

RAILROAD ACCIDENT INVESTIGATION

Report No 3820

SOUTHERN PACIFIC COMPANY

HOGUP, UTAH

OCTOBER 18, 1958

INTERSTATE COMMERCE COMMISSION

Washington

SUMMARY

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DATE	October 18, 1958	
RAILROAD	Southern Pacific	
LOCATION	Hogup, Utah	
KIND OF ACCIDENT	Derailment and collision	
TRAINS INVOLVED	Freight	Passenger
TRAIN NUMBERS	Extra 6349 East	27
LOCOMOTIVE NUMBERS	Diesel-electric units 6349 and 8219	Diesel-electric units 6022 and 5915
CONSISTS	87 cars, caboose	16 cars
SPEEDS	10 m p h	30 m p h
OPERATION	Signal indications	
TRACKS	Single, tangent, 0 40 percent ascending grade eastward	
WEATHER	Clear	
TIME	10 23 p m	
CASUALTIES	11 injured	
CAUSE	Broken journal, and derailed car obstructing main track in front of approaching train	

INTERSTATE COMMERCE COMMISSION

REPORT NO 3820

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS UNDER
THE ACCIDENT REPORTS ACT OF MAY 6, 1910

SOUTHERN PACIFIC COMPANY

January 23, 1959

Accident at Hogup, Utah, on October 18, 1958, caused by a broken journal, and a derailed car obstructing the main track in front of an approaching train

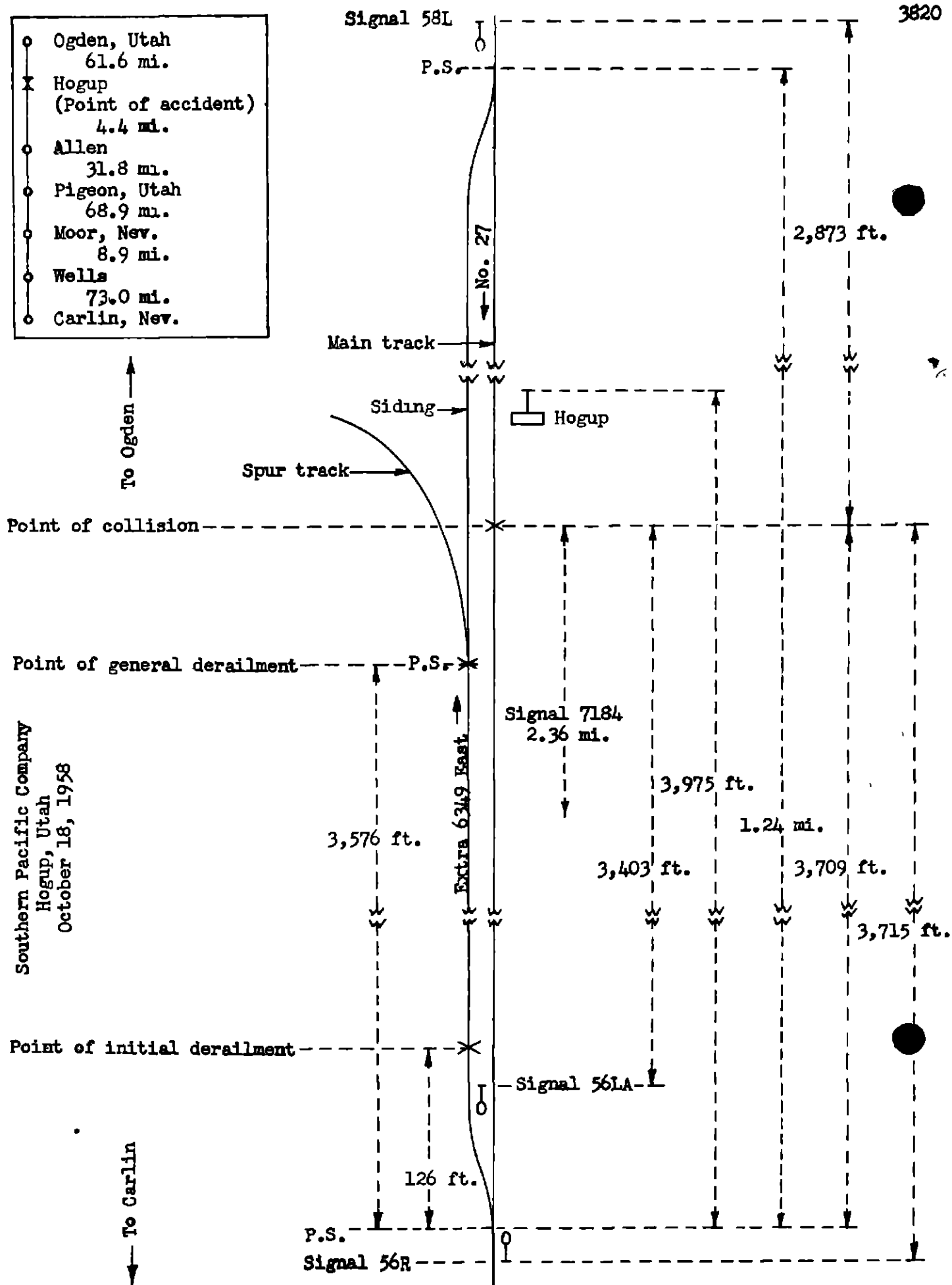
REPORT OF THE COMMISSION¹

FREAS, Commissioner

On October 18, 1958, there was a derailment of a freight train, and a collision between a derailed car of that train and a passenger train on the line of the Southern Pacific Company at Hogup, Utah, which resulted in the injury of 7 passengers, 1 train porter, 1 train-service employee not on duty, and 2 train-service employees

¹ Under authority of section 17 (2) of the *Interstate Commerce Act* the above-entitled proceeding was referred by the Commission To Commissioner Freas for consideration and disposition

Southern Pacific Company
Hogup, Utah
October 18, 1958



Location of Accident and Method of Operation

This accident occurred on that part of the Salt Lake Division extending between Carlin, Nev., and Ogden, Utah, 248.6 miles. In the vicinity of the point of accident this is a single-track line over which trains are operated by signal indications. At Hogup, 186.2 miles east of Carlin, a siding 1.24 miles in length parallels the main track on the north. The west switch of the siding is located 3,975 feet west of the station sign at Hogup. A spur track diverges to the north from the siding. The switch of the spur track, which is facing point for eastbound movements on the siding, is located 3,576 feet east of the west switch of the siding. The initial derailment occurred on the siding at a point 126 feet east of the west switch and the general derailment occurred at the spur track switch. The collision occurred on the main track at a point 3,709 feet east of the west switch of the siding. The track is tangent throughout a distance of 2.56 miles immediately west of the point of accident and a considerable distance eastward. The grade is 0.40 percent ascending eastward at the point of accident.

The main track structure in the vicinity of the point of accident consists of 113-pound rail, 39 feet in length, laid new in 1947 on an average of 24 treated ties to the rail length. It is fully tieplated with double-shoulder tie plates, single spiked, and is provided with 4-hole, 28-inch joint bars, and an average of 12 rail anchors per rail. It is ballasted with crushed rock to a depth of 12 inches below the bottoms of the ties.

The track structure of the siding in the vicinity of the point of accident consists of 112-pound rail, 39 feet in length, relaid in 1956 on an average of 22 treated ties to the rail length. It is fully tieplated with double-shoulder tie plates, single spiked, and is provided with 4-hole 26-inch joint bars. It is ballasted with gravel to a depth of 6 inches below the bottoms of the ties.

Automatic signal 7184 and semi-automatic signal 56R governing eastbound movements on the main track are located, respectively, 2.36 miles west, and 3,715 feet west of the point of collision. Semi-automatic signals 58L and 56LA governing westbound movements on the main track are located, respectively, 2,873 feet east, and 3,403 feet west of the point of collision. These signals form part of a traffic-control system.

The aspects applicable to this investigation, and the corresponding indications and the names are as follows:

Signal	Aspect	Indication	Name
7184 58L	Yellow	PROCEED NOT EXCEEDING MEDIUM SPEED, PREPARED TO STOP SHORT OF NEXT HOME SIGNAL	APPROACH SIGNAL YELLOW
56R	Red over green	PROCEED ON DIVERGING ROUTE	BLOCK SIGNAL GREEN FOR DIVERGING ROUTE
58L	Green	PROCEED	BLOCK SIGNAL GREEN
56LA	Red	STOP	HOME SIGNAL RED

The control circuits are so arranged that when an eastbound train enters the siding at Hogup at the west switch, and the block of signal 58L is unoccupied, signal 58L displays a Yellow aspect and signal 56LA displays a Red aspect

The carrier's operating rules read in part as follows

DEFINITIONS

SPEEDS

Medium Speed A speed not exceeding forty miles per hour

827 * * *

Trainmen must be in position to observe their trains while running, particularly while rounding curves * * *

* * * Where stops are made for other reasons, inspection of trains must be made as often as practicable * * *

Inspection should include running gear, bearings, * * * If defects are discovered they should be corrected if possible, and cars unsafe to run must be set out * * * Special attention must be given to hot bearings

* * *

In the vicinity of the point of accident the maximum authorized speed for passenger trains is 79 miles per hour, and for freight trains 60 miles per hour. However, it is restricted to 20 miles per hour through the turnout and on the siding at Hogup

Description of Accident

Extra 6349 East, an eastbound freight train, consisted of diesel-electric units 6349 and 8219, coupled in multiple-unit control, 87 cars, and a caboose. This train departed from Carlin at 2 45 p m, passed Wells, the last open office, 73 miles east of Carlin, at 6 27 p m, passed signal 7184 which displayed a Yellow aspect, passed signal 56R which displayed a Red-over-Green aspect, entered the siding at Hogup, and while moving at a speed of 17 miles per hour, as indicated by the tape of the speed-recording device, the rear truck of the 17th car became derailed at a point 126 feet east of the west switch of the siding. While the train was moving at a speed of 10 miles per hour the 18th and 19th cars became derailed at the spur track switch. Derailed equipment obstructed the main track and shortly after this equipment was struck by No. 27.

No. 27, a westbound first-class passenger train, consisted of diesel-electric units 6022 and 5915, coupled in multiple-unit control, 1 refrigerator-express car, 2 baggage cars, 3 refrigerator-express cars, 1 baggage car, 1 baggage-dormitory car, 2 sleeping cars, 1 dome-lounge car, and 5 coaches, in the order named. The 8th to the 15th cars, inclusive, were of lightweight construction. The other cars were of conventional all-steel construction, with the exception of the 6th car which had a wooden superstructure on a steel underframe. The 1st, 4th, 5th, and the 9th to the 15th cars, inclusive, were equipped with tightlock couplers. This train departed from Ogden at 8 59 p m, passed signal 58L which displayed a Green aspect, and while moving at a speed of 30 miles per hour, as indicated by the tape of the speed-recording device, it struck derailed equipment of Extra 6349 East.

Extra 6349 East stopped with the rear end of the 17th car about 180 feet east of the spur track switch. The rear truck was torn from the car. The 18th car stopped upright with the front end on the main track about 130 feet east of the spur track switch and the rear end on the siding. This car was struck by No. 27 and was heavily damaged. The other derailed cars stopped on or near the track structure and were somewhat damaged. The 1st diesel-electric unit of No. 27 stopped on its left side, south of the main track, with the front end about 165 feet west of the point of collision. The 2nd unit, leaning at an angle of about 45 degrees, stopped south of the main track and it remained coupled to the 1st unit. Separations occurred at both ends of the 2nd car. The 1st and 2nd cars stopped upright, across the main track. The diesel-electric units were somewhat damaged. The 1st car was somewhat damaged and the 2nd car was slightly damaged.

The engineer and fireman of No. 27, and a brakeman, who was in a car of the train and not on duty, were injured.

The weather was clear at the time of the accident, which occurred about 10 23 p. m.

The 17th car of Extra 6349 East was SP 401144, an all-steel covered hopper car built in March 1957. It is 35 feet 3 inches long, 10 feet 2 inches wide, and 13 feet high. The trucks are spaced 25 feet 3 inches between centers. The lightweight, nominal capacity, and load limit are, respectively, 50,700 pounds, 140,000 pounds, and 159,300 pounds. When the accident occurred the car was loaded with cement. The weight of the lading was 150,880 pounds. The trucks are of the 4-wheel type with 6-inch by 11-inch journals, 33-inch one wear wrought-steel wheels, and cast-steel side frames with integral journal boxes. The journal boxes were equipped with waste packing and packing retainers.

Discussion

As Extra 6349 East was approaching the point where the accident occurred, the enginemen and the front brakeman were in the control compartment at the front of the locomotive. The conductor, the swing brakeman, and the flagman were in the caboose. The brakes of this train had been tested and had functioned properly when used en route. The headlight was lighted brightly. Signal 7184 displayed a Yellow aspect and the engineer reduced the speed of the train to comply with the signal indication. Signal 56R displayed a Red-over-green aspect indicating that the train was to enter the siding at Hogup. The fireman said that he first saw fire being emitted from a journal box of approximately the 20th car in the train when the locomotive was about 4,000 feet west of the west switch of the siding, and that he so informed the engineer. The engineer decided to clear the main track before stopping the train to attend to the journal. The speed of the train was reduced to 17 miles per hour as it entered the siding and was further reduced to 10 miles per hour as it proceeded on the siding. The front brakeman assembled equipment for servicing the defective journal and alighted from the locomotive on the north side as the train proceeded on the siding. Shortly thereafter he observed sparks under one of the cars and heard the noise of derailed wheels on the ties. He immediately gave stop signals with his lantern to the enginemen. Before the engineer could take action to stop the train, the brakes became applied in emergency as a result of the general derailment. The front brakeman then observed the headlight of No. 27 approaching from the east. He proceeded to the main track and gave stop signals which were acknowledged by the engineer of No. 27 shortly before that train struck derailed equipment of Extra 6349 East. The conductor of Extra 6349 East said that as the caboose passed a point on the siding about 170 feet east of the west siding-switch, he observed what appeared to be ties burning along the north rail of the siding. He alighted from the caboose for a closer inspection of the fire and found journal packing burning. He said that the derailment occurred while he was examining this burning material.

As No 27 was approaching the point where the accident occurred the speed was about 70 miles per hour. The enginemen were in the control compartment of the first diesel-electric unit, and the members of the train crew were in various locations in the cars of the train. The brakes had been tested and had functioned properly when used en route. The headlight was lighted brightly. Signal 58L displayed a Yellow aspect, and the engineer initiated a brake application to comply with the signal indication. Before No 27 passed the signal, its aspect changed to Green and the engineer then released the brakes. The speed of the train was about 54 miles per hour at that time. The engineer dimmed the headlight in deference to the train on the siding. The enginemen said that when No 27 was about 500 feet from the head end of Extra 6349 East, the red oscillating headlight of the locomotive of Extra 6349 East began to function. The engineer immediately made an emergency application of the brakes. He said that he then observed stop signals being given by someone in the vicinity of what appeared to be a car fouling the main track. He said that it was not possible to see the obstruction clearly as the headlight was on dim, and that he did not have sufficient time to place the headlight on bright. The speed of the train was reduced to 30 miles per hour when the collision occurred.

Examination of the track structure of the siding after the accident disclosed that from a point 126 feet east of the west siding switch, to the switch of the spur track, flange marks appeared on the ties along the south side of the rails. Marks were also found on the outside of the head of the south rail and on the tops of several joint bars indicating that a pair of wheels had become derailed. East of the spur track switch, where the general derailment occurred, the siding and the main track were destroyed throughout a distance, respectively, of about 200 feet and 240 feet.

Examination of the equipment after the accident occurred disclosed that the left front journal of the rear truck, at location R-3, of SP 401144, the 17th car, had broken, and that the truck side-frame had dropped sufficiently to be in contact with the track structure. The stub of the journal had been in contact with the journal box and had worn through the top. The truck was apparently torn loose from the car when it came in contact with the track structure at the spur-track switch. The detached portion of the failed journal was warm when found inside the journal box after the accident. The journal bearing, the wedge, and journal box packing were missing from the box, and the bearing and the wedge were not found. The other journal boxes of the car were inspected and found to be in good condition.

The failure of the journal involved consisted of an irregular break extending from locations 7-1/8 inches to 8-5/8 inches from the collar. The specified dimensions of the journal were 6 inches by 11 inches. The actual diameter at a point adjacent to the collar and at the point of failure was 5-13/16 inches. The end of the journal remaining attached to the wheel assembly was worn and ridged by contact with the journal box.

The journal boxes on this car were provided with waste packing and were equipped with packing retainers. They were last packed at Butler, Pa., in March 1957. This car was loaded at Redwood Harbor, Calif. The journal boxes were last serviced at Roseville, Calif., 614.1 miles west of the point of accident, at which point no defective conditions were found. The train was inspected at Carlin, Nev., by car inspectors as it arrived and departed. A member of the crew also inspected the train as it departed from Carlin. At Moor, 81.9 miles east of Carlin, the swing brakeman inspected the south side of the train. At Pigeon, 150.8 miles east of Carlin, the front brakeman inspected the first 30 cars. The members of the crew said that they made frequent observations of the train en route. No defective conditions were observed on the train until immediately before the derailment occurred.

Cause

This accident was caused by a broken journal, and a derailed car obstructing the main track in front of an approaching train

Dated at Washington, D C , this twenty-third
day of January, 1959

By the Commission, Commissioner Freas

(Seal)

Harold D McCoy,

Secretary

Interstate Commerce Commission
Washington 25, D. C.
OFFICIAL BUSINESS
RETURN AFTER FIVE DAYS

POSTAGE AND FEES PAID
INTERSTATE COMMERCE COMMISSION