

BUREAU OF SAFETY

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REPORT NO. 1986

Railroad: Chesapeake & Ohio  
Date: May 21, 1935  
Location: South Fayette, W. Va.  
Kind of accident: Derailment  
Train involved: Freight  
Train number: Extra 1225  
Engine number: 1225  
Consist: 55 loads and caboose  
Speed: 25 - 30 m.p.h.  
Track: 1°30' curve to right; high rock bluff  
Weather: Heavy rain  
Casualties: 4 employees injured  
Cause: Track knocked out of alinement by  
fallen rock.

1986

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN  
ACCIDENT ON THE CHESAPEAKE & OHIO RAILWAY NEAR SOUTH  
FAYETTE, W. VA., ON MAY 21, 1935.

July 1, 1935.

To the Commission:

On May 21, 1935, there was a derailment of a freight train on the Chesapeake & Ohio Railway near South Fayette, W. Va., which resulted in the injury of 4 employees.

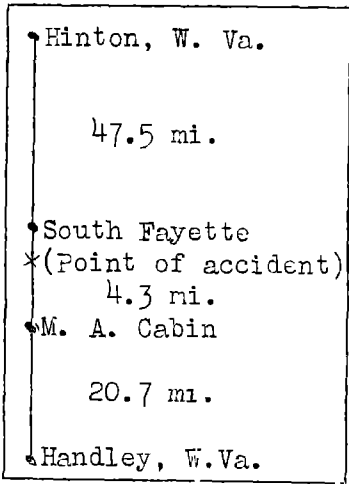
Location and method of operation

This accident occurred on the New River Subdivision of the Hinton Division, extending between Handley and Hinton, W. Va., a distance of 72.5 miles; in the vicinity of the point of accident this is a double-track line over which trains are operated by time table, train orders, and an automatic block-signal system. The accident occurred at a point about 1 mile west of the station at South Fayette; approaching this point from the west, there is a series of short curves and tangents, followed by a 1030' curve to the right 790 feet in length, the accident occurring on this curve at a point 19 feet from its leaving end, where the grade for east-bound trains is 0.4 percent ascending. Eastbound automatic block signal 4060 is located 2,968 feet west of the point of accident.

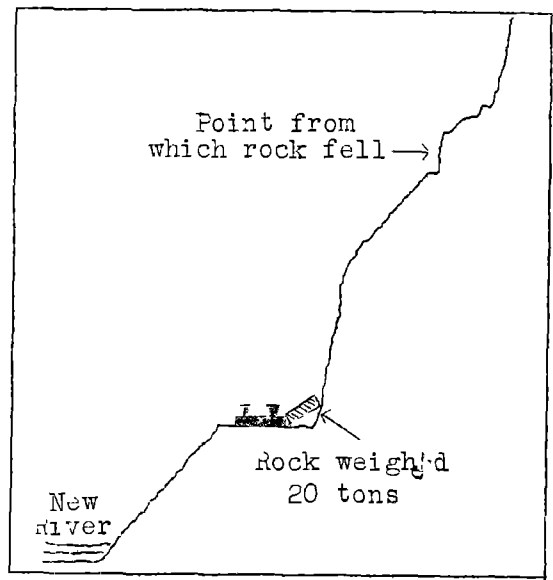
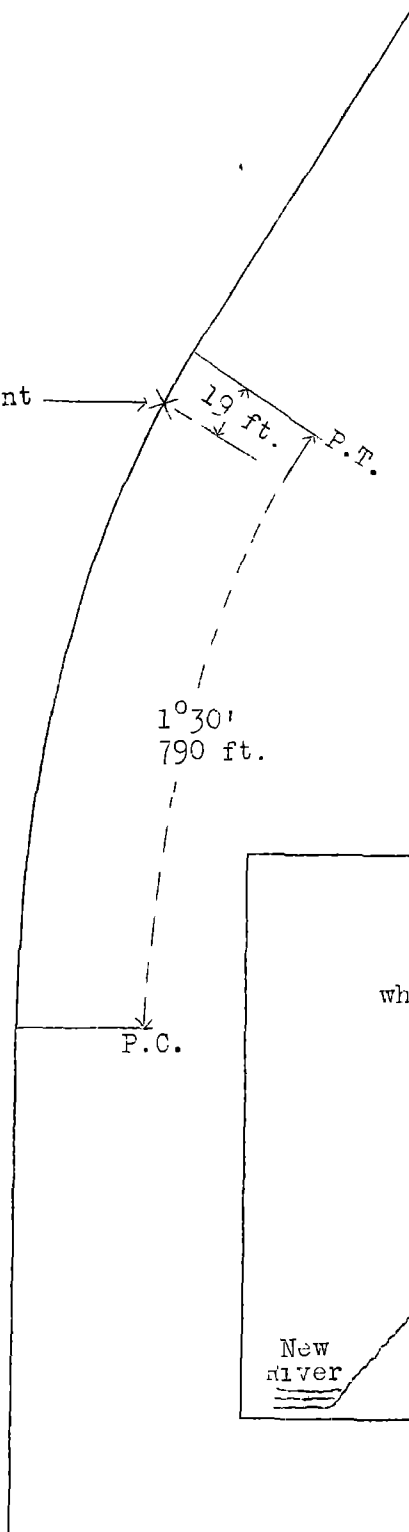
The track is laid with 130-pound rails, 39 feet in length, with an average of 23 ties to the rail length, fully tieplated, single spiked, and ballasted with crushed stone to a depth of 12 inches; rail anchors also are used and the track is well maintained. In this vicinity the east-bound track is on the south bank of the New River, while the west-bound track is on the north bank. The east-bound track is laid in a side-hill cut 40 feet above the stream and 90 feet south of it; the face of the slope on the south side of the track, or the inside of the curve, is precipitous and the top of the bluff is about 725 feet above the track. It is composed of layers of solid rock, a mixture of shale and earth, and earth.

Owing to the curve and the side of the cut, the view of an engineman from the cab of an east-bound engine, especially at night, is considerably restricted.

Inv. No. 1986  
Chesapeake & Ohio Ry.  
South Fayette, W. Va.  
May 21, 1935



Point of accident →



There was a heavy rain falling at the time of the accident, which occurred about 1:22 a.m.

### Description

Extra 1225, an east-bound freight train, consisted of 55 cars and a caboose, hauled by engine 1225, and was in charge of Conductor McFadden and Engineman Patterson. This train passed MA Cabin, the last open office, 4.3 miles west of South Fayette, at 1:10 a.m., according to the train sheet, passed automatic signal 4060, which was displaying a proceed indication, and on reaching a point about 1 mile west of South Fayette it was derailed while traveling at a speed estimated to have been between 25 and 30 miles per hour, due to the track having been knocked out of line by a fallen rock.

Engine 1225, its tender, and the first 13 cars in the train were derailed; most of this equipment went down the slope toward the river, the engine stepping on its left side near the stream, parallel with and 70 feet from the track, with its forward end 213 feet east of the fallen rock. The engine was badly damaged and three of the cars were destroyed. The employees injured were the engineman, fireman, head brakeman and conductor.

### Summary of evidence

Engineman Patterson stated that automatic signal 4060 was displaying a proceed indication when his engine passed it, moving at a speed of 25 or 30 miles per hour, and that the head brakeman was firing the engine; the fireman had been back in the tender, digging down coal. A heavy rain was falling, it had been raining all night, and a close lookout was being maintained ahead. The headlight was burning brightly and the engineman opened the clear-vision window and had just sat down when he saw a streak of fire and then the engine turned over, the engineman did not see the obstruction prior to the accident and everything happened so quickly that he did not have time to close the throttle or apply the air brakes. Fireman McKnight said that the heavy rainfall wet the coal to such an extent that it kept him busy going back and forth in the tender and digging it down, while Head Brakeman Huffman sat on the fireman's seat box watching the stoker. Fireman McKnight had just come back from the tender and sat down on the brakeman's seat box when the derailment occurred. These employees had been in

the service for 35 and 28 years, respectively, and had not experienced any previous trouble at this location. No statement was obtained from Head Brakeman Huffman, owing to injuries sustained in the accident.

Conductor McFadden and Flagman Farley were in the caboose and were not aware of anything wrong until the train came to an abrupt stop. Conductor McFadden immediately went forward and saw the track out of line and the rock that caused the accident, and he said that at that time rocks and dirt were still falling.

Chief Dispatcher Hanifin stated that train crews are required to report any unusual track or bluff conditions whenever they are observed; however, prior to the accident he received no report from any train crew as to track, bluff or weather conditions in the locality involved.

Section Foreman Bennett, in charge of the track where the accident occurred, said it is patrolled every day. The section foreman last patrolled the track personally on May 16 and was last over it on May 20, but no unusual condition was noticed; the bluff looked to be in good condition and there was no indication of a slide. He also had been on top of the bluff, in March of this year, but had not found any condition he thought was dangerous. It rained on May 20, but at the time he went to bed, about 8 p.m., it was not raining hard enough to justify sending out extra men to patrol the track. The section foreman also stated that during the 2 months prior to the accident some water had been running off the hillsides and down into the track ditches, but that the ditches had carried off the water without any trouble. After the accident he examined the cliff and saw the fallen rock that caused the derailment; rock and dirt continued to fall during the entire day and a considerable quantity came down in the evening.

Ditcher Supervisor Draper stated that about May 8 or 9 he took down two rocks at a point about 100 feet west of where the slide occurred, but did not do any work at the particular point involved; he inspected the bluff at that time, however, going across it just below the point where the slide subsequently occurred, and he said that as he remembered it the earth was dry at that time. There had been considerable rain during the last month through this territory, but no trouble was experienced due to insufficient drainage.

Bluff Inspector Belcher, who arrived at the scene about 6 a.m., made an examination at the point where the slide started and found that part of the west portion of the ground was somewhat wet. Churn drill holes were made and the ground appeared

to be solid, the drill making good clean holes and no dirt falling back into them, although when standing on top of the dirt where it was wet he could feel it move slightly under foot in a few places. Bluff Inspector Belcher stated that his entire time is devoted to inspecting cliffs and rocks and that he covers most of his territory once each week; he last inspected this bluff on May 18, but nothing wrong was observed, the bluff appearing to be in good condition.

Division Engineer Drumeller stated that he arrived at the scene about 6:30 a.m. and found considerable shale and earth in the ditch line; after the shale and earth had been removed a piece of rock, weighing about 20 tons, was found wedged between the ends of the ties and the cliff, and it was necessary to drill and blast the rock in order to get it clear of the ditch and put the track back in proper alignment. The track had been knocked out of line about 2 feet for a distance of 75 feet. There was no evidence of a broken rail due to the slide; one of the rails on the south side of the track was broken within the limits of an angle bar, but this apparently occurred as a result of the derailment. Examination of the bluff above the point of derailment indicated a solid rock face for a distance of about 20 feet above the track; then there was earth and shale, on top of which there was a layer of solid rock, and above this point there was earth. The indications were that the mass earth above the solid rock had been well saturated with water, causing it to shift, and in his opinion the shifting action of this earth mass broke the rock face, causing the rock to fall and knock the track out of line, and then about 350 cubic yards of shale fell on top of the rock. The division engineer further stated that no slide-detector fences are in use on this division, but detector wires are used at two different locations; within the last 6 years he knew of only one case where there was occasion for the wires to function and in that case a small rock came down and cut the wire, causing the automatic block signal involved to display a red indication, although the rock itself would not have had any effect on the track. Wires were broken for the most part by trespassers stepping over or on them. The division engineer also said that two bluff inspectors are employed continuously on this division, in addition to inspections made by section foremen and others.

Road Foreman of Engines Glass, who arrived at the scene about 6:20 a.m., found the automatic brake valve in emergency position and the throttle partly open. In his opinion there was nothing about the engine or train that caused the accident, and his examination of the track did not reveal any indication of derailed or dragging equipment west of the point of derailment.

East-bound passenger Train No. 2 passed the point in question about 11:42 p.m., May 20, or about 1 hour and 40 minutes prior to the occurrence of the accident, traveling at a speed of 30 or 35 miles per hour, and at that time members of the crew noticed nothing unusual.

#### Discussion

The investigation developed that a large rock, weighing about 20 tons, became dislodged from a point about 37 feet above the track and fell against the road bed, forcing the track out of alinement about 2 feet for a distance of about 75 feet. The bottom of the displaced rock, before it fell from its position in the bluff, rested on a layer of shale and earth, and, after the rock fell about 350 cubic yards of shale and earth also fell, covering the rock to a depth of 3 feet. Apparently the rock did not foul the rail, as there were no marks on the right side of the engine to indicate that it had struck the rock, and it was evident that the track circuit controlling the automatic block signals was not disturbed as a result of the fallen rock and the earth and shale slide, consequently the engine crew of the freight train received no warning of danger when passing the last east-bound automatic signal. The last train to pass was a passenger train, less than 2 hours previously, and at that time nothing wrong was observed.

#### Conclusions

This accident was caused by a large rock falling against the road bed and knocking the track out of alinement.

Respectfully submitted,

W. J. PATTERSON,

Director.