



# Aviation Investigation Final Report

<b>Location:</b>	BIG LAKE, Alaska	<b>Accident Number:</b>	ANC98FA079
<b>Date &amp; Time:</b>	June 17, 1998, 18:10 Local	<b>Registration:</b>	N9982X
<b>Aircraft:</b>	Cessna 185	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

Witnesses reported seeing the airplane entering a steep right bank toward them from level flight about 300 feet above the ground. A commercial pilot witness in the group, who estimated the bank to be 120 degrees, said the airplane reversed direction, and leveled out prior to striking trees. Postaccident inspection disclosed no evidence of preimpact mechanical anomalies with the airplane. The pilot had moved to Alaska within the previous two weeks, and was described by his employer as excited to learn to be a bush pilot. He had accumulated six hours of experience with the owner in his float equipped 300 horsepower Cessna 185, all in the previous week.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's performance of a low level maneuver. Factors were the pilot's overconfidence in his personal ability, his lack of experience in the type of airplane, and his failure to maintain adequate clearance from terrain.

## Findings

Occurrence #1: ABRUPT MANEUVER  
Phase of Operation: CRUISE

### Findings

1. (C) LOW ALTITUDE FLIGHT/MANEUVER - PERFORMED - PILOT IN COMMAND

2. (F) OVERCONFIDENCE IN PERSONAL ABILITY - PILOT IN COMMAND
3. (F) LACK OF FAMILIARITY WITH AIRCRAFT - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: MANEUVERING

Findings

4. OBJECT - TREE(S)
5. (F) ALTITUDE/CLEARANCE - INADEQUATE - PILOT IN COMMAND

## Factual Information

### HISTORY OF FLIGHT

On June 17, 1998, about 1810 Alaska daylight time, a wheel equipped Cessna 185 airplane, N9982X, was destroyed when it impacted wooded terrain approximately five miles south of Big Lake, Alaska. The solo commercial pilot sustained fatal injuries. The flight was conducted under 14 CFR Part 91 as a personal flight. Visual meteorological conditions prevailed at the time of the accident, and a company flight plan was filed. The flight departed Merrill Field, Anchorage, Alaska, for Big Lake, about 1800, after dropping off two passengers.

A commercial pilot who was on the shore of the lake where the airplane came to rest, witnessed the accident. He told the NTSB investigator that he saw the airplane northbound about 300 feet above ground level. The witness said that when the airplane reached a position abeam the group of people he was with, it turned toward them and rolled into a right bank which exceeded 90 degrees. The witness said he could see the entire outline and top of the airplane, and estimated the angle of bank to be 120 degrees. The airplane descended, leveled out, and then contacted trees. It came to rest in a lake. The witness described the airplane as reversing direction almost 180 degrees during this descending turn.

The witness pilot, and another witness in the same group, both told the NTSB IIC that they heard the engine noise increase during the turn. The engine noise continued until impact. Both witnesses stated it appeared the plane turned toward their group as if to fly past them. None of the persons in the group knew the pilot.

### PERSONNEL INFORMATION

The pilot held a commercial pilot certificate with airplane single and multiengine land ratings. He also held an instrument and flight instructor rating for single engine airplanes. The pilot's second class medical certificate was issued on February 10, 1997 with no restrictions.

The pilot had relocated to Alaska two weeks prior to the accident, to fly as a pilot for the owner of the airplane, in support of the owner's guide service. According to the pilot's logbook, at the time of the accident, he had accumulated 746 total hours of flight experience. In the previous 90 and 30 days, he had flown 81 and 13 hours, respectively. During the previous week, the pilot had accrued six hours of experience in a float equipped Cessna 185.

Prior to relocating to Alaska, the majority of his experience was as a flight instructor in Cessna 120, Cessna 152, and Cessna 172 airplanes. He had accumulated 26 hours of experience in multiengine airplanes, 19 hours as a copilot in a Beech BE-100 King Air, and 7 hours in a Piper PA-34.

The owner of the airplane described the pilot as very enthusiastic, and excited at the opportunity to be an Alaskan bush pilot. He said the pilot had graduated from college during the prior month, and moved to Alaska as soon as he was able. The pilot's personal logbook cover was titled "The Professional Pilot's Logbook." This cover had been modified in pen to read "The Professional BUSH Pilot's Logbook."

#### AIRCRAFT INFORMATION

The airplane was powered by a Teledyne Continental Motors IO-520 engine rated to produce 300 horsepower. The owner had purchased the airplane one week prior to the accident. The owner had a buyer's inspection performed two weeks prior to the accident.

The airplane was manufactured on August 17, 1961, and had accumulated 10,579 hours in service at the time of the accident.

The maximum allowable weight of the Cessna 185 was 3,200 pounds. At the time of the accident, the estimated weight was 2,231 pounds.

The center of gravity was estimated by the NTSB IIC to be within the allowable range.

#### METEOROLOGICAL INFORMATION

Visual meteorological conditions prevailed in the area at the time of the accident. The reported weather at Anchorage International Airport, 14 miles southeast of the accident site, at 1853, was scattered clouds at 7,000 feet, 10 miles of visibility, and winds from 320 degrees at 5 knots.

#### COMMUNICATIONS

The airplane departed Merrill Field in Anchorage about 1755. After leaving the Class D surface area, no communications were received by any Air Traffic Control facilities.

#### WRECKAGE AND IMPACT INFORMATION

A path was cut through trees located along the edge of the unnamed lake in which the airplane came to rest. The wreckage path extended from the first visible indication of damage to trees, for 307 feet on a magnetic bearing of 165 degrees, and ended at the fuselage and cabin. Along this path were several fresh cut tree tops which made a descent angle of approximately 15 degrees from horizontal.

A one foot section of right wing and right aileron were located about 15 feet beyond the first damaged tree.

Cleanly broken trees along the wreckage path made a bank angle of 35 degrees from vertical. As viewed looking in the direction of travel, the left wing was found on the right side of the wreckage path, wedged in a tree about 15 feet above the ground. The right wing was located on the ground on the left side of the wreckage path. In between these two wing sections, an 8-inch diameter tree had two clean, angled slashes, about 8 feet and 12 feet above the ground.

The flaps remained attached to their respective wings and were in the retracted position. The flap handle was in the flaps retracted position.

About 170 feet beyond the first indication of damaged trees, and at the bottom of the 15 degree descent path, was a 10 feet long, three feet deep crater with the engine oil cooler in the bottom. About 30 feet beyond this crater was the engine.

The propeller was not located. The propeller mounting studs were examined and found to have metal deposits filling all threads. All engine controls were found in the full forward position.

130 feet beyond the crater, the fuselage came to rest in three feet of water. The instrument panel remained attached. The pilot was located in the cockpit, restrained in the left pilot seat.

A strong smell of gasoline was present at the accident site on June 17. On June 18, the foliage along both sides of the wreckage path began to turn a brownish color and wilt. The fuel selector valve was found in the "BOTH" position.

No preimpact anomalies were found with the flight control system, or the engine.

#### MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination was performed on the pilot by the State of Alaska Medical Examiner, 5700 E. Tudor Road, Anchorage, on June 18, 1998. The examination report cited "blunt impact injuries" as the cause of death.

Toxicological samples taken from the pilot were analyzed by the FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma, on July 22, 1998. Tetrahydrocannabinol Carboxylic Acid (THC - Marijuana) was detected in the pilot's urine at a level of 0.015 (ug/ml, ug/g). Tetrahydrocannabinol Carboxylic Acid (THC - Marijuana) was detected in the pilot's blood. According to the NTSB medical officer, the level of THC detected was below that which would indicate use immediately prior to the accident flight.

#### SURVIVAL ASPECTS

The pilot was restrained by a lap belt and shoulder harness. The restraint system and pilot seat remained attached to the aircraft structure. The structure of the airplane surrounding the pilot was deformed and collapsed inward.

## TESTS AND RESEARCH

Both elevator control actuator rods were found separated. These were examined at the NTSB metallurgical laboratory on July 9. No evidence of preimpact failure was noted.

## ADDITIONAL INFORMATION

The wreckage was released to the owner on June 19, 1998.

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	24, Male
<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>	No
<b>Instructor Rating(s):</b>	Airplane single-engine; Instrument airplane	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	February 10, 1997
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	746 hours (Total, all aircraft), 6 hours (Total, this make and model), 630 hours (Pilot In Command, all aircraft), 81 hours (Last 90 days, all aircraft), 13 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cessna	<b>Registration:</b>	N9982X
<b>Model/Series:</b>	185 185	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	185-0182
<b>Landing Gear Type:</b>	Tailwheel	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	November 26, 1997 Annual	<b>Certified Max Gross Wt.:</b>	3350 lbs
<b>Time Since Last Inspection:</b>	11 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	10579 Hrs	<b>Engine Manufacturer:</b>	Continental
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	IO-520-D
<b>Registered Owner:</b>	KENNETH R. JONES	<b>Rated Power:</b>	300 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>	Day
<b>Observation Facility, Elevation:</b>	ANC ,18 ft msl	<b>Distance from Accident Site:</b>	14 Nautical Miles
<b>Observation Time:</b>	18:53 Local	<b>Direction from Accident Site:</b>	150°
<b>Lowest Cloud Condition:</b>	Scattered / 7000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	Broken / 20000 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	5 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	320°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	18°C / 11°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	ANCHORAGE , AK (MRI )	<b>Type of Flight Plan Filed:</b>	Company VFR
<b>Destination:</b>	(BGQ )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	18:00 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<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 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	61.459194,-150.090591(est)



## Administrative Information

<b>Investigator In Charge (IIC):</b>	Thomas, Matthew
<b>Additional Participating Persons:</b>	KENNETH R EPPERSON(FAA FSDO); ANCHORAGE , AK GREGORY W SCHMIDT; WICHITA , KS
<b>Original Publish Date:</b>	February 16, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=3096">https://data.nts.gov/Docket?ProjectID=3096</a>

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