

Inv-2117

INTERSTATE COMMERCE COMMISSION

WASHINGTON

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REPORT OF THE DIRECTOR

BUREAU OF SAFETY

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ACCIDENT ON THE

ATCHISON, TOPEKA & SANTA FE RAILWAY

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KINGMAN, ARIZ.

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NOVEMBER 19, 1936

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INVESTIGATION NO. 2117

SUMMARY

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Inv-2117

Railroad: Atchison, Topoka & Santa Fe  
Date: November 19, 1936  
Location: Kingman, Ariz.  
Kind of accident: Rear-end collision  
Trains involved: Freight : Freight  
Train numbers: Extra 3896 : Extra 3866  
Engine numbers: 3896-3530 : 3866  
Consist: Helper engine 3530, : 66 cars, caboose  
63 cars, caboose  
Speed: Standing : 6-7 m.p.h.  
Track: 8° 06' curve to right, view materially  
restricted by rock cut; descending  
grade westward  
Weather: Clear  
Time: 3:01 p.m.  
Casualties: 4 injured  
Cause: Failure of engineer to operate under  
proper control within yard limits

January 15, 1937

To the Commission:

On November 19, 1936, there was a rear-end collision between two freight trains on the Atchison, Topeka & Santa Fe Railway at Kingman, Ariz., which resulted in the injury of 2 live-stock caretakers and 2 employces.

#### Location and method of operation

This accident occurred on the First District of the Arizona Division, extending between Seligman, Ariz., and Needles, Calif., a distance of 149 miles. This is a double-track line over which trains are normally operated by time-table, train orders and an automatic block-signal system; at the time of the accident, however, the automatic block-signal system in this territory was temporarily out of service due to repairs being made at the powerhouse, and during this time the rules relating to automatic blocks were suspended and trains were being operated under rule 91, which reads in part as follows:

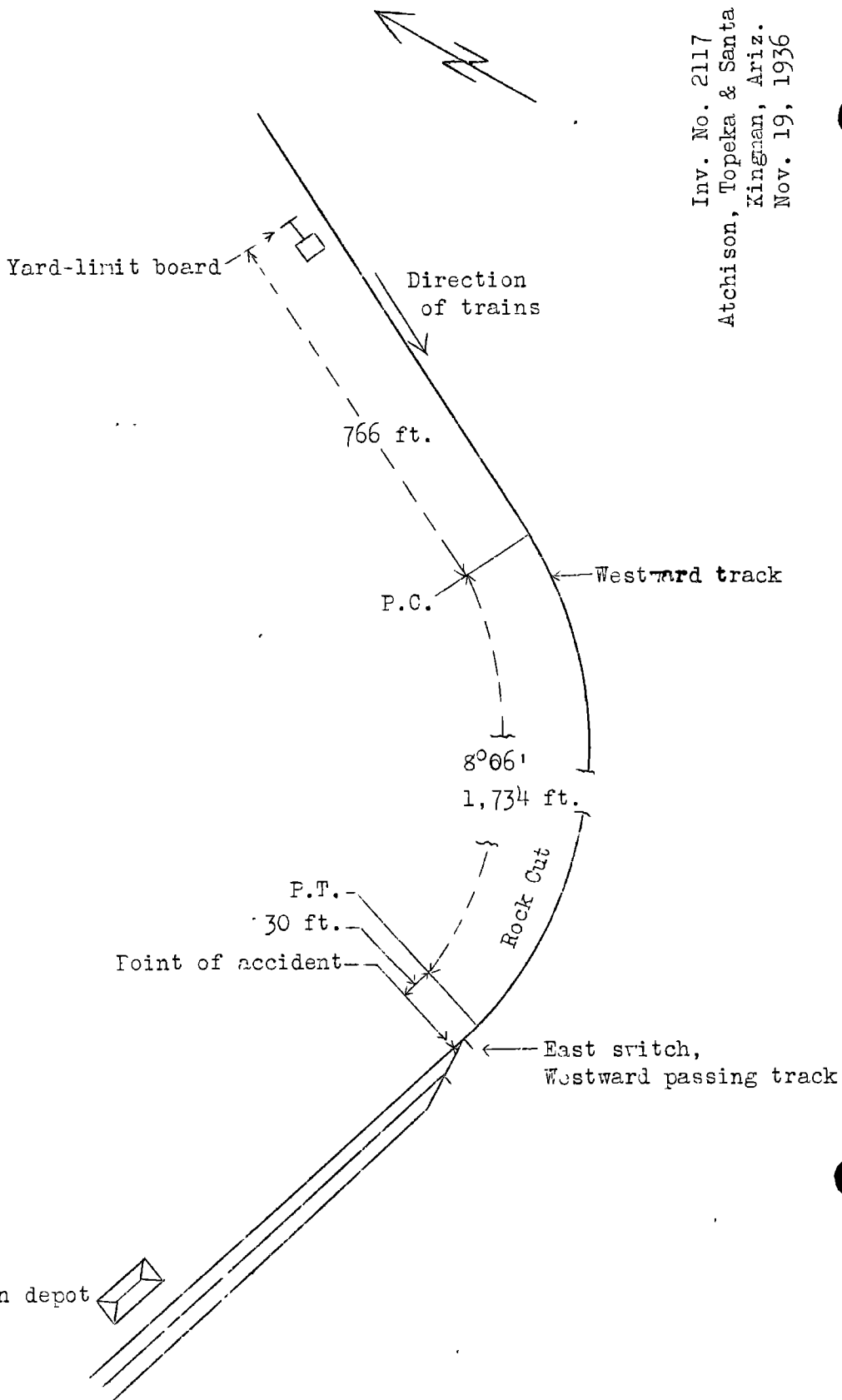
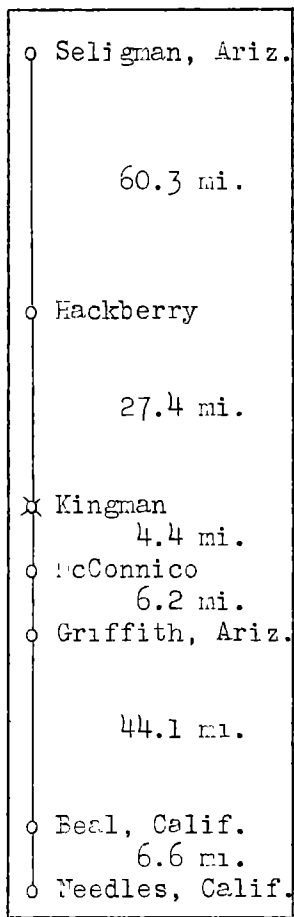
"Unless some form of block signal is used, trains in the same direction must keep at least five minutes apart, except in closing up at stations. \*\*\*\*\*"

The accident occurred within yard limits, on the west-bound main track, at the east switch of the westward passing track, 2,530 feet west of the east yard-limit board; approaching this point from the east, beginning at the yard-limit board, the track is tangent for a distance of 766 feet, then there is a compound curve to the right 1,734 feet in length, with a maximum curvature of  $2^{\circ} 06'$ , followed by 30 feet of tangent track to the east switch of the westward passing track, this tangent extending for a considerable distance beyond. The grade for west-bound trains is descending, varying from 1.4 to 1.8 percent, and is at its maximum at the point of accident.

At the point where the accident occurred in Kingman yard the two main tracks are located a considerable distance apart; the westward passing track parallels the west-bound main track on the south. A rock cut on the inside of the curve involved restricts the view from the right side of the cab of a west-bound engine to a distance of less than 500 feet.

The weather was clear at the time of the accident, which occurred about 3:01 p.m.

Inv. No. 2117  
Atchison, Topeka & Santa Fe Ry.  
Kingman, Ariz.  
Nov. 19, 1936



### Description

Extra 3896, a west-bound freight train, consisted, in the order named, of road engine 3896, helper engine 3530, 63 cars and a caboose, and was in charge of Conductor Morse and Engineman Morden, with Engineman Duncan in charge of the helper engine. This train passed Extra 3866 at Hackberry, 27.4 miles east of Kingman, about 1:30 p.m., and arrived at Kingman at 2:15 p.m., where it stopped on the main track, within yard limits, with the caboose at the east switch of the westward passing track, where it was standing when struck by Extra 3866.

Extra 3866, a west-bound freight train, consisted of 66 cars and a caboose, hauled by engine 3866, and was in charge of Conductor Booth and Engineman Poirot. This train left Hackberry at 2:10 p.m., according to the train sheet, 40 minutes behind Extra 3896, and just after rounding the 8° 06' curve nearly  $\frac{1}{2}$  mile beyond the east yard-limit board at Kingman, it collided with the rear end of Extra 3896 while traveling at a speed estimated to have been 6 or 7 miles per hour.

The caboose of Extra 3896 was badly damaged and the rear end was raised off the truck; three cars in Extra 3896 were also damaged. The front end of engine 3866 was considerably damaged but no part of either train was derailed. The employees injured were the conductor and brakeman of Extra 3866 who were in the caboose of that train.

### Summary of evidence

Engineman Morden, of lead engine 3896, stated that he had not intended to stop at Kingman for water but was held there by a local freight doing switching at the west end of the yard. While at Kingman he received instructions pertaining to work at stations ahead, which necessitated taking water on both engines at Kingman, and it was then decided to eat lunch at that point. He was also given a message stating that Extra 3866 West should pass Kingman about 3:00 p.m., McConnico 3:10 p.m., and Griffith 3:20 p.m., and containing instructions to let that train pass when it overtook his train. Before cutting the engines off for water he was requested by members of the local freight crew to move his train back for a distance of about ten car-lengths to permit them to continue their work. Knowing that the automatic block-signal system was out of service and being familiar with the heavy descending grade, the sharp curve near which the rear of his train would then be placed, and the greatly restricted view to be had by the engineman of a following train, Engineman Morden protected against backing his train and he made no attempt to do so

until after he had consulted with his conductor, who told him to make the move. Several unsuccessful attempts were made to back the train and the engine of the local freight was finally used to assist, all of which consumed considerable time. Feeling much concern regarding the position of his train, Engineman Morden went to the telegraph office while other members of the crew were eating, and explained the situation to the operator with a request that he notify the train dispatcher, thinking that perhaps the dispatcher might issue instructions to the local freight to get out of the way or that he might protect against the hazard in some other manner. When the engines were about to be re-coupled to the train after having taken water, he was informed by his head brakeman that the following train had collided with the rear end of his train. Engineman Morden said that he did not whistle out a flag because he had never done so within yard limits except when on the time of a first-class train and he also thought that the members of his crew who were at the rear end of his train, and who were responsible for its protection, would realize the hazard as well as himself and would make some attempt to relieve the situation. After the accident he set his train out at Kingman and handled the train of Extra 3866 from Kingman, to Needles, Calif., a distance of 61.6 miles, and the air brakes functioned properly en route.

Statements of Fireman Hartin and Head Brakeman Winkler, of engine 3896, also of Engineman Duncan and Fireman Wadlington, of helper engine 3530, brought out nothing additional of importance. Engineman Duncan supported the view that under existing conditions, the interest of safety demanded that some sort of warning should have been given to the following engineman even though the rules did not require flag protection within yard limits in this case.

Conductor Morse, of Extra 3896, stated that when his train stopped at Kingman he went to the head end and authorized the back-up movement of his train in order to allow the local freight to perform their work; Conductor Morse remained at the head end attending to various duties and he was there when the accident occurred. Before leaving the caboose he advised Flagman McCall that he was going to the head end and also instructed him to remain near the rear end and if he heard an approaching train to "slip back and give them a break." He did this merely as an extra precaution, on account of the block signals having been taken out of service temporarily, and in consideration of the heavy descending grade, the restricted view around the curve through the rock cut, and the dangerous location of his caboose with respect to these conditions. Conductor Morse considered

flagging within yard limits to be a bad practice as it might result in enginemen forming the habit of expecting flag protection at such locations, when it was not required by the rules, and that to furnish such protection on some occasions and not to do so on other occasions would be an extremely dangerous practice, also, with respect to freight trains, the rules place the responsibility for accident upon the approaching train. He did not intend that his flagman should protect in the manner prescribed by rule 99, but merely intended to have him remain near the rear end and give some degree of warning, provided the flagman heard a following train approaching. The conductor understood, however, that the flagman did not hear the following train approaching. Conductor Morse was of the opinion that the accident was caused by the failure of the following engineman to operate his train under proper control as required by the rule governing train movements within yard limits.

Flagman McCall said that after the back-up movement was made and the caboose stopped on the main track at the east switch, he went back around the curve with flagging equipment to protect in case the train made an additional back-up movement; he remained there until he heard proceed whistle signal sounded; he thought that it was his own train ready to depart, and he returned to the caboose. At this time Swing Brakeman Luetzow returned to the caboose for his lantern and shouted to the flagman that their own train would not back up any farther, and that it was going to McConnico to pick up three dead engines, following which the swing brakeman started back toward the head end of the train. The flagman then saw a rod projecting over the side of a car about two car lengths ahead of the caboose and he went forward to remedy this; while so doing he heard the exhaust of the following engine and immediately started in that direction but was only able to reach the caboose when the collision occurred. He said that the conductor told him to remain at the rear of the train and if he heard a following train coming to signal them if he could. Nothing was said about providing regular flag protection, nor was it required within yard limits in this instance. He did not know what his own train would stop at Kingman, or how long it would be delayed after it did stop; he did not hear any whistle signal sounded by the following train, and did not know how close that train was following; he considered the yard limit rule sufficient protection for his train and said it was the responsibility of the following enginemen to move within yard limits under proper control. Swing Brakeman Luetzow gave testimony similar to that of Flagman McCall; after obtaining his lantern from the caboose the swing brakeman had gotten forward to a point about midway of the train when the accident occurred. Swing Brakeman Luetzow did not consider it necessary to furnish flag protection within yard limits, and said that the protection given by the flagman was for the purpose of making the back-up movement.

Engineman Poirot, of Extra 3866, stated that his train handled properly and made the usual trip between Seligman and Hackberry, where it stopped and picked up cars and loaded stock, during which time Extra 3896 passed. When pulling out of Hackberry the conductor told him that he heard the dispatcher putting out a message to the extra ahead that their own train would pass it when overtaken; however, he did not have any idea when his own train would overtake the train ahead and thought probably that he would receive instructions in this connection on reaching Kingman. En route to Kingman the air brakes worked properly. Before reaching the east yard-limit board he made an air brake application which reduced the speed of his train from about 18 miles per hour to 11 or 12 miles per hour, saying that as the automatic block-signals were temporarily out of service he was proceeding slowly. He was sitting on his seat box looking ahead, using a drifting throttle, and the speed of the train seemed to be getting too low; he released the brakes and put the brake valve in running position, and he had no more than done so when he saw the caboose ahead; he immediately made a service application of air brakes, not realizing that the caboose was so close, but after moving about one car length beyond he saw the caboose was only about three car lengths away, and he immediately closed the throttle, applied the brakes in emergency and opened the sanders, reducing the speed to about 6 or 7 miles per hour at the time of the collision. Engineman Poirot stated that he was 50 years old and that he had been in engine service with this railroad for 22 years, prior to which time he had about 3 years service with another railroad. He was thoroughly familiar with all physical conditions of the road in this territory; the air brakes functioned properly at all times and there was nothing about their condition that had any bearing on the accident. He did not think that he sounded the engine whistle approaching Kingman, either for the station or when rounding the curve, as required, nor was the engine bell ringing. He was fully aware of the requirements of the yard limit rule and said that he did not expect to be flagged within yard limits, but added that had the flagman of the train ahead been back a distance of even 100 or 150 feet behind the caboose, he could have stopped his train in time to prevent the accident.

Conductor Booth of Extra 3866 said that about 2 hours after the accident he talked with Engineman Poirot and at that time the engineman told him that he had not expected to overtake a train at Kingman. Conductor Booth also said that on a previous occasion in which he had afforded flag protection within yard limits at Barstow as a matter of extra precaution, the engineman he had flagged took exception with him for doing so.



Dispatcher Hallinin stated that the operator at Kingman informed him that the instructions for Extra 3896 were delivered to that crew about 10 minutes after their arrival at Kingman; shortly afterwards the operator reported that the engineman felt concerned regarding the location of the caboose and the possibility of it being struck by a following train. The dispatcher suggested to the operator that Extra 3896 pull down the main track and back in one of the westward sidings, and if this was not possible, to cross over and clear in the eastward siding, but he did not know what action was taken after this suggestion was made. Sometime later the dispatcher learned that the main track was still being occupied and he knew that the train was being delayed; he could not understand what prevented Extra 3896 from clearing the main track and the operator could not inform him; he then consulted the chief dispatcher and informed him as to conditions; the chief dispatcher said that if Extra 3896 could not clear the main track at Kingman immediately, they should leave there without further delay. When the dispatcher gave these instructions to the operator it was about 40 minutes after the engineman had first spoken to the operator about feeling concerned regarding the situation and the accident had then occurred. Dispatcher Hallinin further stated that the yard-limit rule should have been strictly complied with and then the accident would have been averted.

#### Discussion

Under the rules of this railroad extra trains are required to move at restricted speed within yard limits and the responsibility for accident with respect to such trains rests with the approaching train. Engineman Poirot, of Extra 3863, was thoroughly familiar with the physical conditions in this locality and was also aware of the fact that the automatic block signals had been temporarily taken out of service, and he understood the requirements of the yard-limit rule. The braking system of his train was in proper working order and functioned properly at all times en route; while rounding the curve through the cut he made a service application of the brakes but released before he could see the condition of the main track ahead, at which time the speed of his train was about 10 or 12 miles per hour, and after moving about one car length after releasing the brakes he saw the standing caboose about three car lengths ahead and although he immediately applied the brakes in emergency it was then too late to avert the accident, which occurred well within yard limits. In order to operate in safety at this location, extreme caution was necessary, particularly in view of the descending grade and the restricted view around the curve through the cut.

The evidence clearly indicates, however, that Engineman Poirot was not expecting to find the main track occupied at this location, and that he erred when he released the brakes on the curve where the view was greatly restricted; he should have kept the brakes applied until he had reached a point from which he could see the condition of the track ahead, in which event the accident could have been averted.

Had the automatic block signals with which this line is equipped been in operation at this time the engineman of Extra 3836 would have received restrictive signal indications as he approached Kingman, warning him that the track ahead was occupied, and the accident would probably have been averted.

#### Conclusion

This accident was caused by the failure of Extra 3836 to be operated under proper control within yard limits.

Respectfully submitted,

W. J. PATTERSON,

Director.