



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	CONCHAS, NM	<b>Accident Number:</b>	FTW96LA366
<b>Date &amp; Time:</b>	08/30/1996, 1830 MDT	<b>Registration:</b>	N55HU
<b>Aircraft:</b>	Cessna 421B	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	3 Serious
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

At 1615, the pilot called FSS for a weather briefing and to file an IFR flight plan. He was told that there was thunderstorm activity, which was building in intensity, extending from Raton, New Mexico, to Garden City, Kansas, with some scattered activity in the Oklahoma panhandle. The briefer further reported that the thunderstorm activity was moving east, southeast. The pilot checked in with Albuquerque Center at 1750 during his departure climb to 21,000 feet. At 1755, convective SIGMET 70C was issued for isolated severe thunderstorms located 10 miles north, northeast, of Las Vegas, New Mexico. FAA Order 7110.65J, Air Traffic Control, section 2-6-2, states that 'controllers shall advise pilots of hazardous weather that may impact operations within 150 NM of their sector or area of jurisdiction.' SIGMET 70C was not given to the pilot by the center controller. Radio contact was lost at 1823. The pilot reported that the airplane was in VMC, approaching precipitation, when they encountered hail and the pilot's windshield was broken out which resulted in the airplane's depressurization.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadvertent flight into hail which shattered the pilot's windshield and resulted in his incapacitation due to hypoxia.

## Findings

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Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE

### Findings

1. HAZARDOUS WEATHER ADVISORY - NOT ISSUED - ATC PERSONNEL(ARTCC)
  2. WEATHER CONDITION - THUNDERSTORM
  3. (C) WEATHER CONDITION - HAIL
  4. (C) FLIGHT INTO ADVERSE WEATHER - INADVERTENT - PILOT IN COMMAND
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Occurrence #2: DECOMPRESSION

Phase of Operation: CRUISE

### Findings

5. WINDOW, FLIGHT COMPARTMENT WINDOW/WINDSHIELD - FAILURE, TOTAL
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Occurrence #3: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: DESCENT - UNCONTROLLED

### Findings

6. AIRCRAFT CONTROL - NOT POSSIBLE - PILOT IN COMMAND
  7. (C) INCAPACITATION(ANOXIA/HYPOXIA) - PILOT IN COMMAND
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Occurrence #4: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

On August 30, 1996, at 1830 mountain daylight time, a Cessna 421B, N55HU, was destroyed during an encounter with hail and the subsequent uncontrolled landing near Conchas, New Mexico. The instrument rated private pilot and two passengers were seriously injured. The airplane was registered to and operated by Kiowa Service Inc., under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the cross country flight that originated from Albuquerque International Airport, Albuquerque, New Mexico, approximately 54 minutes before the accident. An IFR flight plan had been filed with the destination of Alva Municipal Airport, Alva, Oklahoma.

According to FAA Flight Service Station (FSS) recordings, the pilot called for the weather and to file a flight plan on his cell phone. The pilot was surprised to discover that he had called McAlester FSS in Oklahoma and not the nearby FSS in Albuquerque, New Mexico, because of the preprogramming of his cell phone.

At 1615, McAlester FSS briefed the pilot that there was thunderstorm activity, building in intensity, extending from Raton, New Mexico, to Garden City, Kansas, with some scattered activity in the Oklahoma pan-handle. The briefer further reported that the thunderstorm activity was moving east, southeast, with winds at 18,000 feet to 24,000 feet generally from 320 degrees at 25 knots. No SIGMETs were in effect for the route of flight at this time. The pilot then filed an IFR flight plan with McAlester FSS for the 2.5 hour flight at 19,000 feet and an airspeed of 180 knots.

According to Albuquerque ARTCC Center recordings, the pilot checked in with ABQ Center at 1750 and the airplane leveled off at 21,000 feet at approximately 1805. Approximately 14.5 minutes later, the pilot was approved to descend to 19,000 feet. The Albuquerque Center recordings indicate that no SIGMET information was given to the pilot. At 1823, Albuquerque Center lost radio contact with the accident airplane.

At 1755, convective SIGMET 70C was issued for weather located 10 miles north, northeast, of Las Vegas, New Mexico, which was valid until 1955. SIGMET 70C was for isolated severe thunderstorms, with 20 mile diameters, moving from 010 degrees at 15 knots, and tops above 45,000 feet. FAA Order 7110.65J, Air Traffic Control, section 2-6-2, states that "controllers shall advise pilots of hazardous weather that may impact operations within 150 NM of their sector or area of jurisdiction."

The pilot reported to the IIC that there were "some clouds" approximately 50 to 60 miles in front of the airplane. He further stated in his written report: "I then turned on the onboard radar scope and could see precipitation to the left and to the right of our path. However, the center area, probably 15 to 20 miles wide was clear on the scope. This was the area that I had planned to go through the clouds. They did not appear to be dark thunderstorms, only clouds like I had flown through many times before. Before we had reached those clouds, about 10 miles before, is when we encountered hail. It first appeared as like rain, then within one minute of first encounter, a large piece of ice broke through the left windshield."

The passenger in the right front seat was a private pilot without a multiengine or instrument rating. In his written statement he reported that the pilot "had the on-board radar on, which did not indicate strong storms directly in our flight path. It showed rain on both sides, but just a small ring of rain in front." He further reported that the "large (approximately 2 inches) hail

blew out the pilot's windshield and dazed the pilot." He stated that the pilot then put his head in his lap to avoid further injury and "he took over the controls" and attempted to "keep the wings level." The passenger further stated that he "never felt dizzy or light headed." The next thing he remembered was the back seat passenger trying to wake him up on the ground. He stated that he "was still in the co-pilot's seat, buckled in."

The passenger in the back seat stated that "he did not remember anything about the crash landing. When I came around, all was quiet." At first he had trouble getting his breath, and then he attended to his two unconscious friends in the front seats. Next, the back seat passenger opened the airplane door and walked an estimated 3/4 of a mile to "see if possibly there was someone close by." He then returned to the airplane and located a battery pack for the cell phone. The back seat passenger then dialed 911 and established contact with the sheriff's department in Tucumcari, New Mexico.

The Tucumcari sheriff's department was in contact with a United States Air Force search-and-rescue Hercules C-130 airplane which was already homing in on the accident airplane's Emergency Locator Beacon. The back seat passenger gave further guidance to the C-130 airplane in locating their position. Because of the remoteness of the accident site, the darkness, and the heavy rains, it took emergency personnel approximately 4 hours to reach the accident airplane. Approximately two hours later, two Emergency Medical Service helicopters arrived at the accident site to transport the injured pilot and his passengers to the nearest hospital.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	60, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--w/ waivers/lim.	<b>Last FAA Medical Exam:</b>	07/11/1996
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2934 hours (Total, all aircraft), 67 hours (Total, this make and model)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N55HU
Model/Series:	421B 421B	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	421B0014
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	10/15/1995, Annual	Certified Max Gross Wt.:	6800 lbs
Time Since Last Inspection:	15 Hours	Engines:	2 Reciprocating
Airframe Total Time:	2700 Hours	Engine Manufacturer:	Lycoming
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	GTSIO-520-H
Registered Owner:	KIOWA SERVICE, INC.	Rated Power:	375 hp
Operator:	KIOWA SERVICE, INC.	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	, 0 ft msl	Distance from Accident Site:	0 Nautical Miles
Observation Time:	0000	Direction from Accident Site:	0°
Lowest Cloud Condition:	Unknown / 0 ft agl	Visibility	40 Miles
Lowest Ceiling:	Unknown / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	ALBUQUERQUE, NM (ABQ)	Type of Flight Plan Filed:	IFR
Destination:	ALVA, OK (3K1)	Type of Clearance:	IFR
Departure Time:	1736 MDT	Type of Airspace:	Class A

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Serious	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Serious	Latitude, Longitude:	

## Administrative Information

**Investigator In Charge (IIC):** JAMES F STRUHSAKER **Report Date:** 02/02/1998

**Additional Participating Persons:** JEFFREY D HUSS; 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 [pubinq@ntsb.gov](mailto:pubinq@ntsb.gov), or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

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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](#).