

REPORT OF THE CIVIL AERONAUTICS BOARD  
of the  
Investigation of an Accident Involving Aircraft in  
Air Carrier Operation

A Douglas DC-3 aircraft, NC 17332, owned and operated by American Airlines, Inc., received minor damage in an accident which occurred at about 9:17 p.m. on February 5, 1942, at the Municipal Airport, Little Rock, Arkansas. No injuries were sustained by any of the seven passengers or the crew of three. The crew consisted of Captain Sheldon T. Shoff, First Officer Herbert L. Gray, both of whom were properly certificated and appropriately rated, and the stewardess, Gracia North.

The flight, designated by American Airlines as Trip 23-11, originated at New York, New York, with Fort Worth, Texas, as its destination. Several intermediate stops were made enroute, including one at Memphis, Tennessee. At 7:51 p.m. the trip departed from Memphis, with 360 gallons of gasoline, for Little Rock, Arkansas, on a flight plan which gave Memphis as the alternate.

The flight proceeded normally until it had passed over Brinkley, Arkansas, which is located about 60 miles east-northeast of Little Rock. The trip then began to encounter rain and turbulence which became increasingly severe as it approached Little Rock. After several attempts the crew made a radio contact with the Little Rock ground station at about 8:45. They were advised that a thunderstorm was in progress over the airport. By that time they had entered an area of severe turbulence and lightning, accompanied by heavy rain and hail. At about 8:55 they passed over the Little Rock Range Station, and, in order to get out of the storm, proceeded on southwest. In the vicinity of Benton, Arkansas, the flight broke out into clear weather. Captain Shoff circled between Benton and Little Rock for approximately 12 minutes, waiting for the storm to leave the vicinity of the field.

At 9:12 the captain decided that a landing could be made, and was informed by the company station that the wind was west-southwest 8 m.p.h. While lining up for an approach to the south on the north-south runway, he observed that the airplane was drifting considerably to the left. At this point the ground station advised him that the wind had shifted to west-10; fifteen seconds later it had shifted to west-northwest-12. The captain decided not to continue with the approach to the south but to swing around in a wide arc, coming in from the southeast on the northwest-southeast runway. About the time the trip passed over the field, it was advised that the wind had changed to northwest-12 and was quite variable. Illuminated by frequent lightning flashes, the runway was plainly visible. The air was turbulent, and at one point, while 150 feet off the ground, the airplane was thrown to the right by an exceptionally severe gust. Shoff realigned the aircraft with the runway and crossed the southeast end at about 20 feet altitude with an indicated air speed of 90 m.p.h. The throttles were closed, and the airplane continued to descend until it touched the ground in a normal wheel landing about one-quarter of the way down the 4100-foot runway. After it had rolled about 1000 feet and just after the tail

wheel had touched the ground, the ship ballooned to about 10 feet off the ground and floated for a distance of approximately 1000 feet. When the ship again made contact with the runway, the captain applied brakes, but without effect. The new asphalt runway, slick with water from the preceding rain, offered practically no traction to the wheels. Shoff attempted to groundloop to the left, but to no avail, and the airplane ran off the end of the runway, crossed a small intervening strip of sod, hit a wire fence at the end of the field, and came to rest astride the fence with its right wheel in a ditch.

Subsequent investigation revealed that the brakes were in good mechanical condition. The wheel tracks made by the airplane on the runway, however, show that the only time the brakes had been effective was when the airplane crossed a concrete strip about 175 feet in width at the end of the runway. This was insufficient to do more than slow the plane down. Ceiling and visibility in the vicinity were above the required minimums, but wind conditions were abnormal. A small tornado had passed through the business section of Little Rock, about 2½ miles from the airport, approximately a half-hour before the accident and had caused considerable damage, although the Weather Bureau, some nine blocks away from the path of the tornado, recorded no winds of unusual velocity.

PROBABLE CAUSE: Poor brake reaction due to slippery runway surface.

CONTRIBUTING FACTOR: Gusty wind on ground, causing airplane to balloon.

BY THE BOARD

/s/ Darwin Charles Brown  
Secretary