

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT OF THE DIRECTOR
BUREAU OF SAFETY

ACCIDENT ON THE
SOUTHERN RAILWAY

JEFFERSON, ALA.

FEBRUARY 3, 1937

INVESTIGATION NO. 2140

SUMMARY

Inv-2140

Railroad: Southern
Date: February 3, 1937.
Location: Jefferson, Ala.
Kind of accident: Rear-end collision
Trains involved: Freight : Freight
Train numbers: Extra 6615 East : Extra 6681 East
Engine numbers: 6615 : 6681
Consist: 29 cars, caboose : 1 engine (in tow)
29 cars, caboose
Speed: Standing : 4-6 m.p.h.
Track: 8° curve through tunnel; 0.22 percent
descending grade eastward
Weather: Clear
Time: 7:31 p.m.
Casualties: 1 killed
Cause: Failure properly to protect back-up
movement

Inv-2140

March 26, 1937.

To the Commission:

On February 3, 1937, there was a rear-end collision between two freight trains on the Southern Railway near Jefferson, Ala., which resulted in the death of 1 employee.

Location and method of operation

This accident occurred on that part of the Birmingham Division extending between Birmingham, Ala., and Columbus, Miss., a distance of 122.1 miles; in the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders, no block-signal system being in use. The accident occurred in a tunnel within yard limits, at a point 520 feet west of the passenger shelter at Jefferson; approaching this point from the west, there is a reverse curve consisting of a $6^{\circ} 33'$ curve to the right 1,107 feet in length, followed by an 8° curve to the left 1,354 feet in length, the latter curve passing through a tunnel 387 feet long; the accident occurred on this curve about 716 feet from its eastern end and 167 feet east of the western portal of the tunnel. Approaching from the east the track is tangent for 123 feet, then there is a $6^{\circ} 5'$ curve to the left 892 feet in length, followed by 9 feet of tangent track, and then the curve on which the accident occurred. The grade for east-bound trains is descending, being 0.22 percent at the point of accident but ascends for a short distance on a 1.61 percent grade commencing at a point 900 feet east of the Blossburg Branch junction switch.

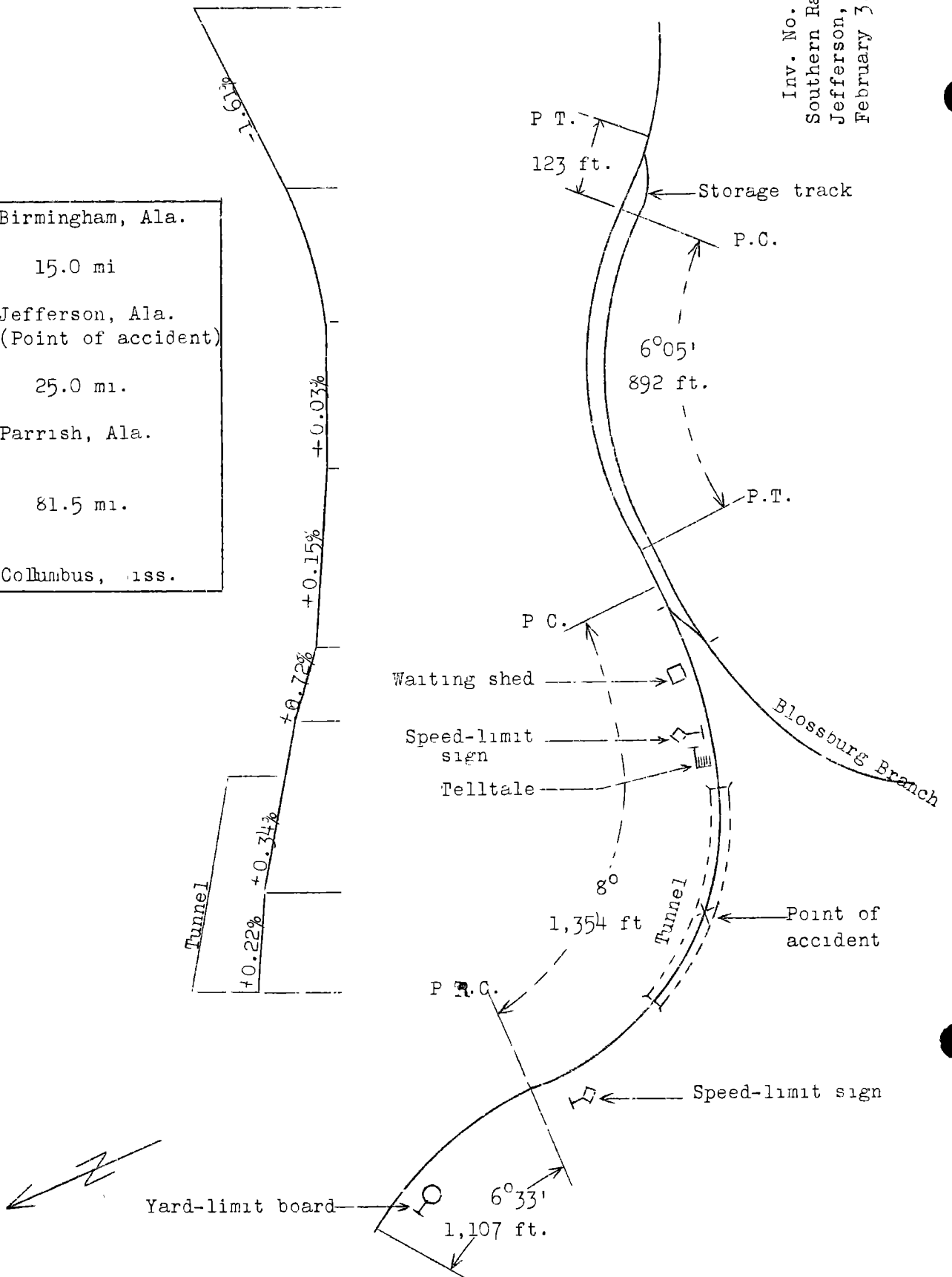
A 6 miles per hour speed-limit board for east-bound trains is located on the south side of the track, 300 feet west of the west portal of the tunnel. Another speed board, located on the north side of the track, 154 feet east of the east portal, limits the speed of west-bound trains to 8 miles per hour.

The west yard-limit board is located 1,708 feet west of the passenger shelter and the east yard-limit board is located 3,310 feet east thereof; train movements within yard limits are governed by rule 93, reading as follows:

"Within yard limits the main track may be used without protecting against second and inferior class trains. Second and inferior class and extra trains or engines must move within yard limits prepared to

Inv. No. 2140
Southern Railway
Jefferson, Ala.
February 3, 1937

o	Birmingham, Ala.
	15.0 mi
o	Jefferson, Ala.
X	(Point of accident)
	25.0 mi.
o	Parrish, Ala.
	81.5 mi.
o	Columbus, Miss.



stop unless the main track is known or seen to be clear. When the view is obstructed additional precautions must be taken. In case of accident the responsibility will rest with the approaching train."

The Blossburg Branch diverges from the main track in a southwesterly direction at a point 177 feet east of the passenger shelter; the switch-stand is equipped with a switch-lamp, and the switch target is 6 feet 6 inches above the head block; night indications are green when the switch is normal and red when lined for the Blossburg Branch; however, the switch light was not burning at the time of the accident.

A storage track parallels the main track on the south and merges with the Blossburg Branch at a point 259 feet west of the junction switch; the east end of the storage track joins the main track 1,012 feet east of the junction switch.

It was dark but the weather was clear at the time of the accident, which occurred about 7:31 p.m.

Description

Extra 6615, an east-bound freight train, consisted of 29 cars and a caboose, hauled by engine 6615, and was in charge of Conductor Sapp and Engineman Vaughn. This train departed from Columbus at 2:30 p.m., and departed from Parrish, 25.6 miles west of Jefferson, at 6:20 p.m., according to the train sheet, and was approaching the tunnel at a speed of 5 or 6 miles per hour when the caboose of Extra 6681 was seen in the tunnel; Extra 6615 had just stopped when the caboose ahead was backed into it.

Extra 6681, an east-bound freight train, consisted of 1 engine in tow, 18 cars and a caboose, hauled by engine 6681, and was in charge of Conductor Ray and Engineman Norris. This train, a local turn-around freight train, originated at Birmingham Yard and at the time of departure was hauled by engine 777 and was engaged in filling out at Jefferson Junction when engine 777 became disabled. Relief engine 6681, in charge of Conductor Caldwell and Engineman Reynolds, was dispatched from Birmingham Yard and on arrival at Jefferson Junction was turned over to Conductor Ray and Engineman Norris at about 6:30 p.m. After engine 6681 had coupled ahead of the disabled engine an attempt was made to pull the train out of the Blossburg Branch, but it became stalled when the caboose had reached a point approximately 150 feet east of the junction switch; a cut was then made and 5 cars were set out in the

storage track. After the engine had been recoupled, another attempt was made to start the train but after moving only a few car lengths it stalled a second time; a back-up movement was then made in order to get a run for the hill and while backing at a speed of from 4 to 6 miles an hour the caboose collided with Extra 6615 in the tunnel.

The caboose of Extra 6681 was practically demolished and immediately caught fire; the caboose trucks and rear truck of the car ahead were shoved forward under that car, the forward truck of which remained on the rails. The north rail was turned over and the left engine-drivers rested with their flanges in the rail web; the right drivers remained on the rails; the engine truck was entirely derailed and the pilot of the engine rested against the rear end of the gondola, practically destroyed.

The employee killed was the flagman of Extra 6681 who was in the caboose.

Summary of Evidence

Engineman Vaughn, of Extra 6615 East, stated that the air brakes were tested and worked properly en route and when approaching the west yard-limit board at Jefferson the speed was 6 or 8 miles per hour, which was further reduced to such an extent that it became necessary to work steam up to within 5 or 6 car lengths of the west portal of the tunnel, the engine entering the tunnel at a speed not exceeding 6 miles per hour; as his engine cab passed under the arch the fireman and brakeman shouted: "caboose ahead", and at the same time he observed the lighted markers and immediately applied the air brakes in emergency and it was his opinion that his train was stopped at the time of impact. He also stated that he was operating his train in accordance with yard rules and that if the caboose had been standing instead of moving the accident would not have occurred. He said that there was no one in sight on the caboose and he believed that had a flagman been on the rear platform and had applied the brakes on that train in emergency, the accident could have been avoided and also that if a fusee had been burning on the rear of the caboose he would have seen its reflection on the tunnel walls. On previous occasions when the tunnel was occupied under similar circumstances he had always found trains properly protected.

Fireman Kelso and Brakeman Christian, of Extra 6615 East, said that approaching the tunnel they were maintaining a lookout from the left seat-box. The speed was from 4 to 6 miles per hour and their first intimation of impending danger was

when their engine cab entered the tunnel. The lighted markers ahead came into view at a distance of about two and one half car lengths. A warning was shouted to their engineman who immediately applied the air brakes in emergency. They estimated the distance that their engine traveled after the brakes had been applied at not more than two car lengths and said that it was stopped at the time of the crash. Brakeman Christian was of the opinion that the caboose was shoved into his train. They both stated, however, that the accident could have been avoided by prompt application of brakes on the train ahead.

Conductor Sapp and Flagman Handy, of Extra 6615 East, who were in the cupola of the caboose, stated that the speed of their train was between 4 and 6 miles per hour at the time their engine entered the tunnel. Shortly thereafter the brakes were applied in emergency and the train stopped within a car length; this was their first intimation of anything wrong. They both said that their train was being operated in compliance with rule 93, and it was their understanding that trains backing into the tunnel should have flag protection.

Conductor Caldwell, who was deadheading on the caboose of Extra 6681 East, stated that as the train was leaving Jefferson Junction, he caught the rear of the caboose behind Flagman Faulkner after the flagman had lined the main-track switch. After moving about 2 car lengths the train stalled and Flagman Faulkner went towards the head end; the train then backed westward and stopped with the caboose about a car length west of the Blossburg Branch switch and when the flagman returned he said that 5 cars had been set off to reduce tonnage. Both he and Flagman Faulkner then became occupied inside the caboose writing reports and paid no further attention to the movement of the train. Conductor Caldwell's first intimation of the approach of Extra 6615 was when Flagman Faulkner called it to his attention; it was then that he discovered that the caboose was in the tunnel, and the approaching headlight appeared to be directly above him. He immediately jumped from the rear platform and the collision occurred as he struck the ground. He thought that the caboose was moving at the time Flagman Faulkner warned him and he did not notice any application of the brakes before he jumped. He had known Flagman Faulkner for thirty years and considered him to be a safe and competent employee and he appeared to be normal in every respect.

Statements of Messenger Engineman Reynolds and Fireman Lane, of Engine 777 in tow, were to the effect that the train was backing at a speed of between 5 and 8 miles per hour at the time of collision and neither noticed an application of the brakes prior to the impact, and felt only a slight rebound as a result of the collision. Engineman Reynolds said that

he was not aware that the train was backing up the main line until his engine reached the Junction switch.

Conductor Ray, of Extra 6681 East, stated that after reducing the train Flagman Faulkner, who was at the head end at the time, stated that he was going to back the train into the Blossburg Branch. An understanding was had to this effect and also that when the flagman reached the rear he would give a back-up signal. A few minutes later, upon receiving a signal from the rear, the back-up movement was made at a speed not exceeding 5 miles per hour. He was on the fireman's side of the engine in tow at this time and could not see the caboose markers but assumed the movement was being made into the Branch. He did not realize his train had backed on the main track beyond the Blossburg Branch until the impact occurred, at which time the engine on which he was riding was near the Junction switch. He said that Flagman Faulkner had been his flagman for 4 years and he considered him to be a competent man upon whom he could depend.

Engineman Norris, of Extra 6681 East, stated that after the cars had been set out, Flagman Faulkner came to him and said that if the train stalled again, to back in upon the Blossburg Branch as far as possible to get a start for the grade ahead and not to stop to pick him up at the switch; the train could be stopped over the hill and the flagman would walk to the caboose. After attempting to start the train it moved but a few car lengths when it stalled; the engineman then sounded the back-up signal which was acknowledged by a lamp signal from someone on the ground near the rear of the train. He then started the back-up movement at a speed of 3 or 4 miles per hour, thinking that the train was backing into the Blossburg Branch. He could not see in the direction of the caboose at this time on account of the smoke drifting down from the engine in tow, immediately behind his own engine, and he was also kept busy operating the throttle lever, due to his engine slipping. He believed that his train backed into Extra 6615 and said that had Flagman Faulkner been on the rear platform of the caboose, the accident would have been averted. The statements of Fireman Wethington, of Extra 6681 East, corroborated those of Engineman Norris.

Brakeman Whitley, of Extra 6681 East, stated that when his train stalled a short time prior to the accident, he was on the left side of the engine in tow; he crossed over to the right side of the engine and observed the markers on the caboose but did not see any signals given from the rear. He thought that his train was backing into the Blossburg Branch until after the accident occurred. He estimated that the speed was not in excess of 5 miles per hour while backing up

and it was his opinion that his train backed into Extra 6615. He also stated that before the back-up movement began, his understanding with Flagman Faulkner was that the train was to be backed into the Blossburg Branch.

Discussion

The evidence indicates that Extra 6615 was being operated within yard limits as prescribed by rule 23, this train having stopped before the collision occurred. The evidence also indicates that Extra 6691 was backing up at a speed of from 4 to 6 miles per hour and that Flagman Faulkner was inside the caboose during this movement. Rule 103 of this railroad requires that when cars are being pushed by an engine, except when shifting or making up trains in yards, a trainman must take a conspicuous position on the front of the leading car. The exception covers the making and breaking up of trains only and not extended movements within yards. Had some member of the crew been alert, on the rear of the train, it appears that the train could have been brought to a stop before the collision occurred; why Flagman Faulkner failed to comply with this requirement is not known. The evidence indicates that before the last forward move was made he had had an understanding with employees on the head end of the train that if the train stalled it would be cacked in upon the Blossburg Branch to get a start for the hill. He lined the switch for the main track, entered the caboose, and then it appears, he failed to follow the further movement of his train. Whether he overlooked the fact that the switch was lined for a main-track movement or whether he failed to realize that the train was moving backward until he noticed the approaching headlight, was not determined as he was killed in the accident.

This Bureau has investigated many accidents which occurred within yard limits due to failure properly to observe the requirements of rule 93. Some of these instances involved yard limits that extended several miles in length and included portions of track over which, with no requirement in effect except the provisions of rule 93, approaching trains could not move with safety other than under flag protection. Removing the requirements for flag protection, and at the same time not strictly enforcing the provisions of the rule intended to insure safety under these conditions, causes a serious situation. Yard limits should be made as short as practicable and should not include sections of track where the provisions of the rule governing movement of trains entering such sections are difficult or impossible to enforce.

In the accident here under investigation, if the provisions of rule 93 relative to taking extra precautions when the view is obstructed, were literally observed, all trains passing through Jefferson tunnel should be preceded by a flagman, yet the authorized speed for trains through the tunnel is 8 miles per hour for west-bound trains and 6 miles per hour for east-bound trains which indicates that it was not intended that the provisions of rule 93 should be literally observed by trains making this movement.

During the 30-day period immediately preceding the date of this accident there was an average daily movement of 17.8 trains. Traffic of such density justifies serious consideration of the need for added protection which would be afforded by the block system.

Conclusion

This accident was caused by failure of Extra 6681 to be properly protected during a back-up movement.

Recommendations

It is recommended that serious consideration be given to the need for the block-signal system on this portion of the railway.

Respectfully submitted,

W. J. PATTERSON,

Director.