

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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INVESTIGATION NO 2829  
THE NORTHERN PACIFIC RAILWAY COMPANY  
REPORT IN RE ACCIDENT  
AT CASTLE ROCK, WASH., ON  
SEPTEMBER 18, 1944

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SUMMARY

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Railroad: Northern Pacific

Date: September 18, 1944

Location: Castle Rock, Wash.

Kind of accident: Side collision

Trains involved: N. P. freight : G. N. freight

Train numbers: Extra 1553 West : Extra 2185 West

Engine numbers: 1553-1677 : 2185

Consist: 67 cars, caboose : 27 cars, caboose

Estimated speed: Practically stopped : 40 m. p. h.

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

Track: Double; tangent; 0.20 percent  
ascending grade westward

Weather: Clear

Time: 8:53 p. m.

Casualties: 1 killed; 4 injured

Cause: Train fouling main track immediately  
in front of following train

Recommendation: That the Northern Pacific Railway  
Company install, at clearance  
points on its sidings in automatic  
block-signal territory on the Third  
Sub-division of the Tacoma Division,  
derails coordinated with electric  
switch-locking

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 2829

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

THE NORTHERN PACIFIC RAILWAY COMPANY

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November 3, 1944.

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Accident at Castle Rock, Wash., on September 18, 1944,  
caused by a train fouling the main track immediately  
in front of a following train.

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REPORT OF THE COMMISSION<sup>1</sup>

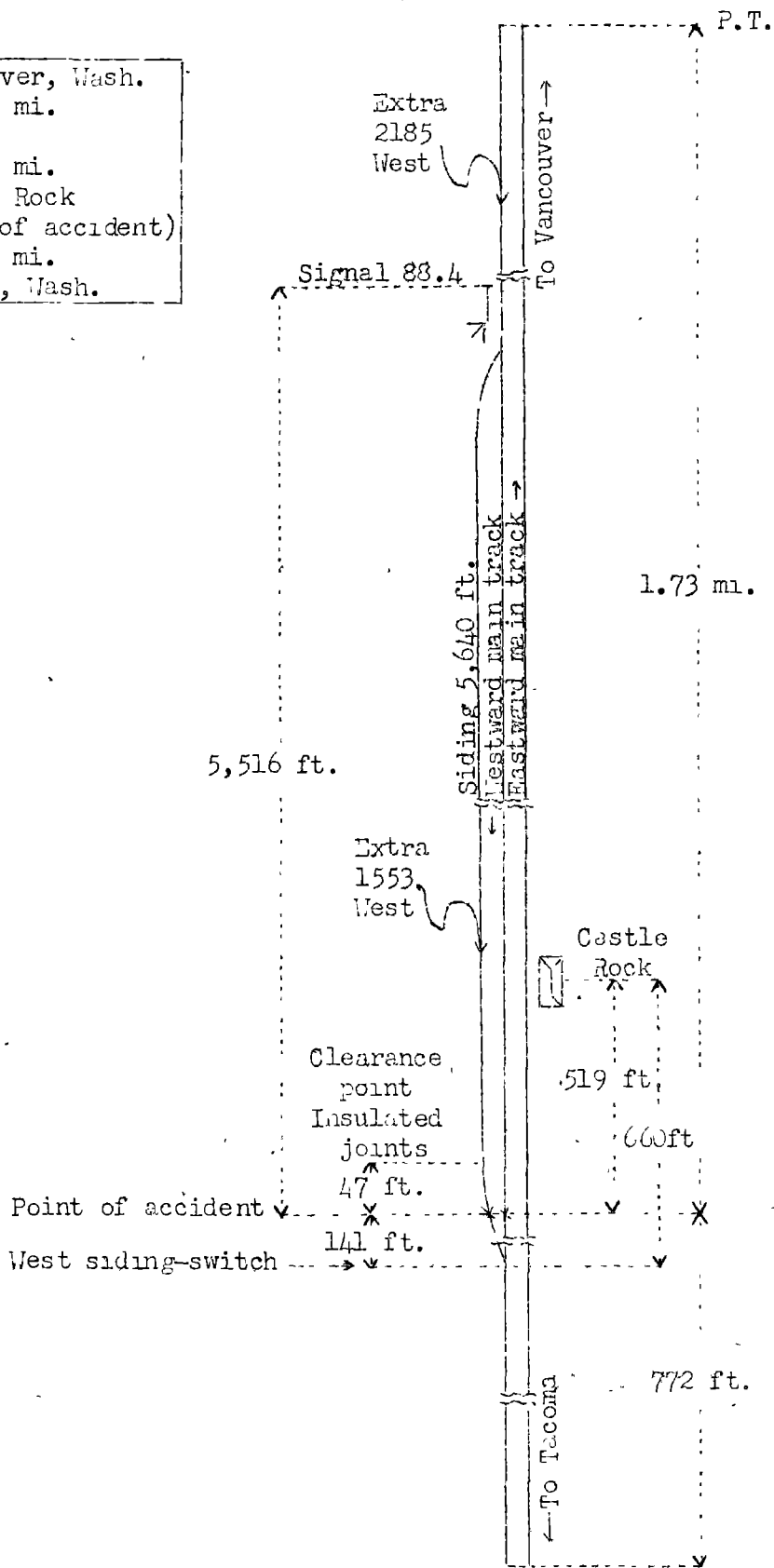
PATTERSON, Chairman:

On September 18, 1944, there was a side collision between a Northern Pacific Railway freight train and a Great Northern Railway freight train on the line of the Northern Pacific Railway at Castle Rock, Wash., which resulted in the death of one Great Northern Railway employee, and the injury of four Great Northern Railway employees. This accident was investigated in conjunction with a representative of the Department of Labor and Industry of the State of Washington.

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<sup>1</sup>Under 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.	39.1 mi.
o	Kelso	9.9 mi.
X	Castle Rock (Point of accident)	87.4 mi.
o	Tacoma, Wash.	



Inv. No. 2829  
 Northern Pacific Railway  
 Castle Rock, Wash.  
 September 18, 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 westward, according to time-table directions, from Vancouver to Tacoma, 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 Castle Rock, 49 miles west of Vancouver, a siding 5,640 feet long paralleled the westward main track on the north. The west switch of this siding was 660 feet west of the station. The clearance point at the west end of the siding was 188 feet east of the switch. The accident occurred 47 feet west of the clearance point and 141 feet east of the west switch. The main tracks were tangent throughout a distance of 1.73 miles east of the point of accident and 772 feet westward. At this point the grade was 0.20 percent ascending westward.

Automatic signal 88.4, which governed west-bound movements on the westward main track, was located 5,516 feet east of the point of accident. This signal was of the one-arm, three-position, upper-quadrant, semaphore type, and was approach lighted.

Operating rules read in part as follows:

513. Unless otherwise provided, before a train or engine enters on or fouls a main track \* \* \* trainmen will operate the switch and wait two minutes at the switch before making engine or train movement; \* \* \*. This will not relieve employes from the duty of promptly and properly protecting the movement.

514 (A). \* \* \*

Trains or engines proceeding from sidings \* \* \* to the main track, must remain clear of the insulated joints at the clearance point on such tracks until the main track switch has been opened.

The maximum authorized speed for the G. N. train involved in this accident was 40 miles per hour.

Description of Accident

Extra 1553 West, a west-bound N. P. freight train, consisted of engine 1553 and 1677, 67 cars and a caboose, in the order named. About 8:53 p. m., after this train had moved westward on the siding at Castle Rock and had practically stopped with the engines fouling the westward main track on the

turnout of the west siding-switch, the second engine was struck by G. N. Extra 2185 West.

Extra 2185 West, a west-bound G. N. freight train, consisting of engine 2185, 27 cars and a caboose, passed Kelso, 9.9 miles east of Castle Rock, the last open office east of Castle Rock, at 8:28 p. m., passed signal 88.4, which displayed proceed, and while moving on the westward main track at an estimated speed of 40 miles per hour it collided with Extra 1553 West.

The engines of both trains and the first 6 cars of Extra 2185 West were derailed and damaged.

It was clear at the time of the accident, which occurred about 8:53 p. m.

The front brakeman of Extra 2185 West was killed. The engineer, the fireman, the swing brakeman and the flagman of Extra 2185 West were injured.

In tests after the accident the automatic block-signal system functioned properly.

#### Discussion

The rules governing operation in automatic block-signal territory on this line provide that a train or an engine proceeding from a siding to the main track must remain clear of the insulated joints at the clearance point until the switch has been opened, and an interval of 2 minutes must elapse after the switch has been opened before a movement to the main track may be made. In addition, a movement from a siding to the main track must not be started until proper flag protection has been provided. All the surviving employees concerned understood these requirements.

Extra 1553 West had moved westward a distance of about 900 feet on the siding at Castle Rock and had practically stopped with the engines fouling the westward main track on the turnout of the west siding-switch when the second engine was struck by Extra 2185 West. No train order restricting the authority of either train to proceed had been issued. Under the rules, Extra 1553 West was required not to pass the clearance point of the west siding-switch until after the switch had been in open position an interval of not less than 2 minutes, and flag protection was required for the movement.

As Extra 2185 West was approaching Castle Rock the speed was about 40 miles per hour. The headlight was lighted brightly, and the enginemen were maintaining a lookout ahead. Signal 88.4,

located 5,657 feet east of the west siding-switch and the last automatic signal which this train passed, displayed proceed. The first warning the crew had of anything being wrong was when the engine reached a point about 800 feet east of the west siding-switch. Then the engineer saw the engines of Extra 1553 fouling the main track. He immediately moved the brake valve to emergency position, but the collision occurred before the brakes became effective.

The conductor of Extra 1553 said that he lined the west siding-switch for the movement of his train from the siding to the westward main track. He thought he operated the switch at least 5 minutes prior to the time the accident occurred. When the movement started, the other members of the train crew were in the vicinity of the front end of the train, and the engine-men were on their respective engines. These employees said they did not see the conductor operate the switch and they did not observe the position of the switch until just before the engines entered the turnout. Flag protection was not provided for the movement, and no member of the crew was aware that Extra 2185 was closely approaching until the engines of Extra 1553 entered the turnout. Then the fireman of the first engine saw the reflection of the headlight of the approaching train a few hundred feet distant, and he called a warning. The engineer immediately moved the brake valve to emergency position, and Extra 1553 had practically stopped with the front end of the first engine opposite the west siding-switch when the collision occurred.

Extra 2185 was moving at a speed of about 40 miles per hour when it passed signal 88.4, and, since no restrictive indication was displayed by the signal, this speed was maintained throughout a distance of approximately 1 mile to the point where the engineer observed that the engines of Extra 1553 were fouling the main track. Based on an average speed of 40 miles per hour, an interval of approximately 1 minute 30 seconds elapsed between the time Extra 2185 passed signal 88.4 and the time the accident occurred. Therefore, it is evident that if an interval of 2 minutes had elapsed between the time the west siding-switch was opened and the time the movement of Extra 1553 was started from the siding to the main track, as required by the rules, this accident would not have occurred.

During the two years immediately preceding the date of this accident, the Commission investigated six accidents in which a train, without providing protection, fouled the main track immediately in front of an approaching train, such as occurred in the accident under discussion. These accidents resulted in the death of 43 and the injury of 197 persons. Of these, five occurred in territories where the operation was by timetable, train orders and automatic block-signal system, and

one occurred in territory where the operation was by timetable and train orders only.

Trains of five railroads, namely, the Northern-Pacific, the Union Pacific, the Great Northern, the Milwaukee, and the Longview, Portland and Northern, are operated over the sub-division involved in this accident. During the 30-day period preceding the day of the accident the average daily movement on this sub-division was 49.7 trains. Maximum authorized speeds on this line were 65 miles per hour for passenger trains and 50 miles per hour for freight trains. In view of the nature and volume of traffic on this line, all facilities which are reasonably required for adequate protection should be provided. Derails located at the clearance points and arranged to operate in conjunction with electrically locked switches would prevent trains, about to enter a main track, from fouling the main track immediately in front of an approaching train. If such an arrangement had been provided at the clearance point at the west end of the siding at Castle Rock, this accident would have been prevented.

#### Cause

It is found that this accident was caused by a train fouling the main track immediately in front of a following train.

#### Recommendation

It is recommended that the Northern Pacific Railway Company install, at clearance points on its sidings in automatic block-signal territory on the Third Sub-division of the Tacoma Division, derails coordinated with electric switch-locking.

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

By the Commission, Chairman Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.