

INTERSTATE COMMERCE COMMISSION

WASHINGTON

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REPORT NO. 3319

NORFOLK AND WESTERN RAILWAY COMPANY

IN RE ACCIDENT

AT KIMBALL, W. VA., ON

APRIL 24, 1950

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SUMMARY

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Date: April 24, 1950

Railroad: Norfolk and Western

Location: Kimbell, W. Va.

Kind of accident: Head-end collision

Equipment involved: Passenger train : Track motor-car  
195

Train number: 24 :

Engine number: 137 :

Consist: 5 cars :

Estimated speeds: 35 m. p. h. : 10 m. p. h.

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

Track: Double; 5°55' curve; 0.83 percent  
ascending grade eastward

Weather: Clear

Time: 7:14 a. m.

Casualties: 6 killed

Cause: Failure to provide adequate  
protection for movement of  
track motor-car

Recommendation: That the Norfolk and Western Railway  
Company provide adequate protection  
for movement of track motor-cars on  
its line

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3319

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

NORFOLK AND WESTERN RAILWAY COMPANY

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June 2, 1950

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Accident at Kimball, W. Va., on April 24, 1950, caused  
by failure to provide adequate protection for the  
movement of a track motor-car.

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

PATTERSON, Commissioner:

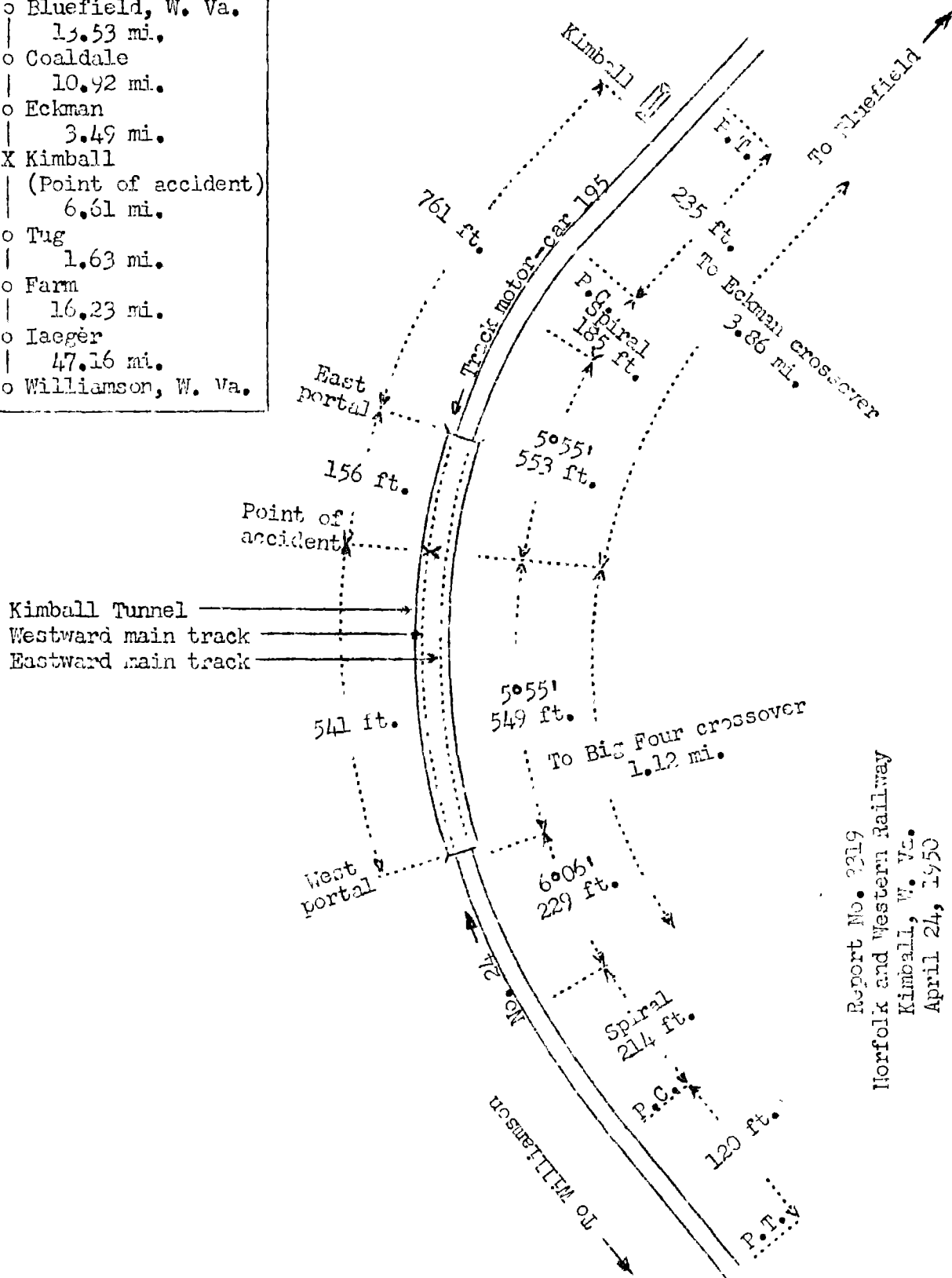
On April 24, 1950, there was a head-end collision  
between a passenger train and a track motor-car on the  
Norfolk and Western Railway at Kimball, W. Va., which  
resulted in the death of six maintenance-of-way employees.

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Under authority of section 17 (2) of the Interstate Com-  
merce Act the above-entitled proceeding was referred by the  
Commission to Commissioner Patterson for consideration and  
disposition.

o	Bluefield, W. Va.
	13.53 mi.
o	Coaldale
	10.92 mi.
o	Eckman
	3.49 mi.
X	Kimball
	(Point of accident)
	6.61 mi.
o	Tug
	1.63 mi.
o	Farm
	16.23 mi.
o	Jaeger
	47.16 mi.
o	Williamson, W. Va.



Report No. 2319  
Norfolk and Western Railway  
Kimball, W. Va.  
April 24, 1950

Location of Accident and Method of Operation

This accident occurred on that part of the Pocahontas Division extending between Williamson and Bluefield, W. Va., 99.57 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. Trains moving against the current of traffic are operated by train orders. A catenary system is provided for the electric propulsion of trains, and both steam and electric motive power are used. Kimball Tunnel, which is 697 feet in length, is located 71.42 miles east of Williamson. The east portal of the tunnel is 761 feet west of the station at Kimball. The accident occurred on the westward main track at a point 156 feet west of the east portal of Kimball Tunnel. From the west there are, in succession, a tangent 120 feet in length, a spiral 214 feet, a 6°06' curve to the right 229 feet, and a 5°55' curve to the right 549 feet to the point of accident and 553 feet eastward. From the east there are, in succession, a tangent 235 feet in length, a spiral 185 feet, and the curve on which the accident occurred. At the point of accident the grade is 0.83 percent ascending eastward.

Kimball Tunnel is 28 feet 10-1/2 inches in width at subgrade, 10 feet 8 inches in height from the top of the rail to the spring line of the arch, and approximately 24 feet in height from the top of the rail to the top of the tunnel.

This carrier's operating rules read in part as follows:

14. Engine Whistle Signals

Note—The signals prescribed are illustrated by "o" for short sounds; "—" for longer sounds. \* \* \*

SOUND	INDICATION
* * *	
(1) — — o o	Approaching public crossings at grade. * * *
* * *	
(q) — o	When running against the current of traffic: (1) Approaching stations, curves, or other points where view may be obscured. * * *
* * *	

30. The engine bell must be rung \* \* \* when passing through tunnels \* \* \*

691. \* \* \* All occupants of cars, as well as the motor car operator, must keep a constant and sharp lookout in both directions for trains, motor cars or obstructions. Trains or motor cars may be expected to run in any direction at any time. Motor cars must proceed under control and with caution expecting to meet a train or car.

\* \* \*

692. When practicable, before starting on a trip, motor car operator must inform himself as to location of all trains and ascertain if traffic is normal by communicating with the nearest telegraph operator or dispatcher.

Dispatchers will give line-ups to parties operating cars when requested. Where there is a telegraph operator on duty, he must obtain this information. Parties receiving these line-ups must understand they are given as a matter of information only and do not in any manner abrogate rules requiring flag protection when or wherever required. Operating conditions may require running of additional trains or light engines at any moment after line-up has been given.

Motor car operators securing information over telephone from dispatchers or telegraphers concerning the movement of motor cars and location of trains, must state their name, location and points between which motor car is to be operated, and the information received must be repeated to the dispatcher or telegrapher for confirmation of their understanding.

After foremen and others in charge of motor cars receive a line-up on trains from dispatchers or telegraph operators, they will give this information to the members of their force, together with advice of the movements to be made and the work to be performed, before occupying the main track or engaging in work thereon.

\* \* \*

They must clear the time of all passenger trains ten (10) minutes.

Necessary precaution must be taken at curves and cuts where the view is obstructed, or where the side clearance is not sufficient to take the car off the track. \* \* \*

697. The operation of motor cars through single track tunnels will be governed by special instructions issued by the Superintendent of the Division on which they are located.

They will not be permitted to follow a train through a double track tunnel until it is known to be clear, or enter a double track tunnel when there is a train on the opposite track.

The maximum authorized speed for the passenger train was 50 miles per hour, but it was restricted to 40 miles per hour on the curve on which the accident occurred. The maximum authorized speed for the track motor-car was 20 miles per hour.

#### Description of Accident

No. 24, an east-bound first-class passenger train, consisted of engine 137, two baggage-express cars, one mail-storage car, one passenger-baggage car, and one coach, in the order named. At Williamson the crew received copies of train order No. 4, which read as follows:

Effective 701AM April 24th Account Laying Rail on Eastward Track Eastward Trains will be Detoured Over Westward Track From Big Four Cross Over to Eckman Cross Over. Eastward Trains Approach Big Four Cross Over and Westward Trains Approach Eckman Cross Over Prepared to Stop and Proceed Only On Instructions From Official on Ground.

Big Four Crossover and Eckman Crossover are, respectively, 1.12 miles west and 3.86 miles east of the point of accident. No. 24 departed from Williamson at 5:20 a. m., 10 minutes late, and passed Tug, the last open office, 6.61 miles west of Kimball, at 6:59 a. m., 14 minutes late. At Big Four Crossover the crew received from an assistant trainmaster copies of instructions reading as follows:

I will protect you over westward track  
Big Four crossover to Eckman crossover.  
Block clear.

The train was diverted to the westward main track at Big Four Crossover at 7:12 a. m., and while moving through Kimball Tunnel on the westward main track at a speed of about 35 miles per hour it collided with track motor-car 195 at a point 156 feet west of the east portal of the tunnel.

Track motor-car 195, occupied by a maintenance-of-way carpenter foreman and five employees, departed west-bound from Kimball about 7:12 a. m. About 2 minutes later, while moving through Kimball Tunnel on the westward main track at a speed of about 10 miles per hour, it collided with No. 24.

No. 24 stopped with the front end of the engine 549 feet east of the point of accident. None of the equipment of this train was derailed or damaged. The track motor-car was demolished.

The six maintenance-of-way employees who were on the track motor-car were killed.

The weather was clear at the time of the accident, which occurred at 7:14 a. m.

Track motor-car 195 was of the 4-wheel type, equipped with 4-wheel brakes, powered by a 4-cylinder 31 horse-power gasoline motor, and was insulated to prevent the shunting of track circuits. It weighed 1,800 pounds, and had seating capacity for eight persons. It was equipped with safety railings and a windshield.

During the 30-day period preceding the day of the accident, the average daily movement in the vicinity of the point of accident was 46.7 trains.

#### Discussion

On the day of the accident, a maintenance-of-way force was replacing rail on the eastward main track between Big Four Crossover and Eckman Crossover, 4.98 miles, and after 7:01 a. m. trains were operated over the westward main track in either direction between those points. An assistant trainmaster was stationed at Big Four Crossover and an assistant road foreman of engines was stationed at Eckman Crossover. Train order No. 4 specified that trains would enter this district only on instructions from one of these officials.



The crew of No. 24 received copies of train order No. 4 at Williamson and No. 24 proceeded eastward on the eastward main track. At Big Four Crossover the crew received written instructions from the assistant trainmaster that the movement of their train on the westward main track would be protected between Big Four Crossover and Eckman Crossover and that the block was clear. The speed of the train was reduced to about 5 miles per hour while the train was being diverted to the westward main track, then it was increased to about 35 miles per hour. As the train was approaching the point where the accident occurred, the engineer and the fireman were maintaining a lookout ahead from their respective positions on the engine, and the members of the train crew were in various locations throughout the cars of the train. The brakes of this train had been tested and had functioned properly when used en route. The engineer sounded the grade-crossing engine-whistle signal when the train reached a point about 1,170 feet west of the west portal of Kimball Tunnel. The engine-whistle signal to indicate that the train was moving against the current of traffic was sounded four times between the crossover and the tunnel. The last whistle signal was completed just before the train entered the tunnel. The engine bell was ringing. The headlight was not lighted. Because of curvature of the track within the tunnel, the engineer's view of the track ahead was restricted to a distance of about 200 feet, and the fireman's view of the track ahead was obscured. The engineer first observed the approaching track motor-car at a distance of about 200 feet. When he realized that it was occupying the westward main track, he initiated an emergency brake application. The collision occurred immediately afterward. The engineer said that the occupants of the track motor-car did not attempt to leave the car and apparently they were unaware that No. 24 was occupying the westward main track.

The occupants of track motor-car 195 reported for duty at Kimball about 7 a. m. They placed the track motor-car on the westward main track at a point about 55 feet west of the station at Kimball, and were en route to Bridge No. 890, 3.5 miles west of Kimball. All of the occupants of the track motor-car were killed. Employees at Kimball, who were not aware that east-bound trains were to be detoured over the westward main track, observed the track motor-car enter Kimball Tunnel at a speed of about 10 miles per hour immediately before the accident occurred.

The rules of this carrier provide that before starting on a trip, track motor-car operators must, when practicable, inform themselves as to the location of all trains by communicating with the nearest telegraph operator or the train dispatcher. The movement of freight trains and helper engines between Farm and Coaldale, located, respectively, 8.24 miles west and 14.41 miles east of Kimball, is under the jurisdiction of a general yardmaster at Eckman. As a result, the train dispatcher does not have sufficient information to issue an accurate line-up of expected train movements in this territory. The operator at Eckman maintains a sheet, for use by the yardmaster, on which he records all train movements in this territory and their time at each open telegraph office. Consequently, it is customary for track motor-car operators in the vicinity of the point of accident to communicate with the telegraph operators rather than with the train dispatcher to obtain a line-up. Line-ups of train movements for the operators of track motor-cars are issued at Eckman either by the operator or by the yardmaster. No record is made of the line-ups which are issued, and the track motor-car operators who receive line-ups are not required to copy them.

The carpenter force had arrived at Kimball on April 18, and had used a track motor-car in moving between Kimball and Bridge No. 890 each day from April 18 until April 21, inclusive. This force was not on duty on April 22 and 23. An employee who usually accompanied the carpenter force on the track motor-car, but did not do so on the day of the accident, said that before leaving Kimball each morning the foreman obtained a line-up by telephone of train movements and repeated it to the employee who was to operate the track motor-car. These line-ups were not copied and were repeated from memory. The foreman had mentioned to the members of the force that line-ups were obtained from Eckman. The employees who were on duty at Eckman from April 18 to 24 said they could not recall having had any telephone conversation whatever with the foreman of the carpenter force. About 7:05 a. m. on the day of the accident the agent at Kimball passed by the telephone booth at the west end of the station while the foreman was engaged in a telephone conversation. This telephone is connected to a local circuit which extends between Eckman and Iaeger, 27.96 miles. However, the agent did not distinctly hear any part of the conversation and he did not know with whom the foreman was talking. The agent was not aware that east-bound trains were to be detoured over the westward main track. A loud speaker is provided in an interlocking station at Iaeger for telephone conversations.

A signal maintainer said that about 7:05 a. m. the telephone code for Eckman was sounded. When it was answered, a person who identified himself as the foreman of the carpenter force at Kimball requested a line-up of west-bound train movements. The signal maintainer said he knew the foreman and readily identified his voice. He said another person, who identified himself as speaking from Eckman, then issued a line-up of west-bound trains but did not include the information that east-bound trains were to be operated over the westward main track after 7:01 a. m. The signal maintainer said he could not identify the voice of the person who issued the line-up. A section foreman arrived at the interlocking station at Tug about 6:45 a. m., where he obtained a line-up of train movements. He was informed by the operator that east-bound trains were to be detoured over the westward main track between Big Four Crossover and Eckman. A short time later he attempted to use the block telephone circuit. However, at that time the circuit was being used by a person at Kimball to obtain from Eckman a line-up of west-bound trains. He said he thought the person at Kimball was the foreman of the carpenter force, but he could not identify the person who issued the line-up. He said he did not hear the entire conversation, but he did not hear the person who issued the line-up include the information that east-bound trains would be detoured. Each of the employees on duty at Eckman on the day of the accident said he did not issue a line-up to the foreman at Kimball.

Neither the assistant trainmaster who was stationed at Big Four Crossover nor the assistant road foreman of engines who was stationed at Eckman Crossover was aware that the carpenter force was stationed at Kimball. Until after the collision occurred, neither was aware that the track motor-car had occupied the westward main track. During the time that trains were operated in either direction over the westward main track between Big Four Crossover and Eckman Crossover, no train was permitted to enter this track while it was occupied by an opposing train. It was intended that the movement of track motor-cars be handled in the same manner. However, because it was assumed that the operator of each track motor-car in the district would communicate with the nearest telegraph operator before the main track was occupied, no effort was made to warn these employees of the unusual conditions which existed. The switches at which trains or engines might enter the westward main track between Big Four Crossover and Eckman Crossover had been spiked in normal position, before 7 a. m., but this did not afford protection for the movement of the track motor-car in question, as there was no switch at the point where the motor-car was placed on the westward main track.

The operators of track motor-cars are given line-ups when they request them. A line-up neither confers right over trains or other track motor-cars nor relieves the operator of responsibility for collision if the movement of a train is omitted from the line-up or if the line-up is otherwise erroneous. A line-up does not confer authority for a track motor-car to occupy the main track. Train crews and the operators of other track motor-cars are not informed when a track motor-car is occupying the main track. Trains may be created at any time after a line-up has been issued without the issuance of a superseding line-up. A line-up of train movements is issued as information only and track motor-car operators are required to provide the same degree of protection when they have a line-up as when they do not have it. Since January 1, 1944, the Commission has investigated twenty-eight collisions, including the instant case, in which track motor-cars were involved. These accidents resulted in the death of 58 persons and the injury of 77 persons, and were caused by failure to provide adequate protection for the movement of track motor-cars.

Cause

It is found that this accident was caused by failure to provide adequate protection for the movement of a track motor-car.

Recommendation

It is recommended that the Norfolk and Western Railway Company provide adequate protection for the movement of track motor-cars on its line.

Dated at Washington, D. C., this second day of June, 1950.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,  
Secretary.