment at 9.26 p.m., while traveling at a speed estimated to have been 45 or 50 miles an hour. The weather was clear.

The locomotive left the rails and came to rest on its left side, down the embankment, about 30 feet from the track, to the left of and parallel with the combination car, which lay between it and the track, their front ends being almost even. It had its pilot destroyed and the cab broken off, the engineman and fireman being killed. The tender was torn from its trucks and came to rest in a reversed position some 25 feet ahead of where the engine lay, with its rear end resting against the side of the express car, both fouling the tracks. The express car was stripped of its trucks and the body of the car came to rest in an almost upright position some distance south of where the tender lay, fouling the tracks crosswise. The combination mail and baggage car came to rest immediately north of the express car, clear of the main track and about 8 feet to the

left of it, lying on its side about half turned over and resting against the locomotive. The rear end of the car was at the foot of the fill. The 2nd-class coach, the 3rd car in the train, came to rest immediately behind the combination car, still on its trucks, leaning slightly to the left, with its front end inclined toward the embankment and its rear end on top of fill, fouling the track about 8 feet. The 1st-class coach, the 4th car in train, came to rest in an upright position on its trucks and still coupled to the coach ahead, but with all wheels derailed. The Pullman car, the 5th car in the train, came to rest in an upright position with its front trucks derailed, its rear trucks remaining on the rails and standing at or near where the obstruction had been placed.

At the point of obstruction, 12 inches from the end of rail and 1 inch south of the rail joint, a crescent-shaped piece, about 5 or 6 inches long and about $1\frac{1}{2}$ inches deep, was broken from the inside edge of the base of the left rail. The joint itself was not broken. From the nature of the break it seemed to have been caused by a sudden upward blow along the edge of the base at the point of fracture and the under side of the base of the rail at the fracture had been beveled up, as if from violent friction. The edge of the base for about 5 to 6 inches beyond the point where the rail was broken also had the appearance of some metallic object bearing against the side in an upward motion. About 6 feet south of this joint there appeared a decided downward kink in the left rail, as if from being struck by some heavy body, leading to the belief that it was here the

engine drivers or trucks again came in contact with the rail after passing over the obstruction. The first and second joints in the left rail south of this location remained intact, but the third joint had bolts sheared and angle-bars broken.

The first indication of wheel marks on the ties was on the 7th cross tie south of the point where the obstruction was encountered and about 6 inches from the rail and to the left of both rails. Wheel marks showed plainly on the ties, diverging to the left from that point and extending to the 3rd rail joint ahead, where the rail joint was broken, as described above; from that point the track was almost completely torn off the roadbed for a distance of 6 rail lengths, or 198 feet, the left rail being under the wreckage. Indications were that after the engine trucks had passed over the obstruction, they landed first on the rail, then on the cross ties, making the above described marks, which gradually led to the left until they ran off of the ties on the left side. The next cross tie beyond the broken rail, which was a sound pine tie, was shoved ahead about 7 inches on the left side and showed that some piece of heavy iron had come in contact with it with terrific force, cutting the fibres of the tie about $1\frac{1}{2}$ inches deep from about 6 inches inside of left rail, splintering off to left end of tie and leaving traces of iron rust along the edge of tie for a distance of 25 to 30 inches between the rails from the fractured rail, and indications of some sharp or square edge rubbed across the face and center of tie. The crushed area of this tie was about 6 or 8 inches. About the center of this same tie there

was another cut place in top side of tie about $4\frac{1}{2}$ inches in length and about $\frac{1}{2}$ inch deep; between that and the first mentioned cut place there was a plain indication of iron rust on the top side of tie.

A short time after the derailment a search was made to determine the cause of it, and a Simplex freight car coupler, weighing about 280 pounds, was found about 230 feet south of the point where the piece was broken from the left rail, about 10 to 15 feet to the left of the roadbed, just ahead of parts of demolished tender truck frame. This drawhead bore abrasions about $\frac{3}{4}$ inch deep on its head, where wheel flanges had come forcibly in contact with it, and less prominent scars on the inside face of coupler head and knuckle about the shape of the ball of a rail, as if caused by friction of the ball of rail rubbing through it.

Appearances indicate that this drawhead was placed upon the left rail between the ties, near a rail joint, with the knuckle hooked over the rail and forming a clamp over the ball of the rail, with the guard arm of coupler extending underneath the inside edge of the base of the rail and the shank of coupler projecting toward the middle of the track, the coupler in this position forming a complete derail. This was apparently the only way in which this drawhead could have been securely enough fastened or lodged to have permitted a sufficient number of wheels to pass over it in the same place and cause the flange marks which showed plainly on the back of drawhead. From in-

dications it appears that this drawhead was pushed or dragged along on the left rail until the breaking of the rail-joint permitted this rail to be torn away.

The train sheet shows freight train No. 85 to have been the last train to pass over this track previous to the movement of No. 13, it having left Lilesville at 9.02 p.m., 22 minutes before the departure of No. 13 from that station, and arrived at Wadesboro, 5 miles south of Lilesville, at 9.11 p.m. Inquiry following the accident developed the fact that No. 85 had not pulled out any of its draw-heads, nor had it any cars in its train from the lading of which a draw-head might have fallen. However, the records show that Conductor Bright, of freight train 2nd No. 82 on April 20th, reported the pulling out of a drawhead from a car of pig iron while passing over this section of track, at Mile Post 274.9, the drawhead being left abandoned in the ditch beside the track. There is no record of any similar accident along this section of track between that date and the time of this accident.

Conductor Fountain stated that after leaving Hamlet the engineman had made a running test of the air brakes and they had experienced no difficulty with the brakes between there and the point of accident; nothing unusual occurred and the speed of the train had not been excessive at any time. He said the electric headlight had been burning brightly and he had received no complaint from his engineman concerning it or any of the other equipment. At the time of the derailment he was

standing in the third car from the engine, but on account of the sudden shock, could not state positively whether or not the brakes were applied in emergency prior to the derailment. He said, in the presence of several others, that he had talked with the colored fireman before he died, and that the fireman said he had seen an obstruction on the track and that the engineman saw it about the same time. In company with others, he made as careful examination as could be made of the track to ascertain the cause of the derailment and decided that it was caused by some obstruction between the rails, but did not locate the obstruction before leaving the scene. He had been running with Engineman Hill intermittently for the past 5 years, had always found him reliable and considered him a very careful engineman.

Flagman Porterfield stated that he was riding in the 3rd car from engine. Just before the shock of derailment he felt the emergency brakes applied and thought they were not released from the time they were applied until the train came to a stop as he felt no distinct slackening of the speed until the cars commenced turning over. He said the train was traveling about 40 miles an hour when he felt the emergency brakes go on, looked ahead, saw sparks flying, and reached up and pulled the emergency cord, but there was no response, indicating the brakes were already applied. He heard the fireman make the statement that there was something on the rail and that the engineman had called his attention to it.

Baggage Master Baker recalled looking ahead from the door of baggage car while at Lilesville and saw by the reflec-

tion that the headlight was burning brightly and thought that an obstruction on the track could be seen a distance of 50 yards. The first he knew of the accident the trucks were on the road-bed, the brakes being applied at about the same time.

Express Messenger Sims stated that after being thrown to the floor of the express car he could see the headlight still burning through the back of his car, the express car having been carried ahead of the engine.

Engineman Howie, who was deadheading on train No. 13, riding in the fourth coach from the engine, stated that before leaving Hamlet he had talked with Engineman Hill, who appeared to be in normal condition. He noticed the electric headlight was burning brightly and recalled the running test of brakes after leaving Hamlet. He said the train was traveling at from 40 to 45 miles an hour when he felt a sudden application of the brakes, which he thought was an emergency application and which threw him over his seat, the shock of derailment coming about 5 or 6 seconds later. He said the brakes were applied before reaching the obstruction and the speed of train was much less when the shock of derailment came than it was at the time the brakes were applied. He had passed over the track where the accident occurred on the afternoon preceding the derailment and had observed nothing wrong with the track and considered it in very good condition. He questioned the colored fireman before his death, who informed him that "they ran over something" and that the engineman had seen it.

Conductor Benton, who was deadheading on train No. 13 at the time of the accident, stated that the speed was 45 or 50 miles an hour approaching the scene of accident; he felt the brakes apply about a train length before the crash came. He had passed over this portion of track that afternoon and considered it in very good condition.

Road Foreman of Engines Goodwin, a passenger on train No. 13, stated that he was riding in the smoking compartment of the chair car; the train was running 45 or 50 miles an hour when he felt the brakes were applied in emergency. He estimated the time between application of brakes and stopping of train to have been about 6 seconds and said the speed of the train had been considerably decreased when it reached the obstruction. With Engineman Howie, he questioned the colored fireman, who said that his engineman had seen something on the track. He said that when they examined the engine, the position of the levers indicated that Engineman Hill had applied the brakes, as they found the brake lever in extreme emergency, the throttle closed and the reverse lever set near the center. He examined the engine, inspecting trucks, driving wheels, tires and pedestal, but found nothing wrong with them. He took particular notice of the break in the inside base of the left rail and thought it was broken from the top.

Master Mechanic Price stated that after the accident he made an inspection of the wheels of the engine and tender and found them in good condition. The trucks had been badly wrecked,

but the tie bars were still attached. He was certain that no mechanical defect existed about the engine which might have caused the derailment. He said he found the brake valve in full release position.

Train Master Pritchett stated that he reached the scene of the derailment before any of the wrecked equipment was moved and investigated to determine the cause. He found no drawheads missing from the derailed equipment, but after examining the coupler and tender truck bolster found lying near the track, decided that the coupler was placed on the rail with intent to wreck the train.

Division Engineer Gold described as an upward fracture the point where the piece was broken from the left rail and stated that the marks further along the base of rail indicated an upward pressure by some object. He had passed over this portion of track two days previous to the accident, at which time the alignment and surfacing were in good condition. He thought the drawhead was clamped over the east rail by some unknown party with malicious intent.

Section Foreman Massages stated that on the day of the accident he had worked on the track in the vicinity of the derailment, putting in some new ties, raising and surfacing the track for about 150 feet north of the location of the derailment, finishing his work about 3.30 p.m. He recalled that while working at that point he had noticed an unemployed negro loitering nearby for about three-quarters of an hour. He further stated that, two or three days preceding the accident, he had picked up

a drawhead on the south end of his section, which he had intended taking into Lilesville at sometime when he could follow a train into that station, but, having some work to perform near the point where the derailment later occurred, had loaded the drawhead onto his motor car and carried it to a spot not far from where the rear end of Pullman car stood after the accident. He had unloaded it there, leaving it lying about 18 inches from the ties, and had observed it there on the day of the accident. Several hours after the derailment, when asked to show the superintendent the drawhead he had moved, he took him to the place where he had unloaded it several days before, but could not find it at that location. Asked if he could identify the drawhead, he said he thought he could, and upon being shown the drawhead which was found in the wreckage, identified it as the one he had moved.

A careful inspection was made of all wheels of the derailed equipment, all appearing in good condition and showing but little wear and the investigation brought out that previous to the accident the running gear of the equipment was without defect.

This accident was caused by train No. 13 striking a drawhead which appears to have been placed on the left rail less than one-half hour previous to the passage of the train, by some person or persons unknown, with malicious intent.

Engineman Hill had been employed as an engineman on this road since 1892 and had a good record. He and Fireman

Hammond had been on duty about one hour and fifteen minutes after a 12 hour rest period, while the train crew had been on duty periods ranging from 3 to 6 hours, after periods off duty varying from 14 hours to 17 hours, none in excess of the statutory period.

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