

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3695
CHICAGO AND NORTH WESTERN RAILWAY COMPANY
IN RE ACCIDENT
AT WHEATON, ILL., ON
JUNE 8, 1956

- 2 -

SUMMARY

Date: June 8, 1956

Railroad: Chicago and North Western

Location: Wheaton, Ill.

Kind of accident: Derailment and collision

Trains involved: Freight : Freight

Train numbers: 252 : 383

Locomotive numbers: Diesel-electric : Diesel-electric
units 4079A, 4082B, units 4076C, 4076B,
and 4067C and 4080C

Consists: 119 cars, caboose : 125 cars, caboose

Speeds: 42 m. p. h. : 35 m. p. h.

Operation: Timetable and auto- : Signal indications
matic train-control supplemented by an
system automatic train-
control system

Tracks: Three; tangent, level

Weather: Clear

Time: 12:05 a. m.

Casualties: 1 killed; 1 injured

Cause: Broken journal, and derailed cars
colliding with train moving on
adjacent main track

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3695

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

CHICAGO AND NORTH WESTERN RAILWAY COMPANY

August 6, 1956

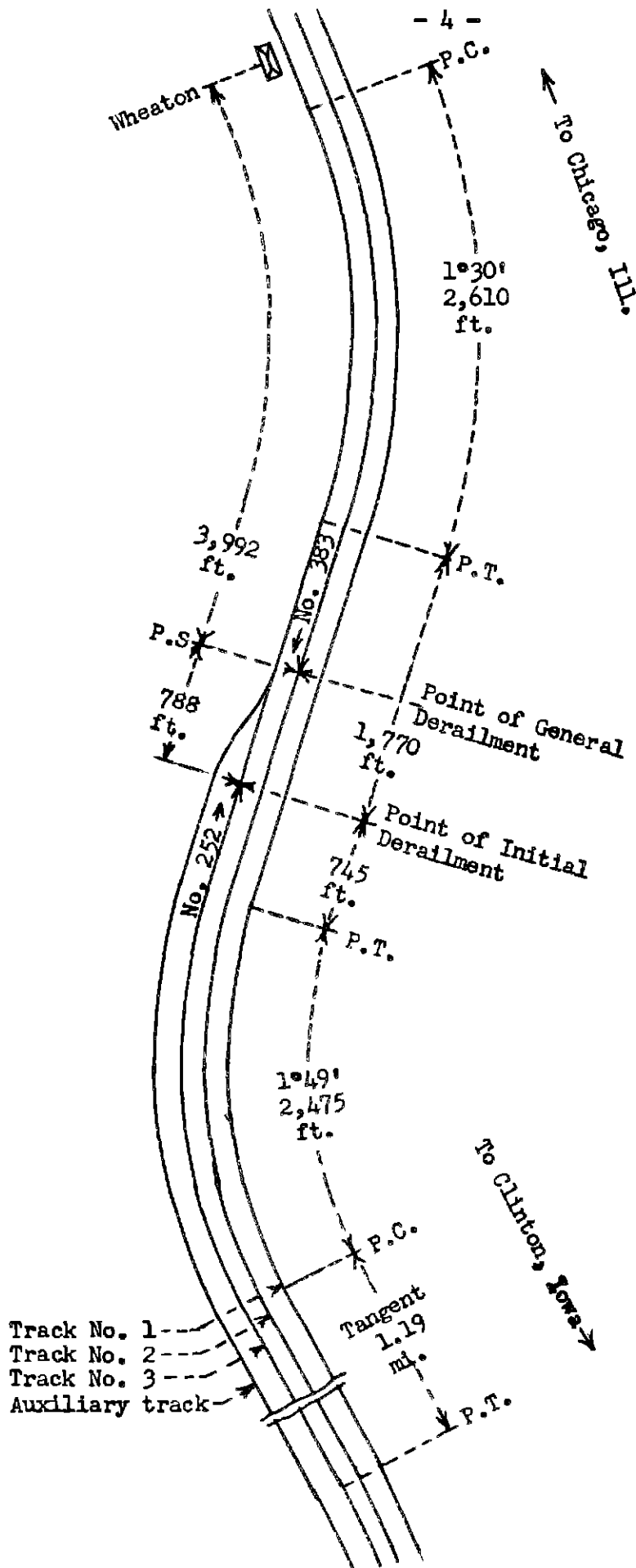
Accident at Wheaton, Ill., on June 8, 1956, caused by a
broken journal, and by derailed cars colliding with
a train moving on an adjacent main track.

REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On June 8, 1956, there was a derailment of a freight train and a collision between derailed cars of that train and a freight train moving on an adjacent main track on the Chicago and North Western Railway at Wheaton, Ill., which resulted in the death of one trespasser, and the injury of one trespasser.

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.



•	Chicago, Ill.	14.6 mi.
•	Proviso	1.0 mi.
•	Tower HM	9.3 mi.
X	Wheaton (Point of accident)	4.6 mi.
•	Tower NI	28.8 mi.
•	DeKalb, Ill.	79.8 mi.
•	Clinton, Iowa	

Report No. 3695
Chicago and North Western Railway
Wheaton, Ill.
June 8, 1956

Location of Accident and Method of Operation

This accident occurred on that part of the Galena Division extending between Clinton, Iowa, and Chicago, Ill., 138.1 miles. In the vicinity of the point of accident this is a three-track line. The main tracks from south to north are designated as No. 1, No. 2, and No. 3. On tracks Nos. 1 and 3 trains moving with the current of traffic are operated by timetable and an automatic train-control system. The current of traffic is westward on track No. 1 and eastward on track No. 3. On track No. 2 trains are operated in either direction by signal indications supplemented by an automatic train-control system. At Wheaton, Ill., 113.2 miles east of Clinton, an auxiliary track parallels the main tracks on the north and connects with track No. 3 at a switch located 3,992 feet west of the station. The switch is trailing-point for east-bound movements. The initial derailment occurred 788 feet west of the auxiliary-track switch, and the general derailment and collision occurred in the immediate vicinity of the switch. From the west there are, in succession, a tangent 1.19 miles in length, a $1^{\circ}49'$ curve to the right 2,475 feet, and a tangent 745 feet to the initial point of derailment and 1,770 feet eastward. From the east there is a $1^{\circ}30'$ curve to the right 2,610 feet in length and the tangent on which the accident occurred. The grade is practically level.

In the vicinity of the point of accident the track structure of track No. 3 consists of 115-pound rail, 39 feet in length, laid new in 1952 on an average of 23 treated ties to the rail length. It is fully tieplated with double-shoulder tie plates, spiked with two spikes per tie plate on tangents and three spikes per tie plate on curves, and is provided with 6-hole 36-inch joint bars and an average of 24 rail anchors per rail. It is ballasted with crushed stone to a depth of 8 to 10 inches below the bottoms of the ties.

The maximum authorized speed for freight trains is 60 miles per hour, but it is restricted to 50 miles per hour on the curves in the vicinity of the point of accident.

Description of Accident

No. 252, an east-bound second-class freight train, consisted of Diesel-electric units 4079A, 4082B, and 4067C, coupled in multiple-unit control, 119 cars, and a caboose. This train departed from Clinton at 9 p. m., June 7, 2 hours 45 minutes late, passed Tower NI, 4.6 miles west of Wheaton

and the last open office, at 12 midnight, and while moving on track No. 3 at a speed of 42 miles per hour the front wheels of the rear truck of the forty-second car were derailed at a point 788 feet west of the auxiliary-track switch at Wheaton. The forty-third to the sixty-seventh cars, inclusive, were derailed in the immediate vicinity of the switch.

No. 383, a west-bound second-class freight train, consisted of Diesel-electric units 4076C, 4076B, and 4080C, coupled in multiple-unit control, 125 cars, and a caboose. This train departed from Proviso, 10.3 miles east of Wheaton, at 11:25 p. m., June 7, and passed Tower HM, 9.3 miles east of Wheaton and the last open office, at 11:40 p. m. While moving on track No. 2 at a speed of about 35 miles per hour the side of the train was struck by derailed equipment of No. 252, and the forty-fifth to the seventy-second cars, inclusive, were derailed.

No. 252 stopped with the front end 3,322 feet east of the auxiliary-track switch. No. 383 stopped with the front end 4,608 feet west of the switch. The forty-second car of No. 252 stopped at the rear end of the forward portion of the train, and with the exception of the forty-fifth car of No. 383, which stopped about 800 feet west of the switch, the other derailed cars of both trains stopped in various positions on or near the tracks in the vicinity of the switch and within a distance of approximately 500 feet. Thirty-six of the derailed cars were destroyed, 11 were badly damaged, and the others were somewhat damaged. The sixty-eighth to the eighty-seventh cars, inclusive, in the train of No. 252 were not derailed but were slightly damaged by contact with derailed equipment.

The trespassers who were killed and injured were in the fifty-seventh car of No. 383.

The weather was clear at the time of the accident, which occurred about 12:05 a. m.

G.A.T.X. 36519, which was the forty-second car of No. 252, is a tank car built in June 1927. It is 35 feet 11 inches in length over the pulling faces of the couplers and has a capacity of 10,390 gallons. The light weight is 56,800 pounds, and the nominal capacity is 100,000 pounds. The trucks were provided with cast steel A.R.A. side frames, 5-1/2-inch by 10-inch journals, one-wear steel wheels at locations R-4 and L-4, and cast iron wheels at the other locations. The wheelbase of each truck is 5 feet 6 inches, and the trucks are spaced 25 feet 10 inches between centers.

At the time of the accident the lading consisted of petroleum asphalt billed from Casper, Wyo., to Baraboo, Wis. The gross weight was 137,427 pounds.

Discussion

As No. 252 was approaching the point where the accident occurred the enginemen and the front brakeman were in the control compartment at the front of the locomotive. The conductor and the flagman were in the caboose. As the train was approaching Wheaton the flagman, who was on the left side of the caboose, saw what he thought were sparks or ties burning at about the center of the train. He called this to the attention of the conductor, and the conductor decided that the fire resulted from an overheated journal. The brakes became applied in emergency as a result of the derailment before he could take action to stop the train. The employees on the locomotive were not aware that anything was wrong until the brakes became applied in emergency.

As No. 383 was approaching the point where the accident occurred the enginemen and the front brakeman were in the control compartment at the front of the locomotive. The conductor and the flagman were in the caboose. The employees on the locomotive did not observe any defective condition of the equipment of No. 252, and they were not aware that cars in that train had become derailed until the brakes of their train became applied in emergency as a result of the derailment.

Examination of the track structure after the accident occurred disclosed that throughout a distance of 4,429 feet west of the initial point of derailment the ends of the ties north of the north rail of track No. 3 were heavily gouged at irregular intervals at a distance of from 7 to 12 inches from the rail. At a point 788 feet west of the auxiliary-track switch flange marks appeared on the ties approximately 10 inches inside the south rail. These marks continued to the turnout of the switch. East of the frog the track was destroyed.

Examination of the equipment of No. 252 after the accident occurred disclosed that the left front journal of the rear truck of G.A.T.X. 36519, the forty-second car, was broken at a point 2 inches from the top of the fillet. This journal was at location R-3. When the journal was examined a short time after the accident occurred it was found to be warm but not extremely hot. The end of the journal and both side frames of this truck were missing. These parts were

not recovered, and apparently they were buried during wrecking operations. The marks on the track structure indicated that the broken journal worked out of the journal box and permitted the side frame to drop sufficiently to come in contact with the track structure. After the weight was removed from the left wheel, this wheel crossed the rail and the right wheel dropped inside the south rail.

Laboratory analysis of the failed axle by the testing department of the carrier disclosed that the chemical composition of the axle was in accordance with A.A.R. specifications except that the carbon content was slightly above the maximum. The Brinell hardness was normal. Although the stub of the journal had been distorted, the face of the fracture indicated that a circumferential crack which extended to a depth of approximately 1 inch had been present prior to the time of the failure. From the examination of the stub it appeared that this journal had been overheated on one or more occasions prior to the time of the failure and that this overheating caused the formation of thermal cracks which developed into the circumferential crack which resulted in the failure.

The wheels at locations R-3 and L-3 on G.A.T.X 36519 were cast on August 12, 1954, but records of the date on which they were applied to the car were not available. The journal boxes were packed with standard loose waste and were equipped with packing retainers. They were last repacked on April 13, 1956. This car was loaded at Casper, Wyo., and departed from that point on May 29. The wheels at locations R-1 and L-1 were replaced at Norfolk, Nebr., because of a cut journal, and all other journal boxes were serviced and oiled at that point. The car departed from Norfolk on June 5 and arrived at Clinton, Iowa, on June 7. All journal boxes were serviced and oiled at Clinton, and no exception was taken to their condition. After No. 252 departed from Clinton the members of the crew made a standing inspection of the train at De Kalb, Ill., 33.4 miles west of Wheaton, and observed the train as it moved on each curve en route. Until the train was closely approaching Wheaton they observed no defective condition. The north side of the train was inspected by a crossing watchman stationed a short distance west of Tower NI and by the operator at Tower NI as it passed that point about 5 minutes before the accident occurred. Neither of these employees detected any defective condition of the equipment.

- 9 -

Cause

This accident was caused by a broken journal, and by derailed cars colliding with a train moving on an adjacent main track.

Dated at Washington, D. C., this sixth day of August, 1956.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,
Secretary.