

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2856
THE SOUTHERN PACIFIC COMPANY
REPORT IN RE ACCIDENT
NEAR BAGLEY, UTAH, ON
DECEMBER 31, 1944

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2856

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

THE SOUTHERN PACIFIC COMPANY

March 7, 1945.

Accident near Bagley, Utah, on December 31, 1944, caused
by failure properly to control the speed of the
following train in accordance with signal indications.

REPORT OF THE COMMISSION¹

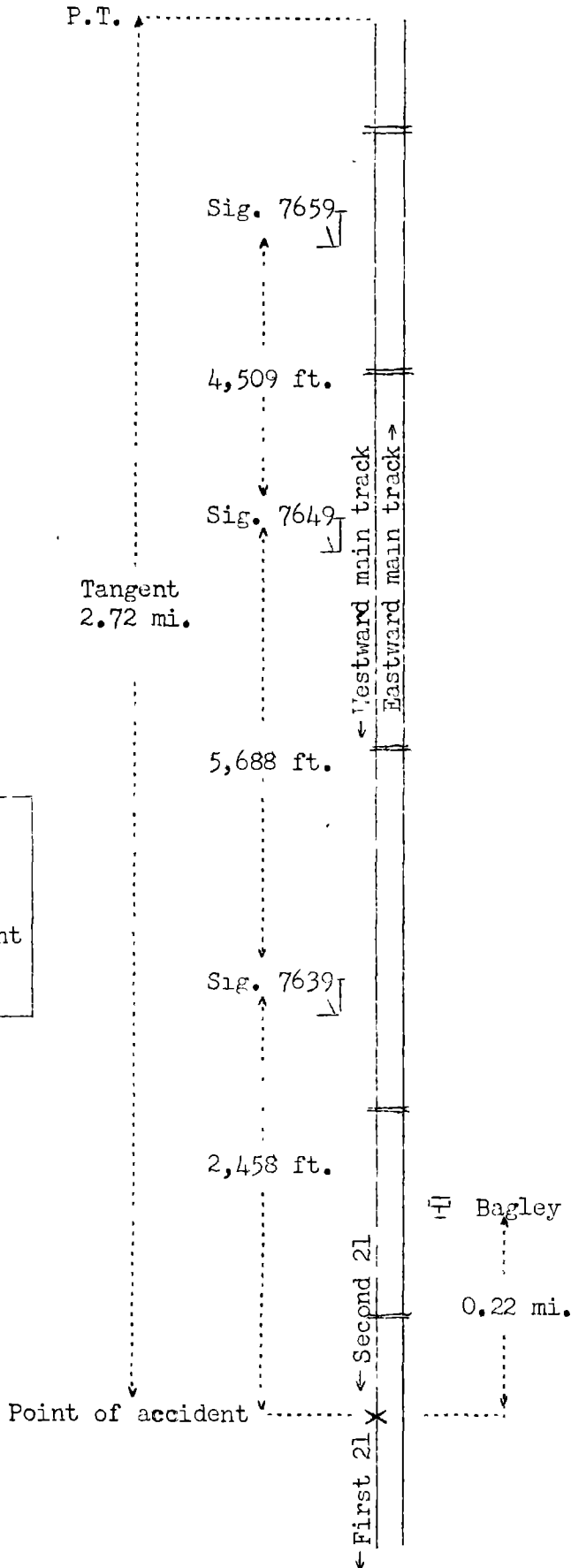
PATTERSON, Commissioner:

On December 31, 1944, there was a rear-end collision between a passenger train and a mail-express-baggage train on the line of the Southern Pacific Company near Bagley, Utah, which resulted in the death of 41 passengers, 1 Pullman employee, 4 dining-car employees, 2 employees off duty and 2 train-service employees on duty, and the injury of 66 passengers, 1 Pullman employee, 7 dining-car employees, 1 train-service agent, 1 employee off duty and 5 train-service employees on duty. This accident was investigated in conjunction with a representative of the Public Service Commission of Utah.

¹Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.

To Ogden →

← To Montello



- | | | |
|---|-------------------|-----------|
| ○ | Ogden, Utah | 18.60 mi. |
| ○ | Bagley, Utah | 0.22 mi. |
| X | Point of accident | 10.38 mi. |
| ○ | Montello, Nev. | |

Inv. No. 2856
 Southern Pacific Company
 Bagley, Utah
 December 31, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Salt Lake Division designated as the Ogden Subdivision and extending westward from Ogden, Utah, to Montello, Nev., 121.2 miles. In the vicinity of the point of accident this was a double-track line over which trains moving with the current of traffic were operated by timetable, train orders and an automatic block-signal system. The accident occurred on the westward main track 18.82 miles west of Ogden, at a point 0.22 mile west of the station at Bagley. The main tracks were tangent throughout a distance of 2.72 miles east of the point of accident and a considerable distance westward. The grade was practically level.

Automatic signals 7659, 7649, and 7639, governing west-bound movements on the westward main track, were located, respectively, 12,655, 8,146, and 2,458 feet east of the point of accident. These signals were of the one-arm, two-position, lower-quadrant, semaphore type, and were approach lighted. The involved aspects and corresponding indications of these signals were as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>
7659	Green, 30 degrees	Proceed
7649	Red, horizontal	Stop
7639	Red, horizontal	Stop

The controlling track circuits were so arranged that when a west-bound train occupied the westward main track in the block immediately west of signal 7639, signals 7639 and 7649 would display stop and signal 7659 would display proceed.

Operating rules read in part as follows:

DEFINITIONS

* * *

With Caution--To run at reduced speed, according to conditions, prepared to stop short of a train, engine, car, misplaced switch, derail, or other obstruction, or before reaching a stop signal. * * *

11. When an unattended fusee is burning on or near, a track within block system * * * limits, train may proceed without stopping, but must run with caution, not exceeding fifteen miles per hour, for three-fourths mile.

* * *

34. All members of train and engine crews must, when practicable, communicate to each other by its name, the indication of each signal affecting the movement of their train.

35. The following signals must be used by flagman:

* * *

Night signals--A red light,
a white light,
torpedoes and
fuses.

99. * * *

When a train stops under circumstances in which it may be overtaken by another train, the flagman must go back immediately with flagman's signals a sufficient distance to insure protection.

* * *

When a train is moving under circumstances in which it may be overtaken by another train, the flagman must take such action as may be necessary to insure protection. By night, or by day when the view is obscured, lighted fuses must be thrown off at proper intervals.

* * *

509 (F). When an automatic block signal indicates "stop", train, after stopping, may proceed with caution, not exceeding twelve miles per hour, under the following conditions:

* * *

(i) On double track.

The maximum authorized speed for the trains involved was 60 miles per hour.

Description of Accident

First 21, a west-bound first-class passenger train, consisted of engine 4425, one mail car, four baggage cars, two U. S. Army hospital cars, seven coaches, one dining car, one Pullman tourist car and two Pullman sleeping cars, in the order named. All cars were of steel construction. This train departed from Ogden, the last open office, at 4:38 a. m., 38 minutes late, and while moving at an estimated speed of 6 miles per hour it was struck by Second 21.

Second 21, a west-bound first-class mail-express-baggage train, consisted of engine 4361, 19 cars and one coach, in the order named. The fourth, eighth and eleventh cars were of steel-underframe construction, and the remainder were of all-steel

construction. This train departed from Ogden at 4:50 a. m., 50 minutes late, passed signals 7649 and 7639, which displayed stop, and while moving at an estimated speed of 50 miles per hour it struck First 21 at a point 2,458 feet west of signal 7639.

The thirteenth car of First 21 telescoped the twelfth car about 45 feet, the sixteenth car telescoped the fifteenth car about 40 feet and the engine of Second 21 telescoped the rear car of First 21 about 13 feet. The twelfth, fifteenth and eighteenth cars of First 21 were demolished. The front end of the engine of Second 21 and the first to the eleventh cars, inclusive, were derailed and damaged.

It was foggy at the time of the accident, which occurred about 5:14 a. m.

The flagman of First 21 and the engineer of Second 21 were killed. The fireman and the brakeman of each train, and the flagman of Second 21 were injured.

During the 30-day period immediately preceding the day of the accident, the average daily movement in the territory involved was 39.5 trains.

Discussion

First 21 was preparing to stop in response to signals given by the flagman of a preceding freight train, which had stopped on the westward main track, when the rear end of First 21 was struck by Second 21.

Immediately after the accident a lighted fusee was found on the westward main track about 1,000 feet east of the rear end of First 21 and another in the immediate vicinity of the point of accident, where the flagman of First 21 was found fatally injured. The enginemen of First 21 said that signals 7649 and 7639 displayed stop as their engine was approaching these signals, and in tests after the accident the signals functioned properly.

The fireman of Second 21 said that because of pockets of dense fog he was unable to see the indication displayed by signal 7649, and he so informed the engineer. The fireman understood the engineer to say that this signal was visible to him, but the engineer did not call the indication. When the engine reached a point a short distance east of signal 7639 the fireman observed that this signal displayed stop, and he called the indication to the engineer. At this time the engineer appeared to be normal, but the fireman did not observe any action being taken to reduce the speed, and, because of being engaged in regulating the firing valve and the fuel-oil supply valves, he did not see the lighted red marker lamps of the preceding train or a lighted fusee until immediately prior to the collision. The members of the train crew were in the rear car. They said that the first they knew of anything being wrong was when the speed of the train was materially reduced from a speed of about 65 miles per hour, as a result of a brake application about 12 seconds prior to the collision. Because of the position in which

the engineer was found in the cab, some of the witnesses thought he had become incapacitated prior to the accident. If the engineer became incapacitated prior to the accident, this condition probably occurred after the brake application was made in the immediate vicinity of signal 7639. The verdict of the coroner's jury was to the effect that the engineer came to his death by sudden shock or heart failure just before the occurrence of the impact between the two trains.

The automatic block-signals in use in this territory were not equipped to display approach indications, but the controlling circuits were so arranged that, when a block was occupied, required stopping distance was provided as a result of stop indications being displayed by two signals immediately to the rear of the occupied block. Under the rules, the stop indication displayed by signal 7649 required Second 21 to be stopped as soon as possible after the indication was visible to the engineer, then to proceed at a speed not in excess of 12 miles per hour and to be prepared to stop short of a train, an obstruction and signal 7639, and to proceed beyond this signal in the same manner as it was required to move in advance thereof. After the accident there was no condition found that would prevent proper application of the train brakes. If Second 21 had been operated in accordance with the indications displayed by the signals involved, this accident would not have occurred.

When the engineer of Second 21 failed to control properly the speed of the train beyond signal 7649, the safety of the movement thereafter depended entirely upon necessary action being taken by the fireman, but in this case the fireman could not see this signal and did not realize until the engine was near signal 7639 that there was a train a short distance ahead. If a cab-signal system had been in use, the fireman would have been able to observe all signal indications, and he would have realized that the circumstances required him to take necessary action to control the speed properly. An automatic train-stop or train-control system is designed to enforce the requirements of automatic block-signal indications when the engineer fails because of disability or any other reason to take necessary action to control the speed of the train. If an adequate automatic train-stop or train-control system had been in use in this territory, an automatic application of the brakes sufficient to cause Second 21 to stop short of First 21 would have occurred, and this accident would have been averted.

Cause

It is found that this accident was caused by failure properly to control the speed of the following train in accordance with signal indications.

Dated at Washington, D. C., this seventh day of March, 1945.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.