

RAILROAD ACCIDENT INVESTIGATION

Report No 4025

CALIFORNIA WESTERN RAILROAD

CAMP THREE, CALIFORNIA

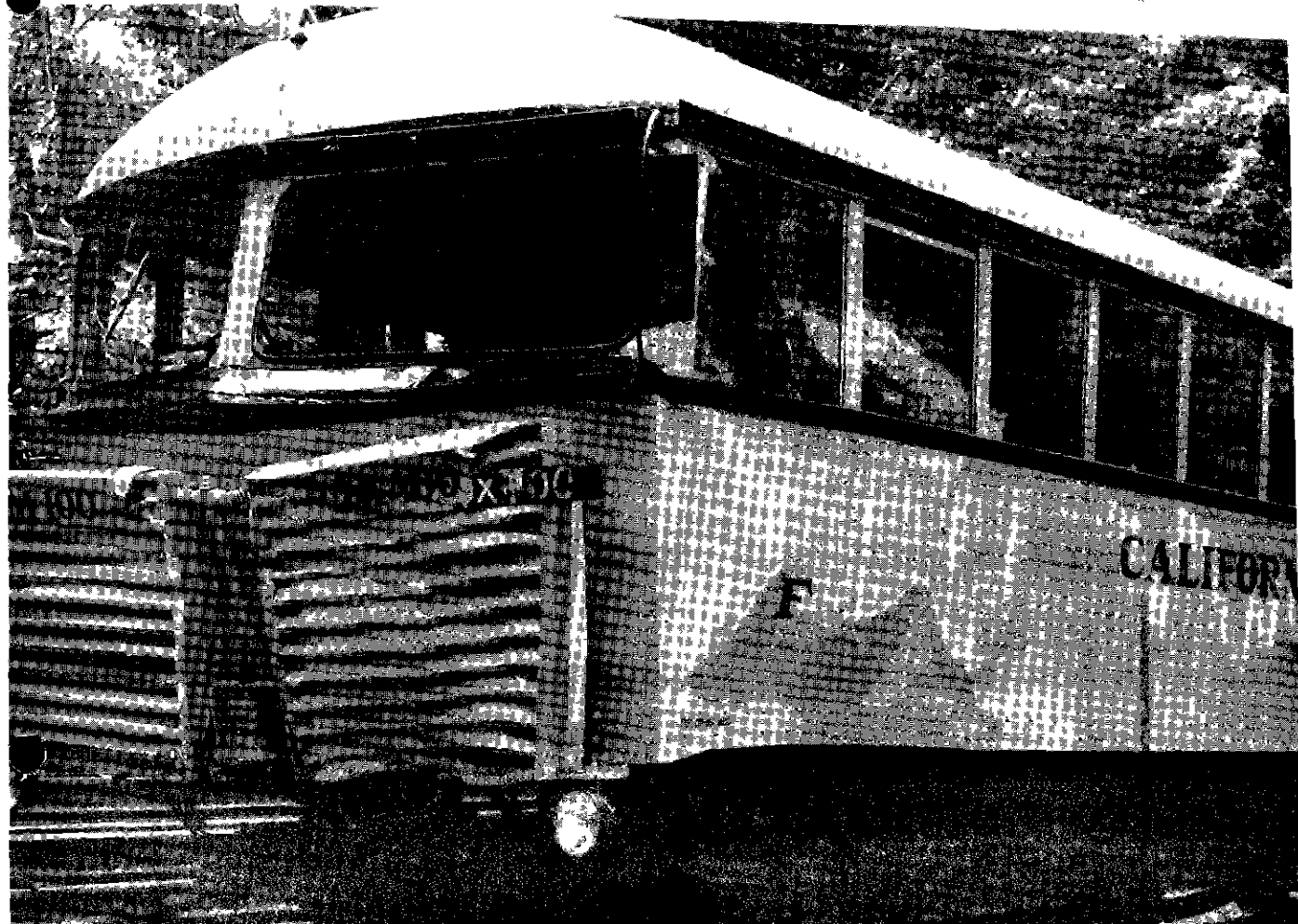
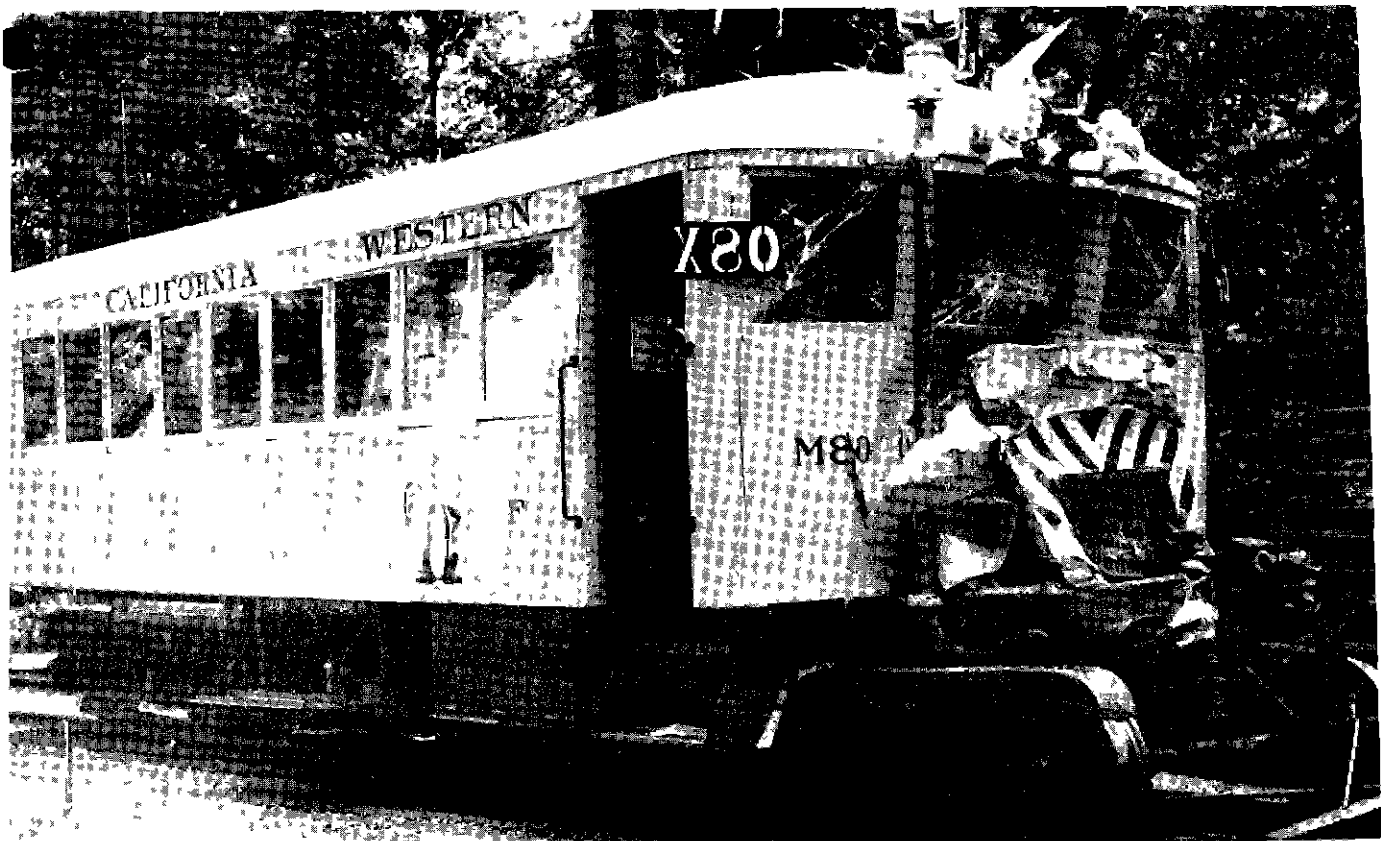
SEPTEMBER 26, 1964

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

DATE	September 26, 1964	
RAILROAD	California Western	
LOCATION	Camp Three, near Fort Bragg, Calif	
KIND OF ACCIDENT	Head-end collision	
EQUIPMENT INVOLVED	Diesel-powered passenger car 100	Gasoline-powered passenger car 80
TRAIN NUMBERS:	Extra 100 East	Extra 80 West
ESTIMATED SPEEDS:	5 m p h	17-20 m p h
OPERATION	Timetable, train orders	
TRACK	Single, 22°00' curve, 1 10 percent descending grade westward	
WEATHER	Clear	
TIME	3:40 p m	
CASUALTIES:	68 injured	
CAUSE	Failure of the motorman and conductor of the westbound train to obey a meet order	
RECOMMENDATION	That the California Western Railroad take such action as may be necessary to obtain compliance with its operating rules	



**INTERSTATE COMMERCE COMMISSION
SAFETY AND SERVICE BOARD NO 1**

RAILROAD ACCIDENT INVESTIGATION

Report No 4025

CALIFORNIA WESTERN RAILROAD

September 26, 1964

S Y N O P S I S

At 3 40 p m , September 26, 1964, a head-end collision occurred between two California Western Railroad passenger trains near Camp Three, Calif (about 15 miles east of Fort Bragg) Sixty-eight passengers and crew members were injured

The accident was caused by failure of the motorman and conductor of the westbound train to obey a meet order

Location and Method of Operation

The California Western Railroad, a single-track line, extends between Fort Bragg and Willits, Calif, a distance of 40 miles. Trains operate by timetable, train orders, and operating rules of the Northwestern Pacific Railroad Company. At Camp Three, 14.9 miles east of Fort Bragg, a 305-foot spur track, designated as a siding in train orders, parallels the main track on the south. The spur-track switch is facing point for eastbound movements on the main track.

The collision occurred on the main track 1,323 feet west of the spur-track switch at Camp Three.

In the accident area, the main track is laid on short curves and tangents. Because of the curves and tall trees along both sides of the main track, the maximum range of vision between opposing trains approaching the accident point is restricted to between 200 and 300 feet.

Details of the main track, operating rules, timetable special instructions, trains involved, damages and other factors are provided in the appendix.

Description and Discussion

Extra 100 East, consisting of diesel-powered passenger car 100, left Fort Bragg at 3 00 p m on the day of the accident. Before leaving, the two crew members, a motorman and conductor, received copies of train order No 18, which read in part as follows:

**ENG 80 RUN EXTRA WILLITS TO FORT BRAGG EXTRA 100
EAST TAKE SIDING MEET EXTRA 80 WEST AT CAMP THREE**

Extra 100 East met No 2 and Extra 200 West at Ranch and Grove and proceeded eastward from Grove at about 17 miles per hour, according to the motorman. While en route from Grove, the conductor proceeded to the front of the passenger compartment and discussed order No 18 with the motorman. They both understood this order required their train to enter the spur-track switch at Camp Three and clear the main track for Extra 80 West, a westbound passenger train consisting of gasoline-powered passenger car 80.

As Extra 100 East approached Camp Three, at a distance of about one-half mile, the motorman sounded the prescribed whistle signal for trains approaching meeting points. About the same time, the conductor left the motorman and walked toward the rear vestibule to be in a position to alight from the train to operate the spur-track switch. Almost immediately thereafter, the motorman saw Extra 80 West come into his view a short distance ahead on the curve involved. The motorman moved the brake valve handle to full application position and a few moments later, when its speed had been reduced to about 5 miles per hour, according to the motorman, Extra 100 East collided with the front end of Extra 80 West, 1,323 feet west of the spur-track switch at Camp Three. The motorman of Extra 100 East said he saw the motorman of Extra 80 West looking toward him as the trains approached each other. He estimated that Extra 80 West was moving about 17 miles per hour at the time of the accident.

The motorman and conductor of each train, and 64 passengers of both trains, were injured.

No 2, Extra 200 West, and Extra 80 West were single-car passenger trains. No 2 left Willits at 2 05 p m and Extra 200 West left there at 2 15 p m. Extra 80 West left Willits 10 minutes after the departure of Extra 200 West and before leaving, the crew members, a motorman and conductor, received copies of train order No 18. They did not discuss the order, but both understood it restricted their train from proceeding westward on the main track beyond the fouling point of the main track and the spur-track switch at Camp Three until Extra 100 East entered this switch and cleared the main track. Extra 80 West arrived at Northspur at 3 19 p m and stopped there as required for a verbal clearance by telephone from the train dispatcher. The conductor received this clearance and was informed by the dispatcher that his train had arrived at Northspur eight minutes after Extra 200 West. In addition, he was instructed to stay at Northspur two minutes longer than usual to maintain the required 10-minute spacing between trains. The conductor informed the motorman about the verbal clearance issued by the dispatcher, and the motorman mentioned that their train was required to meet Extra 100 East at Camp Three.

Extra 80 West left Northspur about 10 minutes after the departure of Extra 200 West and proceeded westward at 20 to 25 miles per hour. The motorman was at the controls at the front of the

train and the conductor was seated on a folding chair in the aisle at the rear of the passenger compartment. The motorman said he suffered a lapse of consciousness when the train was about one-half mile east of Camp Three and said he could not recall anything that occurred between that time and the time of the accident. The conductor did not sound the communicating signal prescribed for trains approaching meeting points, but said he heard the motorman sound engine whistle signal (14n) as the train approached Camp Three at a distance of about one-half mile. He said the train then reduced speed, and he assumed the motorman was preparing to stop short of the spur-track switch at Camp Three to meet Extra 100 East as required by train order No. 18. As Extra 80 West closely approached Camp Three, the conductor saw Extra 100 East was not occupying the spur track. Soon afterward, according to his statements, he realized the motorman was not going to stop short of the spur-track switch as required. The conductor stated that he started to rise from his seat with the intention of going to the front of the train and warn the motorman not to pass Camp Three without meeting Extra 100 East, but the train lurched, apparently about the time it was passing the spur-track switch, and he fell backward from his seat into a rear corner of the passenger compartment. He said that he immediately arose and started to walk forward in the car aisle, when he saw Extra 100 East closely approaching on the main track ahead. The collision occurred a few seconds later, and the conductor estimated Extra 80 West was moving about 20 miles per hour at this time. He could not remember whether he called a warning to the motorman after the train passed Camp Three without meeting Extra 100 East there as required.

According to statements of passengers, the motorman of Extra 80 West did not display any symptoms of an unusual physical condition while approaching the accident point. Some passengers stated they observed the motorman manipulating the brake valve just before the collision occurred, indicating the motorman was conscious in approaching the accident point. None of the passengers could recall having heard the horn of Extra 80 West sounded in approach to Camp Three.

Examination of the controls of Extra 80 West after the accident disclosed that because of damage, the position of the throttle at the time of the accident could not be determined. The handle of the brake valve was found in full-application position.

FINDINGS

Under the provisions of train order No. 18, Extra 100 East was required to enter the spur track at Camp Three and clear the main track for Extra 80 West. The order restricted Extra 80 West from proceeding westward beyond the clearance point of the main track and the spur-track switch until Extra 100 East entered the spur track and cleared the main track. Copies of train order No. 18 were delivered to the crew members of both of these trains and they read and understood the requirements of the order. The investigation revealed the accident occurred on the main track west of the designated meeting point and it is evident Extra 80 West passed Camp Three without having met Extra 100 East there as required by order No. 18, causing the accident to occur. The conductor of Extra 80 West failed to sound the communicating signal prescribed for trains approaching meeting points as his train approached Camp Three and although he said he heard the motorman sound engine whistle signal (14n) while approaching Camp Three, passengers on the train stated they did not hear any engine whistle signal after leaving Northspur. These statements indicate the conductor may have

been mistaken as to whether he heard the motorman sound whistle signal 14(n). The motorman said he suffered a lapse of consciousness while approaching Camp Three at a distance of about one-half mile, and said he could not remember whether he sounded engine whistle signal 14(n). Since just before the collision occurred, it appears the motorman was mistaken about lapsing into unconsciousness in approach to Camp Three and the accident point. It is apparent from the circumstances involved that as Extra 80 West approached Camp Three, both the motorman and the conductor overlooked the requirements of train order No. 18. The train then passed the meeting point prescribed in this order, causing the collision to occur a few moments later.

Cause

This accident was caused by failure of the motorman and conductor of the westbound train to obey a meet order.

Recommendation

It is recommended that the California Western Railroad take such action as may be necessary to obtain compliance with its operating rules.

Dated at Washington, D. C., this twenty-fifth day of May, 1965.

By the Commission, Safety and Service Board No. 1

(SEAL)

BERTHA F. ARMES,

Acting Secretary

Appendix

Track

From the west on the main track there are, in succession, a tangent 367 feet long, an 18°00' curve to the right 408 feet, a tangent 201 feet, and a 22°00' curve to the left 165 feet to the accident point and 407 feet eastward. From the east there are, successively, a tangent 478 feet, a compound curve to the left with a maximum curvature of 20°00', 450 feet, a tangent 76 feet, and the curve on which the accident occurred. In this area, the grade for westbound trains is 1 10 percent descending.

Operating Rules

Extra Train A train not authorized by a timetable schedule. It may be designated

Extra For any extra train except work extra

* * *

14 ENGINE WHISTLE SIGNALS

Note The signals prescribed are illustrated by "o" for short sounds, "—" for longer sounds * * *

SOUND	INDICATION
* * *	
(n) — — o	Approaching meeting or waiting points (See Rule S-90-A)
* * *	

16 COMMUNICATING SIGNALS

Note The signals prescribed are illustrated by "o" for short sounds, "—" for longer sounds * * *

SOUND	INDICATION
* * *	
(1) o	Approaching meeting or waiting points

S-88 Extra trains will be governed by train orders with respect to opposing extra trains

* * *

S-90 At train-order meeting points trains must stop short of fouling point of switch to be used by the train entering the siding * * *

S-90-A Approaching a * * * train-order meeting or waiting point * * * on a train of passenger equipment conductor must sound 16(1) at least one mile before reaching the station, and engineer must immediately acknowledge by sounding signal 14(n)

Should engineer fail to sound signal 14(n), fireman must immediately remind him of requirement. Should engineer fail to reduce speed preparatory to stopping short of fouling point, when required, the conductor must take immediate action to stop the train.

* * *

FORMS OF TRAIN ORDERS

S-A

Fixing Meeting Points for Opposing Trains

* * *

(9) SECOND 573 HOLD MAIN TRACK
MEET NO 26 AT FENELON

* * *

Trains receiving Form S-A train orders will run with respect to each other to the designated points and there meet in the manner prescribed by the rules * * *

Timetable Special Instructions

16 Before departing from Northspur, Conductors of all passenger trains will obtain verbal clearance from the Dispatcher

Trains Involved

Diesel-powered passenger car 100 (Extra 100 East) was built in 1926 and rebuilt in 1956 to seat 44 passengers. It is 43 feet 10 inches long, weighs 44,450 pounds, and has two 4-wheel trucks. It has a straight air brake system, clasp type brakes for each wheel, and a M-18-A brake valve. It is propelled by a 150-horsepower diesel engine mounted under the floor, and power is transmitted through a 4-speed transmission to the rear axle of the front truck. The car (see photographs at the rear of the appendix) may be entered through the vestibule at the rear end or a side door a few feet in front of the rear vestibule. The motorman's station is in the right front corner of the passenger compartment. A conductor's emergency brake valve is in the rear vestibule. The communicating signal apparatus is of the electric-buzzer type and is operated by depressing a button in the rear vestibule. The brakes of the car had been tested before the accident and had functioned properly when used.

Gasoline-powered passenger car 80 (Extra 80 West) was built in 1925 and rebuilt for the second time in 1959 to seat 45 passengers. It is 36 feet 4 inches long, weighs 27,880 pounds, and has two 4-wheel trucks. It has a straight air brake system, a single brake shoe for each wheel, and a type 8 brake valve. The car (see photograph) is propelled by a 6-cylinder 118-horsepower gasoline engine mounted under a hood in front of the motorman's station and over the front truck. Power is transmitted through a 4-speed transmission to the rear axle of the front truck. The motorman's station is at the front center of the passenger compartment and immediately to the rear of the engine hood. Entrance to the car is through a side door to the right of the motorman's station. The car is not equipped with a conductor's brake valve. The cord of the communicating signal apparatus extends from the rear to the front of the passenger compartment and is suspended from the ceiling. The brakes of the car had been tested and had functioned properly when used en route.

Damages

The rear wheels of the front truck of Extra 100 East were derailed. The front end of the car body overrode the pilot, truck and end sills at the front of Extra 80 West throughout a distance of 4 feet 4 inches and stopped against the engine of that train. The front portion of Extra 100 East was considerably damaged.

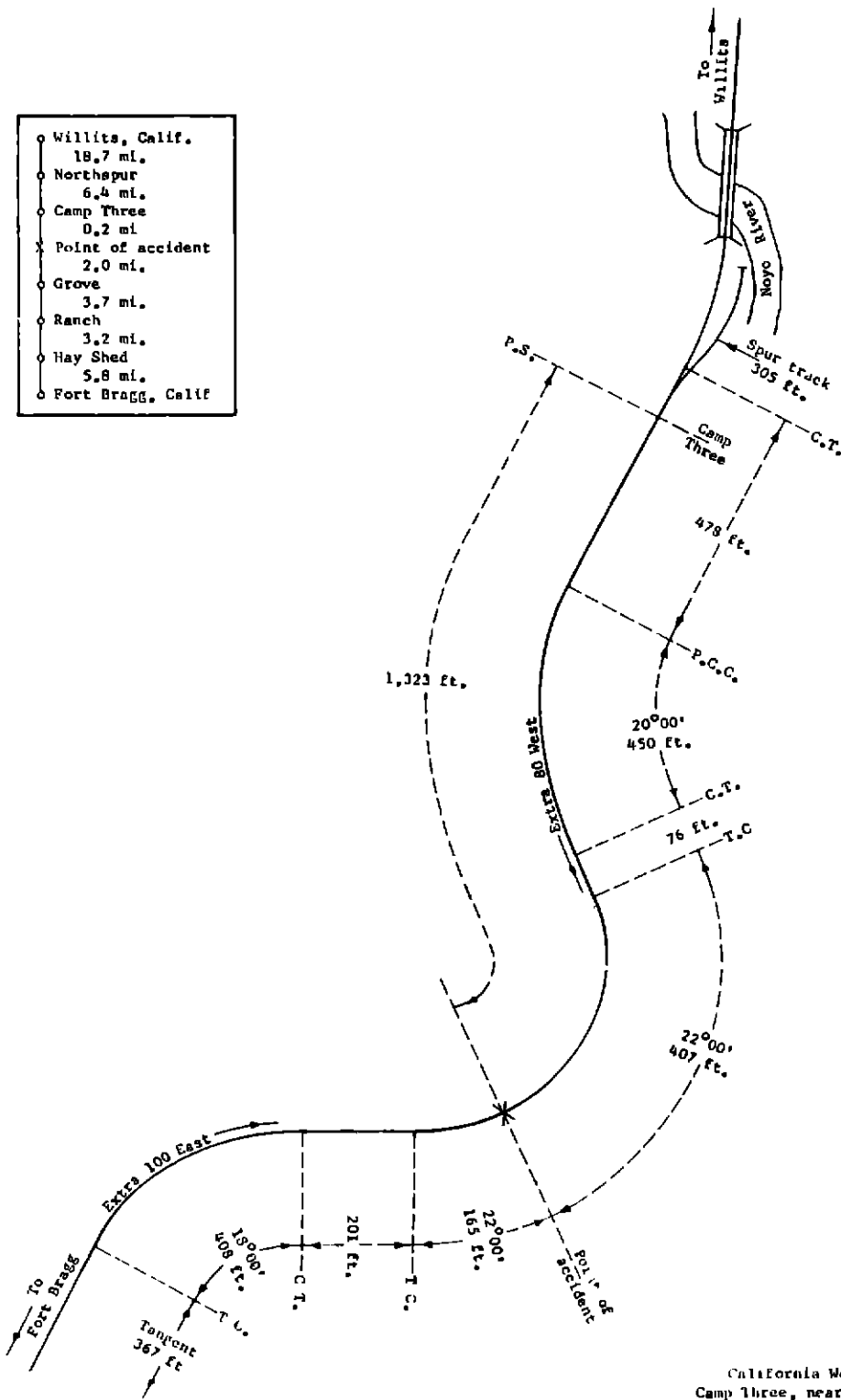
Extra 80 West did not derail. The front portion of this train and the seating facilities in the passenger compartment were heavily damaged.

Other Factors

The accident occurred at 3:40 p.m., in clear weather.

The carrier has not prescribed a maximum speed for movements over its line.

- Willits, Calif. 18.7 mi.
- Northspur 6.4 mi.
- Camp Three 0.2 mi
- ✕ Point of accident 2.0 mi.
- Grove 3.7 mi.
- Ranch 3.2 mi.
- Hay Shed 5.8 mi.
- Fort Bragg, Calif



California Western Railroad
 Camp Three, near Fort Bragg, Calif.
 September 26, 1964