

RAILROAD ACCIDENT INVESTIGATION

Report No 3814

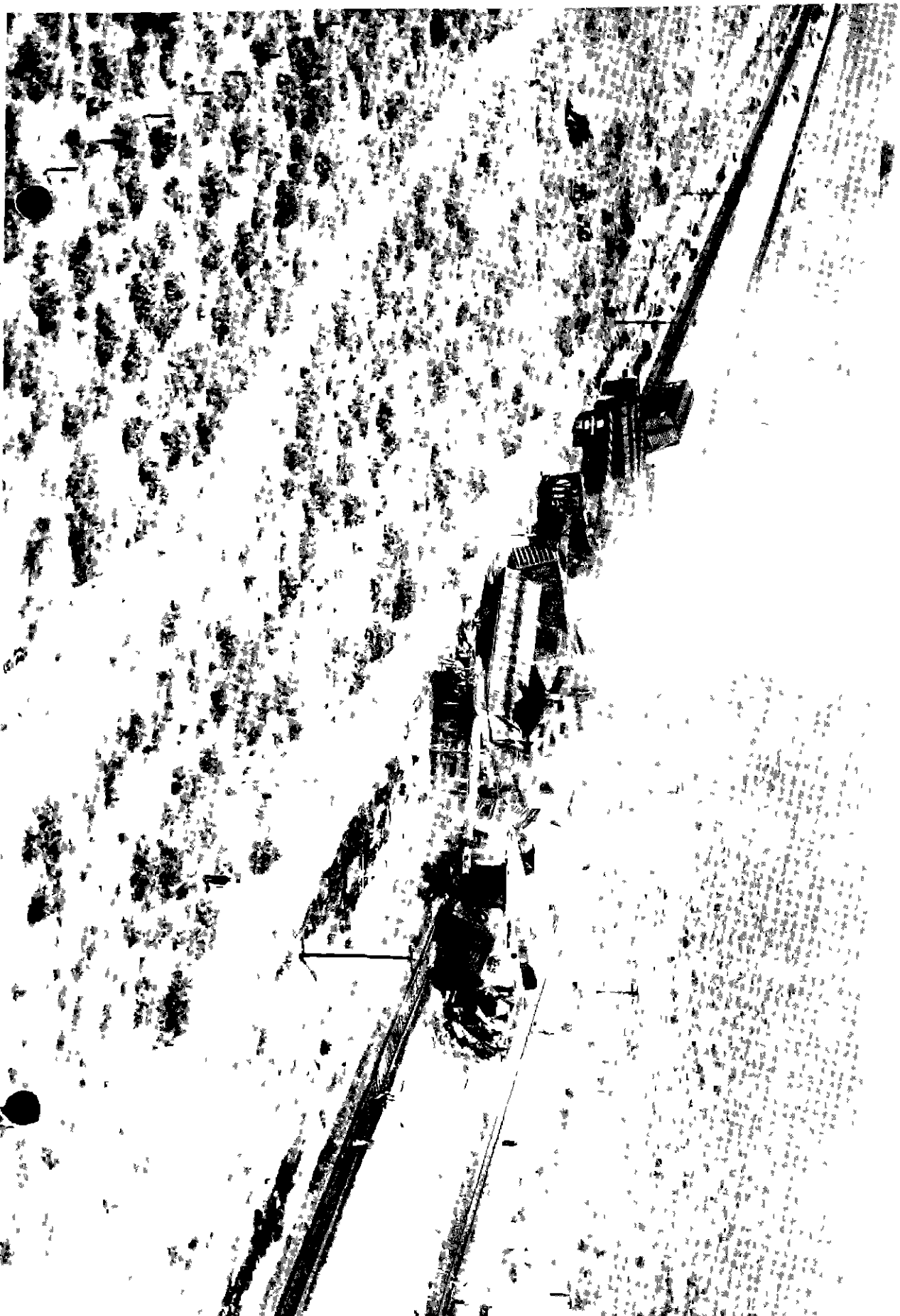
SOUTHERN PACIFIC COMPANY

IMLAY, NEV

JULY 26, 1958

INTERSTATE COMMERCE COMMISSION

Washington



SUMMARY

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DATE	July 26, 1958	
RAILROAD	Southern Pacific	
LOCATION	Imlay, Nev	
KIND OF ACCIDENT	Rear-end collision	
TRAINS INVOLVED	Freight	Freight
TRAIN NUMBERS	Extra 6243 East	Extra 6405 East
LOCOMOTIVE NUMBERS	Diesel-electric units 6243, 6401, and 6249	Diesel-electric units 6405, 6404, and 6228
CONSISTS	115 cars, caboose	114 cars, caboose
SPEEDS	Standing	35 m p h
OPERATION	Timetable, train orders, and automatic block-signal system	
TRACK	Double, tangent, 0 28 percent descending grade eastward	
WEATHER	Clear	
TIME	5 55 a m	
CASUALTIES	2 killed, 4 injured	
CAUSE	Failure to operate following train in accordance with signal indications	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3814

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

SOUTHERN PACIFIC COMPANY

November 23, 1958

Accident near Imlay, Nev , on July 26, 1958, caused by failure to operate the following train
in accordance with signal indications

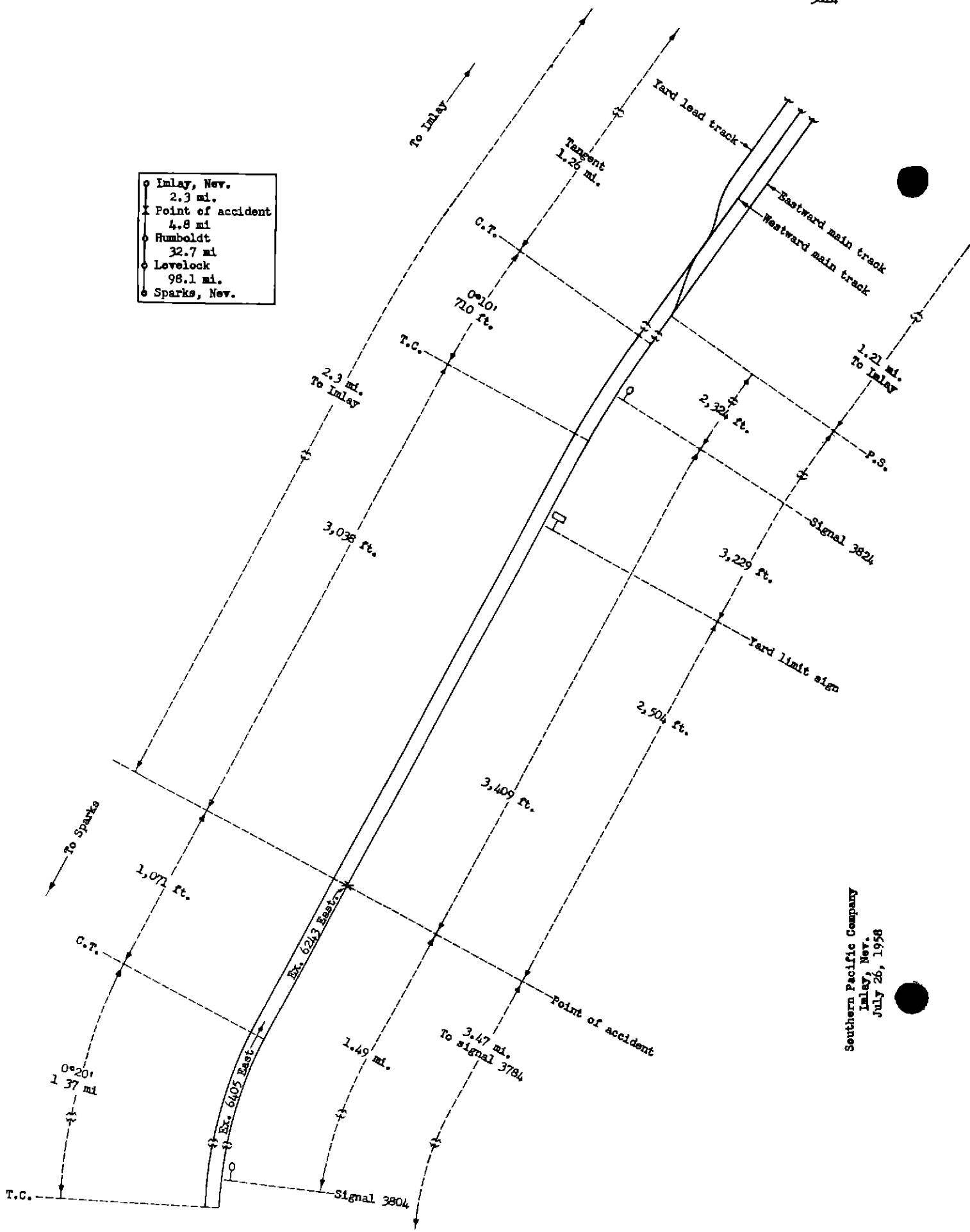
REPORT OF THE COMMISSION¹

TUGGLE, Commissioner

On July 26, 1958, there was a rear-end collision between 2 freight trains on a line of the Southern Pacific Company near Imlay, Nev , which resulted in the death of 2 train-service employees and the injury of 4 train-service employees. This accident was investigated in conjunction with a representative of the Nevada Public Service Commission

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

- Inlay, Nev.
2.3 mi.
- ⊥ Point of accident
4.8 mi
- Humboldt
32.7 mi
- Lovelock
98.1 mi.
- Sparks, Nev.



Southern Pacific Company
 Inlay, Nev.
 July 26, 1958

Location of Accident and Method of Operation

This accident occurred on that part of the Salt Lake Division extending between Sparks and Imlay, Nev., 137.1 miles. In the vicinity of the point of accident this is a double-track line over which trains are operated by timetable, train orders, and an automatic block-signal system. At Imlay a facing-point crossover connects the main tracks. The west switch of this crossover is located 1.21 miles west of the station. A yard lead track diverges to the north from the westward main track. The switch of this track, which is facing-point for eastbound movements on the westward main track, is located immediately east of the east switch of the crossover. The west yard-limit sign of Imlay yard is located 3,229 feet west of the west switch of the crossover. The accident occurred on the eastward main track at a point 2.3 miles west of the station and 2,504 feet west of the west yard-limit sign. From the west on the eastward main track there are, in succession, a 0°20' curve to the right 1.37 miles in length, a tangent 1,071 feet to the point of accident and 3,038 feet eastward, a 0°10' curve to the right 710 feet, and a tangent 1.26 miles. The grade for eastbound trains varies between 0.85 and 0.28 percent descending throughout a distance of 1 mile west of the point of accident, and it is 0.28 percent descending at the point of accident.

The distance between the centerlines of the main tracks in the vicinity of the point of accident is approximately 50 feet. At that point the eastward main track is laid on a fill about 3 feet in height, and the westward main track is laid on a fill about 16 feet in height.

Automatic signals 3784, 3804 and 3824 are located, respectively, 3.47 miles west, 1.49 miles west, and 3,409 feet east of the point of accident. These signals are of the searchlight type and are approach lighted. Aspects applicable to this investigation, and the corresponding indications and names are as follows:

Signal	Aspect	Indication	Name
3824	RED	STOP	HOME
3804	RED	STOP	HOME
3784 3804	YELLOW	PROCEED NOT EXCEEDING MEDIUM SPEED, PREPARED TO STOP SHORT OF NEXT HOME SIGNAL	APPROACH

The controlling circuits are so arranged that when the block of signal 3784 is unoccupied and the block of signal 3804 is occupied, signal 3784 displays a yellow aspect and signal 3804 displays a red aspect.

This carrier's operating rules read in part as follows:

DEFINITIONS

Medium Speed A speed not exceeding forty miles per hour

Restricted Speed Proceed prepared to stop short of train, obstruction, * * * not exceeding twenty miles per hour

99-A * * *

When a train stops within block system limits, with protection of at least two block signals to the rear, flagman must go back immediately with flagman's signals a sufficient distance to insure full protection against following trains moving at restricted speed, * * *

* * *

509 When an automatic block signal displays stop indication, train, after stopping, may proceed at restricted speed, under the following conditions

* * *

(d) On double track

34 Each member of engine crew must * * * identify by name each signal affecting the movement of his train as soon as it becomes visible or audible to him and, in addition, communicate the aspect of each automatic block * * * signal. Other members of the crew within hearing distance must acknowledge at once and repeat the name and aspect of the signal as soon as it can be verified

* * *

The maximum authorized speed for freight trains in the vicinity of the point of accident is 60 miles per hour

Description of Accident

Extra 6243 East, an eastbound freight train, consisted of diesel-electric units 6249, 6401, and 6243, coupled in multiple-unit control, 115 cars, and a caboose. This train departed from Sparks at 10 15 p m, July 25, passed Lovelock, the last open office, 39.8 miles west of Imlay, at 3 54 a m, passed signal 3804, which displayed a Yellow aspect, and stopped at signal 3824, which displayed a Red aspect. The train was then moved eastward and stopped with the front end of the locomotive approximately 200 feet west of the west switch of the crossover. About 5 minutes later the rear end was struck by Extra 6405 East.

Extra 6405 East, an eastbound freight train, consisted of road-type diesel-electric units 6405, 6404, and 6228, coupled in multiple-unit control, 114 cars, and a caboose. This train departed from Sparks at 12 05 a m, passed Lovelock at 4 08 a m, passed signal 3784, which should have displayed a Yellow aspect, passed signal 3804, which should have displayed a Red aspect, passed the flagman of Extra 6243 East, and while moving at an estimated speed of 35 miles per hour it struck the rear end of Extra 6243 East.

Separations occurred between the diesel-electric units of the locomotive of Extra 6405 East. The 1st unit stopped on its left side with the front end approximately 90 feet east of the point of collision. The front end and rear end of this unit were approximately 10 feet and 45 feet, respectively, south of the eastward main track. The 2nd unit stopped on its right side across the track structure with the rear end against the 1st unit. The 3rd unit stopped upright across the track structure and adjacent to the 2nd unit. The 1st to the 40th cars, inclusive, of Extra 6405 East, and the caboose, and the 110th to 114th cars, inclusive, of Extra 6243 East were derailed. These cars stopped in various positions on or near the track structure. A fire started in the 1st diesel-electric

unit of Extra 6405 East immediately after the collision occurred and spread rapidly throughout the derailed equipment. The diesel-electric units, and the 1st to the 39th cars, inclusive, of Extra 6405 East, and the caboose, and the 111th to 114th cars, inclusive, of Extra 6243 East were destroyed as a result of the collision and the fire.

The engineer and the fireman of Extra 6405 East were killed, and the conductor, the front brakeman, the swing brakeman, and the flagman were injured.

The weather was clear at the time of the accident, which occurred about 5 55 a m.

Discussion

As Extra 6243 East was approaching the point where the accident occurred the conductor, the flagman, and the swing brakeman were in the caboose. This train was stopped west of the west crossover switch after passing signal 3824 to permit a switching crew to complete a switching movement. When the train stopped, the flagman alighted and proceeded westward with flagman's signals to a point approximately 50 feet west of the caboose. The conductor said that about 5 minutes after the train stopped he observed Extra 6405 East approaching at a distance of approximately 2,600 feet. He said he thought that the speed of the train was excessive and that he immediately called a warning to the flagman and the swing brakeman. The flagman said that he observed Extra 6405 East approaching on the curve west of the point of accident at the time the conductor called the warning and that he immediately proceeded westward giving stop signals with a red flag. He said that he continued to give stop signals until the locomotive was approximately 150 feet distant and that the signals were not acknowledged. He estimated that he had reached a point approximately 150 feet west of the caboose of Extra 6243 East at that time. He said he was standing at a point about 100 feet south of the eastward main track when the locomotive of Extra 6405 East passed him and that he observed a person in the engineer's place in the control compartment at the front end of the locomotive. The conductor said he observed the collision while standing on the westward main track opposite the point of collision and that he had a clear view into the control compartment at the front end of the locomotive of Extra 6405 East immediately before the collision occurred. He said that he did not observe any one in the control compartment. The swing brakeman said that he observed the collision from a point south of the eastward main track. The conductor, the flagman, and the swing brakeman said they did not observe any indications that the brakes of the train were applied before the collision occurred and that the engines of the locomotive were under power when the collision occurred. The conductor and the swing brakeman estimated that the speed of the train was about 35 miles per hour when the collision occurred.

As Extra 6405 East was approaching the point where the accident occurred the enginemen and the front brakeman were in the control compartment of the locomotive, and the conductor, the swing brakeman, and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted. The front brakeman said that en route to Humboldt, 7 1 miles west of Imlay, the members of the crew in the control compartment called the indications of the restricting signals and that the engineer controlled the speed of the train in accordance with the indications. He said that when the train was in the vicinity of Humboldt he left the control compartment and entered the lavatory in the engine compartment of the 1st diesel-electric unit. When he left the control compartment the enginemen were in their proper places. He said that when he returned to the control compartment he observed that the train was closely approaching the rear end of Extra 6243 East. He said that the engineer was in his proper

place and that he called to him to initiate an emergency application of the brakes. The collision occurred immediately afterward. He said that he did not know whether the engineer took action to stop the train in response to his warning and that he did not notice whether the fireman was in the control compartment at that time.

An assistant road foreman of engines said that it was a customary practice for the firemen of eastbound locomotives to check the water gauges in the engine rooms of diesel-electric units as they approached Imlay. He said that the firemen usually checked these gauges after the locomotives passed a point about 10 miles west of Imlay. Since neither the conductor of Extra 6243 East nor the front brakeman of Extra 6405 East saw the fireman of the following train immediately before the collision occurred, and since the remains of the fireman were found after the accident in the gangway on the left side of the engine compartment of the first diesel-electric unit, it appears that the fireman was not in the control compartment of the locomotive of the following train at the time of the collision.

The conductor and the front brakeman both said that the engineer appeared to be in good physical condition and normal in all respects when they conversed with him. The front brakeman said that both the engineer and the fireman were alert and maintaining a lookout ahead when he left the control compartment as the train moved in the vicinity of Humboldt.

An examination of the control compartment of the locomotive of Extra 6405 East after the accident occurred disclosed that the door and cab windows on the right side were open 10-3/4 inches and 3-3/8 inches, respectively, and that the door and cab windows on the left side were open 5/8 inches and 9 inches, respectively.

A signal inspector of the carrier said that shortly after the accident occurred he shunted the approach circuits of signals 3784 and 3804 and found that these signals displayed a Yellow aspect and a Red aspect, respectively, which were the proper aspects for the condition of track occupancy. Tests of the signals involved in the accident were performed by members of the carrier's signal force after the accident occurred and no defects were found which would cause the signal system to function other than as intended.

Observations were made from the control compartment of a diesel-electric unit 4 days after the accident and approximately at the same time of day that the accident occurred. Approaching signal 3804 from the west the aspect of the signal was clearly visible throughout a distance of approximately 1 1/2 miles immediately west of the signal.

The brakes of the 41st to the 114th cars, inclusive, of Extra 6405 East were tested after the accident occurred and it was found that 14 of these cars had brake-cylinder piston travel in excess of 10 inches.

Cause

This accident was caused by failure to operate the following train in accordance with signal indications.

Dated at Washington, D. C., this twenty-third day of November, 1958.

By the Commission, Commissioner Tuggle,

(Seal)

H. D. McCoy,
Secretary