INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT ON THE ATCHISON, TOPEKA & SANTA FE RAILWAY NEAR CAMBRIDGE, KANS., ON SEPTEMBER 7, 1934.

November 8, 1934.

To the Commission:

On September 7, 1934, there was a head-end collision between a passenger train and a helper engine on the Atchison, Topeka & Santa Fe Railway near Cambridge, Kans., which resulted in the death of 3 employees, and the injury of 1 passenger, 1 mail clerk and 2 employees.

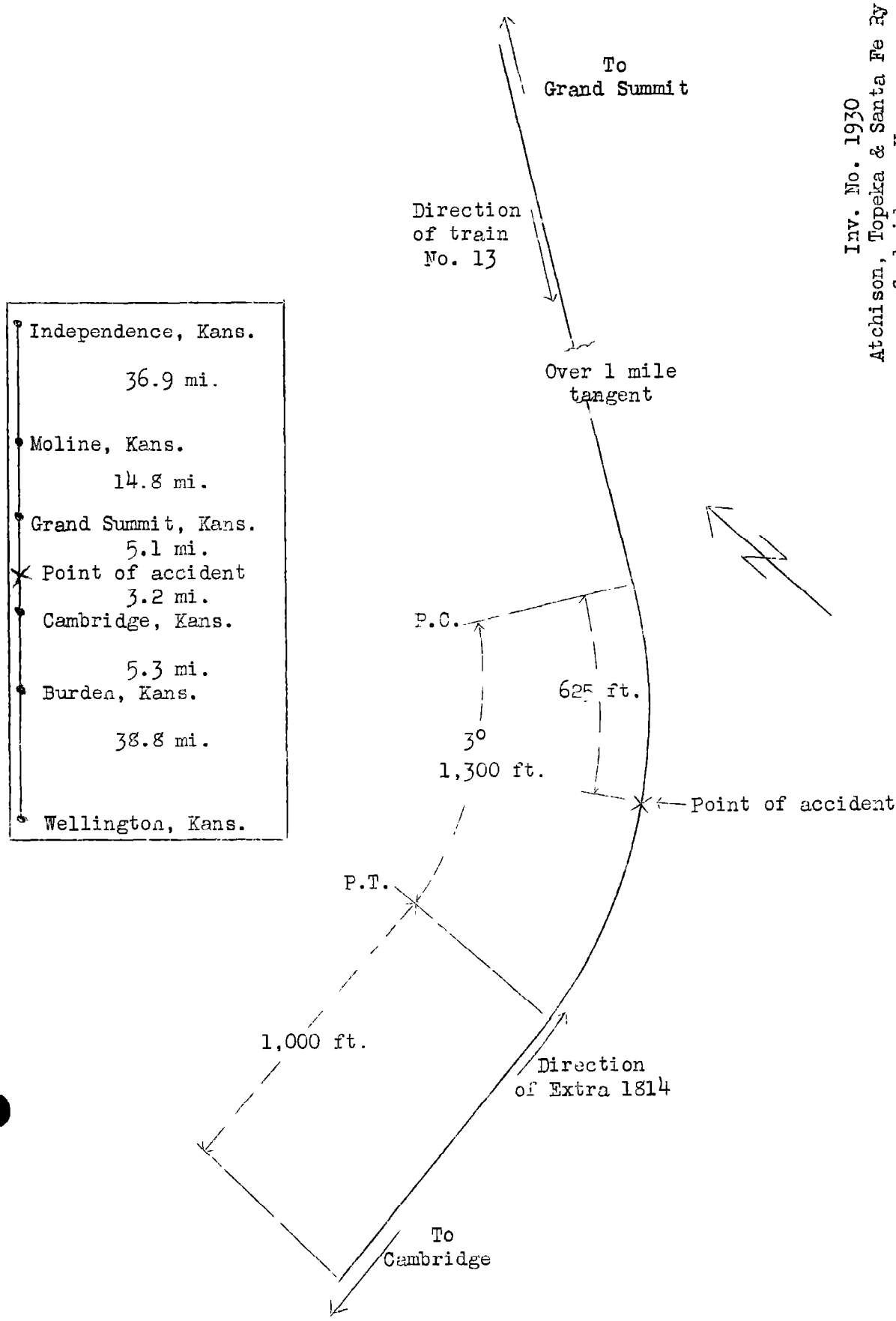
Location and method of operation

This accident occurred on the Third District of the Southern Kansas Division, which extends between Independence and Wellington, Kans., a distance of 104.1 miles; this is a single-track line over which trains are operated by time table and train orders, no block-signal system being in use. The accident occurred about 3.2 miles east of Cambridge; approaching this point from the east, the track is tangent for more than 1 mile, followed by a 3° curve to the right, 1,300 feet in length, the accident occurring on this curve at a point about 625 feet from its eastern end. Approaching from the west the track is tangent for 1,000 feet, followed by the curve on which the accident occurred. The grade at the point of accident is 0.382 percent descending for west-bound trains; with the exception of a few intermittent short stretches of slightly ascending grade, this grade continues to descend westward for a distance of about 4.5 miles, varying from 0.382 to 0.999 percent, following which there is a short stretch of level track and then the grade ascends for a distance of about 2.5 miles, varying from 0.334 to 1.3 percent.

Owing to a cut about 10 feet in depth and a field of corn on the inside of the curve the view was restricted to a very short distance.

The weather was clear and it was dark at the time of the accident, which occurred about 4:15 a.m.

Inv. No. 1930
Atchison, Topeka & Santa Fe Ry.,
Cambridge, Kansas
Sept. 7, 1934



Description

East-bound Extra 1814 consisted of light engine 1814, headed westward, and was in charge of Engineman Hanson and Fireman Taylor. This engine had helped a west-bound freight train from Moline to Burden, a distance of 28.4 miles, and was returning to Moline. Cambridge is located 5.3 miles east of Burden and neither of these stations was an open office, consequently it is not known exactly what time Extra 1814 left Burden or passed Cambridge on the return trip. Train No. 13 was due at Cambridge at 4:19 a.m., according to the time table schedule, but instead of clearing at that point for the opposing superior train Extra 1814 passed Cambridge and then collided with Train No. 13 while traveling at a speed estimated to have been less than 20 miles per hour.

West-bound passenger Train No. 13 consisted of 1 all-steel combination mail and baggage car and 1 steel-underframe day coach, hauled by engine 1484, and was in charge of Conductor Bixler and Engineman Leighty. This train left Moline, the last open office, 23.1 miles east of Cambridge, at 3:35 a.m., according to the train sheet, on time, and was approaching Cambridge at a speed estimated to have been about 30 miles per hour when it collided with Extra 1814.

The force of the impact tore the cistern off the tender of engine 1814 and the trucks from the frame; the frame remained coupled to the engine, the cistern was thrown to the north of the track, while the trucks were across the roadbed. Engine 1814 was not derailed and following the collision it headed westward down the long descending grade, dragging the tender frame, and started up the ascending grade, finally stopping at a point about 1.5 miles up the grade or about 6.2 miles west of the point of collision; the tender frame was wedged into the track and roadbed which prevented the engine from moving backward down the hill. The tender frame had swung from side to side as it was dragged along the track and broke off marker posts and two water spouts, tore out crossing planks, cattle guards and fences, and damaged ties. The engine throttle was found to be wide open, the reverse lever stood about one half stroke in forward motion, the boiler was without water and steam, and there was only very little fire left in the fire box. Engine 1484 was derailed to the right and stopped down an 8-foot fill on the inside of the curve parallel to the track, bottom up; the tender cistern was torn from the frame, but neither of the two cars in the train was derailed. The employees killed were both enginemen, and the fireman of Train

No. 13, while the employee injured was the fireman of Extra 1814; the enginemen of Extra 1314 was found beside the track about 1 mile west of the point of accident.

Summary of evidence

Fireman Taylor, of Extra 1814, was interviewed at the hospital 8 days after the accident, and he stated that after his engine helped the west-bound freight train to Burden it remained there for about 15 to 18 minutes and then left that point on the eastward trip, backing up with the back-up headlight burning properly. While at Burden he had not looked at his watch nor consulted his time table, but he said that the engineman looked at his own watch after the engine had headed in on the siding. Fireman Taylor did not know whether Engineman Hanson had a time table but said the engineman inquired as to the schedule of Train No. 13, whereupon the fireman consulted his own time table; the engineman then looked at his watch again and told the fireman that it was 3 a.m., this being when they left Burden, but the fireman did not check the time because his watch was under his sweater and hard to reach. Train No. 13 was due at Grand Summit at 4:05 a.m., and they decided that there was time for them to reach that point. On passing Cambridge the engineman asked whether the engine needed water and the fireman told him that it did not; approaching the curve involved the fireman was on the deck of the engine and was unaware of anything wrong until the accident occurred; he said the engineman appeared to be as alert as usual.

Conductor Bixler and Brakeman James, of Train No. 13, were in the rear car in their train and the first knowledge they had of anything wrong was when the accident occurred. Immediately afterwards the conductor went forward and saw Fireman Diehl, of Train No. 13, who at that time told the conductor that all he saw was the reflection of a headlight and then the crash occurred; Fireman Diehl afterwards died. Conductor Bixler was of the opinion that the engineman of Train No. 13 applied the air brakes in emergency immediately prior to the crash, while Brakeman James did not think that the engineman applied them, saying that the crash and brake application were instantaneous. They both said that the accident occurred at 4:15 a.m.

Members of the crew of Extra 3103, the west-bound freight train which engine 1814 had helped from Moline to Burden, said they noticed nothing unusual with the manner in which the train was handled between those points and that Engineman

Hanson and Fireman Taylor of the helper engine appeared normal in every respect. Conductor Smith stated that at Moline both he and Engineman Hanson went to the register room and that the engineman procured the watch register, opened it and took out his watch, and the conductor, who already had his own watch in his hand and was standing beside the engineman, held his watch over toward the engineman so that the engineman could see it and the engineman remarked that his watch should be 10 seconds fast; Conductor Smith said, however, that he did not actually see what time was shown by the engineman's watch. Conductor Smith further stated that his train arrived at Burden at 3:38 a.m., stopping just east of the east switch of the passing track; helper engine 1814 was cut off and shortly afterwards his own train departed, clearing the west switch of the passing track about 3:45 a.m., at which time engine 1814 was still on the passing track.

Caller Whitson stated that he drove his automobile to the home of Engineman Hanson and called him for duty at 6:50 p.m., September 6, and at that time the engineman signed the call book and then they compared watches, being within a few seconds of each other. Superintendent Gist examined Engineman Hanson's watch at the undertaker's; at that time it had nearly run down and was 20 seconds slow. Engineman Hanson's watch had been registered at Moline at 1:48 a.m. as being 10 seconds fast.

Conclusions

This accident was caused by the failure of Engineman Hanson and Fireman Taylor, of light engine 1814, to know the correct time, with the result that their engine failed to clear the main track for an opposing superior train.

The conductor of Extra 3102 said his train arrived at Burden at 3:38 a.m. and Fireman Taylor, of engine 1814, said his engine remained on the passing track at that point for a period of 15 of 18 minutes after cutting off from Extra 3102. These statements indicate that engine 1814 left Burden on its return trip about 4 a.m., and in view of the fact that Engineman Hanson's watch was 10 seconds fast prior to the accident and 20 seconds slow some time after the accident when nearly run down, it is apparent that the engineman's watch was showing practically correct time and that he misread it when he told the fireman it was 3 a.m. when leaving Burden, the time actually being 4 a.m. Fireman Taylor did not check the engineman's

statement as to the time, and after using his own time table he and the engineman figured they had ample time in which to reach Grand Summit, 13.6 miles east of Burden, for Train No. 13, which is due at that point at 4:05 a.m., when as a matter of fact under the rule requiring extras to clear opposing superior trains by not less than 5 minutes engine 1814 had only about 14 minutes in which to get into clear for the opposing superior train at Cambridge, 5.3 miles east of Burden; Train No. 13 was due to leave Cambridge at 4:19 a.m. Following the accident, Engineman Hanson's time table was found in a suitcase in his locker at Chanute roundhouse.

Respectfully submitted,

W. J. PATTERSON,

Director.