

INTERSTATE COMMERCE COMMISSION  
WASHINGTON

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REPORT NO. 3533  
UNION PACIFIC RAILROAD COMPANY  
IN RE ACCIDENT  
AT AULT, COLO., ON  
AUGUST 27, 1953

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SUMMARY

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Date: August 27, 1953

Railroad: Union Pacific

Location: Ault, Colo.

Kind of accident: Collision

Equipment involved: Passenger train : Motor-truck

Train number: 18 :

Engine number: 841 :

Consist: 13 cars :

Estimated speeds: 70 m. p. h. : 5 m. p. h.

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

Track: Single; tangent; 0.49 percent descending grade eastward

Highway: Tangent; crosses track at angle of 74°48'; 2.2 percent ascending grade northward

Weather: Clear

Time: 7:55 a. m.

Casualties: 2 killed; 8 injured

Cause: Motor-truck occupying rail-highway grade crossing immediately in front of approaching train, which was proceeding at an unauthorized speed

INTERSTATE COMMERCE COMMISSION

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REPORT NO. 3533

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

UNION PACIFIC RAILROAD COMPANY

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September 23, 1953

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Accident at Ault, Colo., on August 27, 1953, caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching train, which was proceeding at an unauthorized speed.

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

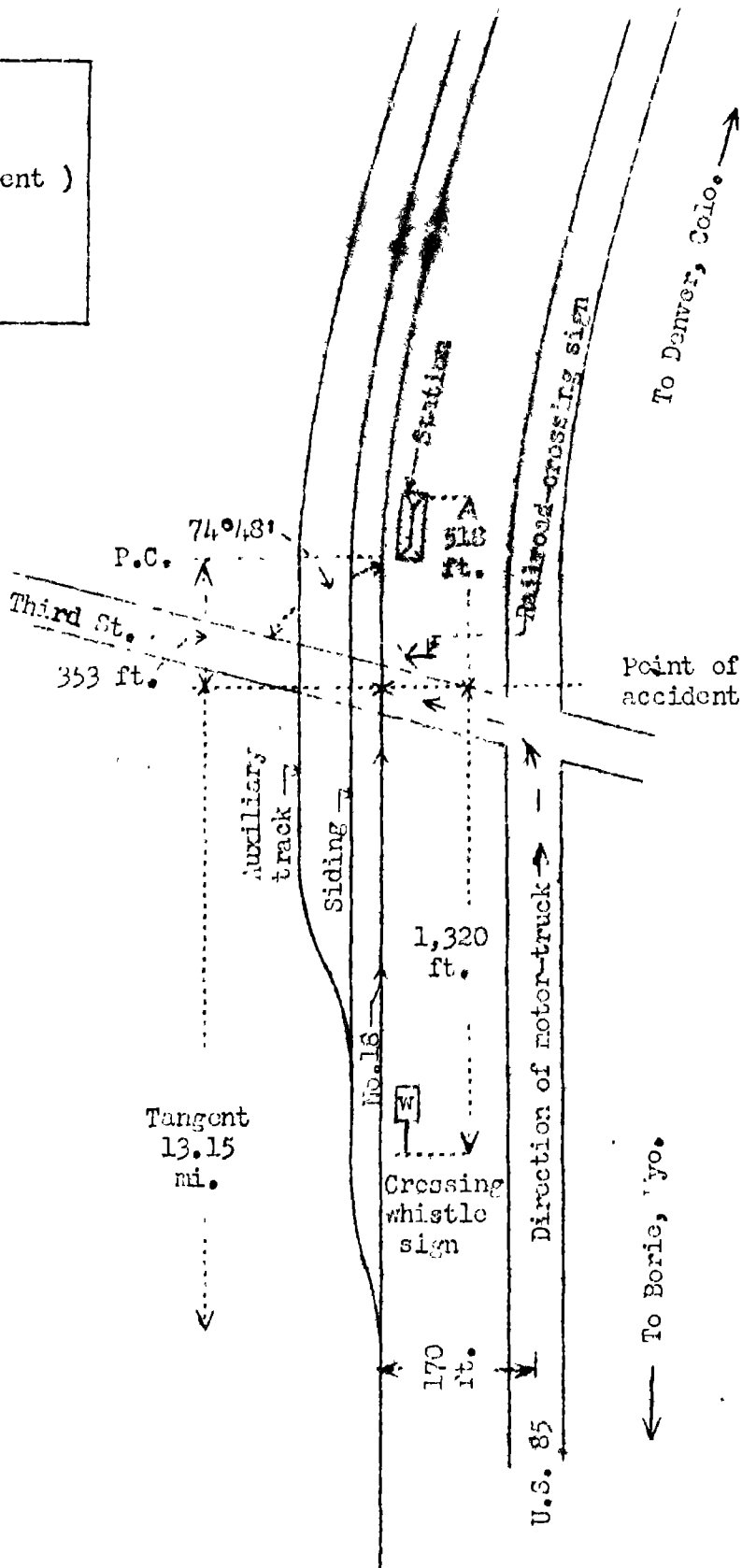
CLARKE, Commissioner:

On August 27, 1953, there was a collision between a passenger train on the Union Pacific Railroad and a motor-truck at a rail-highway grade crossing at Ault, Colo., which resulted in the death of two train-service employees, and the injury of six passengers, one dining-car employee, and the driver of the motor-truck.

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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.

- Denver, Colo. 63.0 mi.
- X Ault ( Point of accident ) 23.0 mi.
- Carr, Colo. 17.3 mi.
- Borie, Wyo.



Report No. 3533  
 Union Pacific Railroad  
 Ault, Colo.  
 August 27, 1953

Location of Accident and Method of Operation

This accident occurred on that part of the Wyoming Division extending between Borie, Wyo., and Denver, Colo., 103.3 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 40.2 miles east of Borie and 518 feet west of the station at Ault, Colo., where the railroad is crossed at grade by Third Street. The track at this point extends practically north and south, and the highway practically east and west. Timetable directions on the railroad are east and west, and these directions are used in this report. The railroad is tangent throughout a distance of 13.15 miles immediately west of the point of accident and 353 feet eastward. The grade for east-bound trains is 0.49 percent descending at the point of accident. In the vicinity of the point of accident a siding and an auxiliary track parallel the main track on the north. Third Street is tangent throughout a considerable distance on each side of the crossing and intersects the railroad at an angle of 74°48'. The crossing is 19 feet in width and is surfaced with bituminous material to the level of the tops of the rails. In the vicinity of the point of accident U. S. Highway No. 85 parallels the railroad on the south. The center-line of the highway is 170 feet south of the center-line of the main track. The grade for north-bound vehicles moving on Third Street between U. S. Highway No. 85 and the main track of the railroad is approximately 0.8 percent descending a distance of 100 feet, then 2.2 percent ascending 75 feet to the crossing.

A standard cross-buck railroad-crossing sign is located to the right of the direction of north-bound traffic on Third Street, approximately 15 feet east of the center-line of the street and 19 feet 10 inches south of the center-line of the main track. This sign is mounted on a mast, 11 feet above the level of the street, and bears the words "RAILROAD CROSSING" in black on a white background. A crossing-whistle sign for east-bound trains is located 1,320 feet west of the crossing.

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

ENGINE WHISTLE SIGNALS

14.

Note. \* \* \*

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

In sounding Signal 14 (1) for public crossings, the first of the long sounds must be started at such a point that the signal will be completed by ending the last sound on the crossing, prolonging it if necessary. The duration of the complete signal must be not less than ten seconds.

\* \* \*

Sound

Indication

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(1) — — o —

Approaching public crossings at grade \* \* \*

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30. Engine bell must be rung \* \* \* while approaching and passing public crossings at grade and stations \* \* \*

The motor vehicle code of the State of Colorado reads in part as follows:

Section 224. Certain vehicles must stop at all railroad grade crossings.

(a) The driver \* \* \* of any vehicle carrying explosive substances or flammable liquids as a cargo or part of a cargo, before crossing at grade any track or tracks of a railroad, shall stop such vehicle within 50 feet but not less than 10 feet from the nearest rail of such railroad and while so stopped shall listen and look in both directions along such track for any approaching train, and for signals indicating the approach of a train, \* \* \* and shall not proceed until he can do so safely.

\* \* \*

The maximum authorized speed for passenger trains with steam engines is 75 miles per hour. It is restricted by ordinance to 40 miles per hour while moving over any public crossing within the Town of Ault.

Description of Accident

No. 18, an east-bound first-class passenger train, consisted of engine 841, a 4-8-4 type, one baggage car, one express-refrigerator car, one mail car, two baggage cars, three coaches, one dining car, one lounge car, and three sleeping cars, in the order named. The eleventh car was of lightweight steel construction, and the other cars were of conventional all-steel construction. This train passed Carr, 23 miles west of Ault and the last open office, at 7:32 a. m., 1 hour 34 minutes late, and while moving at a speed of 70 miles per hour, as indicated by the tape of the speed recording device, it struck a motor-truck at the rail-highway grade crossing at Third Street in Ault.

The vehicle involved was a tractor and semi-trailer owned by William Barker of Cheyenne, Wyo., and operating under contract with the Saunders Petroleum Company, Kansas City, Mo. The driver and owner, who was the sole occupant, held Wyoming chauffeur's license No. 36474. The tractor was a 1946 model Kenworth. It bore Wyoming license No. 2 T 3920. It was powered by a six-cylinder Diesel engine, and was provided with an enclosed cab and with tandem axles and dual wheels and tires at the rear. The semi-trailer was a 1941 model Fruehauf. It bore Wyoming license No. 2 X 1441. It consisted of a 4,500-gallon insulated tank mounted on tandem axles with dual wheels and tires. Both the tractor and the semi-trailer were equipped with air brakes. At the time of the accident the cargo consisted of 4,500 gallons of road oil, which had been heated to a temperature of 200 degrees Fahrenheit. It was loaded at Cheyenne, Wyo., and was to be delivered to the Weld County Commission in Ault. The total weight of the vehicle and cargo was approximately 60,500 pounds, and the total length was approximately 51 feet 6 inches. This vehicle approached the crossing from the south and stopped about 15 feet south of the main track. It then proceeded northward, and while it was moving over the crossing the semi-trailer was struck by No. 18.

No. 18 stopped with the front of the engine 1.39 miles east of the point of accident. No unit of the train was derailed. The engine and tender were somewhat damaged as a result of the collision. The tank of the semi-trailer was broken open, escaping road oil became ignited, and the engine and tender and all cars of the train were damaged by fire.

The tractor and the semi-trailer were separated as a result of the collision. The tractor stopped upright and approximately 70 feet west of the highway and 56 feet north of the main track. It was somewhat damaged. The semi-trailer was demolished. The front portion was carried on the front of the engine to the point at which the engine stopped. The rear portion stopped approximately 75 feet east of the highway and 50 feet south of the main track.

The engineer and the fireman were killed.

The weather was clear at the time of the accident, which occurred at 7:55 a. m.

During the 30-day period preceding the day of the accident, the average daily movement over the crossing was 20.6 trains. During the 24-hour period beginning at 9 a. m., September 6, 1953, 370 automobiles and 68 trucks passed over the crossing.

#### Discussion

As No. 18 was approaching the point where the accident occurred the enginemen were in the cab of the engine and the members of the train crew were in various locations in the cars of the train. The members of the train crew said that the brakes of the train had been tested and that apparently they had functioned properly when used en route. The front brakeman, who was in the vestibule between the first and second cars, said that the grade-crossing whistle signal was sounded as the train approached Third Street. The members of the train crew said that there was an emergency application of the brakes as the train was closely approaching the crossing and before the collision occurred. When the engine struck the semi-trailer, road oil was spread over the track structure throughout a distance of 1,780 feet east of the crossing. This oil reduced the adhesion between the wheels and the rails. As a result, the effectiveness of the emergency brake application was reduced, and the train moved an unusually long distance before it stopped. Air pipes on the right side of the engine and the tender were torn off and broken by coming in contact with portions of the semi-trailer, and after this occurred the brakes of the engine and tender became released. When the train was examined after it stopped, the wheels of 12 of the 13 cars bore flat spots varying from 2 inches to 2-1/2 inches in length. There were no flat spots on the wheels of the engine or the tender.



The driver of the motor-truck said that he turned north on Third Street from U. S. Highway No. 85 and stopped with the front of the truck about 15 feet south of the main track of the railroad. The window on the left side of the cab was open. He said that he looked along the track in both directions for approaching trains. At this time he did not see or hear a train. He started the truck forward, and as the tractor was crossing the main track he heard the sound of a whistle and then observed No. 18 approaching. The collision occurred a few seconds later. The driver thought that the engine struck the semi-trailer approximately midway between the front and the rear. He could not estimate the speed of the truck, but he said that because of the ascending grade south of the crossing the speed was low.

A witness to the accident confirmed the driver's statement that the truck was stopped south of the crossing and then it proceeded upon the crossing. This witness also said that the grade-crossing engine-whistle signal was sounded by the engineer of No. 18.

In the vicinity of the point of accident a pole line parallels the main track on the south at a distance of about 45 feet. As a north-bound highway vehicle reaches a point approximately this distance from the track the driver's view of an approaching east-bound train is somewhat obstructed by the pole line. After the vehicle passes the pole line, the driver has an unobstructed view of an approaching train.

The ordinance restricting the speed of passenger trains to 40 miles per hour while moving over public crossings at Ault was passed in 1931. According to information obtained during the investigation, this ordinance has never been enforced.

#### Cause

It is found that this accident was caused by a motor-truck occupying a rail-highway grade crossing immediately in front of an approaching train, which was proceeding at an unauthorized speed.

Dated at Washington, D. C., this twenty-third day of September, 1953.

By the Commission, Commissioner Clarke.

(SEAL)

GEORGE W. LAIRD,  
Acting Secretary.