

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3566
FORT WORTH AND DENVER RAILWAY COMPANY
IN RE ACCIDENT
NEAR KIRKLAND, TEX., ON
MAY 1, 1954

SUMMARY

Date: May 1, 1954

Railroad: Fort Worth and Denver

Location: Kirkland, Tex.

Kind of accident: Rear-end collision

Trains involved: Freight : Passenger

Train numbers: Extra 854 South : 7

Engine numbers: Diesel-electric : Diesel-electric
unit 854 : units 9981A
and 9981B

Consists: 66 cars, caboose : 11 cars

Speeds: Standing : 25 m. p. h.

Operation: Timetable and train orders

Track: Single, tangent, 0.13 percent
ascending grade southward

Weather: Foggy

Time: 12:25 p. m.

Casualties: 5 injured

Cause: Failure to provide adequate protection
for train occupying main track on
time of following superior train

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3566

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

FORT WORTH AND DENVER RAILWAY COMPANY

June 1, 1954

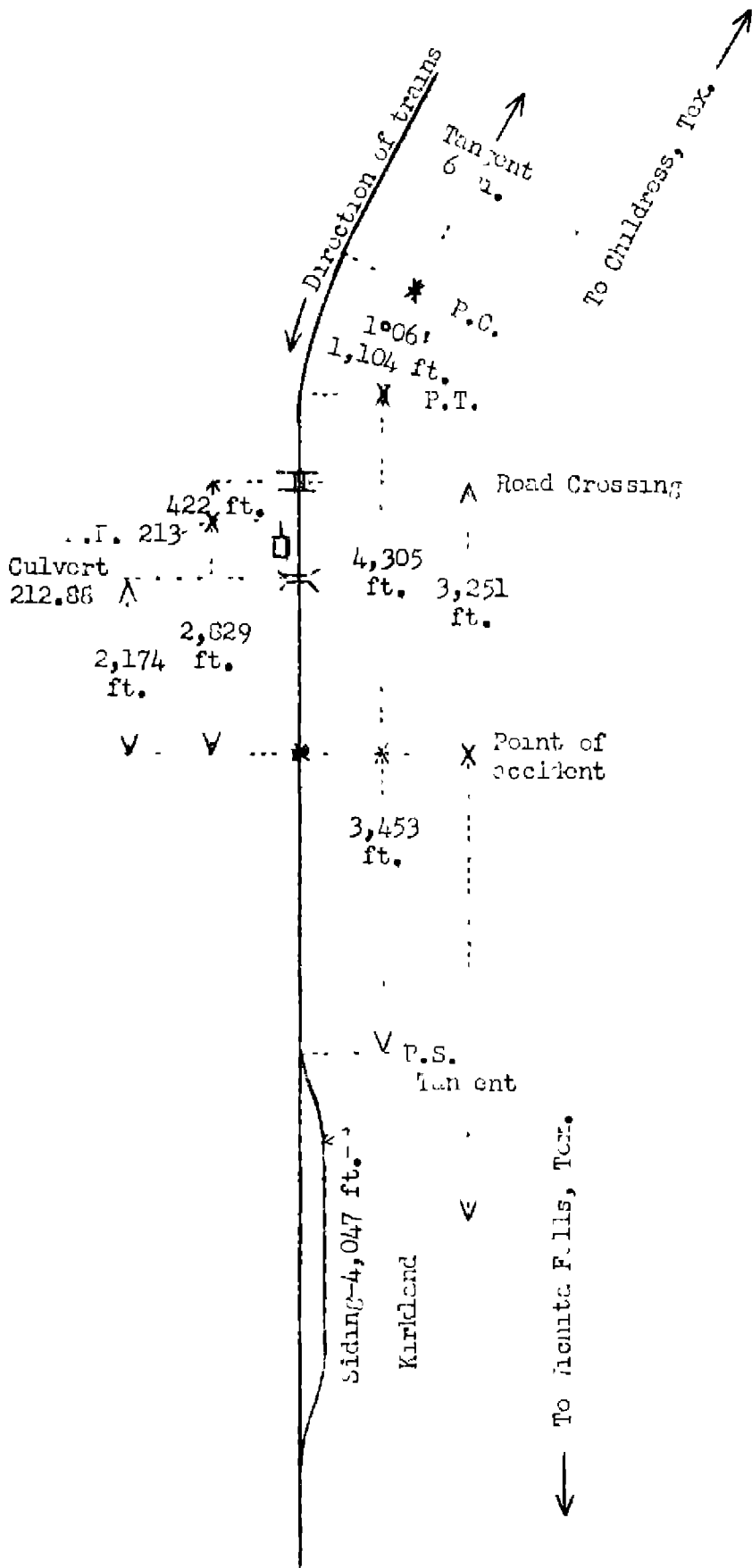
Accident near Kirkland, Tex., on May 1, 1954, caused by failure to provide adequate protection for a train occupying the main track on the time of a following superior train.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On May 1, 1954, there was a rear-end collision between a freight train and a passenger train on the Fort Worth and Denver Railway near Kirkland, Tex., which resulted in the injury of two passengers, one railway-mail clerk, and two dining-car employees.

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



- Childress, Tex.
- | 7.7 mi.
- X Point of accident
- | 1.2 mi.
- Kirkland
- | 19.5 mi.
- Wauah
- | 77.8 mi.
- Wichita Falls, Tex.

Report No. 3566
 Fort Worth and Denver Railway
 Kirkland, Tex.
 May 1, 1954

Location of Accident and Method of Operation

This accident occurred on that part of the Wichita Falls Division extending between Childress and Wichita Falls, Tex., 106.2 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. There is no block system in use. At Kirkland, 8.9 miles south of Childress, a siding 4,047 feet in length parallels the main track on the east. The accident occurred on the main track at a point 7.7 miles south of Childress and 3,453 feet north of the north siding-switch at Kirkland. From the north there are, in succession, a tangent more than 6 miles in length, a 1°06' curve to the left 1,104 feet, and a tangent 4,305 feet to the point of accident and a considerable distance southward. The grade for south-bound trains varies between level and 1.03 percent ascending throughout a distance of 1.3 miles immediately north of the point of accident, and at that point it is 0.16 percent ascending.

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

DEFINITIONS

Reduced Speed.--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

9. Day signals must be displayed from sunrise to sunset, but when day signals cannot be plainly seen, night signals must be used in addition.

11. A train or engine finding a fusee burning red, on or near its track, must stop. * * *

15. The explosion of two torpedoes is a signal to proceed at Reduced Speed for one mile. * * *

* * *

36. The following signals will be used by flamm:

Day signals--A red flag,
Torpedoes and
Red fusees.

* * *

73. Extra trains are inferior to regular trains.

86. Unless otherwise provided, an inferior train must be clear at the time a superior train in the same direction is due to leave the next station in the rear where time is shown, but not less than five minutes.

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 full protection, placing two torpedoes and, when necessary, in addition, displaying lighted fuses. * * *

When a train stops under circumstances in which it may be overtaken by another train, the engineman will immediately signal the flagman to protect the rear.
* * *

* * *

The maximum authorized speeds are 55 miles per hour for Diesel-powered freight trains and 65 miles per hour for Diesel-powered passenger trains.

Description of Accident

Extra 854 South, a south-bound freight train, consisted of Diesel-electric unit 854, 66 cars, and a caboose. At Childress, the initial station, members of the crew received, among others, copies of train order No. 11 reading as follows:

NO 7 ENG 9981A RUN 40 MINUTES LATE
CHILDRESS TO QUANAH

and train order No. 13 reading as follows

EXTRA 854 SOUTH WILL NOT PROTECT AGAINST
FOLLOWING EXTRA TRAINS BETWEEN CHILDRESS
AND QUANAH UNTIL 1 30 P M FOLLOWING
EXTRA TRAINS MUST NOT LEAVE CHILDRESS
BEFORE 1 30 P M

Quanah is 28.4 miles south of Childress. Extra 854 South departed from Childress at 11:24 a. m. and while reducing speed preparatory to entering the siding at Kirkland an emergency application of the brakes occurred as a result of a separation in the train. The train stopped at 11:45 a. m. with the rear end 3,453 feet north of the north siding-switch. About 40 minutes later, after a second separation in the train had occurred, the rear end was struck by No. 7.

No. 7, a south-bound first-class passenger train, consisted of Diesel-electric units 9981A and 9981B, coupled in multiple-unit control, one baggage-mail car, five baggage cars, two coaches, two sleeping cars, and one dining car, in the order named. The first, fifth, and sixth cars and the ninth to the eleventh cars, inclusive, were of all-steel construction, the eighth car was of lightweight steel construction, and the other cars were of steel-underframe construction. At Childress, members of the crew received, among others, copies of train order No. 11. This train departed from Childress at 12:15 p. m., 56 minutes late, and while moving on the main track at a speed of approximately 25 miles per hour it struck the rear end of Extra 854 South.

The caboose and the rear three cars of Extra 854 South were derailed and stopped in various positions on or near the track. The caboose and the rear car were destroyed. The second car from the rear was badly damaged, and the other derailed car was slightly damaged. No. 7 stopped with the front end of the locomotive approximately 70 feet south of the point of collision. The first Diesel-electric unit was somewhat damaged. No equipment of this train was derailed.

The weather was foggy at the time of the accident, which occurred about 12:25 p. m.

The Diesel-electric units of No. 7 were equipped with 24RL brake equipment. Diesel-electric unit 9981A was equipped with an oscillating red headlight, the controls of which are so arranged that it will be displayed and the conventional headlight will be extinguished when an emergency application of the brakes is made.

Discussion

Extra 854 South departed from Childress at 11:25 a. m. The first siding south of Childress at which this train could clear the main track was at Kirkland. No. 7, under the provisions of train order No. 11, was due to leave Childress at 11:59 a. m. and Kirkland at 12:09 p. m. If

Extra 854 South failed to clear the time of No. 7 as prescribed by rule No. 86 the crew was required to provide protection as prescribed by rule No. 99.

When Extra 854 South departed from Childress the engineer, the fireman, and the front brakeman were on the locomotive. The conductor and the flagman were in the caboose. Because of fog which restricted visibility in the vicinity it was necessary to use a lighted fusee to give a proceed signal from the rear end of the train after it cleared the yard tracks and the main-track switch had been restored to normal position. The engineer said that he and the conductor had discussed the work which their train was to perform en route and had decided that it was advisable to take siding at Kirkland for No. 7. As the train was approaching the north siding-switch at that station he made a service application of the brakes. When the speed had been reduced to about 10 miles per hour an emergency application of the brakes occurred. The train stopped with the locomotive approximately 150 feet north of the north siding-switch. The front brakeman immediately alighted from the locomotive and lined the switch for entry to the siding. The engineer estimated that fog restricted visibility to a distance of approximately 900 feet. He said that when brake-pipe pressure was not promptly restored he became concerned and sounded the whistle signal for the flagman to protect the rear end of the train. He then instructed the front brakeman to inspect the forward portion of the train. The conductor and the flagman said that they had observed that the marker lamps at the rear of the caboose were lighted when their train left Childress. The conductor said that when the train stopped as a result of an emergency application of the brakes he immediately warned the flagman that No. 7 was due to leave Childress at 11:59 a. m. He said that soon afterward he observed the flagman leave the caboose and proceed northward to provide protection. He then left the caboose to inspect the train. He found that a separation had occurred at the rear of the fifty-seventh car where slack action had actuated a long pin lifter and uncoupled the cars. Because of difficulty in transmitting signals in the fog, there was considerable delay in making the movements necessary to couple the train. Immediately after it was coupled a second separation occurred at another point in the rear portion of the train. The conductor and other members of the crew in the vicinity of the front end of the train were attempting to couple the

separated portions in order to move the train clear of the main track when the collision occurred. The flagman said that after he left the caboose he proceeded northward with flagman's signals to a point immediately north of the curve to the rear of his train, approximately 1.02 miles north of the point at which the caboose stopped, where he placed two torpedoes two rail-lengths apart on the west rail. He said that he then returned to the vicinity of Mile Post 213, located 2,829 feet north of the rear end of his train. Visibility in the vicinity of the curve was restricted by fog to distances variously estimated as from 450 feet to 600 feet. The flagman said that as No. 7 approached he lighted a red fusee and gave stop signals. He said that his signals were not acknowledged and he observed as the train passed that the conventional white headlight of the locomotive was lighted and that there were no indications of a brake application having been made.

As No. 7 was approaching the point where the accident occurred the engineer and the fireman were maintaining a lookout ahead from their respective positions in the control compartment at the front of the locomotive. The members of the train crew were in various locations in the cars of the train. The headlight was lighted brightly. The brakes of this train had been tested and had functioned properly when used en route. The engineer said that he sounded the grade-crossing whistle signal for a highway crossing located 3,251 feet north of the point of accident and prolonged the signal until the locomotive reached the crossing. He said that immediately afterward he observed a lighted red fusee. He immediately closed the throttle and made an emergency application of the brakes. He said that he then acknowledged the flagging signals and opened the sander valve and that during this time the locomotive exploded two torpedoes. The fireman said that he called a warning when he observed the lighted red fusee. He thought the engineer initiated a service application before the brakes were applied in emergency. He said that he observed the flagman step clear of the track and that the torpedoes were exploded when the locomotive was closely approaching the point at which the lighted red fusee was displayed. The conductor said that in the vicinity of Mile Post 213 the brakes were applied but he was not aware that an emergency application had been made. The train porter said that he was in the vestibule between the seventh and eighth cars when the brakes were applied in emergency but he was unable to estimate the distance the train moved before the collision occurred. The

flagman said that he became concerned because of the heavy brake application and opened a vestibule door of the rear car and looked forward a few seconds before the accident occurred. A railway-mail clerk said he thought the brakes were applied in emergency approximately 15 seconds before the accident occurred.

Immediately after the accident occurred the flagman of No. 7 proceeded northward with flagman's signals to provide protection for his train. He said that he met the flagman of Extra 854 South at a point between a culvert located 2,174 feet north of the point of accident and Mile Post 213. The flagman of Extra 854 South was proceeding southward at that time.

All members of the crew of Extra 854 South read and understood the train orders issued for their train. They understood that protection was not required against following extra trains between Childress and Quanah before 1:30 p. m. When their train stopped north of the north siding-switch at Kirkland they were aware that unless it was clear of the main track before 11:59 a. m. it would be on the time of No. 7 and protection against the superior train would be required. Soon after the train stopped, the flagman proceeded northward with flagman's signals to provide such protection. However, the enginemen of No. 7 said that they did not receive any flagging signals and did not see a lighted red fusee until their locomotive was south of a highway crossing located 3,251 feet north of the point of accident and that torpedoes were not exploded until the locomotive was closely approaching the point at which the lighted fusee was displayed. Examination of the tape of the speed-recording device of the locomotive of No. 7 indicates that this train was moving at a speed of about 67 miles per hour when the brake application became effective and that the speed was reduced to approximately 25 miles per hour at the point of collision. Under these circumstances it appears that the distance from which flagging signals were given was not sufficient to provide full protection.

According to the provisions of the Commission's order of June 17, 1947, Docket No. 29543, a line on which any passenger train is operated at a speed of 60 or more miles per hour or any freight train is operated at a speed of 50 or more miles per hour must be equipped with an automatic or a manual block-signal system which meets the Commission's

standards. On September 14, 1951, this carrier was granted an extension of time until December 31, 1952, in which to complete installation of an automatic block-signal system meeting these requirements on the line on which this accident occurred. This relief allowed, during that period, maintenance of train speeds not in excess of those which will be permitted upon completion of the signal installation. The carrier has not completed signal installation in the territory where the accident occurred and it has not requested relief nor has relief been granted since the expiration of the previous order. Under these circumstances, maintenance of the presently authorized speeds for Diesel-powered passenger and freight trains in this territory is in violation of the Commission's order of June 17, 1947. Had the block system been in service on this line this accident probably would have been prevented.

Cause

This accident was caused by failure to provide adequate protection for a train occupying the main track on the time of a following superior train.

Dated at Washington, D. C., this first day of June, 1954.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,
Secretary.