



# National Transportation Safety Board Aviation Accident Final Report

---

<b>Location:</b>	Cloudcroft, NM	<b>Accident Number:</b>	DEN04LA017
<b>Date &amp; Time:</b>	11/01/2003, 1157 MST	<b>Registration:</b>	N9864F
<b>Aircraft:</b>	Cessna 172R	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	2 Serious, 1 Minor

**Flight Conducted Under:** Part 91: General Aviation - Instructional

---

## Analysis

The airplane was flying through a valley when the pilot unexpectedly encountered rapidly rising terrain. The valley that the accident airplane went through, gains approximately 3,000 feet over 5 statute miles. The pilot was forced to turn sharp to the right and could not maintain altitude. The airplane impacted into a heavily forested area, destroying the airplane and causing serious injury to the pilot receiving instruction and the flight instructor on board.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the dual student's failure to maintain clearance from the terrain. Also causal was the flight instructor's inadequate supervision. Low altitude flight and rising terrain are contributing factors.

## Findings

---

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: CLIMB

### Findings

1. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - DUAL STUDENT
2. (F) LOW ALTITUDE FLIGHT/MANEUVER
3. (F) SUPERVISION - INADEQUATE - PILOT IN COMMAND(CFI)
4. CLIMB - NOT ATTAINED - DUAL STUDENT
5. (F) OBJECT - TREE(S)
6. TERRAIN CONDITION - MOUNTAINOUS/HILLY

## Factual Information

On November 1, 2003, at approximately 1157 mountain standard time, a Cessna 172R, N9864F, operated by Hesston College, was destroyed following impact with terrain during climb near Cloudcroft, New Mexico. The commercial certificated flight instructor and private pilot receiving instruction were seriously injured, and a private pilot passenger received minor injuries. Visual meteorological conditions prevailed. The mountain flying training flight was being conducted under the provisions of Title 14 CFR Part 91. The flight originated from Las Cruces, New Mexico, at approximately 1100 and was en route to Roswell, New Mexico.

The airplane was one of three airplanes participating in a mountain flying training program. According to the accident report submitted by the college, the flight was proceeding through a valley, en route to Roswell. The terrain "rose up unexpectedly." The valley that the accident airplane was in, rises approximately 3,000 feet in 5 statute miles. According to the college, the airplane was unable to climb fast enough to clear the rising terrain. The airplane turned sharp to the right but was unable to maintain terrain separation. The airplane made a forced landing in a heavily forested area in Lincoln National Forest. During the forced landing, the airplane impacted several trees, separating both wings and the left horizontal stabilizer. The airplane came to rest inverted.

The calculated density altitude at the accident site was approximately 10,380 feet. According to the Cessna Pilot Operating Handbook, the service ceiling of the C172R is 13,500. The maximum gross weight is 2,450 pounds and the actual weight of the accident airplane was calculated to be 2,424 pounds. Based on these conditions, the maximum rate of climb was 200 feet per minute.

### Flight Instructor Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	23, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Single-engine; Instrument Airplane	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	09/04/2002
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	04/05/2003
<b>Flight Time:</b>	932 hours (Total, all aircraft), 385 hours (Total, this make and model), 853 hours (Pilot In Command, all aircraft), 35 hours (Last 90 days, all aircraft), 30 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

## Student Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	19, Male
<b>Airplane Rating(s):</b>	Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	08/07/2003
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	08/26/2003
<b>Flight Time:</b>	75 hours (Total, all aircraft), 74 hours (Total, this make and model), 28 hours (Pilot In Command, all aircraft), 19 hours (Last 90 days, all aircraft), 8 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N9864F
<b>Model/Series:</b>	172R	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	17280091
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	10/21/2003, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	2457 lbs
<b>Time Since Last Inspection:</b>	42 Hours	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3324 Hours at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	IO-360-L2A
<b>Registered Owner:</b>	Hesston College	<b>Rated Power:</b>	160 hp
<b>Operator:</b>	Hesston College	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	ALM, 4200 ft msl	Distance from Accident Site:	15 Nautical Miles
Observation Time:	1150 MST	Direction from Accident Site:	230°
Lowest Cloud Condition:	Clear	Visibility	10 Miles
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.96 inches Hg	Temperature/Dew Point:	20° C / 5° C
Precipitation and Obscuration:			
Departure Point:	Las Cruces, NM (LRU)	Type of Flight Plan Filed:	VFR
Destination:	Roswell, NM (ROW)	Type of Clearance:	None
Departure Time:	1100 MST	Type of Airspace:	Class G

## Wreckage and Impact Information

Crew Injuries:	2 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	2 Serious, 1 Minor	Latitude, Longitude:	32.976111, -105.738611

## Administrative Information

Investigator In Charge (IIC):	James F Struhsaker	Report Date:	06/02/2004
Additional Participating Persons:	JD Huss; FAA FSDO; Albuquerque, NM		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).