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INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

CHICAGO, ROCK ISLAND & PACIFIC RAILWAY

BUTTERFIELD, ARK.

JULY 13, 1936

INVESTIGATION NO. 2081

SUMMARY

Railroad: Chicago, Rock Island & Pacific
Date: July 13, 1936
Location: Butterfield, Ark.
Kind of accident: Head-end collision
Trains involved: Freight : Freight
Train numbers: No. 688 : Extra 850
Engine numbers: 1573 : 850
Consist: 10 cars, caboose : 1 car, caboose
Speed: 12-15 m.p.h. : 10-20 m.p.h.
Track: 10°20' curve 1,194 feet; tangent on each side of curve; embankment on inside of curve with brush, bushes and trees growing thereon, materially restricting vision; accident occurred on this curve
Weather: Clear
Time: 9:25 a.m.
Casualties: 2 killed; 10 injured
Cause: Conductor left register slip at junction covering return movement over branch line before this movement was executed.

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August 24, 1936

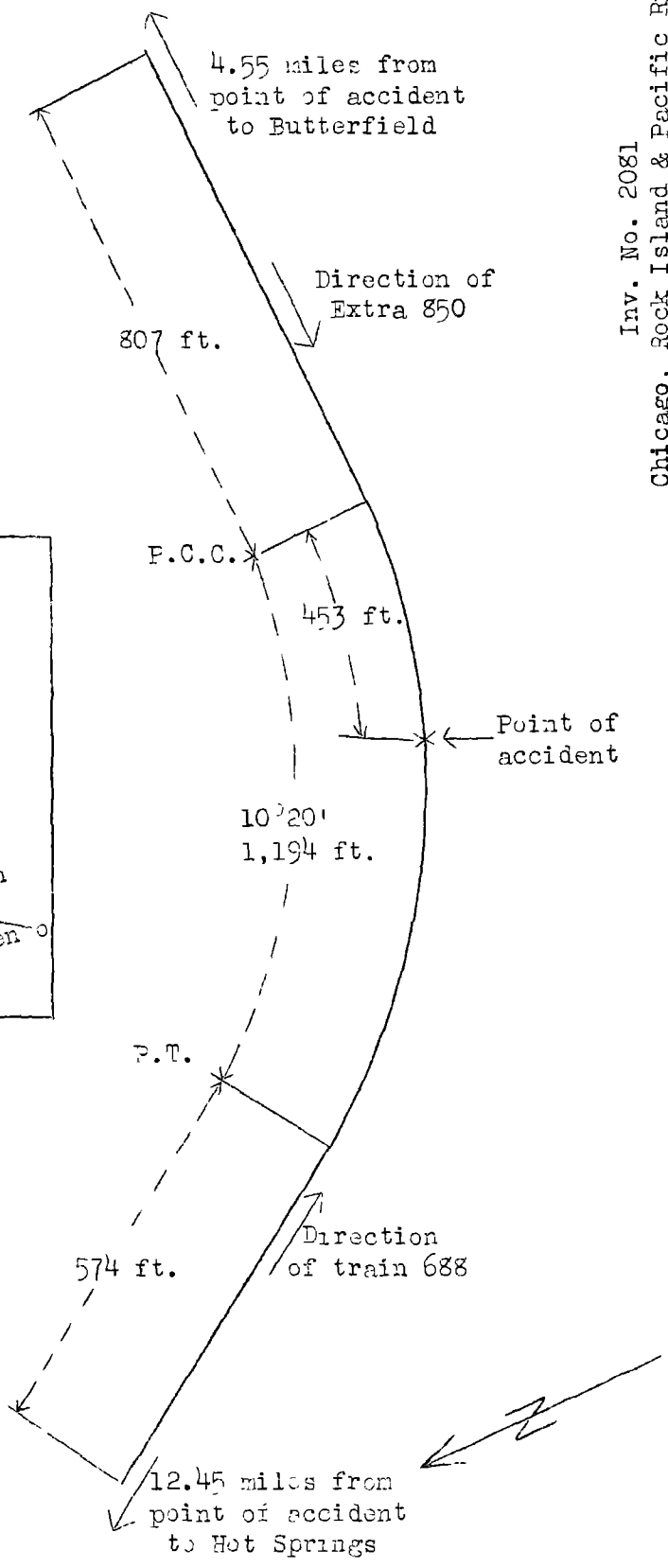
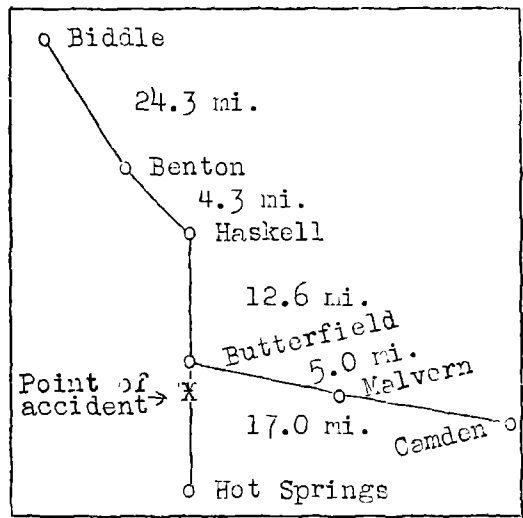
To the Commission:

On July 13, 1936, there was a head-end collision between two freight trains on the Chicago, Rock Island & Pacific Railway near Butterfield, Ark., which resulted in the death of 1 employee, and the injury of 1 person carried under contract, 1 trespasser, and 9 employees, 1 of whom subsequently died.

Location and method of operation

This accident occurred on the Hot Springs Branch of the Second District, Arkansas-Louisiana Division, extending between Hot Springs and Biddle, Ark., a distance of 58.2 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. Butterfield is located 17 miles east of Hot Springs and the accident occurred about 4.55 miles west of the depot at Butterfield; approaching this point from the east the track is tangent for 807 feet, followed by a compound curve to the right 1,194 feet in length, with a maximum curvature of $10^{\circ}20'$, the accident occurring on this curve at a point 453 feet from its eastern end, where the curvature is at its maximum. Approaching from the west the track is tangent for a distance of 574 feet, followed by the curve on which the accident occurred. The grade at the point of accident is 1.5 percent ascending for west-bound trains. Owing to an 8-foot embankment, covered with trees and brush, on the inside of the curve, the view of an opposing engine is restricted from the engineman's side of the cab, across the inside of the curve, to a distance of 512 feet, while from the outside of the curve the engineman could see an opposing engine but 32 feet ahead. The maximum authorized speed for freight trains in this vicinity is 25 miles per hour, except on curves, and the fixed slow speed signals for this particular curve restrict speed to 15 miles per hour.

At Butterfield, a closed office, there is a junction with the Camden Branch, which extends southward to Camden, a distance of 63.2 miles. Malvern is located on the Camden Branch 5 miles south of Butterfield, and Hot Springs is located on the Hot Springs Branch 17 miles west of Butterfield. Operating directions, however, are east and west on both branches. The same train and engine crew operates from Malvern to Hot Springs and return daily except Sunday, handling Train No. 690 from Malvern to Butterfield; Train No. 687 from Butterfield to Hot Springs and returning on Train No. 688 from Hot Springs to Butterfield and Train No. 689 from Butterfield to Malvern, the latter station being the initial and final terminals for this crew. The timetable schedule of



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 Chicago, Rock Island & Pacific Ry.
 Butterfield, Ark.
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these trains is as follows:

	No. 690	No. 687	No. 688	No. 689
Malvern	a.m. 5:30			a.m. 9:20
5.0				
Butterfield	5:50 a.m.	a.m. 5:50	a.m. 3:40	9:00 a.m.
17.0				
Hot Springs		6:50 a.m.	7:10 a.m.	

Butterfield was formerly designated as a train register station, but was discontinued as such several years ago and is now a register station by card for certain designated trains. Train No. 690 is required by timetable rule, and Train No. 688 by General Order No. 37, dated July 6, 1936, to leave a register ticket, Form 1339, in the box provided for that purpose at Butterfield. There is no provision on Form 1339 for showing the time of arrival of trains; a footnote at the bottom of the form reads: "Conductors will leave this form, filled out as may be required at that particular station, where required by Rule or Special Instructions. Operator will immediately transcribe above information on train register".

Timetable rule also permits Train No. 687 and Train No. 689 to leave Butterfield without a clearance card, Form "A". Rule 83 of the operating rules provides that a train must not leave an intermediate station on any subdivision, where schedules originate or terminate, until it has been ascertained that trains authorized by such schedules, if superior or of the same class, have arrived or left.

The weather was clear at the time of the accident, which occurred about 9:25 a.m.

Description

Train No. 688, an east-bound second-class freight train, consisted at the time of the accident of 10 cars and a caboose, hauled by engine 1573, and was in charge of Conductor Garner and Enginemen Crawford. This crew left Malvern on Train No. 690, at 5:30 a.m., according to the train sheet, on time. On arrival at Butterfield the conductor placed two slips of paper in the register box, upon one of which was written: "690 Eng 1573 No Signals

arrived 5:50 A" and upon the other was written: "688 Eng 1573 No Signals arrived". Each of these papers was signed Garner and Crawford and neither one was written on the prescribed register ticket, form 1339; the time of arrival was shown on the slip for Train No. 690, but no arriving time was shown on the slip for Train No. 688. After the conductor placed the two slips in the register box, the crew left Butterfield on Train No. 687, proceeded to Hot Springs and turned at that point, leaving Hot Springs on Train No. 688, at 9:31 a.m., according to the train sheet, 1 hour 21 minutes late, and while approaching Butterfield, collided with Extra 850 while traveling at a speed estimated to have been between 12 and 15 miles per hour.

Extra 850, a west-bound freight train, consisted of 1 car and a caboose, hauled by engine 850, and was in charge of Conductor Dennis and Engineman Flippen. At Biddle, 41.2 miles east of Butterfield, the crew received copy of train order 18, giving them authority to run extra to Hot Springs. This train left Biddle at 7:40 a.m., according to the train sheet and left Haskell, the last open office, 12.6 miles east of Butterfield, at 8:50 a.m. On arrival at Butterfield the conductor found the two slips left by Conductor Garner in the register box, and he considered the slip reading "688 Eng 1573 No Signals arrived" as sufficient information for his own train to leave Butterfield. He informed his engineman that Train No. 688 had arrived, following which Extra 850, departed from Butterfield about 9:14 a.m., and on reaching a point about 4.55 miles west of Butterfield it collided with Train No. 688 while traveling at a speed estimated to have been between 10 and 20 miles per hour.

The two engines were locked together and their front ends were telescoped, but they remained upright and on the rails; they were badly damaged and stopped 21 feet east of the point of collision. The cab of engine 1573 was torn off, and the tender was demolished; the tender of engine 850 was badly damaged. The first and second cars and the rear pair of wheels of the forward truck of the fourth car in Train No. 688 were derailed. The employee killed was the engineman of Train No. 688, and the fireman of Extra 850 subsequently died; the other employees injured were both conductors, both head brakemen, the engineman, swing brakeman and rear brakeman of Extra 850, and the fireman of Train No. 688.

Summary of evidence

Conductor Garner, of Train No. 688, stated that he wrote two messages on clip paper in regard to the arrival of Trains Nos. 690 and 688 while he was in the caboose en route from Malvern to Butterfield. This was the first time he had ever done this and he said that the reason he did it on this occasion was to have

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the slip he made out for Train No. 688 in the register box at Butterfield when his train returned from Hot Springs, as on a previous occasion he came to the register box on his return from that point and found that he had no paper on which to record his arrival, having left it in the caboose. On arrival at Butterfield on the trip in question he placed both papers in the register box; the slip covering Train No. 690 showed the arrival as 5:50 a.m., but on the slip for Train No. 688 no time was shown as he intended to record the time when he returned from Hot Springs. He placed the slip in regard to Train No. 690 in the upper left hand corner of the register box, while the paper in regard to Train No. 688 he placed under an old train register book in the register box. He knew that no space was provided on a regular register ticket, form 1339, to show either the arriving or departing time of a train, but he said that he always included this information on his messages, and as he had shown no arriving time on the slip left in the box, covering Train No. 688, he did not think anyone would use it. He did not realize, at the time, that some other crew might construe this as a register slip for Train No. 688, but since the accident he could see how the message might easily be taken for such a record. He was aware of the requirements of General Order No. 37, dated July 6, 1936, requiring Train No. 688 to leave Form 1339 in the box provided at Butterfield and he also knew that extra trains had been operating between Butterfield and Hot Springs occasionally during the past month. He had no register tickets, form 1339, saying that he had made requisition for a supply about three months ago, but that they were not furnished; he had been on this job regularly for about one year and not to his knowledge had the prescribed form of register ticket been used on this branch, except that when he first went on this job he had used one or two which he had on hand; it was customary to use slips of paper for this purpose and no criticism was ever made of this practice by officials. Butterfield is not a telegraph office, and there is no operator or company telephone there. Conductor Garner said that the air brakes on this train were tested before leaving Hot Springs on the return trip, and worked properly; he estimated the speed to have been between 12 and 15 miles per hour when the accident occurred.

None of the other surviving members of the crew of Train No. 688 was aware of anything wrong until the accident occurred; they did not know that Conductor Garner had left a report in the register box at Butterfield for Train No. 688 before leaving for Hot Springs. Fireman Brewer said that his engine was drifting at a speed of about 15 miles per hour when he saw the top of engine 850 about 200 feet away, across the inside of the curve, and he immediately shouted a warning of danger to his engineman and jumped. The air brakes were tested at Hot Springs and worked

properly, however, the fireman did not know whether the engine-men had time to apply them in emergency prior to the accident. Brakeman Scott said that he had seen some register tickets left in the box at Butterfield which were made out on the regular form and also some which were made out on pieces of clip paper.

Conductor Dennis, of Extra 850, stated that on arrival of his train at Butterfield he found the two messages in the register box written on slips of paper regarding Trains Nos. 690 and 688. He said that when he saw the message reading "688 Eng 1573 No Signals arrived" no question arose in his mind that Train No. 688 had returned from Hot Springs; he replaced the message in the register box and informed Engineman Flippen that Train No. 688 had arrived; the enginemen then asked him to repeat what he had said, which was done in the presence of the fireman, and the conductor added that the slip was in the box. Conductor Dennis considered this record sufficient information upon which to proceed to Hot Springs, saying that while no arrival time was shown on the slip, such information is not required to be shown on a regular register ticket, form 1339, and that he expected to find a slip in the box for Train No. 688, as the train was overdue. He said that in all instances the branch freight trains use yellow slips of paper for registering at Butterfield, instead of regular register tickets. Conductor Dennis said that in his opinion the use of a train register book at Butterfield would provide more safety than is provided under the present method of registering by register ticket, form 1339, as under the present system conductors are not required to furnish enginemen with any written information regarding trains, whereas with a train register book in use, rule 83a requires that information concerning the arrival and departure of trains at such register stations be obtained from the train register book and furnished to the engineman by the conductor, on train register check form C.T. 107-B.

Engineman Flippen, of Extra 850, gave testimony similar to that of Conductor Dennis as to what transpired at Butterfield concerning the message relative to the arrival of Train No. 688. There was no doubt whatever in the mind of Engineman Flippen that Train No. 688 had arrived at Butterfield after the conversation with his conductor, and furthermore that train was then about 33 minutes overdue. Extra 850 then departed from Butterfield and the first intimation the engineman had of anything wrong was upon seeing the opposing engine rounding the curve, about 150 feet away, at which time the speed of his own train was about 10 or 12 miles per hour, and he immediately jumped. The air brakes were tested and worked properly. Engineman Flippen thought that the use of a train register book at Butterfield and the use of a train register check, form C.T. 107-B, would afford more protection than the present method of registering by register ticket, form 1339. Statements of other members of the crew of Extra 850 developed nothing additional of importance.

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Assistant Superintendent Dimmett had been in charge of the Hot Springs Branch since July 1, 1936, and he was unaware of the manner in which crews were registering at Butterfield. He said, however, that a register book would be immediately provided at Butterfield and that the use of the prescribed train register check, form C.T.107-B, would also be required.

Discussion

Butterfield was formerly a designated train register station, but was discontinued as such several years ago; there is no operator or company telephone at this point. The register box is located at the depot and certain specified trains are required to place a register ticket, Form 1339, in this box. Trains No. 690 and 688 are two of such trains. Form 1339 does not provide for showing the time of arrival or departure of trains, and Conductor Garner had none of the forms on hand; he therefore left the information covering Train No. 690 usually shown when registering at Butterfield and including the time of arrival, on a sheet of paper as had been his custom for some time in the past, and in addition, he left a similar record covering Train No. 688, except for the time of arrival which he omitted, intending to fill in the arriving time upon his return from Hot Springs on Train No. 688. He stated that this was the first instance in which he had ever done this and gave as an explanation for so doing that he had, on a previous occasion, forgotten to carry paper with him and upon reaching the register box had no means of registering. The thought that some other crew might consider the slip regarding Train No. 688 as a register of the arrival of that train did not occur to him as he had not entered the time of arrival; he viewed it as an incomplete record and assumed that others would do the same; since the occurrence of the accident, however, he clearly understood how such a record might easily be construed as a register of the arrival of Train No. 688, and especially in view of the fact that the regular prescribed register ticket, Form 1339, does not require time to be shown.

On arrival of Extra 850 at Butterfield, Conductor Dennis found both messages concerning Trains Nos. 690 and 688, in the register box. When he read the message regarding Train No. 688 there was no doubt in his mind about the train having arrived at Butterfield and he replaced the message in the box and informed Engineman Flippen that Train No. 688 had arrived. The engineman also believed the train had arrived, particularly since it was then more than 1/2 hour overdue and in view of the slip found in the register box. Extra 850 then departed from Butterfield and after proceeding approximately 4.55 miles, collided with Train No. 688 on the 10°20' curve.

To correct the conditions disclosed by this investigation, Assistant Superintendent Dimmett stated that a train register would immediately be established at Butterfield.

Conclusion

This accident was caused by Conductor Garner, of Train No. 687, leaving a register slip at a junction when he entered a branch line, to cover his return movement on that branch, before the movement was executed.

Respectfully submitted,

W. J. PATTERSON,
Director.