

INTERSTATE COMMERCE COMMISSION

WASHINGTON

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INVESTIGATION NO. 3059

THE NEW YORK CENTRAL RAILROAD COMPANY

REPORT IN RE ACCIDENT

AT GALATEA, OHIO, ON

JANUARY 6, 1947

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SUMMARY

Railroad: New York Central  
Date: January 6, 1947  
Location: Galatea, Ohio  
Kind of accident: Derailment and collision  
Trains involved: Freight : Freight  
Train numbers: Second 95 : Extra 2135  
South  
Engine numbers: 2112 : 2135-2177  
Consists: 70 cars, caboose : 98 cars,  
caboose  
Speed: 32 m. p. h. : Standing  
Operation: Timetable, train orders and manual-  
block system  
Track: Single; tangent; 0.30 percent  
descending grade northward  
Weather: Clear  
Time: 11:28 p. m.  
Casualties: 1 killed; 2 injured  
Cause: Broken journal, and derailed freight  
cars striking engines of freight  
train standing on adjacent track

INTERSTATE COMMERCE COMMISSION

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INVESTIGATION NO. 3059

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

THE NEW YORK CENTRAL RAILROAD COMPANY

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February 18, 1947

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Accident at Galatea, Ohio, on January 6, 1947, caused  
by a broken journal, and derailed freight cars  
striking the engines of a freight train standing  
on an adjacent track.

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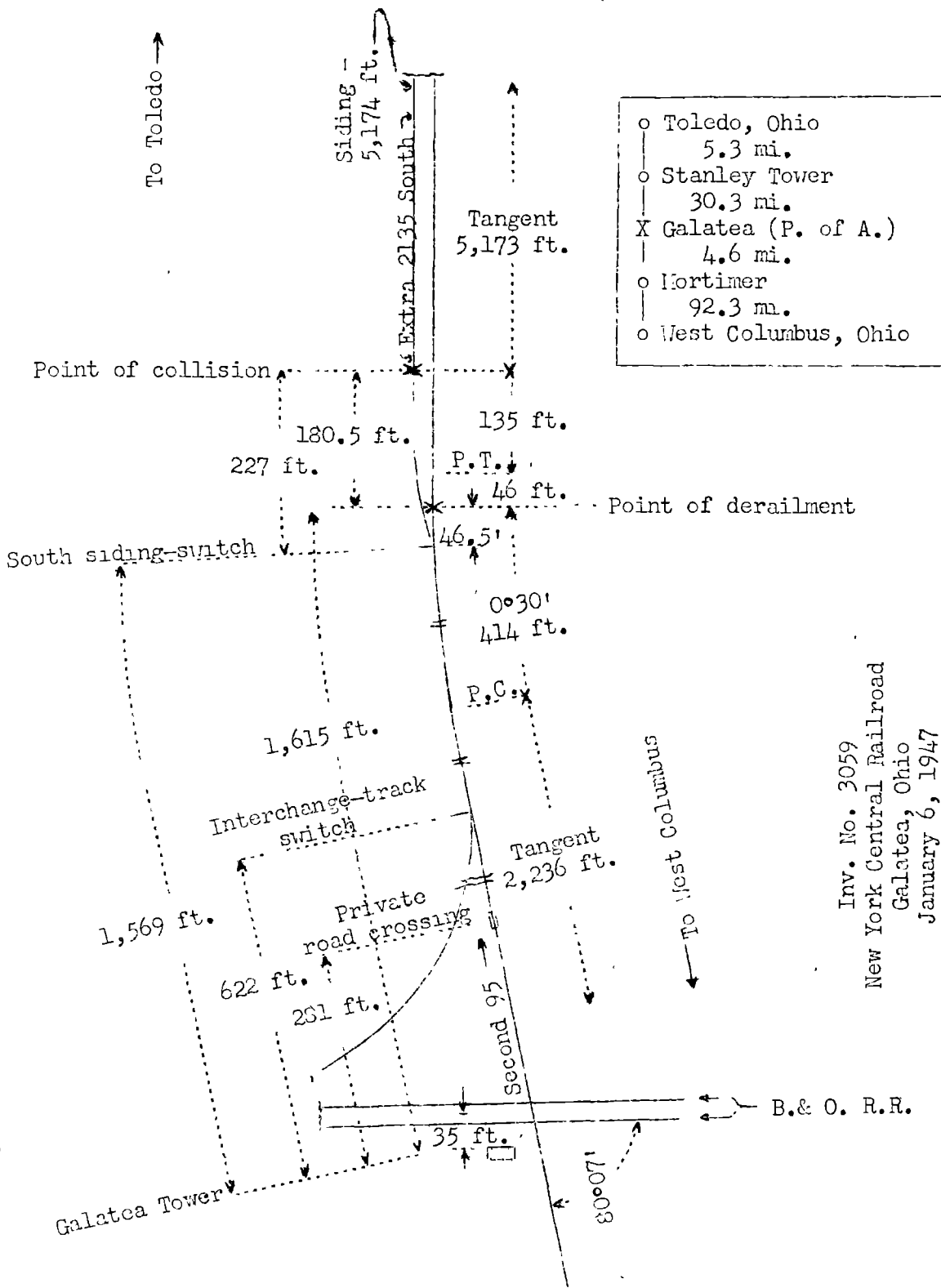
REPORT OF THE COMMISSION<sup>1</sup>

PATTERSON, Commissioner:

On January 6, 1947, there was a derailment of a freight train, and a collision between derailed cars of this train and a freight train standing on an adjacent track, on the New York Central Railroad at Galatea, Ohio, which resulted in the death of one employee, and the injury of two employees. The accident was investigated in conjunction with representatives of the Public Utilities Commission of Ohio.

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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 Commissioner Patterson for consideration and disposition.



- o Toledo, Ohio  
5.3 mi.
- o Stanley Tower  
30.3 mi.
- X Galatea (P. of A.)  
4.6 mi.
- o Hortimer  
92.3 mi.
- o West Columbus, Ohio

Inv. No. 3059  
New York Central Railroad  
Galatea, Ohio  
January 6, 1947

Location of Accident and Method of Operation

The accident occurred on that part of the Ohio Central Division extending between West Columbus and Stanley Tower, near Toledo, Ohio, 127.2 miles, a single-track line, over which trains are operated by timetable, train orders and a manual-block system. At Galatea, 96.9 miles north of West Columbus, a double-track line of the Baltimore and Ohio Railroad intersects the line of the New York Central at an angle of  $80^{\circ}07'$  at a point 35 feet north of the interlocking tower, located in the southwest angle of the intersection. A siding 5,174 feet in length parallels the main track on the west. The south switch of the siding is 1,569 feet north of the tower. The derailment occurred on the main track 46.5 feet north of the south siding-switch, and the collision occurred 180.5 feet northward. From the south there are, in succession, a tangent 2,236 feet in length and a  $0^{\circ}30'$  curve to the right 414 feet to the point of derailment and 46 feet northward, then there is a tangent 135 feet to the point of collision and 5,173 feet northward. The grade is 0.30 percent descending northward.

A private-road grade crossing, which is surfaced with planks and crosses the New York Central main track at right angles, is 281 feet north of the tower. A trailing-point switch, which connects the N. Y. C. main track and the north end of an interchange track, is 622 feet north of the tower.

At the point of collision the distance between the centerlines of the main track and the siding is 13 feet. The track structure of the main track consists of 127-pound rail, 39 feet in length, laid on an average of 24 treated ties to the rail length. It is fully tieplated, single-spiked, provided with 6 rail anchors per rail length, and is ballasted with crushed limestone to a depth of 18 inches. The turnout of the south siding-switch consists of switch-points and rails of 127-pound rail-sections and a No. 10 spring-type frog, laid on 66 switch ties.

Operating rules read in part as follows:

701. \* \* \*

When trains are passing, trainmen at rear of train must observe the general condition of trains on other tracks.

\* \* \*

The forward trainmen of freight trains, and enginemen and firemen when practicable, must be on the lookout for signals from the rear after meeting or passing trains, also when approaching and passing stations, \* \* \* and frequently at other points.

When trains are passing, signalmen and operators must observe the general condition of trains. \* \* \*

If any indication of conditions endangering a train is observed, "Stop" signal must be given. If there are no apparent defects, employes \* \* \* must give "Proceed" signal.

The maximum authorized speed for freight trains is 40 miles per hour.

#### Description of Accident

Second 95, a north-bound second-class freight train, consisting of engine 2112, 70 cars and a caboose, departed from Mortimer, 4.6 miles south of Galatea, at 11:20 p. m., 9 hours 55 minutes late, passed the tower at Galatea at 11:28 p. m., 9 hours 53 minutes late, and while it was moving at a speed of 32 miles per hour the thirtieth to forty-fifth cars, inclusive, were derailed at a point 46.5 feet north of the south siding-switch at Galatea. The derailed equipment of Second 95 struck the engines of Extra 2135 South, which was on the siding.

Extra 2135 South, a south-bound freight train, consisting of engines 2135 and 2177, 38 cars and a caboose, stopped into clear on the siding at Galatea at 11:05 p. m., with the front end of the first engine standing 227 feet north of the south siding-switch. About 23 minutes later the engines of this train were struck by the derailed cars of Second 95.

The thirtieth to forty-fifth cars, inclusive, of Second 95 stopped in various positions; 10 cars were destroyed and 6 cars were considerably damaged. The first engine of Extra 2135 South and its tender, remaining coupled, were overturned by the impact, and stopped on their right sides about 8 feet west of the siding and parallel to it. No other unit of this train was derailed. The cab of the first engine was demolished, steam pipes were broken and the engine was otherwise badly damaged. The front end of the second engine of Extra 2135 South was somewhat damaged.

The fireman of the first engine of Extra 2135 South was killed. The conductor of Second 95, and the engineer of the first engine of Extra 2135 South were injured.

The weather was clear at the time of the accident, which occurred about 11:28 p. m.

The thirtieth car of Second 95 was INT 6812, a steel hopper-type car, built in May, 1923. It was 32 feet 3 inches long over end-sills, 10 feet 4 inches wide and 11 feet 9-3/4 inches high. Its lightweight, capacity and load limit were, respectively, 38,100 pounds, 110,000 pounds and 130,900 pounds. At the time of the accident the lading consisted of coal, and the total weight of the car and the lading was 146,000 pounds. The trucks were of the 4-wheel type, having 5-1/2-inch by 10-inch journals, one-wear wrought-steel wheels, and cast-steel U-section side frames. The journal boxes were cast integrally with the side frames. The spring arrangements consisted of one assembly of four double-coil helical springs at each side of each truck. The wheels and the axle involved were assembled on August 3, 1933. The journal boxes were last packed on August 12, 1946.

#### Discussion

Second 95 was moving at a speed of 32 miles per hour, as indicated by the tape of the speed-recorder with which the engine was equipped, in territory where the maximum authorized speed for this train was 40 miles per hour, when the thirtieth to forty-fifth cars, inclusive, were derailed. The first the members of the crew of this train were aware of anything being wrong was when the brakes became applied in emergency as a result of the derailment.

Extra 2135 South entered the siding at Galatca about 11:05 p. m. to meet Second 95, and stopped with the front end of the first engine 227 feet north of the south siding-switch. About 23 minutes later, the engines of this train were struck by the derailed cars of Second 95. At the time of the collision, the engineer of the first engine was on the second engine, the fireman was on the first engine, and the front brakeman was in the vicinity of the front of the first engine. The first the surviving members of the crew of Extra 2135 South were aware of anything being wrong was when the front brakeman observed sparks flying from the front truck of the thirtieth car of Second 95. The accident occurred before he could take action to stop Second 95. The fireman of the first engine of Extra 2135 South was killed.

After the accident a journal-box dust-guard wedge was found 8 feet west of the N. Y. C. main track and 20 feet north

of the centerline of the B. & O. westward main track. At a point about 53 feet northward, a journal-bearing wedge was found about 15 feet west of the N. Y. C. main track. The first marks on the track structure were batter marks on an angle bar outside the west rail of the N. Y. C. main track at a point 41.6 feet north of the centerline of the eastward main track of the B. & O. Batter marks appeared on each succeeding angle bar outside the west rail throughout a distance of 213 feet to the private-road grade crossing, where the plank outside the west rail had been struck and moved northward 2.5 feet. Northward from the road crossing, scraping and batter marks appeared on the west ends of the ties. The heel of the frog, the wing rail and spring housings of the north interchange-track switch were badly damaged. Portions of journal-box packing, pieces of a journal box and a journal bearing were found west of the main track in this vicinity. From the interchange-track switch northward to the south siding-switch, batter and scraping marks appeared on the outside angle bars of the west rail and on the west ends of ties. The stock rail of the south siding-switch was canted eastward. The first flange mark appeared on a tie inside the east rail of the main track at a point 46.5 feet north of the switch-points. From this point northward the main track was destroyed throughout a distance of about 300 feet and the siding a distance of about 200 feet.

Examination after the accident disclosed that the rear journal on the left side of the front truck of the thirtieth car of Second 95 was broken. The left truck-side was badly battered and scraped, and the rear journal box was bent backward and broken. This car was loaded at Dixiana, Va., 460 miles south of Galatea, on January 2, and was destined to Elkhart, Ind., via the Interstate Railroad, The Norfolk and Western Railway, and The New York Central Railroad. The lading consisted of coal. The car was accepted in interchange by the N. Y. C. from the N. & W. at Bannon, Ohio, 103.7 miles south of Galatea, at 2:20 p. m., January 5, and arrived in the yards at West Columbus at 7:30 a. m., January 6. It was assembled in the train of Second 95 about 12:01 p. m., January 6. The records of the N. Y. C. indicate that this car was inspected by members of the mechanical force upon arrival at Bannon, upon arrival at West Columbus, and before departure from West Columbus. No defective condition of the journal was observed. The members of the crew of Second 95 said that throughout the trip they made frequent observations of the equipment of the train, and had inspected each car while the train was standing on the siding at Mortimer, about 1 hour before the accident occurred, and no defective condition was observed. The crew of Second 95 received proceed signals from the crews of other trains and from operators at various points en route. The operator at the tower at Galatea observed the west side of the train as it passed, but he observed no defective condition and gave proceed signals to the conductor, who was on the rear



platform of the caboose. The marks on the track structure and on the truck-side involved, together with the manner in which various parts of the journal assembly were distributed along the track indicate that the journal broke as the truck passed over the frogs of the B. & O. crossing, and that the truck-side sagged downward sufficiently to be in contact with the outside of the stock rail of the south siding-switch. Then the truck was directed toward the turnout and the right wheels dropped inside the east rail of the main track, and the general derailment followed.

The failure of the journal involved consisted of a square break  $3/4$ -inch outward from the dust-guard collar and at the base of the fillet. There was no evidence of over-heating or of cutting. The outer portion of the failed journal had not been recovered at the time this investigation was completed. The break in the journal occurred as a result of a progressive fracture which extended circumferentially inward for depths varying from  $7/8$  inch to  $1-1/8$  inches, and a new fracture having a maximum diameter of  $4-5/16$  inches. The carrier's inspector of equipment expressed the opinion that the progressive fracture originated at the location of a tool mark at the base of the fillet which was made when the journal was turned in the lathe. The axle involved was provided with  $5-1/2$  by 10-inch journals. At the point of fracture the journal was  $5-7/16$  inches in diameter. The dimensions of the axle were within the requirements specified by the Association of American Railroads. Records of the Interstate Railroad indicate that the wheels involved were mounted on the axle on August 3, 1933. There was no mark on the axle and no record of the carrier to indicate the date or place of manufacture.

#### Cause

It is found that this accident was caused by a broken journal, and derailed freight cars striking the engines of a freight train standing on an adjacent track.

Dated at Washington, D. C., this eighteenth day of February, 1947.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.