In re. investigation of an accident which occurred on the Atchison, Topeka & Santa Fe Reilway near Flynn, Okla., on June 13, 1917.

July 11, 1917.

On June 13, 1917, there was a head-end collision between a passenger train and a freight train on the Oklahoma Division of the Atchison, Topeka & Santa Je Railway, near Flynn, Okla., resulting in the death of 2 employees and the injury of 5 employees and 67 passengers. After investigation of this accident, the Chief of the Division of Safety reports as follows:

That portion of the Atchison, Topeka & Santa Fe Railway where this accident occurred is a single track line, upon which train movements are governed by time-table and train orders, supplemented by a manual block system. Train orders are transmitted by telephone.

The direction of train accements as shown by the time card, does not correspond to the points of the compact, trains running south being designated as westbound, and trains running north being designated as eastbound. The time card designation will be used in this report to indicate the direction of train movements.

The track in the vicinity of the accident is laid with 33-foot rails, weighing 90 pounds to the yard, on 20 crecested pine ties to each rail length. The ballast is broken stone, about 15 inches deep, and the track is well maintained.

The trains involved in this socident were west (south) bound passenger train No. All, known as the "Texas Plyer", and east (north) bound freight train extra 3131.

Train No. 111, in charge of Conductor Clay and Engineman Rain, was hauled by engine 1444, and consisted of 2 steel underframe baggage care, I steel underframe chair car, I all-steel cosch, and I wooden Pullman sleeper. It left Oklahoma City at 9.17 a. m., seven minutes late, with train order No. 46 and permissive block eard No. 47, as well as a clearance card of the prescribed form calling attention to "31" order No. 46, and permissive block card No. 47. Train order No. 46 was a positive most order reading as follows:

"No. 411, engine 1444, meet extra 3131 east at Flynn."
Block card No. 47, authorized the movement of train No. 411
in the block section between Oklahoma City and Moore, a distance of 9.2 miles, with the restriction to meet extra 3131
at Flynn, a blind siding 4.8 miles west of Oklahoma City.

Train No. 411 failed to step at Flynn as directed, and at about 9:30 a.m., while running at a speed of approximately 45 miles per hour, it collided with extra 3131 at a point 2020 feet west of the west switch at Flynn.

Restbound stock extra 3131 was in charge of Conductor Process and Engineers Hell. It was hauled by engine 3131 and consisted of 28 cars of live stock and a caboose. At Moore, the conductor and engineers of this train received order No. 46 and permissive block card No. 47, previously referred to. This train left Moore at 9:16 a. m., and while running at a speed of about 25 miles per hour, collided with train No. 411 as above stated.

Approaching the point of collision from the cast, the track is straight from Oklahome City to a point 734 feet west of the west switch at Flynn, there is then a 2-degree curve to the right, 1,309 feet long. It was at the west end of this curve that the collision occurred. The grade is ascending westward between Oklahoma City and Flynn, the maximum being 1 per cent. Between Flynn and Moore the grade is undulating. At the place of collision train No. 411 was on a grade 900 feet long, .885 descending westward. Approaching from the west, the track is straight for a distance of about 4 miles, and the grade is mostly descending contward, the maximum being 15 for short distances.

Engine 1444 was derailed and the boiler was torn from the frame and came to rest at right angles to the track on the inside of the curve. The engine frame and wheels were upright parallel to the boiler; the tender was thrown to the opposite side of the track, and the eletern was torn from the frame. The baggage car next the engine was derailed, but remained upright parallel with the track; its front end which was badly damaged by sontact with the derailed tender, being on top of the front end of the frame of engine \$131. The remaining cars in train No. 411 were not derailed and sustained but slight damage. The boiler of engine \$131 was torn from the engine frame and thrown to the side of the track where it came to rest parallel to the boiler of engine \$144. The whoels and frame of engine \$131 remained on the track. The tender remained upright on its frame and only one wheal of its rear track was derailed. The tender elstern was badly damaged. The first 1 ears in extra \$131 were demolished. From the sixth car back the ears were not derailed and all were returned to Moore on their own wheels. At the time of the collision the weather was clear and there was a strong wind blowing.

Conductor Glay, of train Mo. 411, stated that he was regularly employed on the Middle Division, and that this was the first trip he had made over the Oklahoma Division in more than 14 years; he had never before made a trip over this division as a conductor.

He said that his train arrived at Oklahoma City on time and departed from there at 9:17, seven minutes late. He received train order 46 and permissive card 47, also a clearance card. He de-livered the orders to Engineers Rain, handing him both copies of the order. Magingman Rain thereupon signed the conductor's copy, as required by rule, and returned it to Conductor Clay with the remark, "Well, we meet them at Flynn." He also said that upon receiving the order he naked the operator if Flynn was not the first station out of town, and the operator told him it was. He did not show the orders to the brakenes or the train porter before leaving; he said that just provious to leaving, or as the train was pulling out, he told the brokeman that they had to meet extra )1)1 at Flynn. Se said the reason he did not show the orders to the brekenen, was that they were about leaving town and he wented to show them to the porter, and he failed to show them to the porter because he did not see him from the time he got on the train until after the accident. He stated that when the train started from Oklahoma City, he started to take up tickets and continued taking tickets until the train approached very near the seems of the accidents. He heard the engineena whistle twice for road eressings. but heard no station whistle, and thinking that it was about time for the engineman to sound the station whistle, he was just about to look out of the window to see if he could see any sign of the town when the cresh came. He did not pull the signal cord between Oklahoma City and the point of the accident.

After the socident he stated that he went up to the engine and saw Enginemen Rain in the cab, as two men were getting him out from the wreekage. When the enginemen saw him he said, "Cap, I everlooked my hand." He then said to the enginemen, "George, I did not hear you wistle for town," who replied, "I sure as hell whistled," adding "I was filling my lubricator and did not see them." He said that the sacident happened about 9:30, and that when it occurred he thought his train was running about 50 miles an hour. He did not notice any application of the air brakes and said that he did not believe the enginemen shut the engine off before the collision. He said the majority of his passengers in the smoker and chair cars were persons who beerded the train at Oklahome City, and he had not finished taking up tickets when the socident occurred.

Brekemen Mebert stated that he had been in the service of the Santa Fe as brakeman since January 25, 1917, and had been braking on passenger trains between Newton and Furcell about 15 days. This was his first trap with Conductor Clay. He stated that train Mo. 411 arrived at Okishoma City at 9 o'clock and left at 9:17. Conductor Clay did not show him the orders, but told him they were to meet extra 3131 at Flynn, and asked him how for it was from the city; he replied that it was about outside the city limits as near as he could judge. He did not hear the ongineman whistle for Flynn, and as the train passed through there, he stepped out the rear door of the train just as it passed the west switch. The train was then

running 45 or 50 miles per hour and before he had time to pull the air signal or set the air brakes, the collision occurred. He said he did not know where the emergency valve was located in the eleeping car, where he was at the time of the accident. He had never before been on a train that had a meeting point at flynm, and said he did not realize his train had arrived at that place, After the collision he immediately went back to flag.

Train Portor Payne stated that he had been in the service about 16 years. This was his first trip with Conductor Clay. The conductor did not inform him about the orders on leaving Oklahoma City, nor did the flagman; consequently he had no knowledge of the meet at Flynn. He said he met the conductor in either the chair car or the amoker after the train left Oklahoma City, but was not shown the orders nor told of the meeting point. The ecuductor was then taking up tickets. He said Conductor Clay had shown him orders which were reserved before the train reached Chlahoma City; he was not expecting any orders establishing a most for his train at Flynn, as that was not a regular meeting point, and they colden not freight trains there. He did not hear the enginemen whistle for the station, and although he noticed when the train pessed Flynn, it made no impression upon him. After the socident he assisted in making aginemen Rain comfortable, and the enginemen said to him, "It was all my fault. I was fooling with my lubricator and did not know that I was by Flynn."

Firemen Branchouse, of train No. 411, who was seriously injured in the collision, stated that he had been firing on the Orlahoma "ivision about three years and was fully acquainted with the treek and lay of the ground at Flynn, but this was his first trip with Engineman Rein. He did not see the orders before leaving Oklahoma City, but Engineman Rain showed them to him shortly after leaving there, and he fully understood that they were to meet extra 3131 at Flynn. He said that after they got out of tewn and going pretty good, Enginemen Bain began working with the lubricator trying to get it to feed. He finally decided that it was dry and said, "but us fill it." Both then started to work on the lubricator, and after it had been drained, Fireman Branchouse sterted to get up on the oil tray to fill it. In doing this he stated that he leaned over to see if they were getting close to Flynn and saw the extra coming. He then called to the enginemen to jump, and at once jumped from the gangway of the engine himself, losing consciousness and remembering nothing more until he found himself in the hospital. Fireman Brandhouse said that Engineman Rain whistled for the station and looked out, but did not know just where the train was when this occurred, and he did not at all notice when they passed by Flynn. He estimated the speed of his train to be 30 or 35 miles per hour at the time he looked out and saw the extre approaching.

been employed on the Oxiahoma Division 8 years, three years as a conductor. He stated that at 9:15 a. m. he received order No. 46, and permissive block eard No. 47, at Moore, directing his train to meet train No. 411 at Flynn. He delivered the orders to Enginemen Hell, who road them out loud to him and signed his receipt for them. He said that his train was running about 25 miles an hour when he felt the air brakes go into emergency; he then saw the engine of Aff train No. 411 approaching and at once jumped from the train. He was on the ground when the collision occurred. He heard no whistle sounded from either train, and thought his train ran not more than 8 car lengths after the brakes were applied in emergency.

Brakeman Butler, of extra 3131, stated that he was head brakeman, and was riding on the tender of engine 3131. He knew about the orders to meet train wo. All at Flynn and while his train was running about 25 miles an hour, he locked toward Flynn and noted train No. All appreaching, about 7 or 8 telegraph peles distant; he realized that there was going to be a collision as train No. All was then by Flynn. He called to the fireman and engineman and jumped from the engine, both fireman and engineman jumping off behind him. He said Engineman Hell shut off steam and applied the air brakes in energoney before getting off.

Firemen Hellyer, of extre 3131, said he knew his train had orders tomeet train Ho. 411 at Flynn, and was expecting that train to pull up to the west switch and stop. At about the same time he and Brakeman Butler noticed that train No. 411 was not stopping and called to Engineers Hell who at once set the brakes in emergency, shut off steam and reversed the engine.

This accident was caused by the failure of train No. 411 to stop at Flynn, as directed by train order No. 46, and permissive block eard No. 47. Engineeum Rain, who was killed in the collision, and Conductor Clay, of train No. 411, are equally responsible for failing to aboy the direction of the orders in their peacession. Fireman Branchouse and Brakeman Hobert are also consurable for failure to pay attention to the location of their train and take measures to provent it from running past the meeting point.

Rule 69-b of the Atchison, Topeka & Santa Fe Railway Company's book of rules, requires the conductor of a train to give the engineman a stop signal upon approaching a station where another train is to be met, and if he does not receive a response, it is the conductor's duty to stop the train. Had this rule been observed the accident would not have occurred. Conductor Clay was unfamiliar with the road and for that reason should have taken extra procaution to insure the safety of his train. He should have known that every member of his orew was familiar with the orders and elect to see that they were properly executed.

All employees involved in this accident had good records. Conductor Clay and grow had been on duty 7 hours and 15 minutes at the time of the accident, and Maginesian Rain and Fireman Branchouse had been on duty 4 hours and 25 minutes.