

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2830
THE NORTHERN PACIFIC RAILWAY COMPANY
REPORT IN RE ACCIDENT
NEAR CASTLE ROCK, WASH., ON
SEPTEMBER 19, 1944

SUMMARY

Railroad: Northern Pacific

Date: September 19, 1944

Location: Castle Rock, Wash.

Kind of accident: Rear-end collision

Trains involved: G. N. passenger : G. N. passenger

Train numbers: Passenger Extra : Passenger Extra
3213 East 2501 East

Engine numbers: 3213 : 2501

Consist: 22 cars : 13 cars

Estimated speed: Standing : 25 m. p. h.

Operation: Timetable, train orders and
automatic block-signal system

Track: Double; tangent; 0.32 percent
ascending grade eastward

Weather: Clear

Time: 11:45 a. m.

Casualties: 1 killed; 58 injured

Cause: Failure of the Northern Pacific
Railway Company to provide ade-
quate safeguards for movement of
trains against current of traffic

Recommendation: That the Northern Pacific Railway
Company provide an adequate block
system for operation against
current of traffic

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2830

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

THE NORTHERN PACIFIC RAILWAY COMPANY

November 3, 1944.

Accident near Castle Rock, Wash., on September 19, 1944,
caused by failure of the Northern Pacific Railway
Company to provide adequate safeguards for the
movement of trains against the current of traffic.

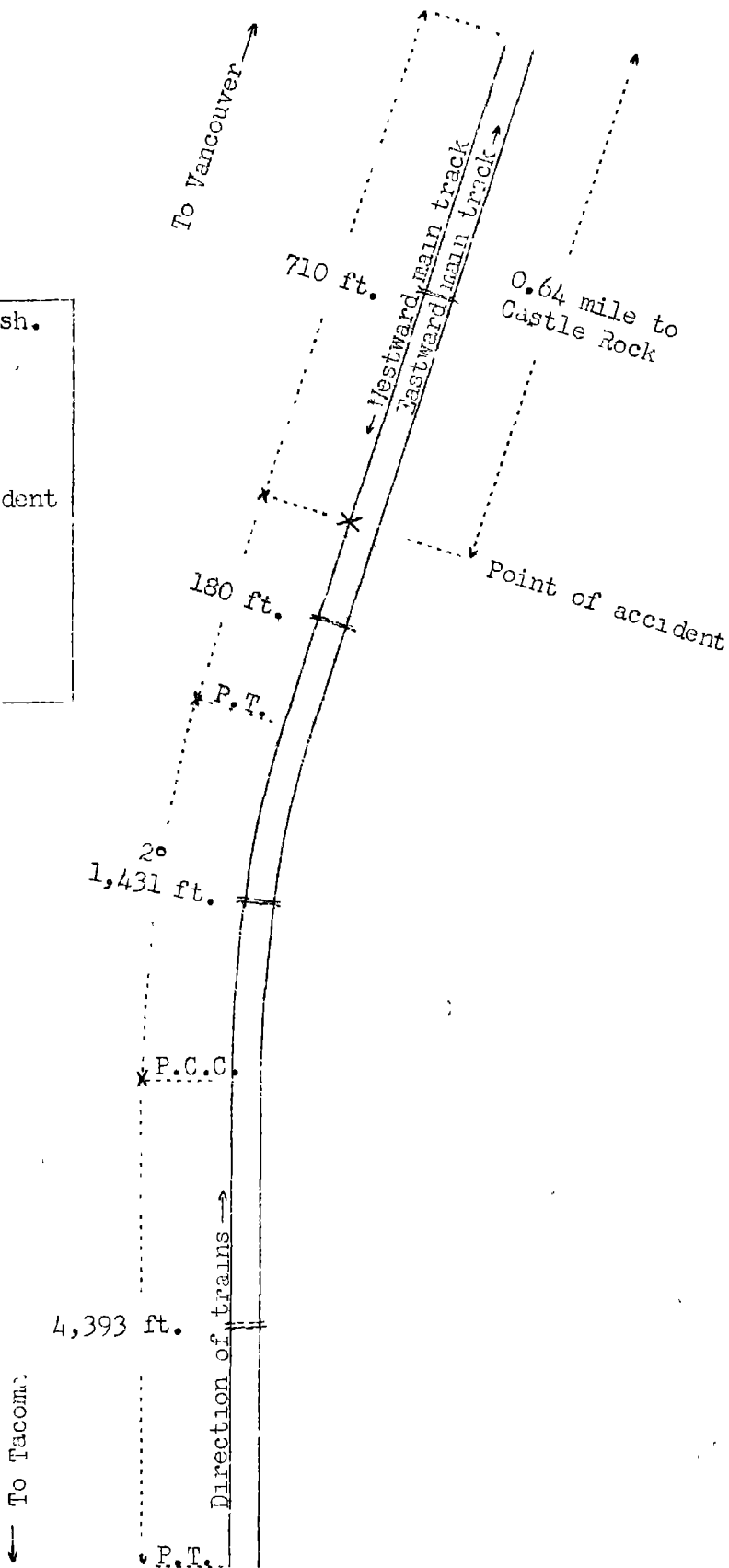
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REPORT OF THE COMMISSION

PATTERSON, Chairman:

On September 19, 1944, there was a rear-end collision between two Great Northern Railway passenger trains on the line of the Northern Pacific Railway near Castle Rock, Wash., which resulted in the death of 1 passenger, and the injury of 41 passengers, 2 Pullman employees, 11 dining-car employees, 1 train porter, 1 traveling engineer and 2 train-service employees. This accident was investigated in conjunction with a representative of the Department of Labor and Industry of the State of Washington.

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

o	Vancouver, Wash.	39.10 mi.
o	Kelso	9.90 mi.
o	Castle Rock	0.64 mi.
X	Point of accident	7.76 mi.
o	Vader Jct.	25.00 mi.
o	Centralia	54.00 mi.
o	Tacoma, Wash.	



Inv-2830
 Northern Pacific Railway
 Castle Rock, Wash.
 September 19, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Tacoma Division designated as the Third Sub-division and extending eastward, according to time-table directions, from Tacoma to Vancouver, Wash., 136.4 miles. This was a double-track line over which trains moving with the current of traffic were operated by time-table, train orders and an automatic block-signal system. Trains of the Great Northern Railway were regularly operated over this line. At the time of the accident the eastward main track between Vader Jct. and Kelso, respectively, 79 miles and 97.3 miles east of Tacoma, was out of service, and trains moving in either direction between these stations were being operated on the westward main track. There was no block system in use for movements against the current of traffic. The accident occurred on the westward main track 86.76 miles east of Tacoma, at a point 0.64 mile west of the station at Castle Rock. From the west there were, in succession, a tangent 4,393 feet in length, a compound curve to the right 1,431 feet, the maximum curvature of which was 2°, and a tangent 180 feet to the point of accident and 710 feet beyond. The grade for east-bound trains was, successively, level 2,400 feet and 0.0229 percent descending 700 feet, then there was a vertical curve 600 feet, followed by a 0.32-percent ascending grade 129 feet to the point of accident and a considerable distance beyond.

Operating rules read 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 to be reduced.

* * *

11. A train finding a fusee burning red 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.

* * *

35. The following signals will be used by flagmen:

Day signals--A red flag,
Torpedoes and Fusees.

* * *

91. Unless some form of block signals is used, trains in the same direction must keep not less than ten 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 recalled and safety to the train will permit, he may return.

* * *

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.

* * *

FORMS OF TRAIN ORDERS.

* * *

D-S.

Providing for the Use of a Section of Two or More Tracks as Single Track.

(1.)-----track will be used as single track between F and G.

* * *

All trains must use the track specified between the stations named and will be governed by rules for single track.

* * *

The maximum authorized speed for the preceding train was 50 miles per hour and for the following train, 65 miles per hour.

Description of Accident

Passenger Extra 3213 East, an east-bound G. N. passenger train, consisted of engine 3213, one refrigerator-express car, five baggage cars, one mail car, one baggage car, six coaches, four Pullman sleeping cars, two Pullman tourist cars, one Pullman sleeping car and one business car, in the order named. The

first, fifth, sixth, eighth, thirteenth and twenty-second cars were of steel-underframe construction, and the remainder were of all-steel construction. At Centralia, 33.4 miles west of Castle Rock, the crew received copies of train order No. 457 reading as follows:

Westward track will be used as
single track from crossover just
west of train order signal at
Vader Jct to crossover just west
of train order signal at Kelso

Passenger Extra 3213 East departed from Centralia on the eastward main track at 9:35 a. m., departed from Vader Jct., the last open office, on the westward main track at 11:27 a. m., and stopped about 11:41 a. m. with the rear end standing 0.64 mile west of the station at Castle Rock. About 4 minutes later the rear end was struck by Passenger Extra 2501 East.

Passenger Extra 2501 East, an east-bound G. M. passenger train, consisted of engine 2501, one baggage car, one dormitory car, five Pullman sleeping cars, one dining car, one Pullman sleeping car, one Pullman lounge car and three Pullman sleeping cars, in the order named. All cars were of steel construction. At Centralia, the crew received copies of train order No. 457. This train departed from Centralia on the eastward main track at 10:51 a. m., departed from Vader Jct. on the westward main track at 11:37 a. m., and while moving at an estimated speed of 25 miles per hour it struck Passenger Extra 3213 East.

The tender of the engine, and the first, ninth, fourteenth and twenty-second cars of Passenger Extra 3213 were considerably damaged. The engine and the first car of Passenger Extra 2501 were derailed, and stopped upright and in line with the track. The engine and the first car were considerably damaged, and the thirteenth car was slightly damaged.

It was clear at the time of the accident, which occurred about 11:45 a. m.

The engineer and the fireman of Passenger Extra 2501 East were injured.

Discussion

About 11:38 a. m. Passenger Extra 3213 East was stopped about 1 mile west of the station at Castle Rock in response to signals given by the flagman of a work extra, which was working in the vicinity of Castle Rock. About 7 minutes later, after Passenger Extra 3213 East had proceeded eastward about 1,800 feet and had again stopped, the rear end was struck by Passenger Extra 2501 East.

As Passenger Extra 2501 East was approaching the point where the accident occurred the speed was about 60 miles per hour. The air brakes had functioned properly at all points where used en route. A traveling engineer, who was on the engine, and the enginemen were maintaining a lookout ahead.

Because of vegetation adjacent to the track and track curvature in this vicinity, the view of the track ahead was materially restricted. When the engine reached a point about 2,900 feet west of the point where the accident occurred the engineer made an 8-pound brake-pipe reduction to control the speed of the train in compliance with the provisions of a train order which required the speed to be not in excess of 5 miles per hour at a point about 5,300 feet eastward. When the engine reached a point about 2,200 feet west of the point where the accident occurred the speed was about 45 miles per hour, and the engineer observed the top portions of passenger cars a short distance east of the east end of the curve. He immediately moved the brake valve to emergency position, then he saw, simultaneously, the rear end of the preceding train and stop signals being given with a red flag from a point about 500 feet west of the rear of that train. The speed of Passenger Extra 2501 was about 25 miles per hour when the collision occurred. The traveling engineer and the enginemen said that no warning signals were seen or heard until the engineer observed the stop signals being given with a red flag immediately prior to the accident.

Under the rules, the flagman of Passenger Extra 3213 East was required to provide flag protection when the speed of his train was first reduced as it approached the point where it was first stopped, and also during the time the train was moving eastward about 1,800 feet to the point where the second stop was made and while it was standing at the point where the accident occurred. The rear car of this train was a business car, and, to avoid disturbing the occupants, the flagman was stationed on the rear platform of the second rear car. He dropped lighted 5-minute fuses on the south side of the westward main track at several points en route, the last one of which was dropped at a point 3,600 feet west of the point where his train first stopped. He said that when his train stopped at the point where the accident occurred he immediately proceeded westward and had reached a point about 500 feet to the rear of his train when he saw a train approaching from the west. He was giving stop signals with a red flag and a lighted fusee when the engine of Passenger Extra 2501 passed him. The flagman thought the flag protection he furnished was sufficient.

In this territory trains moving with the current of traffic were operated by timetable, train orders and an automatic block-signal system. However, a side collision between two trains occurred at Castle Rock about 15 hours before the present accident, and the eastward main track was rendered unfit for service. The first accident is covered in Investigation No. 2829. The eastward main track was still out of service when the second accident occurred, and a train order putting the westward main track into service as single track was issued soon after the first accident occurred. Therefore, the east-bound trains involved in this accident were being operated on the westward main track. Under the rules applicable to operation in single-track territory, the only provisions which were made for spacing following east-bound trains were by the time-interval method enforced by operators at open stations, and by burning fusees dropped by flagmen. The rules required that a train following

another train be spaced at least 10 minutes behind the preceding train. In this case the preceding train passed Vader Jct., the last open office and 7.76 miles west of the point of accident, 10 minutes before the following train passed. The collision occurred before the trains reached Castle Rock, the next open office, 0.64 mile east of the point of accident. Unless the following train received flagging signals, there was no provision that prevented this train from moving at the maximum authorized speed from Vader Jct. until it reached a point in the vicinity of the station at Castle Rock where speed was required to be reduced in compliance with the train-order speed restriction. Although the rules applicable to this case required that a 10-minute interval be maintained between these trains, the flagman of the preceding train was furnished only 5-minute fuses, and the fuses he dropped prior to the time his train stopped and burned out before the following train passed the points where the fuses were dropped.

The automatic block system in this territory did not provide protection for movements against the current of traffic. Although the westward main track was being used as single track, according to the train order covering the movement, the operation of the trains involved simulated movement against the current of traffic. The book of operating rules of this carrier contains manual-block rules which provide, among other things, that no train may be permitted to enter a block occupied by a passenger train, and no passenger train may be permitted to enter a block occupied by any train, except in emergency. If the manual-block system had been in use for movements against the current of traffic in this territory, the following passenger train would not have been permitted to enter an occupied block, and this accident would not have occurred.

Cause

It is found that this accident was caused by failure of the Northern Pacific Railway Company to provide adequate safeguards for the movement of trains against the current of traffic.

Recommendation

It is recommended that the Northern Pacific Railway Company provide an adequate block system for operation against the current of traffic.

Dated at Washington, D. C., this third day of November, 1944.

By the Commission, Chairman Patterson.

(SEAL)

W. P. BARTEL,
Secretary.