INTERSTATE COMMERCE COMMISSION

WASHINGTON

INVESTIGATION NO. 2500

THE GULF COAST LINES

OF THE

MISSOURI PACIFIC LINES

REPORT IN RE ACCIDENT

NEAR HARDIN, TEXAS, ON

MAY 8, 1941

SUMMARY

Railroad:	Gulf Coast Lines	
Date:	May 8, 1941	
Location:	Hardin, Texas	
Kind of accident:	Rear-end collision	
Trains involved:	Freight	:Passenger
Train numbers:	161	:9
Engine numbers:	1268	:388
Consist:	54 cars, caboose	:5 cars
Speed:	7-8 m.p.h.	:45-65 m.p.h.
Operation:	Timetable and train orders	
Track:	Single; tangent; grade practically level	
Weather:	Dense fog	
Time:	6:38 a.m.	
Casualties:	9 injured	
Cause:	Accident caused by failure of preceding train to clear the time of following superior train and then by failure to furnish adequate flag protection.	
Recommendation:	That consideration be given by the Gulf Coast Lines to the establishment of a suitable block system on the line involved in this accident.	

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2500

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

THE GULF COAST LINES OF THE MISSOURI PACIFIC LINES

June 30, 1941

Accident near Hardin, Texas, on May 8, 1941, caused by failure of preceding train to clear the time of following superior train and then by failure to furnish adequate flag protection.

REPORT OF THE COMMISSION[1]

PATTERSON, Commissioner:

On May 8, 1941, there was a rear-end collision between a freight train and a passenger train on the Gulf Coast Lines of the Missouri Pacific Lines near Hardin, Texas, which resulted in the injury of six passengers, one Pullman conductor, and two train-service employees.

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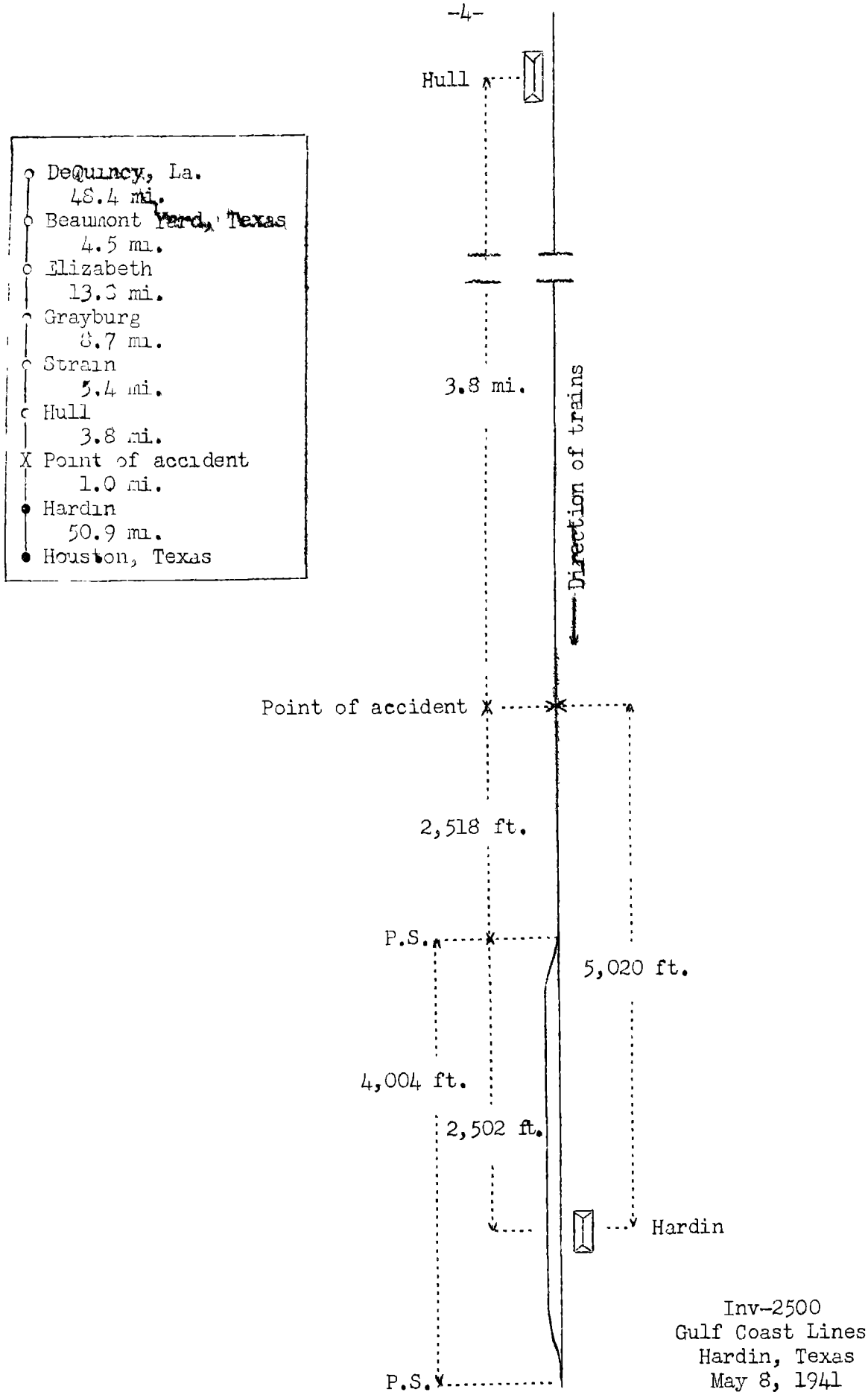
[1] Under authority of section 17(2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Patterson for consideration and disposition.



Inv-2500
Gulf Coast Lines
Hardin, Texas
May 8, 1941

Location and Method of Operation

This accident occurred on that part of the DeQuincy Division designated as the Houston District which extends between DeQuincy, La., and Houston, Texas, a distance of 136.5 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 Hardin a siding 4,004 feet in length parallels the main track on the north; the east switch of the siding is 2,502 feet east of the station. The accident occurred on the main track at a point 2,518 feet east of the east siding-switch and 5,020 feet east of the station. As the point of accident is approached from the east the track is tangent more than 17 miles to the point of accident and more than 1 mile beyond. The grade is practically level.

Rules of the Uniform Code of Operating Rules in use on this line read in whole or in part as follows:

DEFINITIONS

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

11. A train finding a fusee burning on or near its track must stop and extinguish the fusee. Train may then proceed at restricted speed.

15. The explosion of two torpedoes is a signal to proceed at restricted speed. The explosion of one torpedo will indicate the same as two, but the use of two is required.

* * *

86. * * *

Outside of automatic block signal territory, unless otherwise provided, an inferior train must be in the clear at the time a first class train or train of superior right in the same direction is due to leave the next station in the rear where time is shown; except that if the time between stations is less than five minutes, or the distance between stations is less than three miles, the inferior train must be in the clear at least five minutes in advance of time shown for superior train at next station in the rear.

* * *

91. Unless some form of block signal is used: Trains in the same direction must keep not less than five minutes apart, except in closing up at stations.

* * *

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 fusees.

* * *

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 full protection. By night, or by day when the view is obscured, lighted fusees must be thrown off at proper intervals.

When day signals cannot be plainly seen, owing to weather or other conditions, night signals must also be used. * * *

In the vicinity of the point of accident the maximum authorized speeds are 65 miles per hour for passenger trains and 50 miles per hour for freight trains.

There was a dense fog at the time of the accident, which occurred at 6:38 a.m.

Description

No. 161, a west-bound second-class freight train, with Conductor Dorman and Engineman White in charge, consisted at the time of the accident of engine 1268, 1 auxiliary water car, 47 loaded and 6 empty cars and a caboose. This train departed from DeQuincy, 85.6 miles east of Hardin, at 2:40 a.m., according to the train sheet, 2 hours 5 minutes late. At Beaumont Yard, 37.2 miles east of Hardin, the crew received copies of train order No. 14, Form 19, which read as follows:

No. 9 Eng 388 wait at	
Beaumont Yard until	550 Am
Elizabeth	558 Am
Westbury	606 Am
Grayburg	617 Am
Hathaway	622 Am
Strain	627 Am
Hull	633 Am
Hardin	638 Am

* * *

This train departed from Beaumont Yard at 5:15 a.m., 2 hours 40 minutes late, passed Grayburg, 18.9 miles east of Hardin, at 6:06 a.m., 2 hours 55 minutes late, and passed Hull, 4.8 miles east of Hardin and the last open office, at 6:29 a.m., 2 hours 53 minutes late. At Hardin it slightly overran the east siding-switch, moved backward, then started to enter the siding, and, while it was moving at a speed of 7 or 8 miles per hour, the rear end was struck by No. 9.

No. 9, a west-bound first-class passenger train, with Conductor Roll and Engineman Drane in charge, consisted of engine 388, one baggage car, one mail-passenger car, one chair car, one cafe-lounge-chair car and one Pullman sleeping car, in the order named; all cars were of steel construction. At DeQuincy the crew received copies of train order No. 14, Form 19, previously quoted. This train departed from DeQuincy at 4:20 a.m., according to the train sheet, 3 minutes late, passed Grayburg at 6:21 a.m., 19 minutes late, passed Hull at 6:34 a.m., 16 minutes late, and, while moving at a speed estimated as 45 to 65 miles per hour, collided with the rear end of No. 161.

The caboose of No. 161 was demolished. The rear two cars stopped to the right of the track and were badly damaged. The third car from the rear remained upright on the track; its rear truck was derailed and its rear end was demolished. The engine of No. 9 was derailed to the left and stopped 233 feet beyond the point of collision, at right angles to the track, and leaned to the left at an angle of about 45 degrees. The front end and the cab were demolished. The tender was torn loose from the engine and stopped, badly damaged, across the track and at right angles to it. The first car of No. 9 was derailed to the right and stopped upright, with its front end 20 feet north of the track and the rear end on the roadbed; the left front corner was crushed and the car was otherwise considerably damaged. The front truck of the second car was derailed and the car was slightly damaged.

The employees injured were the engineman and the fireman of No. 9.

Summary of Evidence

Engineman White, of No. 161, stated that at DeQuincy a terminal air-brake test was made and the brakes functioned properly en route. Before his train left DeQuincy the conductor, the fireman and he compared watches with the standard clock. At Beaumont Yard he received a copy of train order No. 14 and understood its provisions. About 6:28 or 6:29 a.m. his engine passed the station at Hull and the speed was about 50 miles per hour. He received a proceed signal from the rear of his train. He understood that the rules require an inferior train to be in the clear at the time a first-class train is due to leave the last station in the rear where time is shown. He knew that before his train passed Hull it was moving in violation of this rule and that after it passed Hull only 4 minutes remained in which to traverse a distance of 4.8 miles between Hull and Hardin; however, he had expected to receive an order at Hull establishing a later waiting time for No. 9 at that point. Because his train was late on its schedule he was making an effort to advance it as far as possible in order to minimize any delay which might be incurred by clearing for No. 9. At Hull the weather was clear but about 4 miles west of Hull a dense fog that restricted visibility to about 10 car lengths was encountered. When his train was about 3,000 feet east of the east siding-switch at Hardin the speed was about 58 miles per hour. He made an initial brake-pipe reduction of 10 pounds, which was followed by another 10-pound brake-pipe reduction. About 1,000 to 1,500 feet east of the east siding-switch he sounded the engine whistle for the flagman to protect the rear of the train and at this point the speed had been reduced sufficiently for the flagman to alight. About 500 feet east of the east siding-switch the engineman released the train brakes and controlled the speed with the engine and tender brakes. The front brakeman proceeded to the switch to open it so the train could enter the siding without stopping; however, he failed to open the switch and the engine overran it about 15 feet. His train stopped at the switch at 6:34 a.m., or 1 minute after No. 9 was due to leave Hull. He was not alarmed about No. 9 as he expected his flagman to protect against No. 9 and 4 minutes remained before No. 9 was due to leave Hardin, during which time No. 161 could get into clear on the siding. He stretched the slack, backed clear of the switch, and then the train started to enter the siding. The engine had entered the siding about 4 or 5 car lengths and the speed was about 8 miles per hour when the accident occurred.

Fireman McClurkin, of No. 161, stated that train order No. 14 was discussed and both the engineman and he expected to receive another order at Hull directing No. 9 to wait at Hull until a later time than that specified by order No. 14. When the engine was passing the east siding-switch at Hull he observed that the train-order signal was displaying proceed; he called its indication to the engineman and remarked that

evidently No. 9 would not be further restricted. He said the engineman did not sound the engine whistle signal for the flagman to protect the rear of the train until the brakes became applied in emergency as the train was entering the siding at Hardin. He understood that the rules require an inferior train to be clear of the main track at the time a first-class train in the same direction is due to leave the next station in the rear where time is shown. He knew that his train moved between Hull and Hardin in violation of this rule but, as the engineman was competent and fully aware of the requirements of the rule, he did not call the attention of his engineman to it.

The statement of Front Brakeman Wilson, of No. 161, added nothing of importance.

Conductor Dorman, of No. 161, stated that at Beaumont Yard he received a copy of train order No. 14 and discussed its provisions with the flagman. At 6:29 a.m. his train passed Hull at a speed of 45 or 50 miles per hour. He understood that the rules require an inferior train to be clear of the main track when a first-class train in the same direction is due to leave the next station in the rear where time is shown. In this instance his train was occupying the main track after the time designated for No. 9 to wait at Strain. When his engine passed the station at Hull there was insufficient time to proceed to Hardin and clear No. 9 at the time designated; however, he expected to receive another order at Hull further restricting the schedule of No. 9. When he observed that the train-order signal displayed proceed he gave a proceed signal to the engineman. Since the siding at Hull had a capacity of only 57 cars he did not stop his train for it to back into the clear as several cars of his train were of unusual length and he thought probably his train and No. 9 would have to "saw by," which would delay No. 9 more than if No. 161 proceeded to Hardin ahead of it. About 3 miles west of Hull there was a dense fog that restricted visibility to about 10 car lengths. The conductor stated that he dropped off a lighted 10-minute fusee about 1-1/2 miles east of the east siding-switch at Hardin. As the train was approaching Hardin he instructed the flagman to proceed to the rear and to place torpedoes on the rail as quickly as possible. When the speed was reduced to about 20 miles per hour, the flagman alighted from the caboose with a lighted fusee, a red lantern and an additional supply of fusees in his possession. The train stopped at the east siding-switch at 6:34 a.m. Before the train stopped, the conductor heard the engine whistle sound the signal for the flagman to protect the rear of the train. As the flagman and the lighted fusee disappeared from view about 10 or 12 car lengths to the rear of the caboose, for additional precaution

the conductor lighted a fusee and proceeded to the rear. He estimated that he had reached a point about 30 car lengths east of his caboose when it stopped. Soon afterward he heard No. 9 explode two torpedoes, then the headlight appeared about 10 car lengths distant and he waved stop signals with the lighted fusee; however, neither the flagman's signals, the torpedoes nor the conductor's signals were acknowledged by the engineman of No. 9. The conductor said that the engine was working steam and the speed was about 50 or 60 miles per hour when No. 9 passed him. He did not see any fire flying from the brake shoes and was of the opinion that the speed was not reduced prior to the collision. The accident occurred at 6:38 a.m. After the accident occurred he walked westward about 1,000 feet before he reached the rear end of No. 9.

Flagman McMiller, of No. 161, stated that at Beaumont Yard he read train order No. 14. He understood that an inferior train must be clear of the main track at the time a following first-class train is due to leave the next station in the rear where time is shown. When his train passed Strain, 10.2 miles east of Hardin, he remarked to the conductor that the siding at Hull was of insufficient length to contain their train. The train consisted of 55 cars; however, the siding at Hull had a designated capacity of 57 cars, but No. 161 had experienced difficulty in getting into clear on the 57-car siding at Elizabeth, 27.9 miles east of Hull. When his train was approaching Hull the speed was about 45 miles per hour and it was apparent that the engineman intended to proceed to some point farther west before going into clear for No. 9. The flagman dropped off a lighted fusee east of the station at Hull. The train-order signal displayed proceed, the caboose passed the station at 6:29 a.m., and the operator exchanged signals with the flagman. About 6:32 a.m., when No. 161 was several miles west of Hull, the conductor dropped off a lighted fusee and instructed the flagman to be prepared to provide flag protection as soon as speed was reduced sufficiently for him to alight. The flagman procured five fusees, six torpedoes, and a red lantern. When his train was approaching Hardin a dense fog that restricted visibility to about 200 feet was encountered. When speed was reduced to about 20 miles per hour he alighted and carrying a lighted red fusee he proceeded toward the rear. At a point about 5,300 feet east of the east siding switch he placed two torpedoes on the rail then continued eastward until he reached the east end of bridge 424.0, located 816 feet farther east. He heard No. 9 approaching, and then observed its headlight in the fog about 200 feet distant. He immediately waved stop signals and as the engine passed he shouted a warning to the engineman. The right cab-window was open and the engineman was standing and was maintaining a lookout ahead. The engineman did not acknowledge either the stop

signals or the torpedoes. After the collision occurred he stuck the fusee in a tie east of bridge 424.0, then proceeded toward the scene of the accident and met the flagman of No. 9 proceeding eastward.

Engineman Drane, of No. 9, stated that between DeQuincy and the point where the accident occurred the brakes functioned properly. At Hull the train-order signal displayed proceed and his train passed that station after the time prescribed by train order No. 14. As his train was approaching the point where the accident occurred the speed was between 60 and 63 miles per hour and from their respective sides of the cab he and the fireman were maintaining a lookout ahead. Visibility was considerably restricted by dense fog. There was no condition of the engine that distracted his attention. At a point 500 or 600 feet east of the point where the accident occurred two torpedoes were exploded and he moved the brake valve but was not certain whether he placed it in service or in emergency position. At a point 300 to 500 feet east of the point where the accident occurred he saw the caboose of No. 161 with its marker lamps lighted and the flagman giving stop signals about 100 or 150 feet to its rear. Another person holding a lighted fusee was on the caboose platform. The engineman moved to the gangway and the collision occurred immediately afterward. Between Hull and the point of accident he did not observe any lighted fusees on the track except the one displayed immediately to the rear of the caboose.

Fireman Smith, of No. 9, stated that at DeQuincy he and his engineman compared watches with the standard clock. At DeQuincy a terminal air-brake test was made, a running test was made soon after the train departed from that point, and the brakes functioned properly en route. Brake-pipe pressure of 90 pounds and main-reservoir pressure of 110 pounds were being maintained. At Hull the train-order signal displayed proceed and his train passed the station at 6:34 a.m. The weather was clear. About 1-1/2 miles west of Hull dense fog restricted visibility to a distance of 50 or 100 feet. As his train was approaching the point where the accident occurred the speed was 60 or 65 miles per hour and he was maintaining a lookout ahead. The clear-vision window was open and there was no condition of the engine that distracted his attention. The first he knew of anything being wrong was when his engineman and he saw the lighted markers of the caboose of No. 161 and the conductor of that train standing about 30 feet to the rear and holding a lighted red fusee. He did not see the flagman and did not remember whether any torpedo was exploded. His engineman did not acknowledge the flagging signals. The fireman was not certain that the brakes were applied prior to the collision. He did not observe any lighted fusee between Hull and the point where he saw the conductor of No. 161.

Conductor Roll, of No. 9, stated that at DeQuincy he received a copy of train order No. 14. No. 9 passed Hull about 6:35 a.m. As his train was approaching the point where the accident occurred he was in the fourth car and the speed was about 65 miles per hour. Between Hull and the point where the accident occurred he did not hear a torpedo explode and did not observe the reflection of a lighted fusee. The first he knew of anything being wrong was when the air brakes became applied in emergency; the accident occurred 10 or 15 seconds later. The speed was about 45 miles per hour at the time of the accident, which occurred at 6:38 a.m. In his opinion, the fog restricted visibility so that a lighted fusee could be seen only 15 or 20 car lengths.

The statement of Brakeman Kinley, of No. 9, added nothing of importance.

Flagman Amacker, of No. 9, stated that 5 or 8 minutes after the accident occurred he proceeded to the rear to provide flag protection and met the flagman of No. 161 at a point 80 feet west of bridge 424.0. At the east end of this bridge a burning fusee was stuck in the north end of a tie. The unburned portion of the fusee was about 1-1/2 inches in length.

Express Messenger Irwin, of No. 9, stated that he was in the first car as his train was approaching the point where the accident occurred. He heard two torpedoes explode and immediately the air brakes were applied in emergency.

Operator Hylton, at Hull, stated that No. 161 passed Hull at 6:29 a.m. The weather was clear and the marker lamps remained visible until they reached a point about 3 miles west of Hull. He did not see the reflection of any fusee dropped off that train. No. 9 passed Hull at 6:34 a.m. at a speed of about 60 miles per hour.

Train Dispatcher Moyer, at DeQuincy, stated that No. 161 passed Grayburg, 14.1 miles east of Hull, at 6:06 a.m. He expected that No. 161 would clear for No. 9 either at Hathaway or Strain, 9.6 and 5.4 miles, respectively, east of Hull.

Car Inspector Little, at DeQuincy, stated that he conducted the terminal air-brake tests on both No. 161 and No. 9. The brake equipment of each train functioned properly.

Assistant Chief Engineer Schwinn stated that he arrived at the scene of the accident at 9:45 a.m. The point of accident was 2,518 feet east of the east siding-switch at Hardin. Both rails at this point were bent downward as a result of the impact. Proceeding eastward from this point he found a cap of a fusee 19 feet east of the point of collision. Throughout a distance of 256 feet the rails indicated that the brakes

of No. 9 had been applied in emergency and there was sand on the rails. At a point 642 feet farther east he found a lead fastening of a torpedo. At a point 3,166 feet east of the point of accident the north rail bore indications of a freshly exploded torpedo.

Assistant Superintendent Judd stated that the siding at Hull is 2,980 feet in length and has a capacity of 57 cars, based on an average length of 44 feet. Surprise efficiency tests are conducted in this territory.

During the 31-day period prior to the occurrence of the accident, the average daily movement in the vicinity of the point of accident was 11.2 trains.

Discussion

No. 161, a second-class train, was entering the siding at Hardin when its rear end was struck by No. 9, a first-class train. The crews of both trains held copies of a train order specifying that No. 9 would wait at Grayburg until 6:17 a.m., at Hathaway until 6:22 a.m., at Strain until 6:27 a.m., and at Hull until 6:33 a.m., respectively, 18.9 miles, 14.4 miles, 10.2 miles, and 4.8 miles east of Hardin. All the employees involved understood that the rules and the provisions of the train order required that No. 161 be clear of the main track not later than the time shown for No. 9 at the first station in the rear of the clearing point, or furnish adequate flag protection.

When No. 161 passed Grayburg it had 11 minutes in which to move to Hathaway, a blind siding 4.5 miles west of Grayburg, and clear for No. 9; however, the crew of No. 161 thought their train was too long for the siding at Hathaway and that No. 9 would be delayed at that point in "sawing by." No. 161 passed Strain, a blind siding 4.2 miles west of Hathaway, which siding was long enough to contain the train, and proceeded to Hull, an open office 5.4 miles beyond, because the crew thought they would receive a train order specifying later waiting times for No. 9, but no order was received at Hull. Since the siding at Hull was of the same length as the one at Hathaway, No. 161 proceeded to Hardin. The rear of the train passed the station at Hull at 6:29 a.m., or only 4 minutes before the expiration of the waiting time for No. 9 at that station. Between a point 3 miles west of Hull and the east siding-switch at Hardin a dense fog restricted visibility to a distance of about 200 feet. No. 161 stopped at the east siding-switch at Hardin at 6:34 a.m., which was 1 minute after the waiting time for No. 9 at Hull had expired. The rear end of No. 161 was struck at a point 5,020 feet east of the station at Hardin, 5 minutes after the expiration of the waiting time for No. 9 at Hull.

There was considerable discrepancy in the statements concerning the flag protection furnished by No. 161. The conductor of that train said he dropped a burning 10-minute fusee at a point 1-1/2 miles east of the east siding-switch at Hardin, that the flagman alighted with flagging equipment when the speed of his train had been reduced to 20 miles per hour, and that he himself soon afterward alighted, proceeded to the rear of his train, and with a burning fusee flagged No. 9 from a point about 1,200 feet to the rear of the point where his caboose stopped. According to the statement of the flagman, he placed two torpedoes at a point about 5,300 feet east of the east siding-switch and waved stop signals with a burning fusee from that vicinity. This point was about 2,500 feet east of the point where the caboose stopped. On the other hand, the engineman of No. 9 said the only torpedoes exploded were at a point 500 or 600 feet east of the point where the accident occurred; however, the fireman of No. 9 did not hear any torpedoes explode. The engineman of No. 9 said that he observed the flagman giving stop signals from a point 100 or 150 feet to the rear of the caboose and observed another person holding a lighted fusee and standing on the caboose platform. The fireman of No. 9 said he did not see the flagman of the preceding train but he saw the conductor standing about 30 feet to the rear of the caboose and holding a lighted red fusee. In any event, it is apparent that, considering the weather conditions and the maximum authorized speed of 65 miles per hour, the flag protection furnished by No. 161 was not sufficient.

If this line had been provided with an adequate block system, it is probable the accident would have been averted.

Cause

It is found that this accident was caused by failure of the preceding train to clear the time of a following superior train and then by failure to furnish adequate flag protection.

Recommendation

It is recommended that consideration be given by the Gulf Coast Lines to the establishment of a suitable block system on the line involved in this accident.

Dated at Washington, D.C., this thirtieth day of June, 1941.

By the Commission, Commissioner Patterson.

(SEAL) W. P. BARTEL,

Secretary.