

INTERSTATE COMMERCE COMMISSION
WASHINGTON

REPORT NO. 3636
UNION PACIFIC RAILROAD COMPANY
IN RE ACCIDENT
NEAR DODD, COLO., ON
JUNE 15, 1935

SUMMARY

Date: June 15, 1956
Railroad: Union Pacific
Location: Dodd, Colo.
Kind of accident: Derailment
Train involved: Passenger
Train number: Extra 945 West
Engine number: Diesel-electric units 945,
955B, and 961B
Consist: 15 cars
Speed: 64 m. p. h.
Operation: Timetable, train orders,
and automatic block-
signal system
Track: Single; tangent; level

Weather: Clear
Time: 3:45 a. m.
Casualties: 1 killed; 7 injured
Cause: Washout

INTERSTATE COMMERCE COMMISSION

REPORT NO. 3636

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

UNION PACIFIC RAILROAD COMPANY

August 1, 1955

Accident near Dodd, Colo., on June 15, 1955, caused by
a washout.

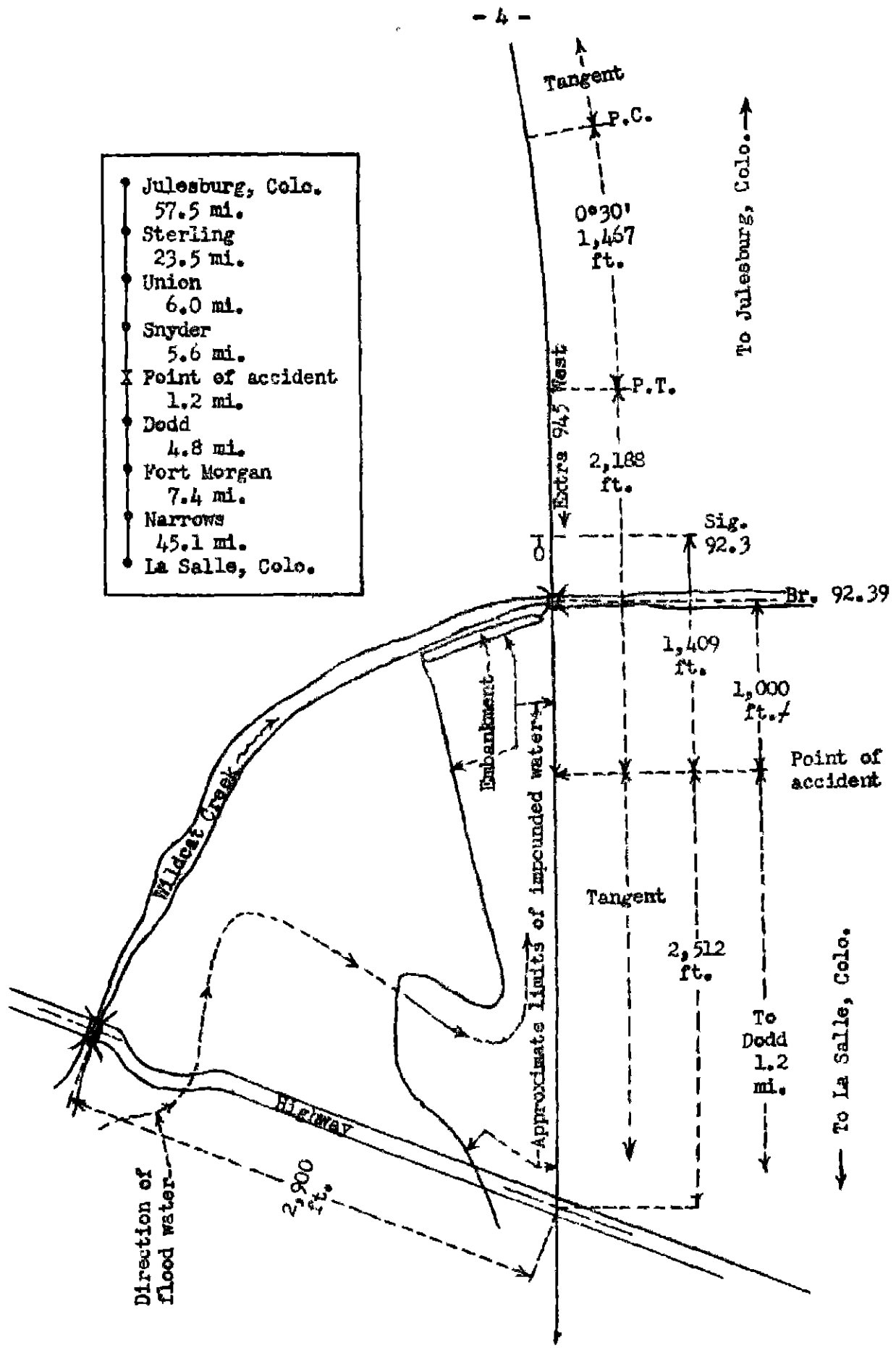
REPORT OF THE COMMISSION¹

CLARKE, Commissioner:

On June 15, 1955, there was a derailment of a passenger train on the Union Pacific Railroad near Dodd, Colo., which resulted in the death of one mechanical department employee, and the injury of three passengers, one chair-car attendant, one dining-car employee not on duty, one mechanical department employee, and 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 Clarke for consideration and disposition.

•	Julesburg, Colo.	57.5 mi.
•	Sterling	23.5 mi.
•	Union	6.0 mi.
•	Snyder	5.6 mi.
X	Point of accident	1.2 mi.
•	Dodd	4.8 mi.
•	Fort Morgan	7.4 mi.
•	Narrows	45.1 mi.
•	La Salle, Colo.	



Report No. 3636
 Union Pacific Railroad
 Near Dodd, Colo.
 June 15, 1955

Location of Accident and Method of Operation

This accident occurred on that part of the Nebraska Division designated as the Third Subdivision and extending between Julesburg and La Salle, Colo., 151.1 miles, 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 92.6 miles west of Julesburg and 1.2 miles east of the station sign at Dodd. From the east there is a $0^{\circ}30'$ curve to the right 1,467 feet and a tangent 2,188 feet to the point of accident and a considerable distance westward. The grade is practically level.

In the vicinity of the point of accident the track structure consists of 131-pound rail, 39 feet in length, laid new in 1945 on an average of 22 treated ties to the rail length. It is fully tieplated, spiked with two rail-holding spikes and two plate-holding spikes per tie plate, and is provided with 6-hole 39-inch joint bars and an average of 12 rail anchors per rail. It is ballasted with gravel to a depth of 14 to 16 inches below the bottoms of the ties.

At a point approximately 1,000 feet east of the point of accident the railroad crosses Wildcat Creek at Bridge 92.39. This is a 2-span deck plate girder bridge 91 feet in length. The flow line is 12.9 feet below the base of the rails, and the waterway opening is 496 square feet. In this vicinity Wildcat Creek flows in a southeasterly direction. A highway which extends north and south crosses the railroad at grade at a point 2,512 feet west of the point of accident and crosses Wildcat Creek at a bridge located 2,900 feet north of the track. The bed of the stream at the highway bridge is 19 feet higher than it is at the railroad bridge. Between Bridge 92.39 and the highway crossing the railroad is laid on a fill which varies in height from 5 to 8 feet. At the point of accident the fill is 8 feet in height, 55 feet in width at the bottom, and 19 feet in width at the top. It is composed of sandy loam. In the vicinity of the railroad bridge the south bank of Wildcat Creek consists of an

embankment which rises above the level of the adjacent ground to the approximate height of the railroad fill. No provision is made for draining the area between this embankment and the railroad fill. The drainage area of Wildcat Creek extends in a northwesterly direction a distance of approximately 29 miles from Bridge 92.39 and covers an area of over 100 square miles. There are dams at various points in the stream and in its tributaries. At times there is no run-off from this area.

Automatic signal 92.3, governing west-bound movements, is located 1,409 feet east of the point of accident.

The maximum authorized speed for the train involved was 79 miles per hour.

Description of Accident

Extra 945 West, a west-bound passenger train, consisted of Diesel-electric units 945, 955B, and 961B, coupled in multiple-unit control, one baggage car, four sleeping cars, three dining cars, one lounge car, four coaches, one dome coach, and one coach, in the order named. All cars were of lightweight construction. The seventh and eighth cars were of the articulated type with a six-wheel truck common to both cars. With the exception of the coupling between these cars, all units of the train were equipped with tightlock couplers. This train departed from Julesburg at 1:57 a. m., passed Union, 81.0 miles west of Julesburg and the last open office, at 3:28 a. m., passed signal 92.3, which indicated Proceed, and while moving at a speed of 64 miles per hour the locomotive, the first to the eleventh cars, inclusive, and the front truck of the twelfth car were derailed at a point 92.6 miles west of Julesburg and 1.2 miles east of the station sign at Dodd.

Separations occurred between adjacent units of the train from the first Diesel-electric unit to and including the eighth car. The first Diesel-electric unit stopped on its left side, about 50 feet south of the track and parallel to it, with the front end about 350 feet west of the point of

derailment. The second unit stopped with the front end behind the rear end of the first unit and the rear end about 10 feet south of the track. The third unit stopped with the front end behind the rear end of the second unit and the rear end on the track structure. These units leaned toward the south at angles of from 15 to 25 degrees. With the exception of the fourth car, none of the derailed cars overturned. The first car stopped with the front end near the rear end of the third Diesel-electric unit and about 15 feet south of the track, and the rear end about 25 feet north of the track. The second car stopped at the bottom of a washed-out section of the fill. The front end was near the rear end of the first car, and the rear end was about 50 feet south of the track. The third car stopped with the front end near the rear end of the second car and the rear end on the track structure east of the washed-out section of the fill. The other derailed cars were derailed as a result of the heavy run-in when the front of the train became derailed and before they reached the washed-out section of the fill. The fourth car stopped on its right side with the front end near the rear end of the third car and the rear end about 60 feet south of the track. The fifth to the eighth cars, inclusive, stopped in diagonal positions on or near the track, and the other derailed cars stopped approximately in line with the track. The Diesel-electric units and the first eight cars were considerably damaged, and the other derailed cars were somewhat damaged.

An assistant supervisor of oil, gas, and electromotive power who was on the locomotive was killed. The fireman and a road foreman of engines who were on the locomotive were injured.

The weather was clear and day was breaking at the time of the accident, which occurred at 3:45 a. m.

Discussion

The train involved, operating as Extra 945 West at the time of the accident, was scheduled to operate as train No. 107 between North Platte, Nebr., and Cheyenne, Wyo., via the Second Subdivision. Because of a washout east of Cheyenne on the Second Subdivision, this train was being detoured between Julesburg and Cheyenne via the Third Subdivision

During the late afternoon and early evening on the day before the accident occurred there was a rain storm in the vicinity of the point of accident, and apparently this storm was more severe in the drainage area of Wildcat Creek than at other points in the vicinity. A U. S. Weather Bureau station located approximately 22 miles north of Dodd reported 1.25 inches of rainfall during the 24-hour period ending at 11:59 p. m., June 14. Other stations from 35 miles to 55 miles northwest and west of Dodd reported from 0.24 inch to 0.33 inch of rainfall, the operator at Ft. Morgan, 4.8 miles west of Dodd, reported 2 inches of rainfall, and the operator at Sterling, 46.3 miles east of Dodd, reported 1 inch of rainfall during this period. A resident of the area reported that there was 3.5 inches of rainfall at a point about 9 miles northwest of Ft. Morgan during a 2-hour period ending about 7 p. m., June 14.

The section foreman at Snyder, 6.8 miles east of Dodd, said that it began to rain intermittently about 6:30 p. m., June 14. About 7:45 p. m. the train dispatcher instructed him to patrol his section. He proceeded to the west end of the section, immediately west of Bridge 92.39, continued on approximately 1/2 mile farther west, and then returned to Bridge 92.39. He said that it was not raining at this time. There was no indication of high water in Wildcat Creek and no water along the fill west of the bridge. He left this point about 9:30 p. m., and after patrolling the track to Union he returned to Snyder. He said he encountered no hard rain at any time. He observed no indications of high water at any point. After returning to Snyder he decided that the weather conditions did not warrant his remaining on duty longer, and he returned to his home about 11:30 p. m. He said that the train dispatcher was busy at the time he returned to Snyder, and since there was no unusual track condition to report he did not talk with the dispatcher before he went off duty. The section foreman had been stationed at Snyder during a period of about 10 years. He said he knew of no occasion on which the water in Wildcat Creek had risen sufficiently to overflow the banks during this time.

The roadmaster said that during the time he had been assigned to the district, approximately 8 years, there had been no occasion on which the water in Wildcat Creek had overflowed the banks. He said that he had heard of high water at this point in the past, and it was customary to watch for high water in the creek whenever weather conditions warranted patrolling the track. About 8 p. m., June 14, the roadmaster was called to Narrows, 12.2 miles west of Dodd, because of a washout at that point. When he arrived at Narrows he was informed that the high water resulted from the failure of an irrigation canal rather than from heavy rain. He remained at Narrows until the track at that point was repaired. He said that before Extra 945 West moved over the district the train dispatcher informed him that the section foreman at Snyder had been instructed to patrol his section and had not reported that he had returned to Snyder. The roadmaster said that he was satisfied from this that the section foreman would be watching for high water at Wildcat Creek and that no additional precautions at that point were necessary.

The division engineer said that in 1922 Wildcat Creek had been diverted to its present channel from a channel farther to the south. He was unable to locate records of previous washouts at this point, but residents of the vicinity had informed him that difficulty with high water was experienced in 1935 and again in 1938. In 1942 the fill was raised about 4-1/2 feet and a pile trestle over Wildcat Creek was replaced with the present bridge. He said that there was no available record of difficulty with high water at Wildcat Creek since that time.

Apparently the high water in Wildcat Creek on the day of the accident resulted from heavy rain a number of miles upstream from the railroad and did not overflow the banks in the vicinity of the railroad until after the rain at that point had stopped. Extra 2485 West, a west-bound freight train, passed Dodd about 2 hours 45 minutes before the accident occurred. The members of the crew said that a heavy rain was falling at Sterling when they reported for duty at 9:15 p. m., June 14. The rain stopped before they departed.

from Sterling, at 11:55 p. m., and they encountered no rain between Sterling and Dodd. They said that there was a small amount of water flowing in Wildcat Creek when they passed, but there was no indication of high water at any point and there was no water between the south bank of Wildcat Creek and the track.

Cause

This accident was caused by a washout.

Dated at Washington, D. C., this first day of August, 1955.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,

Secretary.