

October 31, 1935.

REPORT OF THE ACCIDENT BOARD  
BUREAU OF AIR COMMERCE

Statement of probable cause concerning an accident which occurred to an airplane of United Air Lines Transport Corporation on October 7, 1935, near Cheyenne, Wyoming

To the Director of Air Commerce

On October 7, 1935 at approximately 2 19 a.m., at a point about 10 miles west northwest of the airport at Cheyenne, Wyoming, an airplane of United States registry, piloted by licensed airmen, while being flown in scheduled interstate operation carrying passengers, mail and express, unexpectedly contacted the ground with resultant death to all on board and the complete destruction of the aircraft.

The airplane, a Boeing, model 247-D, had been regularly inspected by the Department of Commerce on August 13, 1935 and bore Department of Commerce license number NC-13317. It was owned by the United Air Lines Transport Corporation and at the time of the accident was being operated on the Salt Lake City-Cheyenne division of that corporation's transcontinental route. The pilot, H. A. Collison, held the necessary Department of Commerce transport pilot's license and scheduled air transport rating. He had satisfactorily passed a physical examination for the renewal of his license on September 30, 1935. The co-pilot, G. E. Batty, held a Department of Commerce transport pilot's license. The stewardess was Miss Leona S. Mason. The passengers on board were as follows

Vincent Butler, San Francisco  
J. R. Hillman, Pittsburgh  
J. Cushing, Chicago  
C. H. Miner, Chicago  
Helen Warren, Chicago  
Roy Bane, Denver  
C. H. Mathews, Pittsburgh  
R. E. Renebome, Piedwood City, Calif  
Carolyn Cathcart, Portland, Ore.

The following is a summary of the facts, conditions and circumstances relating to the accident, at the end of which appears a statement of the probable cause of same as found by the Board which analyzed the record.

This flight, scheduled as Trip 4 of October 6th out of Oakland, Calif., was dispatched from Salt Lake City for Cheyenne at 12 07 a.m. on October 7, 1935, with full tanks of fuel (275 gal.). The weather was practically clear and unlimited and, therefore, was definitely favorable for the flight. Normal radio contacts were made throughout the flight, the last one being a contact at 2 16 or 2 17 a.m. by Co-pilot Batty with Cheyenne, giving the airplane's position as "Silver Crown", which is approximately 3 miles west of the point where the accident occurred. Cheyenne called the plane at 2 21 a.m. and received no reply, which establishes the time of the accident at between 2 17 and 2 21 a.m.

Investigation disclosed that the airplane, while on the direct radio course to the Cheyenne airport and while flying in a normal, slightly descending path, had first collided with the ground just a few feet below the top of a small knoll tearing out both engines and engine nacelles. From here it had rebounded and continued through the air for a distance of 1120 feet, where it came to rest.

Marks on the ground at the point of first contact, made by the propellers, fuselage and engines, indicate that the airplane struck in a normal flying attitude. Marks made by the propellers and damage incurred by the propellers and internal parts of the engines indicate that both engines were running at normal speed. A knoll 3 feet higher and 60 feet away, which had to be crossed just prior to reaching the point of first contact, was not touched by the airplane, establishing that the plane was descending. This descent could have been the result of a slight change in the balance of the airplane not immediately noticed by the pilot. However, considering all factors, it seems more likely that the pilot was executing a power glide to the airport with the plane in normal flight attitude for that purpose.

A careful study of the wreckage failed to disclose any evidence of mechanical failure prior to the accident. Evidence that the airplane was in good mechanical condition was provided in a radio report by the crew to Cheyenne about five minutes before the accident, to the effect that the airplane was functioning satisfactorily and could be used for the continuation of the trip east of Cheyenne, if desired. Also, entries made in the airplane log by the co-pilot during this flight indicated definitely that the airplane, engines, instruments and radio were functioning satisfactorily.

That no landing was being attempted at this point is indicated by the fact that the landing gear was found to be in full retracted position, both engines were running at normal speed and neither landing flare had been used. The plane was in such a damaged condition as a result of the second contact with the ground that the position of the switches or controls as found could not be taken as definite proof of their position prior to the accident.

All indications are that the pilot was flying on instruments at the time of the accident. A log book entry made by the co-pilot credited the pilot with one hour of instrument flying, which may or may not have been completed at the time this entry was made. The rheostat controlling the cockpit lights was in full bright position which is usual when flying at night by instruments. The radio was tuned on the Cheyenne station with the volume turned low, as would be the case in an instrument approach, and the airplane was directly on the radio course.

Whether or not the pilot was flying entirely on instruments, the question still arises as to why he was flying so close to the ground at the point of first contact with the ground. It is possible that the co-pilot in giving their position as "Silver Crown" could have done so having observed that the airplane was approaching Silver Crown. The pilot, hearing this over the interphones, might have taken this literally and started losing altitude faster or sooner than he should have from actual location. Another possibility is that the pilot misread his altimeter and as a consequence was actually flying at a much lower altitude than he believed. An additional 1,000 feet of altitude at the point of the accident would have placed the airplane in suitable position for a normal power glide to the airport for a landing.

It is the opinion of the Accident Board that the probable cause of this accident was an error on the part of the pilot in judging his altitude or his distance from the airport, or both.

ACCIDENT BOARD

Jesse F. Lankford,  
Secretary