



# Aviation Investigation Final Report

---

<b>Location:</b>	DANIELSVILLE, Pennsylvania	<b>Accident Number:</b>	NYC95FA162
<b>Date &amp; Time:</b>	July 18, 1995, 03:48 Local	<b>Registration:</b>	N72546
<b>Aircraft:</b>	CESSNA 140	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal, 1 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

---

## Analysis

The flight departed at night with the pilot/owner and a pilot-rated passenger aboard. They were sharing flight duties on the third of a series of flights together, after the pilot rated passenger performed pilot duties on the second flight. Low clouds and fog prevailed; however, no weather briefing was obtained, other than checking the ATIS of a nearby airport. The pilots were receiving VFR advisories, and proceeding toward an uncontrolled airport located near a ridge that was higher in elevation than the altitude of the airplane. According to the pilot, the passenger was flying the aircraft, and they were navigating by dead reckoning. The approach controller asked the pilot if she was familiar with 'the ridge just to the north of slatington.' She replied that she was, but could not see it. As the flight continued, she was given the relative bearing and distance to the airport twice. After the second advisory, engine power was increased, and a turn toward the airport was initiated. However, the airplane collided with wooded/rocky terrain at the top of a mountain, about 3-1/2 miles northeast of the airport. Nearby at Allentown, the ATIS reported 400 ft scattered, 1100 ft overcast, visibility 6 miles with fog. The terminal forecast called for 400 ft broken, 5 miles visibility with fog, occasionally visibility 2 miles with fog.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The flight crew's improper in-flight planning/decision, and failure to maintain adequate clearance (or altitude) from mountainous terrain. Factors relating to the accident were: darkness, fog, low clouds, and the high terrain.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: APPROACH

### Findings

1. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - FLIGHTCREW
2. (F) LIGHT CONDITION - DARK NIGHT
3. (F) WEATHER CONDITION - LOW CEILING
4. (F) WEATHER CONDITION - FOG
5. (F) TERRAIN CONDITION - HIGH TERRAIN
6. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - FLIGHTCREW

## Factual Information

### HISTORY OF FLIGHT

On July 18, 1995, about 0348 eastern daylight time, a Cessna 140, N72546, struck trees in Danielsville, Pennsylvania. The commercial pilot received serious injuries, and the pilot-rated passenger was fatally injured. The airplane was destroyed. Visual meteorological conditions prevailed, and no flight plan had been filed for the flight which was conducted under 14 CFR Part 91, and had departed from Reading, Pennsylvania, about 0325.

The accident flight was the last of three flights that involved the pilot and passenger.

The first flight began on the afternoon of July 17, 1995, when the pilot of N72546, flew from Slatington, to Reading, with the passenger onboard.

The second flight began at Reading, when the pilot of N72546, boarded a Cessna 310, as a passenger on a multiple leg flight, while the passenger performed the duties of pilot. She reported that while on approach to Reading, which was the last flight in the Cessna 310, the Allentown Airport Terminal Information Service (ATIS) was checked. Allentown which was located 10 NM from Slatington, on a heading of 145 degrees magnetic, was the closest weather observation point.

Allentown Information India, which was active from 0250 through 0345, reported the following: scattered clouds at 400 feet, a measured ceiling of 1,100 feet overcast, visibility of 6 miles with fog, temperature 71 degrees F, and dewpoint 71 degrees F, altimeter 29.80.

After the Cessna 310 landed at Reading, the third flight began when the occupants boarded N72546, for the flight to Slatington. The pilot occupied the left seat and performed the takeoff, while a passenger occupied the right seat.

At 0330, Allentown Approach Control Radar identified the flight in the vicinity of Kutztown, Pennsylvania, after the pilot reported that she was at an altitude of 1100 feet, and requested flight following to Slatington. Additionally, she reported that the passenger became the operator of the flight controls; however, she continued to talk on the radio.

At 0346:23, approach control transmitted, "cessna five four six slatington ten o'clock three miles," which was acknowledged by the pilot. A few seconds later, the controller transmitted, "cessna five four six are you familiar with the ridge just to the north of slatington." The pilot replied, "ah yes i am but ah you can make sure we'd steer clear of that." She then added, "can't see the ah tops of the ridge."

At 0347:56, the controller transmitted, "cessna five four six roger and slatington's about ah your eight O'clock and two miles." This was acknowledged by the pilot, after which no further transmissions were received.

The airplane struck trees on the top of Blue Mountain, at an elevation of 1450 feet MSL, about 3 1/2 NM northeast of Slatington Airport, on a bearing of 060 degrees magnetic. The pilot extricated herself from the airplane and walked about 1 mile to a road, where emergency personnel were notified. The passenger was found inside the airplane, fatally injured.

When interviewed, the pilot reported that after the 2nd position report from approach control (Slatington at 8 o'clock, 2 miles), that she wanted to climb, and the passenger, who was the operating the flight controls, wanted to turn toward Slatington. Power was added, and a left turn was initiated, after which the airplane struck trees. Additionally, the pilot reported that they were navigating by dead reckoning, and there were no problems with the engine or airplane.

The accident occurred during the hours of darkness at location 40 degrees, 48 minutes North and 75 degrees, 33 minutes West.

#### PERSONNEL INFORMATION

The pilot held a Commercial Pilot Certificate, for single and multi-engine land airplanes, and an instrument rating. She was issued an FAA 2nd Class Airman Medical Certificate, with no limitations, on November 1, 1994. According to her pilot log book, which was current through July 9, 1995, she had the following flight times:

Total Time	819.2 hours	Pilot-In-Command	743.4 hours	Night
Time	92.7 hours			

Additionally, she had owned N72546 for 2 1/2 years and based it at Slatington.

The passenger, held an Airline Transport Pilot Certificate, with airplane single and multi-engine land ratings. His pilot log book contained an entry dated June 25, 1995, which read, "First time flying the 140..." No other entries were found to indicate the pilot had additional experience in a Cessna 140, or had flown any tailwheel airplanes in the preceding 90 days at night.

#### WRECKAGE AND IMPACT INFORMATION

The airplane was examined at the accident site on July 18, 1995. The empennage was found lodged in a tree, about 15 feet above the ground, and the outboard 3 feet of the left wing was found 20 feet southwest of the empennage. The fuselage, which was heading 010 degrees, was laying inverted in a rock pile, and was located 110 feet from the empennage, on a

bearing of 310 degrees. The cabin roof was penetrated by rocks.

The throttle was in the mid-range position, the mixture was rich, and the carburetor heat was off. The magneto switch was off, and fuel selector was on the left tank.

Several flight control cables between the fuselage and empennage had failed with characteristics that were similar to tension overload. Other cables were still attached to their mounting brackets which had pulled away from their attach points. The aileron cables were not failed; however, the left aileron was attached to the wing with only the inboard aileron hinge.

Both blades of the propeller were bent forward, with the tips missing. Rotational scoring and leading edge impact damage was observed on both blades.

Both wings had leading edge impact damage. Additionally, the right wing spar was fractured outboard of the strut attach point.

#### MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was conducted on the pilot-rated passenger by S. Funke, M.D. Forensic Pathologist, for Northampton County, Pennsylvania, on July 18, 1995.

The pilot voluntarily released the results of her toxicological testing which was conducted by the Lehigh Valley Hospital, Allentown, Pennsylvania. Toxicological testing was conducted on the passenger by the FAA Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma. All results were negative for drugs and alcohol.

#### ADDITIONAL INFORMATION

##### Meteorological Information

The pilot reported that other than checking the Allentown ATIS, no weather check was accomplished. The terminal forecast for Allentown, issued at 2024 on July 17, 1995, called for,

Ceiling 2500 feet broken, visibility 5 miles with haze, winds from 220 degrees at 6 knots, occasionally ceiling 1000 feet, sky obscured 200 feet, rain showers, or thundershowers, and gusts to 35 knots.

The forecast was amended at 0224, on July 18, 1995, and called for:

Ceiling 400 feet broken, 4000 feet overcast, visibility 5 miles with fog, occasionally 400 feet scattered, ceiling 4000 feet overcast, visibility 2 miles with rain showers, or thundershowers, and fog.

The following hourly observations were recorded for Allentown:

July 17 2350 45 SCT M95 OVC 5RW-F 099/72/72/1709/983 July 18 0050 M1000 OVC 6 F 089/71/71/3605/980 July 18 0150 M4 BKN 1000 OVC 6F 092/71/71/0000/981 July 18 0250 4 SCT M11 OVC 6 F 088/71/71/0105/980 July 18 0350 4 SCT M10 OVC 6 F /71/71/3604/979

Additionally, the pilot reported that although she could see the lights from the town of Slatington prior to the accident, she could not see the runway lights. She also reported that after the accident she did not observe any fog.

#### Slatington Airport

The airport was located 10 NM from Allentown on a magnetic heading of 325 degrees, adjacent to, and north of the town of Slatington. Blue Mountain was a ridge that was orientated east/west, located about 1 mile north of the airport, and with peak elevations between 1400 and 1500 feet.

The airport was equipped with low intensity runway lighting and an airport rotating beacon, that were pilot controlled. The FAA had issued a NOTAM for inoperative runway lights on May 12, 1995, which was still in effect at the time of the accident. The lights were tested on July 19, 1995, with 5 clicks of the Slatington Airport UNICOM radio. Both the runway lights and rotating beacon illuminated.

A single runway, orientated 010/190 degrees, was situated next to the Lehigh River. Trees parallel to the runway, and located on the east side of the runway, obscured the accident site, from an observer standing next to the runway.

#### Wreckage Release

The airplane was released to the insurance adjustor, Mr. John Cooley, on July 19, 1995.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	24,Female
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	November 1, 1994
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	819 hours (Total, all aircraft), 500 hours (Total, this make and model), 743 hours (Pilot In Command, all aircraft), 300 hours (Last 90 days, all aircraft), 101 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N72546
<b>Model/Series:</b>	140 140	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	9716
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 1, 1994 Annual	<b>Certified Max Gross Wt.:</b>	1450 lbs
<b>Time Since Last Inspection:</b>	356 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	5100 Hrs	<b>Engine Manufacturer:</b>	CONTINENTAL
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	C-85
<b>Registered Owner:</b>	BETH ANN FIORANI	<b>Rated Power:</b>	85 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Night/dark
<b>Observation Facility, Elevation:</b>	ABE ,394 ft msl	<b>Distance from Accident Site:</b>	10 Nautical Miles
<b>Observation Time:</b>	03:50 Local	<b>Direction from Accident Site:</b>	150°
<b>Lowest Cloud Condition:</b>	Scattered / 400 ft AGL	<b>Visibility</b>	6 miles
<b>Lowest Ceiling:</b>	Overcast / 1000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	360°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	22°C / 22°C
<b>Precipitation and Obscuration:</b>	N/A - None - Fog		
<b>Departure Point:</b>	READING , PA (RDG )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	SLATINGTON , PA (69N )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	03:25 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>	SLATINGTON 69N	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	380 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>	1 Fatal	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal, 1 Serious	<b>Latitude, Longitude:</b>	40.780509,-75.510856(est)

## Administrative Information

**Investigator In Charge (IIC):** Hancock, Robert

**Additional Participating Persons:** MARTIN LYNN; ALLENTOWN , PA  
GENE MC COY; ALLENTOWN , PA  
BRIAN FINNEGAN; WICHITA , KS

**Original Publish Date:** February 27, 1996

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=38857>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).