

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT WHICH OCCURRED ON THE LOUISVILLE & NASHVILLE
RAILROAD AT WALD, ALA., ON SEPTEMBER 29, 1932

November 4, 1932.

To the Commission.

On September 29, 1932, there was a head-end collision between a passenger train and a freight train on the Louisville & Nashville Railroad at Wald, Ala., which resulted in the death of 3 mail clerks and 2 employees, and the injury of 9 passengers, 1 mail clerk, 5 employees of the railroad and 4 Pullman employees.

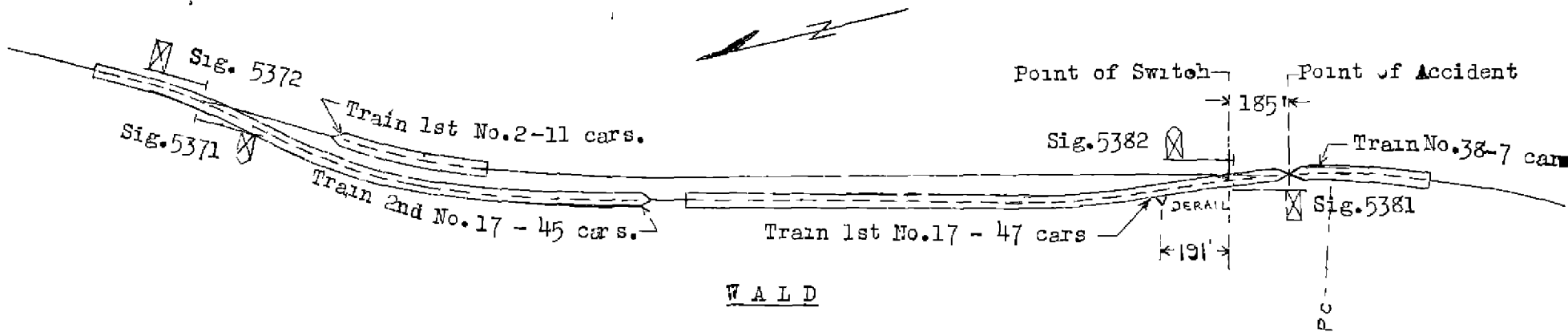
Location and method of operation

This accident occurred on that part of the Montgomery & New Orleans Division extending between Montgomery and Sibert, Ala., a distance of 178.13 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by time-table, train orders, and an automatic block-signal system. The point of accident was 185 feet south of the south passing-track switch at Wald, approaching from the south, the track is tangent for more than $1\frac{1}{2}$ miles, followed by a 10° curve to the left 1,905 feet in length and then 2,408 feet of tangent, the point of accident being on this latter tangent 80 feet beyond the leaving end of the curve. The grade is generally ascending for northbound trains, and is 0.75 per cent ascending at the point of accident.

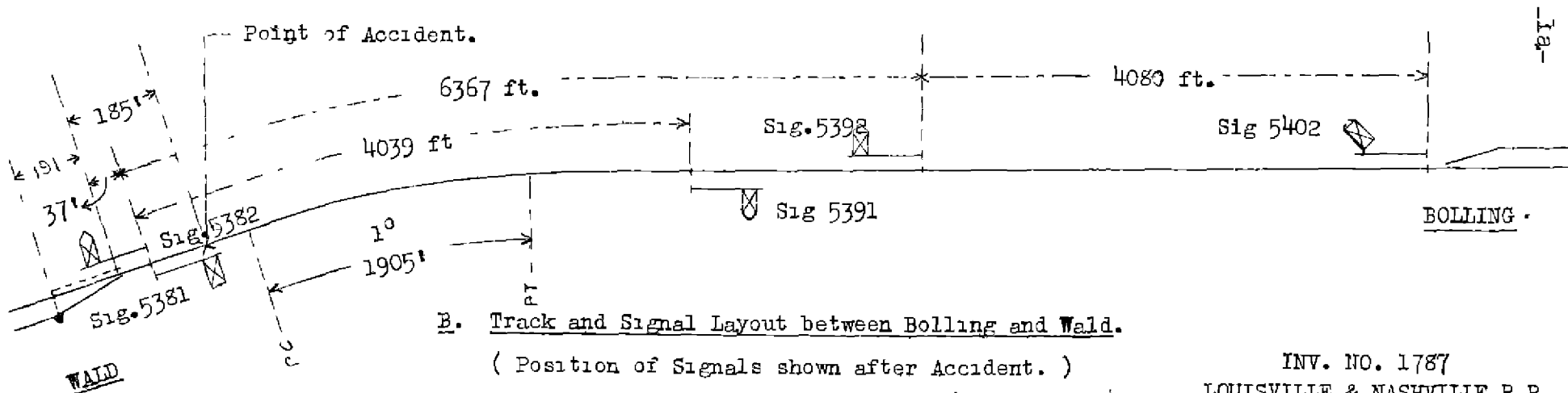
The signals involved are of the three-position, upper-quadrant type, operating on the absolute-permissive-block principle and displaying red, yellow and green for stop, caution and proceed, respectively. Southbound absolute signal 5381 is located 37 feet south of the south switch, with southbound intermediate signal 5391 located 4,039 feet farther south. Northbound permissive signal 5382 is opposite signal 5381 and northbound intermediate signal 5392 is 6,567 feet farther south, while northbound absolute signal 5402, located at Bolling, a station 3.03 miles south of Wald, is 4,080 feet south of signal 5392. The signals are approach lighted.

The passing track at Wald is on the west side of the main track and is 3,401 feet in length. There is also a highway crossing 703 feet south of the south switch. The view of signal 5382 for the engine crew of a northbound train is restricted across the inside of the curve to about 1,650 feet.

The weather was cloudy and day was breaking at the time of the accident, which occurred about 5.22 a.m.



A. Approximate location of trains at time of accident.



B. Track and Signal Layout between Bolling and Wald.

(Position of Signals shown after Accident.)

INV. NO. 1787
 LOUISVILLE & NASHVILLE R.R.
 WALD, ALA.
 September 29, 1932

Description

Southbound second-class freight trains first and second No. 17 waited at Greenville, Ala., for train No. 98, and as soon as it arrived, train first No. 17, consisting of 47 cars and a caboose, hauled by engine 1855, in charge of Conductor B. C. Capell and Engineman Phillips, departed, at 4.35 a.m., according to the train sheet, 7 hours and 30 minutes late, without any orders on train first No. 2, at Wald, the next station, 5.73 miles distant, this train went in on the siding, to meet trains first No. 2 and No. 38, scheduled to pass that point at 4.53 a.m. and 5.11 a.m., respectively.

Train second No. 17 consisted of 45 cars and a caboose, hauled by engine 1739, and was in charge of Conductor Brazil and Engineman Pendergrass. After train No. 98 had departed from Greenville, thus enabling train second No. 17 to pull out on the main track, the crew of this train received train order No. 21, form 19, addressed and reading as follows:

"C&E Second No. 17
C&E First No.17 bet Greenville & Georgiana % 2/17

First No 2 Eng 278 wait at Chapman until Five Two
502 am at Bolling until Five Seven 507 am for First
and Second No. 17 Engs 1855 and 1739
Holt
Recd 4 30 am Comp 4:30 am Phillips Opr."

They also received a message addressed and reading as follows:

"C&E 1/2/17 Fd G 438 am
1/2/17 will not go to the same place for 1/2 - 38
if for any reason 1/17 is in siding, and cannot get
away for 1/2 and 38 - 1/2/17 will reverse positions.
DBH"

Additional copies of the order and message were given to Engineman Pendergrass for delivery to the crew of train first No. 17. Train second No. 17 then departed, at 4.45 a.m., 7 hours and 40 minutes late, according to the train sheet, and on arrival at Wald it pulled down on the main track to the south switch where the engineman delivered the copies of the order to the engineman of train first No. 17. The latter train at once started to depart from Wald, but when it was entirely out on the main track the brakes were applied by Conductor Capell, who had not received a copy of the order. Unable to proceed farther due to the passage of time, train first No. 17 then backed in on the siding, the second section backed up on the main track and headed in at the north switch, coming to a stop behind the first section with its caboose and 12 or 15 cars standing out on the main track. The head brakeman of the second section was sent out to protect that train against trains first No. 2 and No. 38. .

Northbound passenger train first No. 2 consisted of 11 cars, hauled by engine 278, and was in charge of Conductor Hughes and Engineman Urquhart. It left Georgiana, Ala., the last open office, 9.44 miles south of Wald, at 5.04 a.m., according to the train sheet, 27 minutes late, and upon approaching Wald found signal 5392 displaying a caution indication and then was flagged, and found signal 5382 at stop. The engineman was informed of the necessity of sawing by the two sections of train No. 17 and pulled down the main track and stopped near the north switch.

As soon as train first No. 2 was clear of the south switch, train first No. 17 again started to head out, this time for the purpose of sawing by train first No. 2, but it had reached a point only 185 feet south of the switch when it was struck by train No. 38.

Northbound passenger No. 38 consisted of 1 mail car, 1 club car, and 5 Pullman sleeping cars, all of steel construction, hauled by engine 235, and was in charge of Conductor Wilson and Engineman Cowell. This train passed Georgiana at 5.14 a.m., according to the train sheet, 13 minutes late, passed signal 5392 at caution, passed the flagman from train second No. 17, and collided with the head end of train first No. 17 while traveling at a speed estimated to have been between 50 and 60 miles per hour.

Both engines remained upright and were not derailed, although they were very badly damaged. The tender of the passenger engine came to rest opposite the tender of the freight engine, while the mail car stopped on its left side about 40 feet from the track and was practically demolished. The club car was derailed to the left and considerably damaged and the first sleeping car was partly derailed. The first two cars in the freight train were thrown clear of the track, one being demolished and the other badly damaged.

The employees killed were the engineman of train No. 38 and the head brakeman of train first No. 17, those injured were the fireman, conductor, and flagman of train No. 38 and the engineman and fireman of train first No. 17.

Summary of evidence

Conductor B. C. Capell, of train first No. 17, said that when train second No. 17 arrived at Wald it stopped with its caboose opposite his own caboose and the conductor of that train said he had a wait order on train first No. 2 and a message telling him to run around train first No. 17, but nothing was said about train first No. 17 being included in the wait order. Conductor Capell's train then started to pull out, but when the caboose passed the engine of train second No. 17 and he still had not received any orders, Conductor Capell applied the brakes and brought his train to a stop, at 5.03 or 5.04 a.m. He went back to the engineman of the second section, who showed him a copy of train order No. 21. However, it was then too late

to proceed to Bolling, and his engineman sounded a pick-up whistle and backed in on the siding. Conductor Capell riding the caboose instead of getting off and remaining near the south switch so that he could supervise and help in making the movements he knew would be necessary in connection with sawing-by the two passenger trains, for so far as he knew, unless he went to the head end, his head brakeman would have to flag both of those trains as well as handle the switch. After his train had backed in on the siding, he started toward the head end but by the time he had gone only three or four car-lengths train first No. 2 had arrived, at 5.18 or 5.19 a.m., and his own train had started to head out again, in front of train No. 38.

Engineman Phillips, of train first No. 17, said signal 5381 was in proceed position when he headed out on the main track the first time, that it remained at proceed until his own engine passed and caused it to go to stop position, and that it changed back from stop to proceed as soon as his train had backed in again on the siding. Shortly afterwards this signal again went to stop, due to the presence of train first No. 2 in the block, and after that train had arrived the signal went back to the proceed position. Engineman Phillips then started out with the intention of sawing-by train first No. 2, and he said the signal remained in proceed position until his own engine again caused it to go to stop position. In the meantime he had told Head Brakeman Bawl, of his train, to flag train No. 38 and hold it until they could saw-by train first No. 2, but about the time train first No. 2 arrived, Head Brakeman Bawl returned to the engine and said he had an understanding with Head Brakeman Thornton, of train second No. 17, who had flagged train first No. 2, that the latter would hold train No. 38 until the freight trains could saw by train first No. 2 and that Head Brakeman Bawl was to handle the switch and pass signals. Engineman Phillips himself had not talked with Head Brakeman Thornton nor could he see him flagging against train No. 38 and he supposed that the head brakeman was around the curve out of sight. In a subsequent statement made about two weeks after the accident, Engineman Phillips said he received from the engineman of train second No. 17 two copies of the order and also one copy of the message, all pinned together; that he then started for Bolling, and that it was when he was stopped after getting the entire train out on the main track that he instructed Head Brakeman Bawl about flagging, the head brakeman getting off the engine at that point with his flagging equipment. After backing in on the siding, however, he saw the head brakeman close the switch and then heard of the understanding with Head Brakeman Thornton. When starting out the second time, after the arrival of train first No. 2, signal 5381 was at proceed and changed to stop when his engine passed it, although he said he could not tell whether it was his engine or train No. 38 that was the first to foul the block. In either event, however, he proceeded a few car-lengths and then stopped, thinking he had pulled ahead far enough to allow the second section to clear the main track at the north end of the siding, and he then called his head brakeman to the engine and told him to get up on the train so he could see signals, and according to this subsequent statement of Engineman Phillips,

he had been standing at this point a period of three, four, or five minutes before he looked around and saw train No. 38 approaching.

Fireman Hestle, of train first No. 17, said that shortly after the second section arrived his own train started to pull out, the engineman telling him they had a wait order on train first No. 2. After the train had been stopped by the conductor, Engineman Phillips told Head Brakeman Bawl to protect against train first No. 2, this being at 5 a.m., but before the head brakeman started, the train began to back up and the brakeman rode back with the train. After the arrival of train first No. 2, Engineman Phillips signalled Head Brakeman Bawl to open the switch and the train again started to pull out under a proceed signal indication and on the time of train No. 38. Fireman Hestle did not know whether his train had any protection against train No. 38 but took it for granted that the brakeman from train second No. 17 was protecting them, as he had seen that brakeman talking with his own head brakeman. Train first No. 17 had proceeded but a very short distance when Engineman Phillips sounded the whistle and after seeing the expression on the engineman's face as he prepared to get off the engine, Fireman Hestle jumped from the left side without having seen or heard train No. 38 approaching.

Engineman Pendergrass, of train second No. 17, said he left Greenville at 4.43 a.m. and when passing the office his brakeman gave him two sets of orders, one for his own train consisting of two orders and a message, and one for the crew of train first No. 17 consisting of two orders. The latter set being pinned together he did not notice that he held the conductor's copy as well as the engineman's copy, and consequently upon his arrival at Wald he proceeded directly to the south switch, reaching there at 4.55 a.m., delivered the orders to Engineman Phillips and told him about the message, but did not give him a copy although he had two copies of the message pinned to his own orders. Train first No. 17 then started to proceed, was stopped by its conductor, and backed in again on the siding. Before it got back in the siding Engineman Pendergrass instructed Head Brakeman Thornton of his own crew to go out and protect him against a saw with trains first No. 2 and No. 38, and then backed his own train down the main track and headed in at the north switch behind train first No. 17, expecting to saw by the two passenger trains at the same time, although he had not discussed the movement with the conductor of either of the two freight trains. Engineman Pendergrass further stated that he had supposed the orders for the conductor of train first No. 17 would be delivered by his own conductor, it not being customary for both copies of the order to be delivered by the engineman, although he had done so in the past.

Fireman Saugh added nothing except that there had been times when train orders for delivery to a train at an outlying point had been thrown off in passing, although under the rules he thought that where an engineman had both copies of the

order he should make delivery to the conductor and also the engineman of the train for which the orders were intended.

Head Brakeman Thornton, of train second No. 17, said that after train first No. 17 had started to back in on the siding he was instructed by his own engineman to flag the two passenger trains. He got off his engine, which was then backing up on the main track, and started southward and as he neared the switch he saw Head Brakeman Bawl close it, and he also saw the signal go to stop position. Head Brakeman Bawl had only a white lantern with him and remarked that he was going to get his signals as he also had to flag a train. Head Brakeman Thornton did not have any further conversation with him nor was there any agreement or understanding of any kind. Head Brakeman Thornton proceeded southward and on reaching the 30-car-length board, which is 1,325 feet south of the switch, he placed one torpedo on the rail and then returned to the highway crossing 703 feet south of the switch. He heard train first No. 2 whistle, supposedly for the intermediate signal, and lit a fusee. His flag was answered and the train passed him at a speed of about 15 miles per hour, stopping at the signal at the south switch. Head Brakeman Thornton had given the engineman a saw-by signal but fearing this signal might not have been understood he started in toward the engine to tell the engineman the reason for flagging him. Before he reached the engine, however, the train started ahead and Head Brakeman Thornton then started back to flag train No. 38. As soon as train first No. 2 had cleared the switch, however, he heard train first No. 17 start to head out while at about the same time he saw the reflection of the headlight of train No. 38 and also heard its whistle. He had not been instructed to flag for train first No. 17, but nevertheless he at once began to travel faster, at the same time lighting a fusee, and was between the 30 and 40-car-length boards when train No. 38 passed him at a speed of 50 miles per hour. Without acknowledging his stop signals, he had not placed a torpedo on the track for train No. 38 as there had not been time to do so.

Conductor Brazil, of train second No. 17, said he held only one copy of the order and message in question, and that with the time at his disposal when he left Greenville he felt he could comply with the instructions he had received, at the same time observing the operating rules, and have sufficient time to enable him to go to Wald, where his train could remain if the first section had gone, and if the first section had not departed from that point, then his own train would be able to proceed to Bolling. On stopping at Wald at 4.55 a.m., he told Conductor Capell about the order and the message and said he did not have any copies of them for delivery. Conductor Capell told him to go ahead but Conductor Capell's own train then started to move, subsequently being stopped and backed in on the siding, while Conductor Brazil's train backed up and headed in at the north switch, leaving about 15 cars and the caboose on the main track. Conductor Brazil then went to a telephone to enquire as to the location of train No. 38.

Flagman von Beeberg added nothing of importance except that he said he personally had the idea when they left Greenville that neither of the two freight trains could go beyond Wald and that they would have to saw by the two passenger trains at that point, and he said he expressed this opinion to the conductor, who made no reply. He also said it was customary to accept a message over the dispatcher's signature as sufficient authority for exchanging signals at an outlying point.

Engineer Urquhart, of train first No. 2, said signal 5392 was in the caution position, that he acknowledged it and reduced speed, and was told by his fireman that he was being flagged and that signal 5382 was at stop. He also ran over a torpedo and then saw the flagman with a lighted fusee, passing the flagman at a speed of 6 or 8 miles per hour and receiving a saw-by signal; it was about 5.18 a.m. when he was flagged. Engineer Urquhart said he stopped at signal 5382 but did not whistle out a flag, figuring that the flagman who had flagged him could also flag train No. 38 and would protect the saw-by. He then pulled down between the switches and stopped again.

Conductor Hughes, of train first No. 2, said his train had been delayed by signal trouble some distance south of Wald, that he had instructed his flagman to be on the lookout for train No. 38, and that he had seen him throw off lighted fusees at stations 25 miles or more south of Wald. His train was flagged at Wald about 5.17 a.m. and when it had cleared the south switch by about three car-lengths he saw train first No. 17 start to pull out. At that time signal 5381 was displaying a proceed indication, changing at once to a stop indication, but he could not tell whether this was due to the presence of train No. 38 in the block or to the engine of train first No. 17 entering the block.

Flagman Baughman, of train first No. 2, heard his engineer answer the intermediate signal south of Wald and then answer a flag, but although he knew his train was on the time of train No. 38 he made no attempt to throw off a fusee, saying that he had only two fusees left and was saving them for an emergency. He was on the rear of his train when it passed the south switch and he said signal 5381 was displaying a stop indication, that it started to clear and then changed immediately to stop again, indicating that train No. 38 might be in the block, at this time train first No. 17 was beginning to move out of the siding.

Fireman Lewis, of train No. 38, who was badly injured in the accident, made a brief statement in which he said he was firing the engine and did not know whether the engineer acknowledged the signal indications, neither did he remember seeing a flagman or signals of any kind, in fact, he did not remember approaching Wald. Fireman Lewis also stated that so far as he knew the brakes had worked properly and that the engineer had appeared to be in his usual physical condition.

Conductor Wilson, of train No. 38, who was riding in the club car, said the train was traveling at a very good rate of speed and that he felt the brakes applied in emergency just before the accident occurred. He had heard the engineer sound the whistle between Bolling and Wald but could not say whether it was a road crossing signal or an acknowledgment of the intermediate block signal.

Flagman Goodwin, of train No. 38, also heard the whistle sounded when approaching Wald and he estimated the speed of the train to have been about 50 miles per hour when the brakes were applied just before the accident occurred. The rear of his train stopped on the cattle guard north of the highway crossing and he saw Head Brakeman Inornton about 110 steps south of the crossing; the brakeman had red and white lanterns but did not have a fusee with him at the time.

Train Dispatcher Bowen said trains first and second No. 17 were at Greenville for train No. 98 and that he could not give them any orders until he had heard from that train. After hearing from it he could not advance the two freight trains but figured that train No. 98 would arrive at Greenville at 4.31 a.m. and knowing that train first No. 17 was in the south siding, where a train order could not be delivered, and also knowing that they would depart as soon as train No. 98 arrived and go to Wald for trains first No. 2 and No. 58, he issued train order No. 21 and made it complete at 4.30 a.m., with the idea in mind that train second No. 17 would get out of Greenville not later than 4.38 or 4.40 a.m., with sufficient time to go to Wald, deliver the order to the crew of first No. 17, and thus enable that train to proceed to Bolling. At 4.38 a.m. he issued the message previously referred to. Dispatcher Bowen said that when train order No. 21 was issued he also sent a copy of it on Form 31 to train first No. 2 at Georgiana, although the train was then at Evergreen, an open office farther south, and did not depart from Evergreen until 4.32 a.m.; the result of this was that the order was made complete to the inferior train without his having the signature of the crew of the superior train, and, as a matter of fact, the superior train did not get the order for the reason that it was subsequently annulled, the time specified in the order having expired. The dispatcher said there was doubt in his mind as to whether the order and message could be complied with, yet when at 4.40 a.m. he had not heard from the operator at Greenville that the second section had departed it did not occur to him that the time would be short for making the movements he had contemplated and consequently he made no attempt to hold train second No. 17 at that point, later he said that he would have held the train had he known it would not get away before 4.45 a.m.

Operator Phillips, on duty at Greenville, said that two copies each of the order, message, and clearance card for train first No. 17 were pinned together and given to the engineer of train second No. 17, separate from his own orders, as is customary when sending orders for delivery to another train at an outlying point. He also said that it was the duty of the

engineer then to separate the orders and give one copy to the conductor and the other copy to the engineer of the train addressed. Operator Phillips further stated that the contents of the message with respect to changing signals were in the nature of special instructions which conflicted with the rules, and that the book of rules provides that when there is such a conflict the special instructions will govern, subsequently, however, he said that with neither train disabled they would not have the right to exchange orders and signals at an outlying point without authority from the dispatcher on the form provided for the purpose.

Signal Maintainer Cowart said the signals at Bolling and Wald had been operating properly since July, 1930, and that he had inspected them thoroughly only six days prior to the accident. He proceeded to the point of accident from Georgiana and found signal 5402 at caution, while stop indications were displayed by signals 5392, 5382, 5391, and 5381. None of the signal wires had been broken and after the track had been cleared and some rail bonds renewed he made tests of the signal apparatus and found everything working properly.

Signal Supervisor Baker arrived at the scene about four hours after the occurrence of the accident and confirmed the statement of Signal Maintainer Cowart concerning the indications which were displayed by the northbound signals.

Conclusions

This accident was caused primarily by the failure of all concerned to provide adequate flag protection against train No. 38; by the failure of Engineer Phillips, of train first No. 17, properly to observe and obey the stop indication of absolute signal 5381, and by the failure of Engineer Cowell, of train No. 38, properly to observe and obey the caution indication of intermediate signal 5392.

Engineer Phillips said signal 5381 was in the proceed position until his engine passed it and his fireman said it was at proceed when the movement was started, but the flagman of train first No. 2, who was in position to observe the signal and the movement of train first No. 17, said that after the rear of his train had passed, he saw signal 5381 start to go to the proceed position and then return immediately to stop, probably due to the presence of train No. 38 in the block. Furthermore, evidence was afforded by the A.P.B. signal system itself, as follows: The signals involved were functioning properly in connection with the movements made by trains first No. 17 and first No. 2 prior to the time Engineer Phillips started out on the main track the second time, they were observed to be displaying the proper indications very shortly after the occurrence of the accident, and subsequently were given careful examination and test which showed the signal system to be in first-class condition, after the accident signal 5402 at Bolling was in caution position, and signal 5391 in stop position, which is conclusive evidence that train No. 38 passed signal 5392 before Engineer

Phillips' engine passed signal 5381; in other words, train No. 38 was half way through the block before train first No. 17 entered the block. Had train first No. 17 been the first to enter the block, signal 5402 would have been at stop after the accident and signal 5391 at proceed. The elements of time and distance involved also confirm this fact. The distance between the southbound absolute signal at Wald and the northbound absolute signal at Bolling is about 2 miles, the accident probably occurred within three minutes after train first No. 2 cleared the block and train first No. 17 had proceeded into the block a distance of only 143 feet before the accident occurred, while at the same time train No. 38 had traveled nearly the full distance of 2 miles from Bolling to Wald, it is therefore apparent, even after making allowance for the high rate of speed of train No. 38, that that train must have been well inside the block before train first No. 17 entered it. There is no evidence whatever to support the subsequent statement of Engineman Phillips that he had been standing on the main track three, four, or five minutes before the accident occurred.

With respect to flag protection, Engineman Phillips said he told Head Brakeman Bawl to flag train No. 38 and to hold it until after the two sections of train No. 17 had completed their saw-by with train first No. 2, and that his head brakeman returned to the engine with the statement that he had an understanding with Head Brakeman Thornton, of train second No. 17, that the latter would hold train No. 38 while Head Brakeman Bawl handled the switch and passed signals; Head Brakeman Thornton denied that he had any such understanding and Head Brakeman Bawl was killed in the accident. Engineman Phillips, however, knew train No. 38 was overdue, he was in position to exercise full control^{over} and was responsible for the protection afforded the head end of his own train, and it was incumbent on him either to arrange for his own protection by a member of his own crew or else personally to supervise and approve any other arrangement which might be desirable or necessary.

Engineman Cowell, of train No. 38, failed properly to observe and obey signal indications as well as the flagman's stop signals. As previously stated, the signal system is believed to have been operating properly, and because of the presence of train first No. 2, in the block ahead, Engineman Cowell must have received a caution indication at signal 5392. His actions then should have been governed by the provisions of bulletin No. 40, effective September 1, 1934, reading as follows:

"A train passing an automatic or interlocking signal indication caution must reduce speed to not exceed one-half the maximum speed authorized at point involved, but not exceeding thirty miles per hour, prepared to stop at next signal."

It can not be stated definitely whether Engineman Cowell sounded the required whistle signal in acknowledgment of the caution automatic signal indication, but apparently he did not acknowledge the flagman's signals and there was no application of the brakes until a very few seconds before the accident occurred, in addition, at the high rate of speed at which he was operating his train Engineman Cowell could not possibly have obeyed the stop indication of signal 5662. Engineman Cowell was a man of long experience, having had more than 47 years in engine service, and an only entry appearing on his discipline record for the past 25 years had to do with exceeding the speed limit over a drawbridge. So far as known, he was in normal condition prior to the accident, but as he was killed in the accident no explanation can be offered as to why he did not observe or obey the caution signal indication, at the time of this investigation his fireman was not in condition to give information on this point.

Head Brakeman Thornton, of train second No. 17, had been instructed by Engineman Pender, pass to protect against the two passenger trains, and the head brakeman flagged the first one and then came in toward the switch for the purpose of notifying the engineman of the reason for flagging him. When the train proceeded, however, the head brakeman started back and when he heard train first No. 17 start to head out on the main track and about the same time saw the reflection of the headlights of train No. 38 and heard its whistle, he began to run, shouting a whistle, and continued until train No. 38 passed him at a high rate of speed and without answering his stop signals. He said he had not had any understanding, with anyone about protection, any train but his own train and while he was out far enough for that purpose it is doubtful whether he was out far enough to protect train first No. 17, assuming that his stop signals had been seen by the engine crew of train No. 38. Had he continued back all the time after flagging train first No. 2, instead of coming in part way, he might have had time to put down a torpedo and possibly could have prevented the accident.

Flagman Baughman, of train first No. 2, had thrown off fuses at various points en route, for the protection of his train against train No. 38, but said he had only two fuses left and was saving them for an emergency. Just what constitutes an emergency may be open to question, but in a case where one train has fallen back on the time of another train and that other train is an important train with a faster schedule, and when the engineman of the first train is heard by the flagman to answer a caution automatic signal indication and then to answer a flag, there can be no question that right then and there is the time to throw off a fusee, it is possible such action in this case might have prevented the accident.

After Conductor Capell, of train first No. 17, had stopped his train on the main track and learned from the engineman of train second No. 17 what orders had been issued, he should have

remained at that end of the siding in order to supervise the movements which he then knew would have to be made and also to be in position to pass signals while the head end of his train was being protected by a member of his own crew. For his neglect in this respect, Conductor Capell shares a large measure of responsibility for what occurred. He had a flagman of 25 years' experience, who should have been able to do whatever was required while the train was backing in on the siding without having the conductor by his side to supervise the movement.

Train second No. 17 left Greenville without adequate time to enable them to carry out their instructions and at the same time comply with the operating rules. The instructions were that the two freight trains were not to go to the same point for the two passenger trains, and compliance with these instructions required one of these trains to continue on to Bolling, 3.05 miles from Wald, or else train second No. 17 had to remain at Greenville. As it was, this train proceeded to Wald, delivered orders to the engineer only, and the latter then started his train and was stopped by the conductor after the train was out on the main track because the conductor had not received any orders; the conductor said it was 5.03 or 5.04 a.m. when the train was brought to a stop, while the fireman said it was 5 a.m., under the rules this train would have had to be into clear at Bolling not later than 5.02 a.m. Under the circumstances the proper thing for the crew of train second No. 17 to have done was to remain at Greenville.

Dispatcher Bowen issued an order and a message which finally led to the congestion at Wald, the very condition which he was trying to avoid. He had been receiving reports promptly and when at 4.40 a.m. he had received no information to indicate that train second No. 17 had departed from Greenville, he should have arranged to hold that train at that point, it is also to be noted that Dispatcher Bowen made the wait order complete to the inferior train and that the inferior train in effect was acting on the order although the superior train had not received it, also, in the message involved in this case, he left it optional with the crews as to whether they should exchange signals instead of issuing a train order in the form specified for that purpose by the rules.

Operator Phillips, who copied the orders and message for the two freight trains, could very easily have separated the orders given to the engineer of the second section for delivery to the crew of the first section, such action would have apprised Engineer Pendergrass of the fact that he had orders for delivery to the conductor as well as to the engineer.

Engineman Pendergrass should have looked at the orders which had been given to him for delivery to the crew of train first No. 17, in which event he would have discovered that he also had the conductor's copy of the order and could have delivered the conductor's copy when passing the caboose.

From the foregoing it appears that practically all the employees involved in this accident either failed entirely to do what was required or else did it only half way. The signal system was in proper condition, the employees involved were men of long experience, and there was nothing to show that the rules were not adequate to provide for the safe movement of the various trains involved. The circumstances surrounding this accident strikingly direct attention to the necessity for officials of this line to enforce obedience to the rules, particularly in respect to signal observance, flagging, and the issuance and delivery of orders to trains at outlying points.

There is an automatic train-control device in use on this division between New Orleans and Mobile but none between Mobile and Montgomery, within which latter territory this accident occurred. Traffic density on this single-track line during the 30 days preceding the date of the accident, even under the present depressed business conditions, averaged 22.4 trains daily, both directions included. The accident here involved is one of the type intended to be prevented by automatic train-control devices, and it is believed that officials of this railroad should give careful consideration to the need for additional protective devices in the territory in question.

Respectfully submitted,

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Director