INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN ACCIDENT WHICH OCCURRED ON THE BALTIMORE & OHIO RAILROAD AT SIR JOHN'S RUN, W. VA., ON APRIL 29, 1933.

June 30, 1933.

To the Commission:

On April 29, 1933, there was a derailment of a freight train on the Baltimore & Ohio Railroad at Sir John's Run, W.Va., which resulted in the death of 5 trespassers and the injury of 3 trespassers.

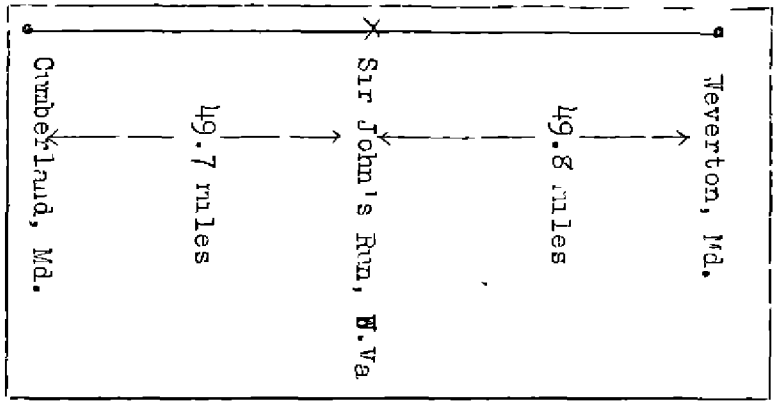
Location and method of operation

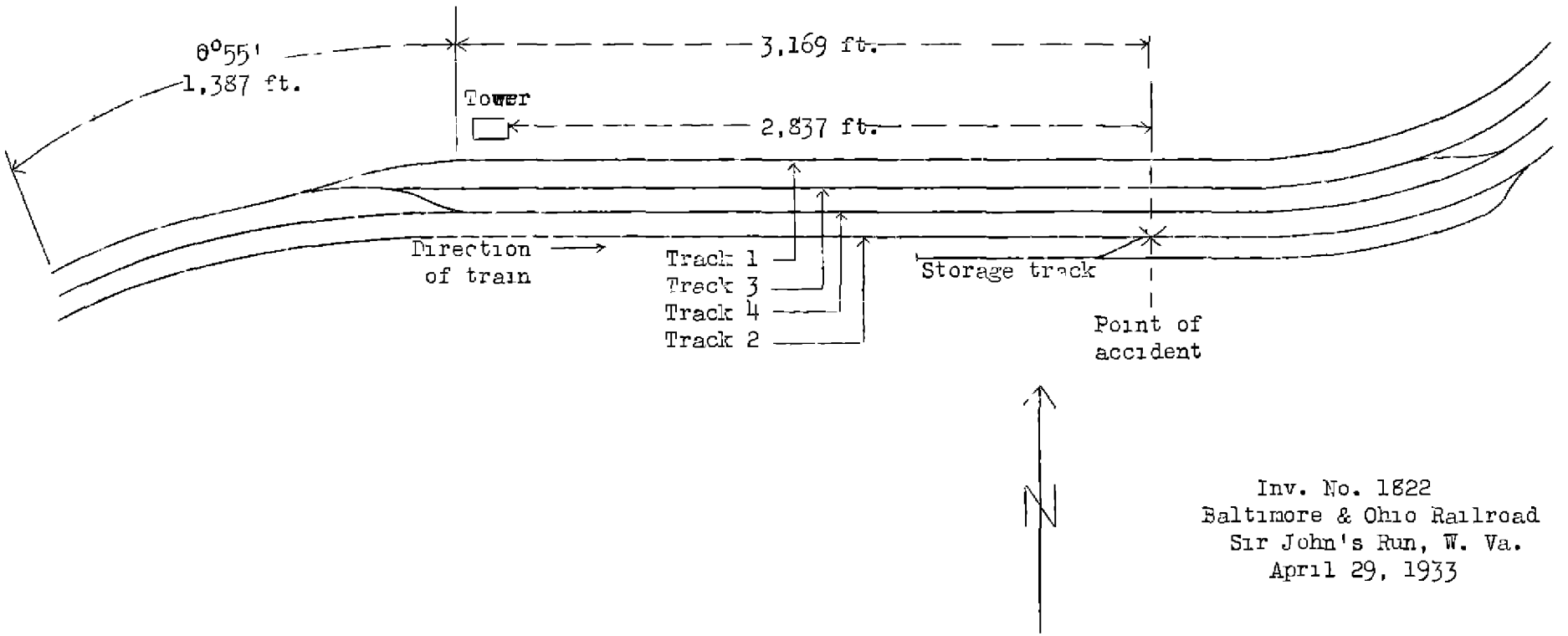
This accident occurred on that part of the Cumberland Division designated as the East End, which extends between Cumberland and Weverton, Md., a distance of 99.5 miles, in the immediate vicinity of the point of accident this is a 4-track line over which trains are operated by time table and an automatic block-signal system. The tracks are numbered, from north to south, 1, 3, 4 and 2, and the accident occurred on track 2 at a point 2,831 feet east of Sir John's Run, at the frog of a trailing-point switch which leads off the main track to the south to a storage track. Approaching this point from the west, there is a series of short curves and tangents, followed by a 0° 55' curve to the right 1,387 feet in length, from which point the track is tangent to the point of accident, a distance of 3,169 feet, and for a short distance beyond that point. The grade is slightly ascending for east-bound trains, being 0.05 percent at the point of accident. The track is laid with 130-pound rails, 39 feet in length, with an average of 21 ties to the rail length, ballasted with stone and is well maintained.

The weather was clear at the time of the accident, which occurred about 12:40 p.m.

Description

East-bound freight train extra 6103 consisted of 130 loaded cars and a caboose, hauled by engine 6103, and was in charge of Conductor Tederick and Engineman Staub. This train departed from Cumberland, 49.7 miles west of Sir John's Run, at 11:15 a.m., passed Sir John's Run at 12:40 p.m., according to the train sheet, and was derailed shortly afterwards while traveling at a speed estimated at 35 miles per hour.





Inv. No. 1822
Baltimore & Ohio Railroad
Sir John's Run, W. Va.
April 29, 1933

The rear truck of the thirtieth car and the thirty-first to the sixty-third cars, inclusive, were derailed, blocking all four main tracks. The first 4 entirely-derailed cars were overturned on track 4, the following car remained upright on track 2, the next 3 cars were also overturned on track 4, the following 24 cars were piled on the storage and main tracks, and the last derailed car remained upright on track 2 immediately west of the frog. Many of the derailed cars were demolished or damaged beyond repair.

Summary of evidence

Engineman Staub stated that at Cumberland the proper test of the brakes was made, that he had no difficulty in handling the train after leaving Cumberland, and that he did not apply the automatic brakes at any point en route. He was working a full throttle and his first knowledge of anything wrong was after passing Sir John's Run when he felt a sudden jerk of the train which was caused by the train parting due to the derailment. He estimated the speed of the train at the time of the accident at 35 miles per hour.

Head Brakeman Bloss stated that he rode on the engine from Cumberland to the point of accident and looked back along the train on both sides several times but did not see fire flying or any other defective condition. After the accident and before the head end left the scene, he went back to the wreckage where he saw a broken arch bar on the south or right side of the rear truck of the first car that was derailed.

Conductor Tederick stated that after the train was coupled and made ready to depart from Cumberland he assisted the yardmen in making the road test of the brakes, after which a car inspector gave the engineman a proceed signal. When approaching Sir John's Run, he was looking out of the window on the north side of the caboose but saw no fire flying or any indication that something was dragging, and he had just crossed to the south side of the caboose when the brakes were applied in emergency. He looked over the derailed equipment and the only thing that he could find which in his opinion caused the accident was a broken arch bar on the thirtieth car from the engine. This broken part showed an old fracture which he estimated at about 25 per-cent.

Car Inspector Decker stated that B&S car 9056, which was the thirtieth car in the train, arrived at Cumberland at 10:55 a.m., April 28, and that he rade a class "C" inspection on the south side of this car, but noticed no defects. He described a class "C" inspection as a general observation to detect safety-appliance defects, as well as

broken or missing cross-head retainers and other parts. When shown a photograph of the broken arch bar on the south side of the truck removed from the rear end of B&S car 9056 subsequent to the accident he said that the original defect could not have been discovered by ordinary inspection as it was concealed by the column casting. He further stated that the only method of discovering a flaw of this nature in the particular type of arch bar involved required the truck to be dismantled.

General Car Foreman Scott stated that B&S car 9056 was last given class "A" or rigid inspection at Somerset, Pa., on April 26, and received only class "C" inspection at Cumberland on April 28, this latter inspection consisting of examining the car to determine that no obvious defect had developed since the last class "A" inspection. Upon arrival at the scene of accident he found the west truck of B&S car 9056 derailed and that one pair of wheels had been pulled from the truck. An inspection of this truck disclosed that the bottom arch bar was broken at the lower bend under the lug of the column casting; the broken parts showed an old fracture of about 10 percent and the balance of the break was new. As this fracture was under the column guide, the flanges of which extended downward over the arch bar 1/2 inch, it concealed the defect so that it could not have been discovered unless the truck was dismantled. He said that it is the practice to replace all arch bars where ruptures appear regardless of their size, but that it is not customary to dismantle these trucks for inspection until the cars undergo heavy repairs.

Train Master Groves boarded the train before it departed from Cumberland and accompanied it to the point of accident. The movement was made over the regular passenger train track and an average run for this class of train was made. The highest speed attained at any point was 42 or 43 miles per hour; at the time of the accident he estimated the speed at 35 or 40 miles per hour. After the accident he made an examination to determine the cause of the derailment and found the broken arch bar on the south side of the rear truck of B&S car 9056. The lead wheels of this truck were on the track and the rear wheels were torn out of the truck frame and were about 10 feet behind where the car stopped. He then made an examination of the track and found that the first marks of disturbance were at Lineburg, 7.3 miles west of Sir John's Run, where slight column-bolt marks appeared on a hand-car crossing. There were also slight marks on the hand-car crossings at the next two stations east of that point, while the marks on the crossing at the next station, Sir John's Run, were more pronounced but not sufficient to tear out the boards. The next mark appeared where the column bolts struck the wing rail at the frog where the accident occurred, turning the wing rail out and derailing the rear wheels of the car in question. All of the evidence indicated

plainly that the derailment was due to the failure of the arch bar on this car.

B&S car 9056 was built in September, 1923, and the only record of repairs having been made to the trucks since that time was on April 6, 1933, these repairs did not include dismantling the truck for inspection.

Conclusions

This accident was caused by the failure of an arch-bar truck.

According to the statements of members of the crew, they were unaware of anything out of the ordinary until the train was derailed. An examination of the track disclosed that something had been dragging, and an inspection of the rear truck of B&S car 9056, the thirtieth car in the train and the first to be derailed, showed it to be badly damaged. The lower arch bar on the right or south side of the car was broken and the rear wheels were separated from the truck. Inspection of the broken arch bar revealed that about 10 percent of the fracture, as indicated by the oxidized surface of the metal, had existed for some time before the arch bar finally failed. Apparently this progressive rupture weakened the arch bar to such an extent that the truck sagged sufficiently to allow a column bolt to drag over crossing planks at several points and when it struck the frog at the point of accident the column bolt was broken and the truck collapsed, resulting in the derailment of the train.

Respectfully submitted,

W. P. BORLAND,

Director.