IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE OREGONWASHINGTON RAILROAD \& NAVIGATION COMPANY AT HILGARD, ORE., ON OCTOBER 8, 1917.

On October 8, 1917, there was a rear-end collision between two freight trains on the Oregon-Washington Railroad \& Navigation Company at Hilgard, Ore., which resulted in the death of two persons. After investigation the Chief of the Bureau of Safety reports as follows:

That part of the Oregon-Washington Railroad \& Navigation Company upon which this accident occurred is a single-track line, over which train movements are governed by automatic block signals. At Hilgard the distant signal is located 2,758 feet west of the west passing-track switch, and the home signal is located 87 feet west of that switch. Enginemen approaching the home signal from the west can see it for about 2,500 feet, but their view beyond is obstructed by trees.
Eastbound freight train No. 24 consisted of 40 cars, hauled by locomotive 2118, and was in charge of Conductor Fulton and Engineman Snodgrase. It left Kamela, Ore., at 9.21 p.m., passed eastbound extra 2129 at Hilgard, and it headed in on the westbound passing track, because the main line was occupied by extra 2153 , pulled down opposite the depot with the rear end of its caboose about 990 feet east of the west switch, and the crew was unloading merchandise when their train was struck by eastbound extra 2129 at about 10.38p.m.

Eastbound extra 2129, having a tonnage of 2,280 tons, consisted of 39 cars, hauled by locomotive 2138, and was in charge of Conductor Mchoney and Engineman Harvey. As soon as the automatic block signal went to the clear position after train No. 24 left Glover, this train followed that train and passing the distant signal at caution and the home signal at danger, collided with it on Hilgard passing track while running at a speed of about 6 miles an hour.
The force of the collision drove train No. 24 forward about 75 feet, and the caboose of that train telescoped outfit box car No. 01090 which was immediately ahead of it. The frame of the caboose was partially reinforced by steel and was not badly damaged by the collision. The second car ahead of the caboose, outfit box car No. 01108, was forced up on top of the wreckage of the caboose and car No. 01090. The wreckage was thrown against train No. 2153, which was standing on the main line, and caught fire, completely destroying cars 01090, 01108 and the caboose, and damaging a stock car in train No. 2153. The two persons killed were a signalman and his wife who were riding in car 01090. Locomotive 3129 was slightly damaged. The weather at the time was clear.
Approaching the point of accident from the west the track is straight for 1,085 feet, then there is a 1.5-degree curve to the right, 950 feet long, then a 8-degree curve to the right, 1,281 feet long, then a tangent 1,757 feet long, then a 3-degree curve to the left, 1,433 feet long. The accident occurred 875 feet in on this latter curve. The grade varies from $2.8 \%$ to $1 / 2 \%$ descending for eastbound trains. On the tangent just preceding the 3-degrees curve on which the accident occurred the grade is $2 \%$ descending eastward for 857 feet, and for the remainder of the distance to the point of accident it is $1.2 \%$.
Engineman Snodgrase of train No. 24 stated that his train entered the passing track at Hilgard at about 10.31 p.m., came to a stop at the depot in two or three minutes and the collision occurred a few minutes later.

Conductor Fulton of train No. 24 stated that upon arrival at Hilgard he found that the crew of extra 2153, which was standing on the main track, had lined up the west switch for his train to go in on the passing track. The train proceeded to the depot, and after the crew had unloaded some freight Conductor Fulton stated that he walked to the front end of the train, told the engineman to pull down into the east passing track, started to walk back to the rear of his train and had gotten within about 15 day lengths of the rear and when the collision occurred at about 10.35 p.m.
Brakeman Hearson of extra 2129 stated that he rode the engine of train No. 24 from Glover to Hilgard for the purpose of holding extra 2135 at that station for his train and that when he reached the west switch he dropped off. He saw a brakeman there, notified him that extra 2129 was coming and directed him to leave the switch set so that train could head in on the passing track; he then went to where extra 2153 was standing, advised the engineman that extra 2129 was coming, and told him to wait there until it arrived. he said that from his position about four or five car lengths from the switch he could not see train No. 24 when it came to a stop, although its rear lights were burning when it passed him. He could see down the passing track a distance of only four or five car lengths. He stated that when extra 2129 arrived at the west switch a few minutes later, the brakeman standing there gave it a come ahead signal, and as it passed over the switch its speed was increased. He had intended to board the engine but the speed was too great and he gave the engineman of his train a slow signal and shouted to him, but neither was headed. He said that when he first saw extra 2129 approaching it was coming around the curve, and when he saw that the engineman could not see his signals he crossed over to the fireman's side of the track. He said that the train was moving past him at a speed of eight or nine miles an hour, that he got on the eighth car from the engine, and it moved about three car lengths further, when it came to a stop. Upon going to the front end of the train he saw it had collided with the rear of train No. 24.
Engineman Harvey of extra 2129 stated that when his train approached Hilgard he found the automatic signals against him and he expected to stop at the west switch and had made arrangements to do so, but when a brakeman there gave him a signal to come ahead he answered it and his train moved forward at a speed of about five miles an hour, the train being about 12 or 15 car lengths west of the west switch at the time. He placed the brake valve in full release position, and about the time the engine reached the switch he made a service application of the brakes of about 8 pounds reduction. He heard somebody call as he passed the switch but did not hear what was said. He said he was leaning out of the cab window and saw one rear light on the caboose of train No. 24 about 3 car lengths ahead. When asked if he had his train under control at Hilgard, Engineman Harvey replied; "No, I was not under control on that curve there. But under the circumstances the track being lined up and the flagman signaling me to come ahead I had a right to suppose they would not let me down there if the track was not clear." He said that the flagman was on the ground and he thought that he would not signal him ahead without knowing whether the track was clear, and he had a right to expect that the flagman would give him some protection. He also said that he knew train No. 24 was a local train and that it might have way freight to unload at Hilgard.
Conductor Mchoney of extra 2129 stated that when train No. 24 passed his train at Glover he instructed Brakeman Pearson to go with that train to Hilgard and hold extra 2153 there until extra 2129 arrived. After train No. 24 left Glover and the automatic signal went to the clear position, his train left there about at 10.15 p.m. and at about 10.30 p.m. the engineman sounded the whistle for Hilgard. When his train reached the west switch its
speed was reduced to about 5 miles an hour, then the braked were released, and its speed had increased to 8 or 10 miles an hour when it came to a sudden stop as if there had been a heavy application of the air brakes. He started toward the front end of the train and did not know there had been a collision until he reached the engine.
Fireman Young of extra 2129 stated that when his train reached the west switch at Hilgard the signal indication was red, the switch was lined up for the passing track, and the brakeman there gave them a signal to come ahead, the speed of the train at this time being about five miles an hour. He stated that as his train approached the west switch he saw brakeman Pearson about four or five car lengths away with a red light and a white light in one hand, standing about opposite the locomotive of extra 2153, and was certain he did not give any signals for he was looking at him all the time. Neither did he hear him shout as the train passed him. As he passed Brakemen Pearson he saw the rear light on train No. 24 about two car lengths ahead and about that time the engineman applied the air brakes in emergency. He could not see ahead further on account of the curve.
Head Brakeman Calboun of extra 2129 stated that he was riding 12 or 14 cars from the front end of the train when it approached Hilgard and he saw that the signal there was red. He saw a brakemen at the west switch give the engineman a come ahead signal, his train started in on the passing track, and came to a stop. When he saw the air pressure going down he thought the train had broken in two and began turning down the retainers, but when he reached the front and of the train he saw that there has been a collision and went back and set the brake on his train. He stated that he also saw a man at the west switch with red and white lanterns when his train reached there but could not say whether he gave signals to his train or not. He thought that the speed of his train at the time of collision was about 8 miles and hour.
Engineman Hentty of extra 2153 stated that he saw extra 2129 approaching the west switch and he saw Brakeman Pearson give slow signals to that train which the fireman could have seen had he been looking out. He stated that he did not see Brakeman Pearson give any come ahead signals to extra 2129 , and the only signal he saw him give was a slow up signal.
Brakemen Wale of extra 2153 stated that he was at the switch when extra 2129 arrived there and he gave them a come ahead signal and that train passed him at a speed of a 8 or 10 miles an hour.
On October 9th a test was made to determine at what distance the engineman and fireman of extra 2129 could have seen the caboose on train No. 24 as their train was approaching Hilgard. Trains were placed in the same positions train No. 24 and extra 2153 occupied on the night of the accident, and a light engine approached Hilgard, from the same direction extra 2129 approached it. By this test it was learned that the fireman of extra 2139 could have seen the caboose of train No. 24 at a distance of 357 feet if he had been looking through the front window of the cab, or a distance of 341 feet had he been leaning out of the cab. The engineman could have seen the caboose a distance of 243 feet by leaning out of the cab.
Special time-card rule No. 2 of the Oregon-Washington Railroad \& Navigation Company reads as follows:
"MOVEMENTS IN YARDS. All trains, yard engines, light engine, etc., must proceed under control in both directions within yards at Umatilla, Pilot Rock Jct., Pendleton, Kamela, La Grande, Baker, Huntington and Wallula.
"PROTECTION AT OTHER STATIONS, Where yard limit signs are not erected, the station (S) whistling posts will be considered the yard limits. Stations referred to are those shown
on the face of time table schedule. Extra trains must approach such stations expecting to find main track occupied without flag protection, and should any collision occur, the responsibility will rest upon the extra train approaching the station. Trains occupying main track at such stations must protect against regular trains and will also be governed be rules in regard to meeting and right-of-track orders."
Under this rule extra trains must approach Hilgard expecting to find the main track occupied, and in case of collision it places the responsibility upon the approaching extra train.
This accident was caused by the failure of Engineman Harvey to have his train under control approaching Hilgard, as required by this rule.
The approach to Hilgard from the west is on a $1.3 \%$ descending grade and a 3-degree curve, while the range of vision of approaching engineman is limited. Engineman Harvey exercised poor judgment in going into the passing track there with a heavy train on the descending grade at such speed as to be unable to bring it to a stop within the range of his vision. He also knew that train No. 24 was a local freight train that did the local work at each station and that it could not be very for in advance of his train, and on that account he should have exercised great care upon entering the passing track at Hilgard.
Engineman Harvey was employed as an engineman 1913, and had a good record. Fireman Young had been employed as such for a period of about two years.

