

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3635  
GREAT NORTHERN RAILWAY COMPANY  
IN RE ACCIDENT  
NEAR YARNELL, MONT., ON  
JUNE 20, 1965

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SUMMARY

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Date:	June 20, 1965
Railroad:	Great Northern
Location:	Yarnell, Mont.
Kind of accident:	Derailment
Train involved:	Passenger
Train number:	3
Engine number:	Diesel-electric units 358A, 358B, and 358C
Consist:	13 cars
Speed:	52 m. p. h.
Operation:	Timetable, train orders, and automatic block-signal system
Track:	Single; 3°26' curve; 0.28 percent descending grade westward
Weather:	Clear
Time:	5:02 p. m.
Casualties:	10 injured
Cause:	Rock falling upon track under train

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3635

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

GREAT NORTHERN RAILWAY

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July 26, 1955

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Accident near Yarnell, Mont., on June 20, 1955, caused  
by a rock falling upon track under a train.

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

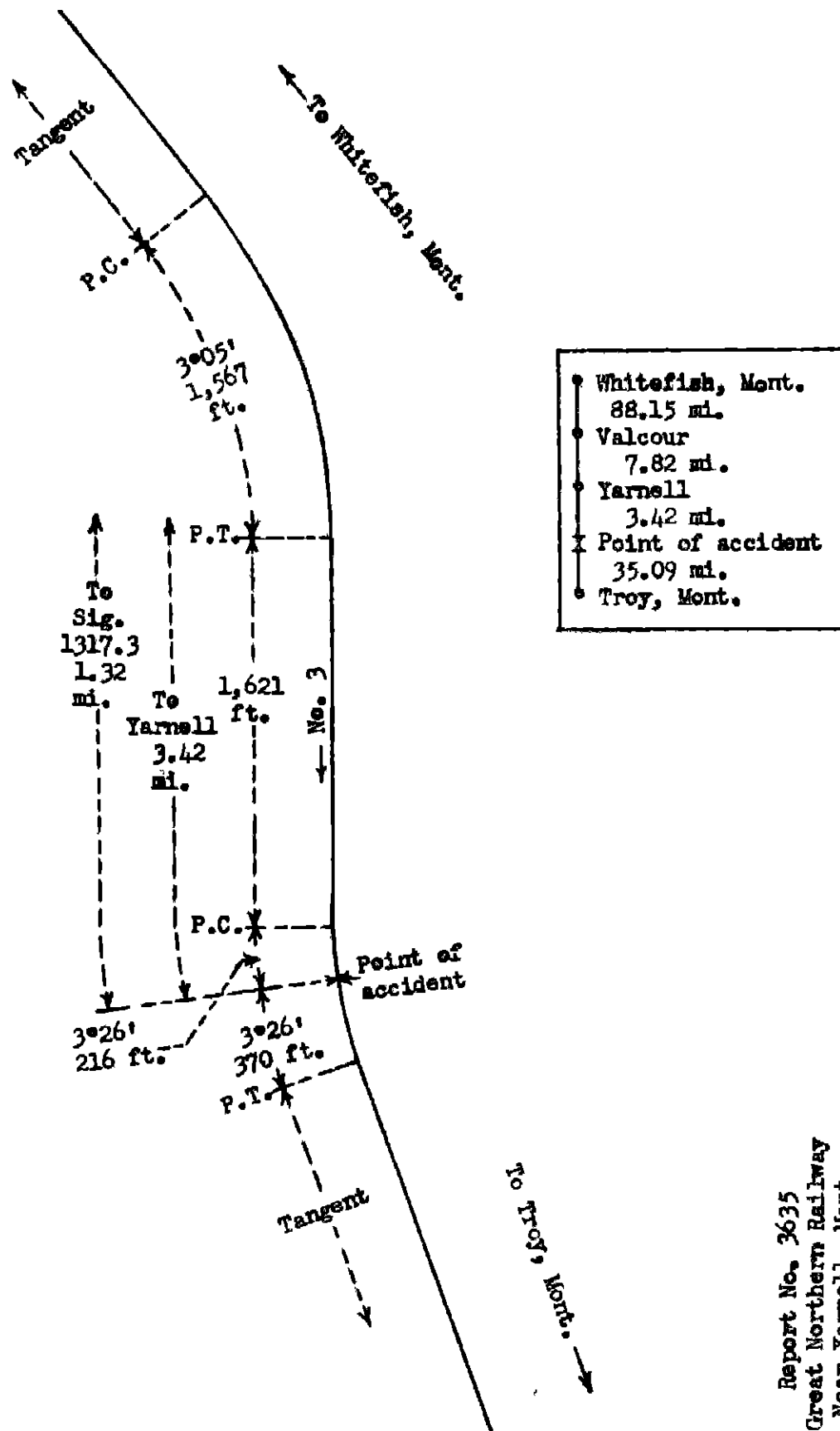
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CLARKE, Commissioner:

On June 20, 1955, there was a derailment of a passenger train on the Great Northern Railway near Yarnell, Mont., which resulted in the injury of nine passengers and one train-service employee.

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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 Clarke for consideration and disposition.



Report No. 3635  
Great Northern Railway  
Near Yarnell, Mont.  
June 20, 1955

### Location of Accident and Method of Operation

This accident occurred on that part of the Kalispell Division extending between Whitefish and Troy, Mont., 134.48 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable, train orders, and an automatic block-signal system. The accident occurred on the main track at a point 99.39 miles west of Whitefish and 3.42 miles west of Yarnell. From the east there are, in succession, a 3°05' curve to the right 1,567 feet in length, a tangent 1,621 feet, and a 3°26' curve to the left 216 feet to the point of accident and 370 feet westward. The grade for west-bound trains is 0.28 percent descending at the point of accident.

The track structure consists of 112-pound rail, 39 feet in length, laid new in 1940 on an average of 24 treated ties to the rail length. It is fully tieplated with double-shoulder tie plates, spiked with two rail-holding spikes per tie plate and one plate-holding spike per tie plate on curves, and is provided with 4-hole 26-inch joint bars and an average of 32 rail anchors per rail. It is ballasted with processed gravel to a depth of 8 inches below the bottoms of the ties.

In the vicinity of the point of accident the railroad parallels the Kootenai River on the south, and the track is laid on the adjacent hillside. The accident occurred approximately 350 feet west of the east end of a side-hill rock cut. Immediately west of the point of accident the track enters a through rock cut about 540 feet in length. At the point of accident the toe of the south wall of the cut is 10 feet from the center-line of the track, and at a point 15.4 feet above the level of the track the wall is 20.4 feet south of the center-line of the track. On the north side the ground line is practically at the grade of the track. The rock in the cut in which the accident occurred is quartzite.

Automatic signal 1317.3, governing west-bound movements, is located 1.32 miles east of the point of accident.

The maximum authorized speed for passenger trains in the vicinity of the point of accident is 79 miles per hour, but it is restricted to 55 miles per hour on the curve on which the accident occurred.

#### Description of Accident

No. 3, a west-bound first-class passenger train, consisted of Diesel-electric units 358A, 358B, and 358C, coupled in multiple-unit control, one mail car, one baggage car, four coaches, one lunch-dormitory car, one dining car, four sleeping cars, and one lounge-sleeping car, in the order named. The second car was of conventional all-steel construction. The other cars were of lightweight steel construction and were equipped with tightlock couplers. This train departed from Whitefish at 3:14 p. m., 24 minutes late, passed Valcour, 11.24 miles east of the point of accident and the last open office, at 4:51 p. m., 16 minutes late, passed signal 1317.3, which indicated Proceed, and while moving at a speed of 52 miles per hour the twelfth and thirteenth cars were derailed at a point 3.42 miles west of Yarnell.

There were no separations between the units of the train. The train stopped with the rear end of the thirteenth car 824 feet west of the point of derailment. The twelfth and thirteenth cars were derailed to the north and stopped approximately in line with the track. The twelfth car leaned to the north at an angle of about 35 degrees, and the thirteenth car leaned to the north at an angle of about 15 degrees. Both cars were somewhat damaged.

The conductor was injured.

The weather was clear at the time of the accident, which occurred at 5:02 p. m.

### Discussion

As No. 3 was approaching the point where the accident occurred the speed was 52 miles per hour, as indicated by the tape of the speed-recording device. The enginemen were maintaining a lookout ahead from the control compartment at the front of the locomotive. The members of the train crew were in various locations in the cars of the train. The locomotive and the cars were riding smoothly, and the enginemen said they observed no obstruction on the track. The members of the crew first became aware that something was wrong when the derailment occurred and the brakes became applied in emergency as a result of a broken brake pipe.

Examination of the equipment and the track after the accident occurred disclosed that a spring plank safety hanger on the front truck of the twelfth car had struck a rock which had become dislodged from the south wall of the cut and fallen to the track. This rock, which measured 10 inches by 14 inches by 18 inches and weighed 163 pounds, was found on the north side of the track. It bore marks of a fresh fracture and traces of paint similar in color to the paint on the spring plank safety hanger. Marks on the wall of the cut indicated that this rock had become dislodged from the top of a flat rock at the top of the wall. The spring plank safety hanger on the north side of the front truck of the twelfth car bore indications of having struck a rock and was bent upward and backward approximately 4 inches. Normally this safety hanger is 8 inches above the level of the tops of the rails. No defective condition of the equipment was found which appeared to have existed prior to the time of the derailment. The first mark of derailment on the track structure was a flange mark 10 inches inside the south rail opposite the point at which the rock was found. Apparently, as No. 3 was passing through the cut the rock became dislodged and rolled upon the track in front of the twelfth car, and when the safety hanger struck the rock the side of the truck was raised sufficiently to permit the flanges of the wheels to cross the rail.

The section foreman had been working in the immediate vicinity of the point of accident on the day on which the accident occurred, and the roadmaster had made a trip over this territory 6 days prior to the day of the accident. These employees observed no unusual condition. They said that in the past they had experienced no difficulty with falling rocks at the point at which the accident occurred.

Cause

This accident was caused by a rock falling upon track under a train.

Dated at Washington, D. C., this twenty-sixth day of July, 1955.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. MCCOY,  
Secretary.