

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 3183
THE COLORADO AND SOUTHERN RAILWAY COMPANY
REPORT IN RE ACCIDENT
NEAR WHEATLAND, WYO., ON
MAY 22, 1948

SUMMARY

Railroad: Colorado and Southern
Date: May 22, 1948
Location: Wheatland, Wyo.
Kind of accident: Derailment
Train involved: Passenger
Train number: 29
Engine number: 2952
Consist: 8 cars
Speed: 20 m. p. h.
Operation: Timetable and train orders
Track: Single; 4°05' curve; 0.78 percent
descending grade northward
Weather: Clear
Time: 10:50 a. m.
Casualties: 2 killed; 1 injured
Cause: Washout

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 3183

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

THE COLORADO AND SOUTHERN RAILWAY COMPANY

July 2, 1948

Accident near Wheatland, Wyo., on May 22, 1948, caused
by a washout.

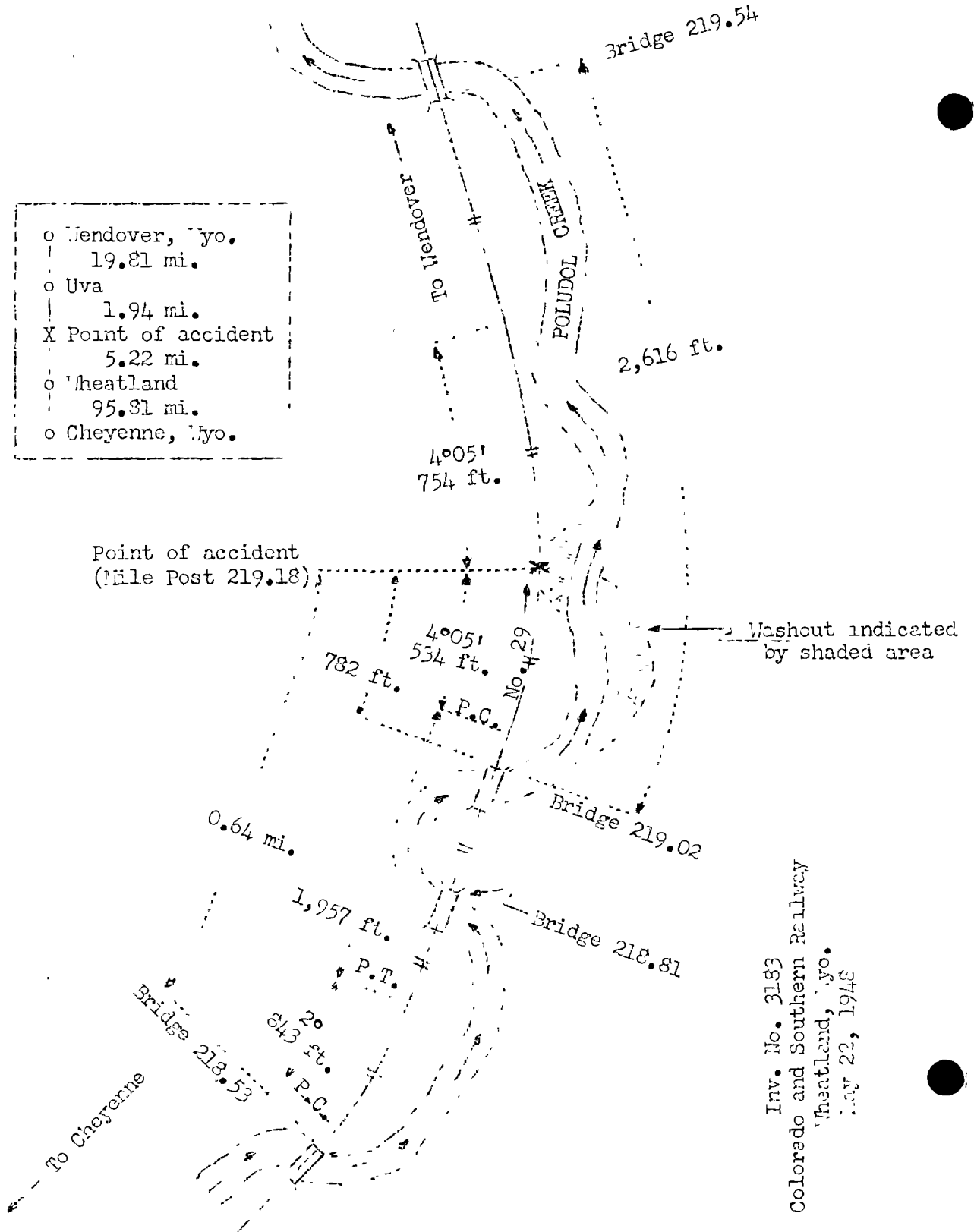
REPORT OF THE COMMISSION¹

PATTERSON, Commissioner:

On May 22, 1948, there was a derailment of a passenger train on the Colorado and Southern Railway near Wheatland, Wyo., which resulted in the death of two train-service employees, and the injury of one train-service employee.

¹
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 Mendover, Wyo. 19.81 mi.
- o Uva 1.94 mi.
- X Point of accident 5.22 mi.
- o Wheatland 95.81 mi.
- o Cheyenne, Wyo.



Inv. No. 3183
 Colorado and Southern Railway
 Wheatland, Wyo.
 May 22, 1948

Location of Accident and Method of Operation

This accident occurred on that part of the Northern Division extending between Cheyenne and Wendover, Wyo., 123.78 miles, a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. The accident occurred on the main track 101.03 miles north of Cheyenne and 5.22 miles north of the station at Wheatland. From the south there are, in succession, a 2° curve to the left 843 feet in length, a tangent 1,957 feet and a 4°05' curve to the left 534 feet to the point of accident and 754 feet northward. The grade is 0.73 percent descending northward.

The track structure consists of 90-pound rail, 39 feet in length, laid in 1929 on an average of 23 ties to the rail length. It is fully tieplated, single-spiked, and provided with 4-hole joint bars and 4 rail anchors per rail length. It is ballasted with gravel to a depth of 6 inches below the ties.

Between Wheatland and Uva, 7.16 miles, the railroad is laid in the valley of Poludol Creek, a tributary of the Laramie River. Throughout this territory Poludol Creek normally is a shallow stream winding through generally rolling prairie country. The soil is friable sandy loam. Between Wheatland and the point of accident, the creek generally parallels the railroad on one side or the other. The railroad spans the stream at four places. At Bridge 219.02, an eight-space ballast-deck pile-trestle 108 feet in length, Poludol Creek crosses to the east and generally parallels the track northward a distance of 2,616 feet, then it crosses to the west of the track at Bridge 219.54, an eight-space ballast-deck pile-trestle. In this territory, the track is laid in a series of shallow cuts and on a series of slight fills. At the point of accident, 782 feet north of Bridge 219.02, the track is laid on an earthen fill 2.5 feet high, and 20 feet wide at the top. The level of the tops of the rails is 11 feet above the level of the bed of Poludol Creek, and the centerline of the track is 70 feet west of the normal west bank of the stream. The normal channel is 60 feet wide and about 10 feet deep. The water contained in this channel is normally about 8 feet wide and 1 foot deep.

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

DEFINITIONS

* * *

Restricted Speed.--Proceed prepared to stop short of train, obstruction, or anything that may require the speed of a train to be reduced.

* * *

Rules of the maintenance-of-way department read in part as follows:

SECTION FOREMEN.

132. They must go over their section during or after storms, either by day or night, and carefully watch all places where trouble is likely to occur. If there is indication of a hard rain on parts of their section, the track in such territory must be given special attention. If on arrival at the end of their section it appears probable that the adjoining section may have been damaged, and this condition not discovered by the Foreman on that section, they will continue as far as considered necessary to insure safety to trains, or until the Foreman of that section is met.

134. In case of severe storms, high water, washouts or unusual conditions of any kind, they must, if in their judgment safety demands it, detail men to watch the points at which trouble is likely to occur.

Special instructions governing inspection of track read in part as follows:

* * *

Whenever trains are stopped pending inspection and determination of actual conditions they must not be released until the conditions ahead are known, beyond a possibility of doubt, to be safe at the specified speed. Trains must not be so released when there is any possibility of danger either by cutting or scouring action of water, or by bridges, buildings, etc., floating down the stream.

At times trains may be released by having maintenance of way employes on motor cars precede them. Whenever this is done the train must move at "restricted speed" and there must be a clear understanding between the men on motor car and the train and engine men concerning the signals or other information to be given by, or received from, men on motor car.

* * *

The maximum authorized speed for the train involved was 60 miles per hour on tangent track and 40 miles per hour on the curve on which the accident occurred.

Description of Accident

No. 29, a north-bound first-class passenger train, consisted of engine 2952, a 4-6-2 type, two box-express cars, two baggage cars, one baggage-mail car, one coach and two sleeping cars, in the order named. The third car was of steel-underframe construction, and the remainder of the cars were of all-steel construction. At Wheatland the crew of this train received copies of train order No. 662 reading as follows:

Trains must not exceed 20 miles an hour
between Mile Post 219.90 and Mile Post
220 10 miles an hour over Bridge 218.53

No. 29 departed from Wheatland at 10:40 a. m., 6 hours 27 minutes late, and while moving at an estimated speed of 20 miles per hour the engine and the first two cars were derailed at Mile Post 219.18.

The engine was derailed to the east and stopped on its right side, about 15 feet east of the centerline of the track and parallel to it, with the front end 125 feet north of the point of derailment. The cab was demolished and steam pipes within the cab were broken. The tender was torn loose from the engine and stopped upside down, across the middle of the boiler and at right angles to the track. Both trucks were detached. The first car stopped on its left side across the cab of the engine and at right angles to the track. The second car remained upright and in line with the roadbed. The first two cars were considerably damaged, and the third car was slightly damaged.

The engineer and the fireman were killed. The flagman was injured.

The weather was clear at the time of the accident, which occurred about 10:50 a. m.

Discussion

No. 29 was moving on a 4°05' curve to the left at an estimated speed of 20 miles per hour, in territory where the maximum authorized speed for this train was 40 miles per hour, when the engine, the tender and the first two cars were derailed. Prior to the time of the accident, the cars had been riding smoothly.

As this train was approaching the point where the accident occurred the members of the train crew were stationed in various locations throughout the cars of the train. These employecs were not aware of anything being wrong until the brakes became applied in emergency. The derailment occurred immediately afterward. The brakes of this train had been tested and had functioned properly en route. A lineman, who was repairing telephone lines at a point 0.7 mile south of the point of accident, said that both enginemen were maintaining a lookout from their respective sides of the cab when the engine passed him.

The investigation disclosed that an unusually heavy rainfall had occurred in the vicinity of Wheatland from about 6 p. m. until about 8:05 p. m. on the day before the accident occurred. According to information furnished by the U. S. Weather Bureau at Cheyenne, 1.43 inches of rain had fallen in the vicinity of Wheatland during this period. According to information furnished by unofficial observers, considerably more rain had fallen in the area southeast of Wheatland than in the vicinity of Wheatland. About 5:57 p. m., May 21, the section foreman who had charge of the track in this vicinity reported by telephone to the chief train dispatcher that a heavy rain was falling and that he would patrol the track and report conditions at intervals. At 9:35 p. m. he reported to the chief dispatcher that the track between Wheatland and Uva, 1.94 miles north of the point of accident, was in good condition, but that unsafe conditions might exist later. In accordance with this report, the chief dispatcher instructed all trains on the line to tie up on sidings. No. 30, a south-bound passenger train, was held at Wendover, and No. 29 was held at Cheyenne. After the section force in charge of the territory involved arrived at Wheatland, they were instructed

to proceed southward to help in repairing washed-out track. The section force from the territory north of Uva was instructed to proceed to Wheatland to assist in repairing the track, and this force passed over the point where the accident later occurred about 11:55 p. m. At that time there was no indication that a washout might occur in the vicinity of the point of accident. The water had receded and was only about 1 foot deep at Bridge 219.02. The only damage to the track consisted of several small washes north of Bridge 219.02, and ballast washed from the deck of Bridge 218.55, located 0.64 mile south of the point of accident. After this damage was repaired, instructions were issued permitting the movement of trains over the district. No. 30 departed from Wendover at 1:30 a. m. and passed over the track involved about 2:20 a. m. The crew of this train said that there were indications of water having been up to the ends of the ties, but there was no indication of defective track or of washed embankment at the point where the accident later occurred.

Examination after the accident disclosed that in this vicinity the west bank of Poludol Creek had been washed in a semi-elliptical shape about 150 feet long, 79 feet wide and 10 feet deep, and the washed area extended under the track to a point about 12 feet west of the centerline of the track. The assistant engineer of track said that prior to the accident the channel of Poludol Creek extended in a general northeasterly direction immediately north of Bridge 219.02, and that during the crest of excessive flow the water had risen to a height of 5 feet above normal and had covered the area between the track and the normal bed of the creek. As the water receded it washed sandy loam into the normal channel and formed a sand bar about 2 feet high in the normal bed of the creek, which formation diverted the flow northwestwardly and caused a new channel to be cut under the track. Because of the friable condition of the soil, this cutting occurred rapidly some time after No. 30 had passed over the track. No inspection of the track in this vicinity was made between the time No. 30 passed and the time No. 29 was derailed. During a 13-year period preceding the date of the accident, no washout or damage by storm had occurred in the immediate vicinity of the point of accident.

Cause

It is found that this accident was caused by a washout.

Dated at Washington, D. C., this second day of July, 1949.

By the Commission, Commissioner Patterson.

(SEAL)

W. P. BARTEL,
Secretary.