INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2869

SOUTHERN PACIFIC COMPANY

REPORT IN RE ACCIDENT

AT REDLANDS, CALIF., ON

FEBRUARY 11, 1945

SUMMARY

Railroad:	Southern Pacific	
Date:	February 11, 1945	
Location:	Redlands, Calif.	
Kind of accident:	Head-end collision	
Trains involved:	Passenger	: Freight
Train numbers:	43	: Extra 5015 East
Engine numbers:	4443	: 5015-3711-3664
Consist:	19 cars	: 96 cars, caboose
Estimated speed:	20 m. p. h.	: 10 m. p. h.
Operation:	Signal indications	
Track:	Single; 3°03' curve; 1.2333 percent descending grade westward	
Weather:	Clear	
Time:	9:54 a. m.	
Casualties:	177 injured	
Cause:	Failure to obey signal indications	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2869

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

SOUTHERN PACIFIC COMPANY

April 5, 1945.

Accident at Redlands, Calif., on February 11, 1945, caused by failure to obey signal indications.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On February 11, 1945, there was a head-end collision between a passenger train and a freight train on the line of the Southern Pacific Company at Redlands, Calif., which resulted in the injury of 157 passengers, 2 persons carried under contract, 1 express messenger, 6 dining-car employees, 4 train porters, 6 train-service employees on duty and 1 train-service employee off duty. This accident was investigated in conjunction with a representative of the Railroad Commission of California.

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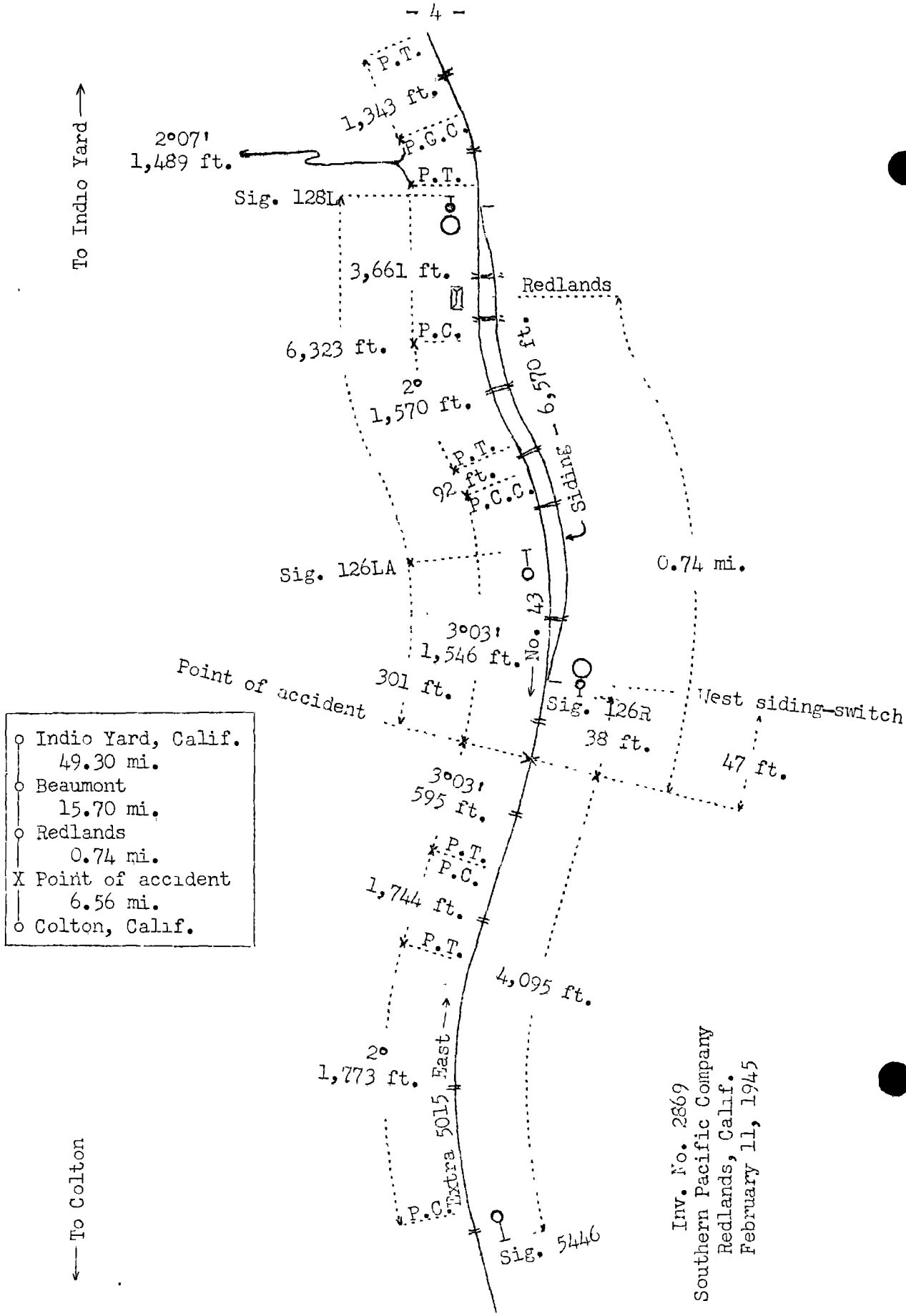
[1]Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv. No. 2869
Southern Pacific Company
Redlands, Calif.
February 11, 1945

Location of Accident and Method of Operation

This accident occurred on that part of the Los Angeles Division designated as the Beaumont Subdivision and extending westward from Indio Yard to Colton, Calif., 72.3 miles. This was a single-track line over which trains were operated by signal indications. At Redlands, 65 miles west of Indio Yard, a siding 6,570 feet long paralleled the main track on the south. The west switch of this siding was 3,868 feet west of the station. The accident occurred on the main track 47 feet west of the west siding-switch. From the east there were, in succession, a tangent 1,343 feet in length, a compound curve to the right 1,489 feet, the maximum curvature of which was 2°07', a tangent 3,661 feet, a 2° curve to the left 1,570 feet, a tangent 92 feet and a compound curve to the right, the maximum curvature of which was 3°03', extending 1,546 feet to the point of accident and 595 feet westward. From the west there were, in succession, a 2° curve to the right 1,773 feet in length, a tangent 1,744 feet and the curve on which the accident occurred. The grade was 1.2333 percent descending westward.

Semi-automatic signals 128L and 126LA, governing west-bound movements, were, respectively, 6,624 feet and 301 feet east of the point of accident. Automatic signal 5446 and semi-automatic signal 126R, governing east-bound movements were, respectively, 4,095 feet west and 38 feet east of the point of accident. Signals 5446 and 126LA were of the one-unit color-light type, and signals 128L and 126R were of the two-unit color-light type. These signals were continuously lighted. The involved aspects and corresponding indications of these signals were as follows:

Signal	Aspect	Indication
128L and 5446	Yellow	Proceed prepared to stop at next home signal
126LA	Red	Stop
126R	Red-over-green	Proceed on diverging route

Signals 128L, 126LA and 126R and the west siding-switch were controlled by a centralized-traffic-control machine at Beaumont, 15.7 miles east of Redlands. Approach locking was provided, and the circuits of the controlled signals involved were so arranged that when the west siding-switch was lined for movement from the main track to the siding, signal 128L would display yellow; signal 126LA, red; signal 126R, red-over-green; and signal 5446, yellow. The control machine was provided with visual indicators, and the controlling circuits were arranged to indicate the movement of trains within the centralized-traffic-control territory.

Operating rules read in part as follows:

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.

772. The main track and controlled sidings must not be fouled, unless authorized by an absolute signal indication, or by permission from the dispatcher.

* * *

776. When an absolute signal indicates "stop", except when it is known to be caused by the approach of a train at a meeting * * * point, the dispatcher must be consulted as quickly as possible after stopping, * * *

The maximum authorized speed for the passenger train was 50 miles per hour, and for the freight train, 35 miles per hour.

Description of Accident

No. 43, a west-bound passenger train, consisted of engine 4443, three baggage-mail cars, seven coaches, one dining-car, three coaches, one lunch-car and four coaches, in the order named. All cars were of steel construction. This train passed signal 128L, which displayed proceed-prepared-to-stop-at-next-home signal, stopped at the station at Redlands, and departed at 9:53 a. m., on time, passed signal 126LA, which displayed stop, and while moving at an estimated speed of 20 miles per hour it collided with Extra 5015 East at a point 301 feet west of signal 126LA and 47 feet west of the west siding-switch.

Extra 5015 East, an east-bound freight train, consisting of engine 5015, 96 cars, engines 3711 and 3664 and a caboose, in the order named, passed signal 5446, which displayed proceed-prepared-to-stop-at-next-home signal, and while moving at an estimated speed of 10 miles per hour it collided with No. 43.

The engine and the second and ninth cars of No. 43, and the first engine, the fourth to the ninth cars, inclusive, and the sixty-fifth to the seventy-first cars, inclusive, of Extra 5015 were derailed. The engine and 17 cars of No. 43 and the first engine and 15 cars of Extra 5015 were more or less damaged.

It was clear at the time of the accident, which occurred about 9:54 a. m.

The engineer, the fireman and the baggageman of No. 43, the engineer and the fireman of the first engine and the front brakeman of Extra 5015 were injured.

Discussion

About 20 minutes before the accident occurred, the dispatcher at Beaumont placed the levers of the centralized-traffic-control machine in position for signal 126LA to display stop for No. 43, and for signal 126R to display proceed-on-diverging-route for Extra 5015 East, and lined the route for Extra 5015 East to enter the siding at the west switch at Redlands to meet No. 43.

As Extra 5015 East was approaching the west siding-switch the enginemen of the first engine were maintaining a lookout ahead. They observed that signal 126R displayed red-over-green, and that the west switch was lined for entry to the siding. The first these employees knew of anything being wrong was when the fireman saw the engine of No. 43 pass the clearance point of the west siding-switch. He called a warning to the engineer, who immediately moved the brake valve to emergency position, but the collision occurred before the brakes became effective.

As No. 43 was approaching the point where the accident occurred the speed was 30 miles per hour, according to the tape of the speed recorder. The air brakes had functioned properly at all points where used en route. The enginemen understood that, under the rules, the yellow aspect displayed by signal 128L required their train to proceed prepared to stop short of signal 126LA, and the red aspect displayed by signal 126LA required the train to stop short of that signal and not to proceed until an indication permitting the train to proceed was displayed or proper authority from the train dispatcher had been received. Because of track curvature the view of signal 126LA from the left side of a west-bound engine was materially restricted. This signal could be seen from the right side of a west-bound engine throughout a distance of about 1,800 feet immediately east of the signal. The engineer of No. 43 said that soon after the train departed from the station at Redlands he looked eastward and thought he saw smoke in the vicinity of the third or fourth car, which indicated to him that the brakes of these cars had not released, and he made several attempts to release the brakes. He did not see the aspect displayed by signal 126LA until the engine was about 300 feet east of the signal, then he observed, simultaneously, the red aspect displayed by this signal and the approaching train, and he immediately moved the brake valve to emergency position in an unsuccessful attempt to stop short of the signal. However, the train was not stopped and the speed was about 20 miles per hour

when the collision occurred. If No. 43 had been operated in accordance with the indications displayed by the signals involved, the accident would not have occurred.

Cause

It is found that this accident was caused by failure to obey signal indications.

Dated at Washington, D. C., this fifth day of April, 1945.

By the Commission, Commissioner Patterson.

W. P. BARTEL,
Secretary.

(SEAL)