INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE TOLEDO, PEORIA & WESTERN RAILROAD AT FORREST, ILL., ON DECEMBER 21, 1929

January 29, 1930.

To the Commission:

On December 21, 1929, there was a head-end collision between a freight train and a road engine making up a train on the Toledo, Peoria & Western Railroad at Forrest, Ill., which resulted in the death of one employee and the injury of one employee. This accident was investigated in conjunction with a representative of the Illinois Commerce Commission.

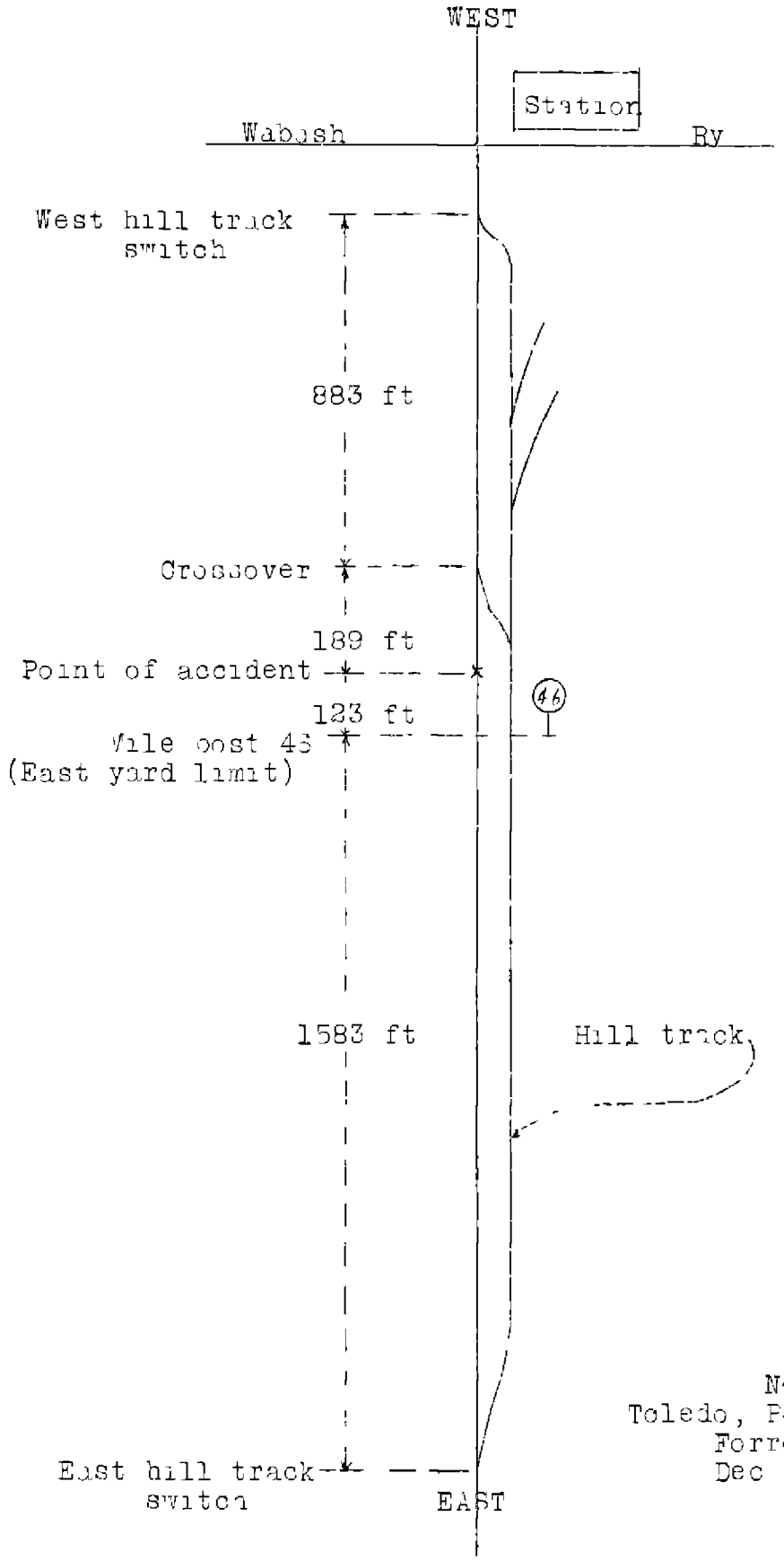
Location and method of operation

This accident occurred on the Eastern Division, which extends between Effner, Inc., and Peoria, Ill., a distance of 111.1 miles, in the vicinity of the point of accident this is a single-track line over which trains are operated by time-table and train orders, no block-signal system being in use. At Forrest the eastern yard-limit terminates at mile post 46, the accident occurring at a point 123 feet inside of this mile post. Approaching the point of accident in either direction the track is tangent for a distance of more than 3 miles, while approaching from the east the grade is level for a distance of 2,400 feet, from which point the grade is 0.667 per cent descending for a distance of 4,403 feet to the point of accident. There is a siding, known as the "hill track", 2,778 feet in length, which parallels the main track on the north, the east switch of this track is located 1,583 feet east of M.P. 46, and there is a crossover extending eastward from the main track to the hill track, the main track crossover switch being 312 feet west of M.P. 46. At a point 1,274 feet west of M.P. 46, the tracks of the Wabash Railway cross those of the T.P.& W. Railroad at grade.

The weather was clear at the time of the accident, which occurred at about 9.26 a.m.

Description

Engine 14, headed east, was in charge of Conductor Overacker and Engineman I. R. Smith, and at the time of the accident the crew was making up a train preparatory to proceeding eastward. This engine had pro-



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ceeded to the east end of the hill track, where two cars were picked up behind the engine, and it then returned to the main track and backed to a point just east of the east yard limit and a few car-lengths east of a cut of cars coupled behind engine 32, which was standing on the main track waiting for a Wabash train to clear the crossing. After engine 14 had stood at this point several minutes, the engineman observed a westbound train approaching, and in an attempt to avert an accident he moved backward into the yard limits until stopped by the cut of cars coupled to engine 32, the collision occurring immediately afterwards.

Westbound freight train extra 42 consisted of 35 cars and a caboose, hauled by engine 42, and was in charge of Conductor Monce and Engineman Coppock. This train departed from Effner, 46.2 miles east of Forrest, at 4.50 a. , left Chattsworth, 5.9 miles from Forrest, at 9.07 a. m., and entered the yard limits at Forrest and collided with engine 14 while traveling at a speed estimated to have been between 18 and 20 miles per hour.

Engine 42 was considerably damaged and had two pairs of drivers derailed, the rear of the tender was derailed to the left. The first 12 cars in extra 42 were derailed and scattered in various positions along the right of way, three of them being demolished and the balance more or less damaged. Engine 14 was derailed but remained upright in a badly-damaged condition. The two cars coupled to this engine came to rest across the hill track, the first car being destroyed and the second car badly damaged, while the two cars coupled to engine 32 were also derailed and destroyed. The employee killed was the fireman of extra 42, and the employee injured was the engineman of engine 14.

Summary of evidence

Engineman Smith, of engine 14, stated that after leaving the roundhouse, his engine entered the hill track and proceeded to the crossover switch, backed through the crossover, and then continued eastward on the main track to the east end of the hill track, where two cars were picked up, after which a return movement over the main track was made. The cut of cars was brought to a stop a short distance from the engine and cut of cars standing at the Wabash crossing, waiting for a passenger train to clear the crossing. About five minutes later, he observed extra 42 approaching from the east, and as it was moving rather rapidly he thought something was wrong, so he sounded one blast of the engine whistle and backed up until his train came in contact with the westbound cut, this being done in order to give the approaching train plenty of room in which to stop. He thought extra 42 was moving at a speed of about 15 miles per hour at the time of the accident.

Head Brakeman Kirk, of engine 14, stated that while standing on the rear of his own train, he looked towards the east and saw a train approaching, and after signaling his engineman three or four times that a train was approaching, which signals apparently were not observed, he started running eastward towards the engine and shouted a warning to the engineman, he continued to run eastward until he was about 100 feet from the approaching train before he realized that it was not going to stop, and he then started towards the right-of-way fence He did not hear the brakes grinding when the engine of extra 42 passed him, which was at a point between 100 and 200 feet from the point of accident. He estimated the speed of that train at 25 miles per hour, although he said that due to his inexperience he was not a very good judge of speed

Conductor Overacker, of engine 14, stated that after instructing his crew to get two cars from the east end of the hill track, he went to the freight house and became engaged in loading freight. After completing this task he started towards his engine, which had returned with the cars, with the intention of instructing the crew to follow the westbound engine As he stepped across the track he observed a train approaching from the east, it then being in the vicinity of the east hill track switch, but at that time he had no idea the approaching train would not stop as from his location he could not approximate its speed.

The statements of Fireman Wilson and Road Brakeman G. E. Smith, both of whom had had very little experience, brought out no additional facts of importance as to what transpired prior to the accident.

Engineman Coppock, of extra 42, stated that the brakes had been inspected by a car inspector, and tested, before departing from Effner, the initial station. Seven cars were picked up at Sheldon, 2 miles west of Effner, but no other cars were picked up or set out after leaving that point Subsequently, four other stops were made en route, the last being at Chatsworth, but in no instance was any difficulty experienced in stopping, and upon leaving Chatsworth he noticed the air gauge registered 90 pounds main-reservoir and 70 pounds brake-pipe pressure. There is an ascending grade west of Chatsworth and steam was worked until the train reached a point about 1 mile east of Forrest, at which time the train was moving at a speed of slightly over 20 miles per hour He then closed the throttle and made a brake-pipe reduction of about five or six pounds for the purpose of testing the brakes, and judging from the length of the exhaust, he thought the brakes were working through the entire train. When

his engine reached a point just east of the east hill track switch, or about one-half mile from where the running test was made, he observed an engine standing on the main track, the fireman apparently saw it at about the same time, as the fireman shouted something that the engineman did not understand. Engineman Coppock immediately made a service application of the brakes and when he noted that the exhaust was very short, he moved the brake-valve handle to the emergency position, this also failed materially to check the speed of the train, although he thought the engine brakes were working properly He estimated the speed at the time the brakes were applied in emergency at 20 miles per hour, which was at a point between 1,200 and 1,500 feet from the point of accident, and at 18 miles per hour at the time of the accident. It also appeared from Engineman Coppock's statements that the front window and one side window on his side of the cab were open, and that the visibility had been good for about 1 mile, except at one point after starting down the grade, where the engine encountered a small snow drift which caused the snow to fly to some extent, and at no time were conditions such that he could not determine his location. Engineman Coppock further stated that the short exhaust received when he applied the brakes in emergency indicated to him that the train line had become stopped up near the forward end of the train, after the running test of the brakes was made, and he expressed the opinion that possibly an angle cock could have been turned by some person who was riding on the train and who got off prior to the accident, he did not see anybody alight from the train, but said he had heard that some person had been seen to get off, although he did not know the name of his informant.

Head Brakeman Ruble, of extra 42, stated that after the cars were picked up at Sheldon, he coupled up the air hose at the head end of the train He rode on the fireman's side of the engine between Chatsworth and the point of accident and noticed the engineman use the brakes on two or three occasions after leaving Chatsworth. The engine encountered several snow drifts before reaching Forrest, which caused the snow to fly considerably on his side of the engine, and this materially restricted his range of vision, in fact, it became necessary to close the side windows to keep the snow from blowing into the cab. As the train approached the point of accident, he was standing on the deck near the fireman's seatbox and the fireman was in the gangway between the engine and tender trying to get a view ahead, the fireman suddenly called to the engineman to apply the brakes, the collision occurring very shortly afterwards. Head Brakeman Ruble did not see the engine standing on the main track prior to the accident, and was of the opinion that

the fireman was the first to observe it, as the brakes were not applied until the fireman had called to the engineman. Head Brakeman Ruble also said that he did not have enough experience to judge the speed of the train at the time of the accident, neither could he estimate the distance the train traveled after the fireman shouted a warning.

Conductor Monce, of extra 42, stated that before leaving Effner, the train was inspected and reported by the car inspector to be in good condition. After picking up the seven cars at Sheldon, he coupled up the air on the seventh car and Brakeman Ruble coupled up the engine. Two stops were made by Watseka, once to meet a train and once to take water and two more at Chatsworth, once for the I C crossing and once in the passing track, and on each occasion these stops were made by using the air brakes, which appeared to function properly. He looked over his train while it was standing on the passing track at the latter point waiting for another train to pass, and as the head end of that train was passing his caboose he blew the tail hose whistle, and after his train pulled out of the siding he sounded it again, which indicated that the air was coupled through the train. Between Chatsworth and the point of accident he looked at the air gauge in the caboose on three or four occasions, and in each case it showed a pressure of 70 pounds. He felt no application of the brakes until after the entire train had passed over the summit east of Forrest, and at that time the engine was probably in the vicinity of the east hill track switch. This appeared to be a light application which caused the slack to bunch and when the caboose rebounded he lost his balance but as soon as he got up he was again knocked down by a second shock, and he did not have time to realize what was happening or whether the brakes were holding. He thought the maximum speed attained after leaving Chatsworth was not more than 35 miles per hour and estimated it at 18 or 20 miles per hour at the time of the accident. Conductor Monce did not inspect the train until after the fireman had been removed from the wreckage, which was at 11.52 a.m., and then he walked back along the train to the caboose and found all of the pistons in braking position, although this would be their natural position on account of the broken brake pipes resulting from the accident. He was unable to inspect some of the derailed cars, the ends of which were buried in the mud, but was present when a gondola, which had been the sixth car from the engine, was picked up and found to have a closed angle cock, this angle cock was of the self-locking type, the handle of which had to be raised before it could be opened or closed. Conductor Monce further stated that at the time he inspected the train at Chatsworth he did

not see any unauthorized person on the train, while no one could have been inside any of the cars, as they were all loaded and sealed. Subsequent to the accident, however, he was informed by the roadmaster that a man had been seen riding on his train, and it was his opinion that if the closed angle cock found in the wreckage was turned to that position prior to the accident, it was done by some one other than an employee.

Superintendent Eckard stated that the only reference he could locate regarding the yard limits at Forest was General Order No. 19, dated May 9, 1919, which fixed the eastern yard limit at mile post 46 and the western limit at mile post 47. He had no knowledge as to when the yard-limit boards were removed, as it had been done without authority, but as nearly as he could determine, they were removed more than six months previous to the date of the accident. Mr. Eckard also said that the angle cock which was found closed in the wreckage was discovered on December 23 while digging under the drawbar of the car in order to place a cable preparatory to picking up the car, but his special agents were unable to uncover anything to support the theory that it had been turned with malicious intent.

The investigation developed that none of the employees involved knew the location of the eastern yard limit at Forrest, there being no yard-limit board to designate this point. Engineman Smith, of engine 14, was of the opinion that it was about 400 feet east of the east hill track switch, and, therefore, thought he was within yard limits when the cars were picked up from the east end of the hill track. Fireman Wilson heard there were yard limits at Forrest but did not know their locations, Brakeman Kirk understood the east yard limit was close to the east hill track switch but did not provide flag protection while using the main track in that vicinity as he had not been instructed to do so, Brakeman Smith did not know definitely and Conductor Overacker had not signed for the general order covering the location of yard limits as he was not a conductor at the time it was issued, but he thought the eastern yard limit was 500 or 600 feet east of the hill track switch. Engineman Coppock, of extra 42, was of the impression that the yard limit began about at the east hill track switch, and Brakeman Ruble did not know, while Conductor Monce stated that he had not seen a yard-limit board but from information obtained from other employees he understood it was a few feet east of the east hill track switch.

Conclusions

This accident was caused by the failure of Engineman Coppock, of extra 42, to have his train under proper control when approaching yard limits.

According to the statements of Engineman Coppock, no difficulty was experienced with the air brakes while making various stops en route, he also made a running test of the brakes when his train reached a point about 1 mile east of Forrest, and the exhaust indicated that the brakes were working the full length of the train. Upon reaching a point in the vicinity of the east hill track switch, however, he observed engine 14 occupying the main track and at once made a service application of the brakes, it was on this occasion that, for the first time, there appeared to be something wrong with the brakes, and he immediately moved the brake-valve handle to the emergency position but it seemed to have very little effect in reducing the speed of the train, although he thought the engine brakes were working properly. Extra 42 consisted of 35 cars and a caboose, with a tonnage of approximately 1,400 tons, and even in view of the 0.667 per cent descending grade approaching the point of accident, it would seem that the use of only the engine brakes, which were found to have been in good condition, should have materially reduced the speed of the train within the distance the train travelled, providing the brakes were handled in the manner described by Engineman Coppock. The damage caused by this accident indicates that the speed probably was higher than the estimates of 18 or 20 miles per hour, and it is more than probable that if the accident had not occurred, extra 42 would have collided with the passenger train standing on the Wabash crossing, 1,151 feet distant.

The rules provide that second and third-class and extra trains must move within yard limits prepared to stop unless the main track is seen or known to be clear, there is also a provision that yard limits will be indicated by yard-limit boards, and locations shown in the time-table The yard limits at Forrest were not marked by yard-limit boards, and the locations are not shown in the current time-table, however, a general order dated May 9, 1919, fixed the location of the east yard limit at mile post 46. While the accident occurred only 133 feet inside yard limits, it was the opinion of all the employees questioned that the limits extended to or east of the hill track switch, located more than 1,700 feet from the point of accident. Engineman Coppock was familiar with the locality and was not confused as to his location, and according to his understanding of the yard limits, he should have had his train under control, as required by the rules, before it passed the east switch of the hill track There should be no question, however, as to yard limits, and it is recommended that this phase of the situation be corrected immediately by the responsible officials of this railroad.

While clearing the wreckage two days after the

accident, the angle cock on the rear end of the sixth car in the train was found closed The theory was advanced that this angle cock had been turned by some unknown person prior to the accident, but as this end of the car was buried in the earth the angle cock could easily have been turned during the course of the accident. Nothing could be developed to support the theory of a closed angle cock, and there seems little reason to attach importance to this discovery.

Engineman Coppock has been an engineman on this railroad for 20 years and Fireman L. T. Smith was employed in July, 1928. Conductor Monce entered the service November 21, 1929, as a brakeman, and was promoted to conductor on December 10; he had had 17 years' previous experience, 6 of which had been as a conductor. Flagman Shepard had been employed as a brakeman at intervals since 1918, while Brakeman Ruble was an inexperienced man. Engineman I. R Smith has been in the service as fireman and engineman since 1920, Conductor Overacker was employed as a brakeman during 1918, being promoted to conductor December 12, 1929, Brakeman G. E. Smith was recently employed by this road but an experienced man, having had six years' experience as a conductor, while Fireman Wilson and Brakeman Kirk were inexperienced At the time of the accident none of these employees had been on duty in violation of any of the provisions of the hours of service law.

Respectfully submitted,

W. P. BORLAND,

Director.