Inv-2276

INTERSTATE COMMERCE COMMISSION

WASHINGTON

REPORT OF THE DIRECTOR

BUREAU OF SAFETY

ACCIDENT ON THE

YAZOO & MISSISSIPPI VALLEY RAILROAD,
ILLINOIS CENTRAL SYSTEM

CLARKSBURG, MISS.

JUNE 13, 1938.

INVESTIGATION NO. 2276

SUMMARY

Inv-2276

Railroad:	Yazoo & Mississippi Valley, Illinois Central System
Date:	June 13, 1938
Location:	Clarksburg, Miss.
Kind of accident:	Derailment
Train involved:	Freight
Train number:	Extra 1530
Engine number:	I. C. 1580
Consist:	5 cars being handled in a switching movement
Speed:	5-10 m.p.h.
Operation:	Timetable and train orders
Track:	Tangent, siding and main track, with connecting cross-over, 0.024 percent ascending grade eastward.
Weather:	Clear
Time:	5 p.m.
Casualties:	1 killed
Cause:	Rigid engine truck.

July 7, 1938.

To the Commission:

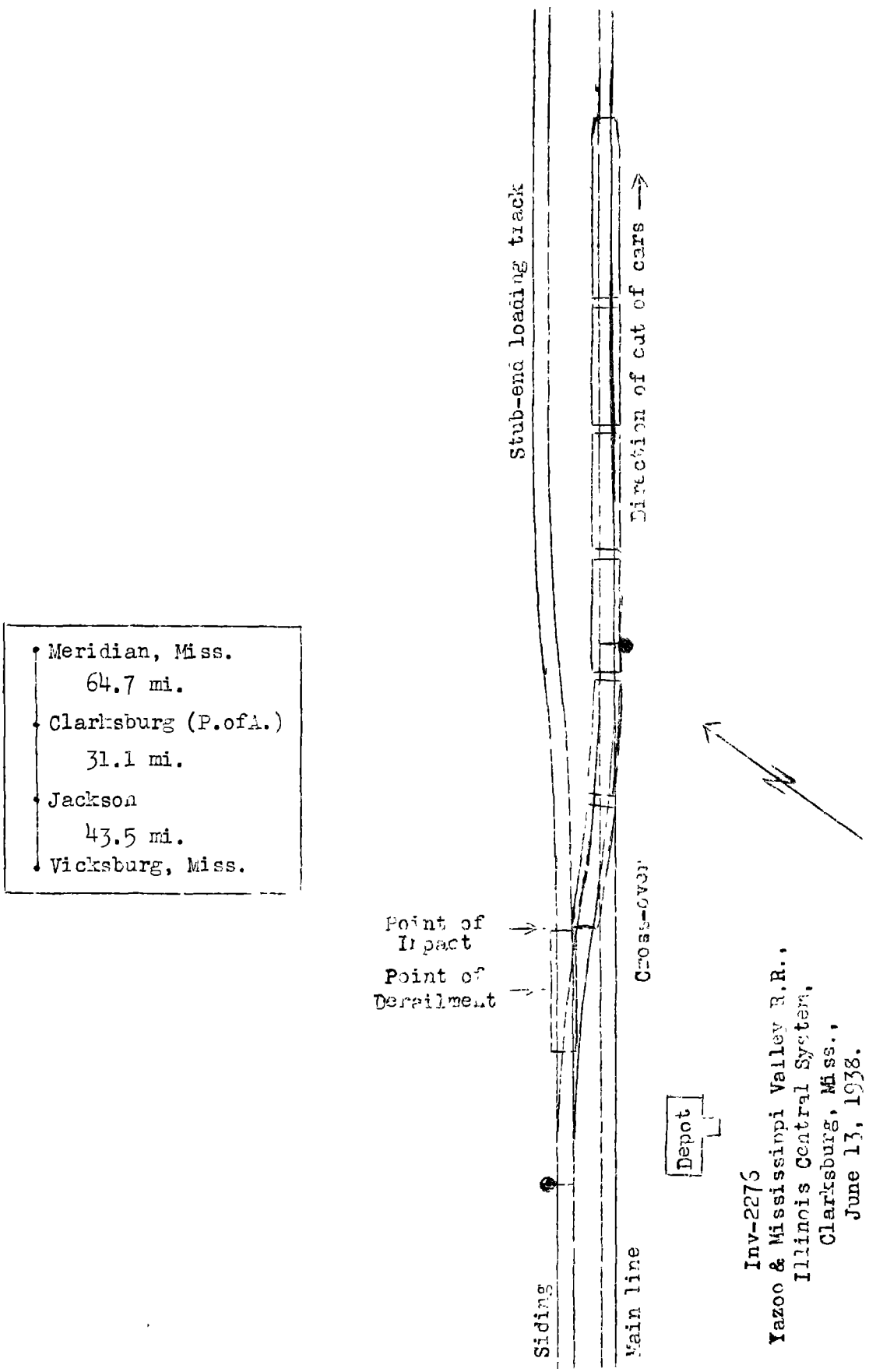
On June 13, 1938, there was a derailment of a locomotive on the Yazoo & Mississippi Valley Railroad at Clarksburg, Miss. Following the derailment which occurred while a running switch was being attempted a detached car collided with the cut of cars being drawn by the engine and caused the death of one employee.

Location and method of operation

This accident occurred on the Meridian District, Vicksburg Division, which extends between Vicksburg and Meridian, Miss., a distance of 139.3 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by timetable and train orders, no block-signal system being in use. The derailment occurred near the frog of a turnout leading from the siding to the main track at Clarksburg. Approaching this turnout from the west the main track and siding are tangent, and the grade is 0.024 percent ascending eastward.

The siding is 3,024 feet long and parallels the main track on the north; at the east end the siding continues 523 feet beyond the cross-over switch as a stub-end loading track. The cross-over leading from the main track to the east end of the siding is 180 feet in length, and is equipped with a No. 8 rigid frog at the siding end and a No. 10 frog at the main track end. The main track switch is at the east end of the cross-over and is located 172 feet east of the station. The derailment occurred 65 feet east of the west cross-over switch, and the collision occurred 20 feet east of the point of derailment. West of the cross-over the siding is laid with 90-pound rail, 33 feet in length, on an average of 18 ties to the panel, and is ballasted with cinders to a depth of about 6 inches. The No. 8 turnout at the siding, or west, end of the cross-over is constructed of 90-pound rail resting on 7 by 9 inch treated oak switch ties, fully tieplated, double-spiked on the outside of the rail and ballasted with crusher-run slag to a depth of 6 inches. The guard rails are 11 feet long and rest on six plates fully spiked; at both ends they are equipped with fillers and are held in position at the center with standard guard rail clamps. The switch at the west end of the cross-over is operated by a ground-throw dwarf switch stand, located on the north side of the tracks, and equipped with circular disk targets 14 inches above the head block. The track in this vicinity is well maintained.

The authorized speed for movements through the cross-over is 10 miles per hour.



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Yazoo & Mississippi Valley R.R.,
Illinois Central System,
Clarksburg, Miss.,
June 13, 1938.

Rule 104 (c) of the transportation rules reads as follows:

> "Running switches will be made only when absolutely necessary, in which case it must be known that hand brakes are operative."

The weather was clear at the time of the accident, which occurred about 5 p.m.

Description

Extra 1580, and east-bound freight train consisted of 45 cars and a caboose, hauled by engine 1580, of the 2-8-2 type, and was in charge of Conductor Ramsey and Engineman Combs. This train arrived at Clarksburg at about 4:57 p.m. The engine and head six cars were detached from the remainder of the train and backed into the siding. During the progress of a running switch movement which was then attempted the front engine truck became derailed while moving at a speed estimated to have been between 6 and 10 miles per hour. When the derailment was discovered and the brakes were applied in emergency the front cut of cars stopped with its west end fouling the stub-end track where it was struck by a detached car.

Only the front engine truck was derailed; the engine and the fifth and sixth cars sustained slight damage. The employee killed was the flagman.

Summary of evidence

Conductor Ramsey stated that when his train arrived at Clarksburg it consisted of 45 cars with 5 empty dump cars and 1 wood-rack next to the engine. The wood-rack was to be set into the loading track at Clarksburg and after the train stopped he made the cut behind the sixth car while Flagman Regons bled the air brake equipment of the sixth car. The conductor also ascertained that the hand brake on the wood-rack car was operative. At the time the running-switch movement was started he was several car lengths from the loading-track switch and did not know of anything wrong until the collision had occurred. Conductor Ramsey was familiar with Rule 104 (c) but said that it was the general practice to place cars at this and similar points by running-switch movements.

Engineman Combs stated that prior to departure from Vicksburg freight yard he inspected the engine, and he also made an outside inspection while taking water at Jackson, 44.3 miles distant, but nothing wrong was observed. The air brakes functioned properly en route, and as cars were added to the train the brakes were cut in. At Clarksburg the sixth car from the engine was to be

dropped into the stub-end loading track, and on arrival there he stopped the train on the main track with the engine about opposite the station. A cut was made behind the sixth car and the engine backed the six cars through the cross-over into the siding where the engine was stopped about one engine length west of the west cross-over switch; the air brakes were still cut in on this cut of cars. In making the drop Brakeman Corn was handling the loading track switch and Flagman Regons was on the side ladder of the sixth car to make the cut. After moving eastward about 2½ car lengths and attaining a speed of 5 or 6 miles per hour, the engineman gave the slack in response to a signal. After the cut had been made and the speed had been increased to about 8 or 9 miles per hour in order to get away from the detached car, the engineman noticed dust flying from under the engine truck and discovered that the engine truck was derailed. Without giving any warning he applied the engine and train brakes in emergency and when the engine with the cut of five cars stopped after traveling about five car lengths, the detached car collided with the standing cut. While an attempt was being made to rerail the engine truck the fireman found a pin which had become displaced from the front engine-truck center-plate swing-hanger near the point of derailment. The engineman was of the opinion that rigidity of the truck, which apparently resulted from the absence of the hanger pin, was the cause of the derailment. He stated that the car could have been placed at the desired location without the necessity of resorting to a drop, but, although the employees have been cautioned not to make them, drops are customary switching operations.

Brakeman Corn stated that it was the practice to make running switch movements to place cars at this and other locations. Preparatory to making a running switch of the sixth car he stationed himself at the west cross-over switch which also provided entry to the stub-end track. During the course of the forward movement to drop the sixth car into the stub-end track the slack was given for the separation; the speed was about 8 to 10 miles per hour when the cut was made and it was then increased slightly. A distance of about 25 feet separated the fifth and sixth cars when he threw the switch. He then noticed that the brakes were applied on the cars being pulled by the engine which were still fouling the loading track, whereupon he called a warning to Flagman Regons, who was standing on the brake platform of the sixth car, facing west when the collision occurred. Brakeman Corn said that the rear end of the fifth car stopped at a point on the cross-over where the cross-over rail and the loading track rail were about 18 inches apart.

Fireman Smith stated that after the engine was rerailed he found a swing hanger pin which had fallen from the engine truck near the main line frog of the cross-over. He was of the opinion

that the absence of this pin from the engine-truck swing-hanger caused the derailment.

Engine Inspector Crevitt stated that he made a thorough inspection of engine 1580 at Vicksburg on June 11th, but did not notice anything wrong with nuts or cotter keys on left back swing hanger bolt.

Master Mechanic Saunders, in company with Trainmaster Chandler and Section Foreman Thornton, made an inspection of track conditions, but nothing was found that would have caused or contributed to the accident. At a point approximately 11 inches west of where the left engine-truck wheel struck the point of the frog of the stub-end loading track, there was a flange mark on the guard rail of the No. 8 turnout to the cross-over showing where it had been mounted by the right engine-truck wheel. Master Mechanic Saunders also made an inspection of engine 1580 and found that the inside swing-hanger pin at the top end of left back swing-hanger of the front engine-truck center-plate was missing. This was the pin that was found by the fireman on the track between the rails about three rail lengths east of the point of derailment. The left back side of the swing center-plate casting and the head of the swing-hanger pin showed fresh marks, indicating that this swing-hanger pin had worked out and had fouled the swing center-plate in such a manner as to cause the truck to become rigid. In his opinion this caused derailment of the engine truck. Inspection of engine also disclosed that the pin through the right back engine-truck spring was broken, but it was still in place.

Trainmaster Chandler agreed with Master Mechanic Saunders concerning the cause of the derailment. The trainmaster further stated that while he does not condone the practice of employees using their own judgment with respect to observation of the rules he did not consider it any unusual hazard to make running switch movements at this point provided the equipment is in good condition. In this case a running switch could have been avoided by running around the car to be set on the loading track. The running switch method was more expeditious and no doubt that factor was considered by the crew.

Observations of the Commission's Inspectors

An examination of the track which included the siding, cross-overs, switches, and the main track for a distance of approximately 300 feet east of the point of derailment, disclosed that the first mark that could be definitely associated with the derailment was a flange mark on the guard rail located opposite the loading track frog. This mark indicated that the right engine-truck wheel had climbed the guard rail at a point 11 inches west

of the frog point. Flange marks also appeared on the ties east of the guard rail along the gage side of the south running rail of the cross-over; corresponding flange marks appeared on the outside web of the north cross-over rail which had turned over. Evidently the right engine-truck wheel mounted and passed over the spring wing of the main track frog, as flange marks continued along the cross-over and the main track to a point 280 feet east of the initial point of derailment.

An inspection of engine 1580 disclosed that the head of the inside pin which supports the upper end of the left back swing-hanger is of a tapered design, and when this pin is in its proper position the head is counter-sunk flush with the inside edge of the truck bolster, leaving a clearance of approximately ½ inch between the inner edges of the truck bolster and the swing center-plate casting. The fact that there was a newly made scar on the swing center-plate on the left side near the back corner, and that the head of the above-mentioned swing-hanger pin had been crushed on one side, indicated that during the backward movement of the engine through the cross-over, the pin had worked out of its proper position and fouled the left side of the swing center-plate casting. As a consequence the engine truck was unable to adjust itself to the curvature of the turnout during the forward movement and derailment resulted. The right back engine-truck cellar and the pin to the right back engine-truck spring were broken, evidently as a result of the derailment.

Discussion

The evidence indicates that as engine 1580 was entering the No. 8 turnout of the cross-over between the siding and the main track during the progress of a running switch movement the engineman discovered that the engine truck was derailed. He made an emergency application of the brakes and the engine stopped approximately 280 feet east of the initial point of derailment with the rear end of a cut of 5 cars, which the engine was hauling, on the cross-over, fouling the loading track lead. Immediately afterward the sixth car which had been diverted to the loading track, cornered the car which was fouling that track.

Examination of the track disclosed that it was in good condition and that the engine truck had been derailed at the loading track frog of the cross-over. Inspection of the front engine truck disclosed a fresh mark on the left side of the swing center-plate casting; marks were also found on the head of the inside upper left back swing-hanger pin. These marks indicated that the swing-hanger pin had worked out and fouled the swing center-plate casting. As a consequence the engine truck became rigid and was unable to move toward the right as the engine truck

entered the No. 8 turnout of the cross-over, and derailment of the engine truck resulted.

At the time of the derailment a space of about 25 feet separated the detached car from the cut being hauled by the engine. Flagman Regons was standing on the brake step located on the east end of the detached car, and, as he was facing west preperatory to operating the hand brake, he was unaware of the dangerous situation in which he had been placed by the derailment of the engine, and apparently he did not hear the warnings called to him.

Since means of running round the car destined for the loading track were available at this point, the rule prohibiting running switches, unless absolutely necessary, was violated. However, it appeared from this investigation that little if any effort was made by the railroad company to enforce this rule, running switch movements being made frequently without regard to the provisions of the rule. Had this rule been properly enforced and obeyed, the fatality in this case would have been averted.

Conclusion

This accident was caused by a rigid engine truck, due to the engine-truck swing center-plate casting being fouled by a displaced swing-hanger pin.

Respectfully submitted,

W. J. PATTERSON,

Director.