

INTERSTATE COMMERCE COMMISSION

WASHINGTON

---

INVESTIGATION NO. 2613

THE NORTHERN PACIFIC RAILWAY COMPANY

REPORT IN RE ACCIDENT

NEAR WATAB, MINN., ON

AUGUST 9, 1942

---

- 2 -

## SUMMARY

Railroad: Northern Pacific

Date: August 9, 1942

Location: Watab, Minn.

Kind of accident: Head-end collision

Trains involved: Freight : Freight

Train numbers: Extra 1739 West : Extra 1795 East

Engine numbers: 1739 : 1795

Consist: 66 cars, caboose : 76 cars, caboose

Speed: 12-20 m. p. h. : 20-30 m. p. h.

Operation: Movement with current of traffic  
by timetable, train orders and  
an automatic block-signal system;  
movement against current of traffic  
by train orders only

Track: Double; tangent; level

Weather: Dense fog

Time: About 4:30 a. m.

Casualties: 3 injured

Cause: Accident caused by failure to obey  
right-of-track order

Recommendation: That the Northern Pacific Railway  
Company provide an adequate block  
system or other suitable protection  
for operation of trains against  
current of traffic

INTERSTATE COMMERCE COMMISSION

---

INVESTIGATION NO. 2613

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

THE NORTHERN PACIFIC RAILWAY COMPANY

---

September 30, 1942

---

Accident near Watab, Minn., on August 9, 1942, caused by  
failure to obey right-of-track order.

---

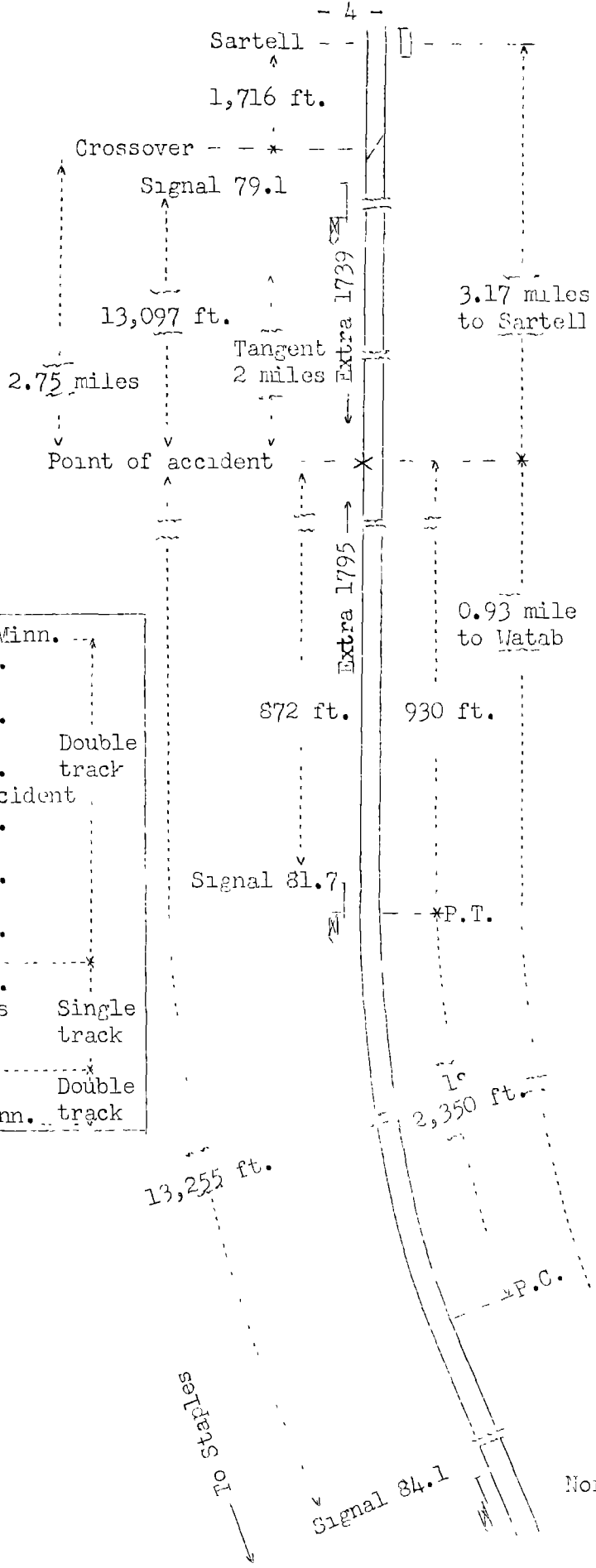
REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On August 9, 1942, there was a head-end collision between two freight trains on the Northern Pacific Railway near Watab, Minn., which resulted in the injury of three employees.

---

<sup>1</sup>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.



- o Northtown, Minn. --- 61.50 mi.
- o St. Cloud --- 4.30 mi.
- o Sartell --- 3.17 mi. Double track
- X Point of accident --- 0.93 mi.
- o Watab --- 12.40 mi.
- o Royalton --- 8.00 mi.
- o Gregory --- 2.80 mi.
- o Little Falls --- 27.6 mi. Single track
- o Philbrook --- 6.3 mi. Double track
- o Staples, Minn. --- track

Inv-2613  
 Northern Pacific Railway  
 Watab, Minn.  
 August 9, 1942

Location of Accident and Method of Operation

This accident occurred on that part of the St. Paul Division designated as the First Sub-Division and extending between Northtown and Staples, Minn., a distance of 127 miles. In the vicinity of the point of accident this is a double-track line over which trains moving with the current of traffic are operated by timetable, train orders and an automatic block-signal system, and trains moving against the current of traffic are operated by train orders only. The accident occurred on the westward main track at a point 2.75 miles west of the crossover at Sartell and 0.93 mile east of Watab. As the point of accident is approached from the east the track is tangent a distance of 1.92 miles to the point of accident. As the point of accident is approached from the west there is a 1° curve to the right 2,350 feet in length, which is followed by a tangent 930 feet to the point of accident. At the point of accident the grade is level.

Automatic signals 79.1, 81.7 and 84.1, which govern west-bound movements on the westward main track, are located, respectively, 13,097 feet east and 872 feet and 15,255 feet west of the point of accident. These signals are of the one-arm, three-indication, upper-quadrant, semaphore type, and are approach lighted. The night aspects and corresponding indications and names of these signals are as follows:

<u>Night Aspect</u>	<u>Indication</u>	<u>Name</u>
Green	Proceed	Clear signal
Yellow	Proceed preparing to stop at next signal. * * *	Approach signal
Red	Stop, then proceed at restricted speed	Stop and proceed signal * * *

Operating rules read in part as follows:

S-87. \* \* \*

Extra trains \* \* \* will be governed by train orders with respect to opposing extra trains.

204. \* \* \*

Enginemen must show train orders to firemen and when practicable to forward trainmen. Conductors must show train orders, when practicable, to trainmen.

220. Train orders once in effect continue so until fulfilled, superseded or annulled. Any part of an order specifying a particular movement may be either superseded or annulled.

\* \* \*

FORMS OF TRAIN ORDERS

D-R.

PROVIDING FOR A MOVEMENT AGAINST THE CURRENT OF TRAFFIC.

(1.) No 1 has right over opposing trains on \_\_\_\_\_ track C to F.

The designated train must use the track specified between the points named and has right over opposing trains on that track between those points. Opposing trains must not leave the point last named until the designated train arrives.

\* \* \*

In the vicinity of the point of accident the maximum authorized speed for freight trains is 50 miles per hour.

Description of Accident

Extra 1795 East, an east-bound freight train, consisted of engine 1795, 65 loaded and 11 empty cars and a caboose. At Staples, 57.1 miles west of Watab, a terminal air-brake test was made, and the brakes functioned properly en route. At Little Falls, 23.2 miles west of Watab, the crew received a clearance card together with copies of train orders Nos. 12 and 16, Form 19, which read as follows:

12.

\* \* \*

Extra 1795 East has right over opposing trains on westward track Royalton to crossover Sartell.

Made Comp                      Time 145 AM

16.

Order No. 12 should read Gregory to crossover Sartell instead of Royalton to crossover Sartell.

Made Comp                      Time 208 AM

This train departed from Little Falls at 3:20 a. m., according to the dispatcher's record of movement of trains, passed Royalton, 12.4 miles west of Watab and the last open office, at 4:05 a. m., and while moving at an estimated speed of 20 to 30 miles per hour it collided with Extra 1739 West at a point 2.75 miles west of the crossover at Sartell.

Extra 1739 West, a west-bound freight train, consisted of engine 1739, 58 loaded and 8 empty cars and a caboose. At Northtown, 69.9 miles east of Watab, a terminal air-brake test was made and the brakes functioned properly en route. At St. Cloud, 8.4 miles east of Watab and the last open office, the crew received a clearance card and, among others, copies of train order No. 12, previously quoted, and copies of train order No. 14, Form 19, which read in part as follows:

14.

Engine 1739 run extra Gregory to Staples meet Extra 1795 East on double track east of Gregory.

\* \* \*

Made Comp                      Time 155 AM

This train departed from St. Cloud at 4 a. m., according to the dispatcher's record of movement of trains, passed the fouling point of the crossover at Sartell where it was required to wait unless Extra 1795 had arrived at that point, and while moving at an estimated speed of 12 to 20 miles per hour it collided with Extra 1795 East.

Because of a dense fog prevailing at the time of the accident, the headlight of an engine was visible a distance of only about 500 feet.

Engines 1795 and 1739 stopped upright and in line with the track. The front ends were telescoped, and all driving wheels of engine 1739, except the rear pair, were raised above the rails. The engine truck was pushed under the cylinders, and the cab and the front end were demolished. The tender was derailed to the north and stopped on its right side to the rear of engine 1739. The first car of Extra 1739 was demolished. The second car was derailed but remained upright on the roadbed. The front end and the cab of engine 1795 were demolished. The tender was derailed to the south and stopped upright behind the engine. The first four cars of Extra 1795 were derailed and stopped at various angles to the track. The first car was demolished. The front truck of the fifth car was derailed. The front truck of the sixth car was driven backward about 2-1/2 feet.

A dense fog prevailed and it was dark at the time of the accident, which occurred about 4:30 a. m.

The employees injured were the engineer and the fireman of Extra 1795 East, and the front brakeman of Extra 1739 West.

#### Data

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 11.1 trains. During this period 4 trains were operated against the current of traffic.

On the sub-division involved, double track extends from Northtown to Gregory, a distance of 90.3 miles, single track from Gregory to Philbrook, a distance of 30.4 miles, and double track from Philbrook to Staples, a distance of 6.3 miles.

#### Discussion

The rules governing operation on the line involved provide that when a train is authorized by a train order to proceed against the current of traffic the designated train must use the track specified between the points named in the order, and trains moving with the current of traffic on that track must not leave the last point named in the train order until the train moving against the current of traffic has arrived. All employees of both crews involved understood these provisions. On the day of the accident Extra 1795 East was operated against the current of traffic on account of a disabled east-bound freight train on the eastward main track between Royalton and Sartell, respectively, 12.4 miles west and 4.1 miles east of Wotab.

The crews of the trains involved held copies of train order No. 12, which authorized Extra 1795 East to proceed against the current of traffic on the westward main track from Royalton to the crossover at Sartell. The crew of Extra 1795 East held copies of train order No. 16 also, which authorized that train to proceed against the current of traffic from Gregory, located at the west end of the section of double track on which the accident occurred, to the crossover at Sartell, instead of from Royalton, 8 miles east of Gregory, to the crossover at Sartell. The crew of Extra 1739 West held copies of train order No. 14, which authorized their train to run extra from Gregory to Staples and to meet Extra 1795 East on double track east of Gregory.

Extra 1795 East was proceeding on the westward main track as it approached the point where the accident occurred. The headlight was lighted brightly, the speed was about 30 miles per hour, the throttle was open and the enginemen were maintaining a lookout ahead. Because of fog the view ahead was restricted



to about 500 feet. According to the statement of the engineer, when his engine was about 0.9 mile east of Watab a faint light appeared through the fog. Because of a highway which crossed the railroad at that point, he thought the light was a motor-vehicle light, and he made a brake-pipe reduction. Just as the brake-pipe exhaust ceased he became aware that the light was the headlight of an opposing train moving on the westward main track. He moved the brake valve to emergency position, but the distance was not sufficient for his train to stop short of the opposing train. The fireman first became aware of the opposing train about the time the brakes were applied in emergency. The brakes of this train had been tested and had functioned properly en route.

Extra 1739 West stopped with the engine at the coaling station at Sartell, located about 350 feet east of the crossover involved, then proceeded westward and passed the crossover where it was required to wait until Extra 1795 East arrived. According to the statement of the engineer, signal 79.1, located 2.48 miles east of the point of accident, displayed proceed for his train. As his train was approaching the point where the accident occurred the speed was about 20 miles per hour, the headlight was lighted and the enginemen were maintaining a lookout ahead. When the engine was about 1,000 feet east of signal 81.7, located 872 feet west of the point of accident, the engineer saw the headlight of Extra 1795 East and, becoming aware that it was proceeding on the westward track, he moved the brake valve to emergency position and the collision occurred immediately afterward.

When copies of train order No. 12 were received, both the conductor and the engineer of Extra 1739 West understood that their train was required to wait at the crossover at Sartell until Extra 1795 East arrived. Both of them understood that a superseding order should contain the words "instead of" in the body of the order, but when order No. 14 was received they erroneously assumed that order No. 14 superseded order No. 12, and that Extra 1739 was authorized to proceed to Royalton and would meet Extra 1795 on the double track between Royalton and Gregory. If order No. 16, giving Extra 1795 right over opposing trains on the westward track from Gregory, instead of Royalton, to Sartell, had been delivered to Extra 1739, the misunderstanding which existed in this case would have been avoided and this accident probably would not have occurred. The fireman of Extra 1739 read train orders Nos. 12 and 14 at St. Cloud and was confused as to the authority of his train under these orders; however, the engineer convinced him that their train was authorized to proceed west of Sartell under the provision of order No. 14. Neither the flagman nor the front brakeman read orders Nos. 12 and 14.

The trains involved were being operated on a track on which the automatic-block signals are not designed for either-direction operation and did not provide protection for opposing movements. Operation by train orders did not provide equivalent protection. The investigation disclosed that during the 30-day period preceding the day of the accident four trains were operated against the current of traffic in the territory involved. The book of operating rules of this carrier contains manual-block rules which provide for the blocking of opposing movements. If an adequate block system for movements against the current of traffic had been in use, this accident would have been averted.

Cause

It is found that this accident was caused by failure to obey a right-of-track order.

Recommendation

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

Dated at Washington, D. C., this thirtieth day of September, 1942.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.