

INTERSTATE COMMERCE COMMISSION
WASHINGTON

INVESTIGATION NO. 2761
THE SOUTHERN PACIFIC COMPANY
REPORT IN RE ACCIDENT
AT WELLS, NEV., ON
JANUARY 12, 1944

SUMMARY

Railroad: Southern Pacific

Date: January 12, 1944

Location: Wells, Nev.

Kind of accident: Rear-end collision

Trains involved: Engines : Freight

Train numbers: Extra 3696 West : Extra 3723 West

Engine numbers: 3696-3681, coupled : 3723

Consist: : 1 auxiliary water
car, 61 cars,
caboose

Estimated speed: Standing : 12-15 m. p. h.

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

Track: Double; tangent; level

Weather: Foggy; temperature below zero

Time: About 8:42 a. m.

Casualties: 2 killed; 1 injured

Cause: Failure properly to control
speed of following train
moving within yard limits

INTERSTATE COMMERCE COMMISSION

INVESTIGATION NO. 2761

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

THE SOUTHERN PACIFIC COMPANY

February 10, 1944.

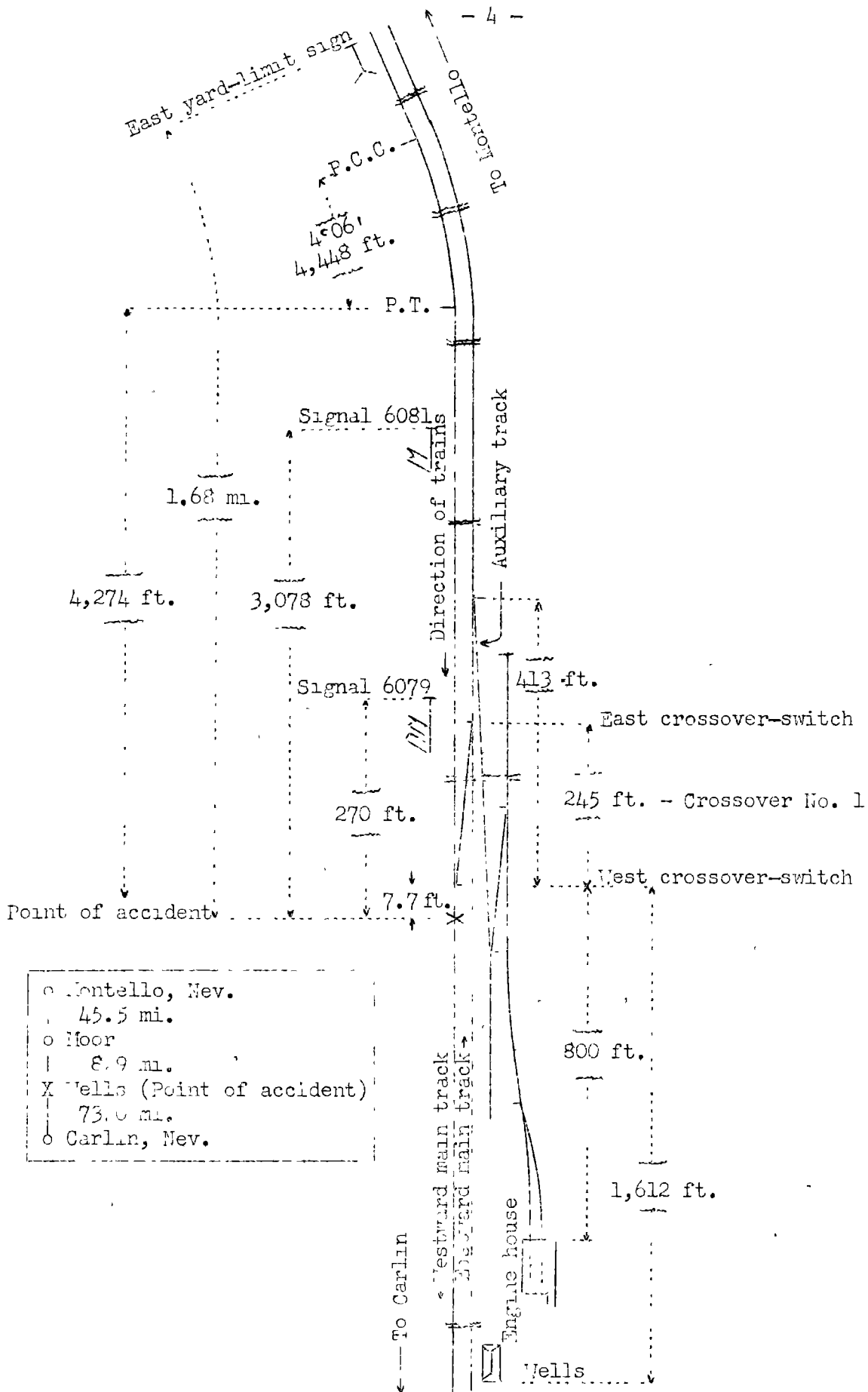
Accident at Wells, Nev., on January 12, 1944, caused by
failure properly to control the speed of the fol-
lowing train moving within yard limits.

REPORT OF THE COMMISSION¹

PATTERSON, Chairman:

On January 12, 1944, there was a rear-end collision between two engines, coupled, and a freight train on the line of the Southern Pacific Company at Wells, Nev., which resulted in the death of two employees, and the injury of one employee.

¹Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Chairman Patterson for consideration and disposition.



Inv-2761
 Southern Pacific Company
 Wells, Nev.
 January 12, 1944

Location of Accident and Method of Operation

This accident occurred on that part of the Salt Lake Division designated as the Elko Subdivision and extending between Montello and Carlin, Nev., 127.4 miles. In the immediate vicinity of the point of accident this was a double-track line, within yard limits, over which trains were operated by timetable, train orders and an automatic block-signal system. The west switch of a crossover 245 feet long, hereinafter referred to as crossover No. 1, which connected the eastward and the westward main tracks, was 1,612 feet east of the station, and was trailing-point for movements with the current of traffic. The accident occurred on the westward main track 7.7 feet west of the west switch of crossover No. 1, and 1.68 miles west of the east yard-limit sign. From the east there was a compound curve to the right 4,448 feet, having a maximum curvature of $4^{\circ}06'$, then a tangent 4,274 feet to the point of accident and a considerable distance beyond. The grade for west-bound trains varied between 0.56 and 1.43 percent descending 8.38 miles, then it was level 116 feet to the point of accident and a considerable distance beyond.

Distant signal 6081 and home signal 6079, governing west-bound movements on the westward main track, were located, respectively, 3,078 feet and 270 feet east of the point of accident. Signal 6081 was of the one-arm, two-indication, lower-quadrant, semaphore type. Signal 6079 was of the two-arm, three-indication, lower-quadrant, semaphore type. These signals were approach lighted. The involved aspects and corresponding indications and names were as follows:

<u>Signal</u>	<u>Aspect</u>	<u>Indication</u>
6081	Yellow, horizontal	Proceed with caution
6079	Red-over-yellow, both arms horizontal	Stop

DEFINITIONS

* * *

Fixed Signal--A signal of fixed location indicating a condition affecting the movement of a train, such as * * * yard limit boards * * *

* * *

With Caution--To run at reduced speed, according to conditions, prepared to stop short of a train, engine, car, misplaced switch, derail, or other obstruction, or before reaching a stop signal. * * *

Operating rules read in part as follows:

9. Day signals must be displayed from sunrise to sunset, but when day signals cannot be plainly seen, night signals must be used in addition.

* * *

19. * * * Markers must be displayed to indicate the rear of every train as follows:

Fig. 16. Engine Running Backward by
Night as an Extra Train,
Without Cars * * *

* * *

Lights at * * * (each end of
pilot beam) as markers,
showing green to side and in
direction engine is moving and
red in opposite direction.

93. Within yard limits the main track may be used, protecting against first-class trains.

Second and inferior class trains, extra trains, and engines, must move with caution within yard limits.

* * *

Time-table special instructions read in part as follows:

RULE 93. Yard limits in which the provisions of Rule 93 will apply are established at the following points.

West MP		East MP
* * *		* * *
606.20	Wells.....	609.50
* * *		

AIR BRAKE RULES

RULE 24. Rear end air-brake test shall be made
* * * at:

* * *

Moor...Westward freight trains.

RULE 33. Retaining valves will be turned up on
freight and mixed trains as follows:

Moor to Wells...One Retainer for
Each 150 M's

* * *

Air Brake Rules and Regulations read in part as follows:

24. Rear End Test:

* * *

(b) * * * at any point that the superintendent may designate, the engineer must charge the brake system to not less than 10 pounds below standard pressure, make a reduction of 10 pounds, and as soon as the brake valve exhaust closes, signal the trainmen by one sound of the whistle. The angle cock at the rear of train must then be opened gradually and with care to avoid emergency action, * * *. When the engineer notes the pressure falling he must signal the trainmen by 2 sounds of the whistle; the angle cock must then be closed. * * *

Special Notice No. 182 contained the following instructions:

* * *

5. * * * Before descending grade with a freight train, the brake pipe must be blown out by uncoupling the hose between the first and second cars, then opening angle cock on the head end of second car and the rear of the first.

Description of Accident

Extra 3696 West, a west-bound train, consisted of engines 3696 and 3681, coupled, and headed eastward. This train departed from Moor, 8.9 miles east of Wells and the last open office, at 8:10 a. m., and stopped on the westward main track at Wells about 8:30 a. m., with the rear end standing 7.7 feet west of the west switch of crossover No. 1 and 270 feet west of home signal 6079. About 12 minutes later the rear end of this train was struck by Extra 3723 West.

Extra 3723 West, a west-bound freight train, consisted of engine 3723, 1 auxiliary water car, 61 loaded cars and a caboose. After a terminal air-brake test was made this train departed from Ogden, Utah, 175.6 miles east of Wells, at 10:40 p. m., January 11, departed from Moor at 8:20 a. m., January 12, passed the east yard-limit sign at Wells, passed signal 6079, which displayed stop, and while moving at an estimated speed of 12 to 15 miles per hour it collided with Extra 3696.

The force of the impact moved engines 3696 and 3681 westward 236 feet. The front end of engine 3681 was badly damaged. Engine 3723 stopped upright, with its front end suspended on the front-end frames of engine 3681. The only wheels of engine 3723 remaining in contact with the rails were the trailer-truck wheels. The front end of engine 3723 was badly damaged, and the cab was torn loose and crushed by the tender. The front truck of the tender was detached and stopped against the rear truck. The auxiliary water car was badly damaged, and its front end was suspended on the rear end-sill of the tender.

It was foggy and the temperature was below zero at the time of the accident, which occurred about 8:42 a. m.

The engineer and the fireman of Extra 3723 were killed. The engineer of engine 3696 was injured.

After the accident, an air-brake test of 61 cars and the caboose disclosed that the brake-cylinder piston travel varied between 6-1/2 and 11 inches. The brake-cylinder piston travel on 18 cars exceeded 9 inches. One brake was inoperative.

Discussion

The rules of this carrier governing operation within yard limits provide that second-class, inferior-class, and extra trains and engines must be operated in such manner that they can be stopped short of a train, an obstruction, or a signal displaying stop. Between Moor and Wells, a distance of 8.9 miles, the grade for west-bound trains is descending, and one retaining valve for each 75 tons of the weight of a train must be set for use. During cold weather, condensation must be blown from the train air-brake system before a train descends

this grade. About 8:30 a. m., Extra 3696 West stopped at Wells, with the rear end standing 7.7 feet west of the west switch of crossover No. 1 and 1.68 miles west of the east yard-limit sign. About 12 minutes later the rear end of this train was struck by Extra 3723 West. Because fog restricted visibility to a distance of 300 to 500 feet, the marker lamps on the pilot beam of engine 3681 were lighted, and they displayed red to the rear.

Before Extra 3723 departed from Moor, the angle cock at the rear end of the caboose was opened, and a 50-pound brake-pipe reduction was made. The pressure was restored to 80 pounds, then the brake-pipe hose between the first and second cars were separated, and the angle cocks at the rear end of the first car and at the front end of the second car were opened. There was no indication of condensation. The brake-pipe pressure was fully recharged, then the retaining valves on the first 45 cars were set for use, and this train departed at 8:20 a. m. As it was approaching Wells, the front brakeman was in the gangway and looking back along the train. He did not observe the indication displayed by signal 6081, nor did he hear the enginemen communicate its indication to each other. When the engine was about 800 feet west of signal 6081, the speed was about 20 miles per hour, and the engineer made a service brake-pipe reduction. Soon afterward the engineer made another service reduction, then, when the engine was about 250 feet east of signal 6079, he sounded three blasts of the whistle. At this time the brakeman looked ahead and observed simultaneously signal 6079 displaying stop and Extra 3696 standing a short distance west of the signal. He jumped just before the collision occurred, at which time the speed was about 12 to 15 miles per hour. He said the brakes were not applied in emergency. His railroad experience covered only about 3 months. From the cupola of the caboose the conductor and the flagman were maintaining a running inspection of the train as it moved around curves. Both frequently observed the brake-pipe pressure gauge. They said that whenever the speed increased to about 20 miles per hour, a 10-pound brake-pipe reduction was made, then, after the speed was reduced to about 10 miles per hour, the brake-pipe pressure was fully restored. From a point 5 miles east of Wells to the point of accident fog was encountered. When Extra 3723 passed the yard-limit sign, the speed was about 20 miles per hour and the gauge registered a brake-pipe pressure of 80 pounds, which indicated that the train brakes were released. They said that shortly before the collision occurred the gauge indicated two brake-pipe reductions of 10 pounds each, then there was a severe shock and the brakes became applied in emergency. After the accident, the flagman observed that signal 6081 displayed proceed-with-caution. Tests disclosed that this signal functioned as intended.

After the accident, an air-brake test was made of 61 cars and the caboose. Of these cars, 18 had excessive brake-cylinder piston travel and the brake on the caboose was inoperative. However, prior to the accident the brakes had been used at various points en route and had controlled the speed properly at all points where used.

Within yard limits, Extra 3723 was required to be operated in such manner that it could be stopped short of a train, an obstruction, or a signal displaying stop. Although fog restricted visibility to a distance of 300 to 500 feet, this train moved at a speed of about 20 miles per hour throughout a distance of about 1 mile after it had passed the yard-limit sign, before action was taken to control the speed. Why the speed was not controlled in compliance with the yard-limit rule could not be determined, as both enginemen were killed in the accident.

Cause

It is found that this accident was caused by failure properly to control the speed of the following train moving within yard limits.

Dated at Washington, D. C., this tenth
day of February, 1944.

By the Commission, Chairman Patterson.

(SEAL)

W. P. BARTEL,
Secretary.