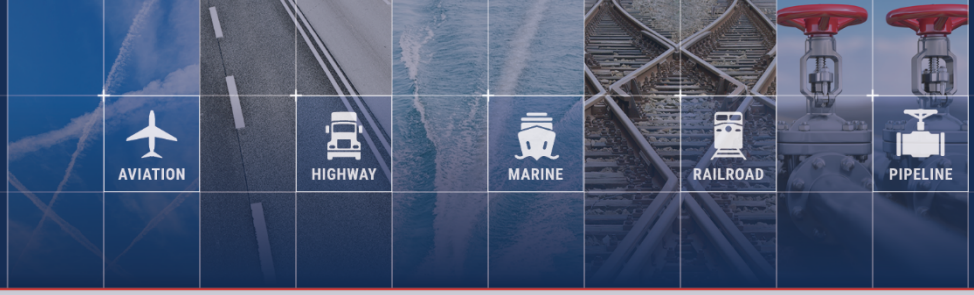

Aviation Investigation Final Report

Location:	CANTWELL, Alaska	**Accident Number:**	ANC95FA044
Date & Time:	April 15, 1995, 07:10 Local	**Registration:**	N115F
Aircraft:	CESSNA 180B	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

THE COMMERCIAL PILOT AND PASSENGER DEPARTED FOR A REMOTE AIRSTRIP TO TRANSPORT SUPPLIES TO A MINING/GRAVEL OPERATION. THE ROUTE OF FLIGHT CROSSED A HIGH MOUNTAIN PASS OVER GLACIER COVERED TERRAIN. THE PILOT OBTAINED A WEATHER OUTLOOK BRIEFING FROM THE FAA THE NIGHT BEFORE THE FLIGHT. HE DID NOT OBTAIN ANY UPDATED WEATHER INFORMATION ON THE DAY OF THE FLIGHT. THE AREA FORECAST INCLUDED MARGINAL VFR TO IFR CONDITIONS SPREADING INTO THE AREA OF THE ACCIDENT. IN ADDITION, AN AIRMET WAS ISSUED ON THE DAY OF THE FLIGHT FOR TURBULENCE NEAR MOUNTAINS. RESCUE PERSONNEL, ALERTED TO THE ACCIDENT BY THE AIRCRAFT'S ELT, COULD NOT INITIALLY REACH THE CRASH SITE DUE TO LOW CEILINGS AND LOW VISIBILITY IN LIGHT SNOW AND SEVERE TURBULENCE. THE AIRPLANE COLLIDED WITH RISING, SNOW COVERED TERRAIN ABOUT 6,000 FEET MSL.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S CONTINUED VFR FLIGHT INTO IMC CONDITIONS. WEATHER CONDITIONS CONSISTING OF LOW CEILINGS AND TURBULENCE WERE FACTORS IN THE ACCIDENT.

Findings

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

Findings
1. TERRAIN CONDITION - SNOW COVERED
2. (F) WEATHER CONDITION - LOW CEILING
3. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
4. (F) WEATHER CONDITION - TURBULENCE

Factual Information

History of the Flight

On April 15, 1995, about 0710 Alaska daylight time, a wheel equipped Cessna 180B, N115F, crashed about 33 miles southwest of Cantwell, Alaska, within the boundaries of Denali National Park. The airplane was being operated as a visual flight rules (VFR) cross-country business flight to Kantishna, Alaska, under Title 14 CFR Part 91 when the accident occurred. The airplane, registered to and operated by the pilot, was destroyed. The certificated commercial pilot and passenger received fatal injuries. Instrument meteorological conditions prevailed in the area of the accident. No flight plan was filed.

The accident flight departed the Talkeetna airport, Talkeetna, Alaska, about 0620 after picking up the passenger as a continuing portion of the flight that originated at Merrill Field, Anchorage, Alaska, about 0530. Following the departure from Talkeetna, no further communications were received from the pilot. Friends of the pilot and passenger reported that the flight was for the purpose of employment and transportation of supplies to a mining/gravel operation located in Kantishna. The pilot had flown diesel fuel to the destination along the route of flight in the past.

At 1158, U.S. National Park Rangers were notified of an emergency locator transmitter signal (ELT) in the area of Anderson Pass that was picked up by satellite receivers at 0719. Search personnel were prevented from reaching the accident location by low ceilings. On April 16, 1995, search personnel located the accident site on glacier terrain at 6,000 feet mean sea level (msl).

The accident occurred during the hours of daylight at latitude 63 degrees, 13.492 minutes north and longitude 150 degrees, 07.673 minutes west.

Crew Information

The pilot held a commercial pilot certificate with airplane single- engine land and instrument airplane ratings. The pilot held private pilot privileges with an airplane single-engine sea rating. The most recent second-class medical certificate was issued to the pilot on April 11, 1994, and contained the limitation that the pilot must wear corrective lenses.

No personal flight records were located for the pilot and the aeronautical experience listed on page 3 of this report was obtained from a review of Federal Aviation Administration (FAA) airmen records on file in the Airman and Medical Records Center located in Oklahoma City. On his application for a medical certificate dated April 11, 1994, the pilot indicated that he had accrued 800 hours of total flight time, with 100 hours accrued in the previous 6 months.

Aircraft Information

The airplane's maintenance records were not located. At the time of the accident, the recording hour meter in the tachometer gauge indicated 3,602.3 hours. Annual inspection work order records located for the airplane indicated that an annual inspection was performed on December 27, 1994. At the time of the inspection, the airplane's recording hour meter indicated 3,550 hours.

Meteorological Information

On April 14, 1995, at 2112, the pilot obtained a weather briefing from the Kenai Automated Flight Service Station (AFSS). The pilot was provided a weather outlook briefing and advised by the briefer to call again on the morning of April 15, 1995, to obtain updated weather information. According to the FAA, the recording of the briefing was inadvertently erased by flight service station personnel. There is no record that the pilot called the FAA for an updated weather briefing.

On April 15, 1995, at 0608, the National Weather Service (NWS) issued the 0600 Anchorage, Alaska, area forecast for the Cook Inlet and Susitna Valley. It was valid until 1800 and was indicating in part: Scattered ceilings and visibility at or above 1,000 feet, 3 miles in light rain and fog or light rain, light snow, and fog along the west side in the vicinity of the Alaska Range. Specifically Cook Inlet, but spreading north westward into the Susitna Valley by 1600, occasional ceilings 2,000 to 3,000 feet broken to overcast and visibility of 4 to 6 miles in light rain and fog or light rain, light snow and fog...Passes: Lake Clark, Merrill, and Rainy; marginal VFR ceilings in rain and snow, occasional IFR ceilings in rain and snow. Windy Pass; VFR, becoming marginal VFR or IFR with ceilings in rain and snow, occasional IFR ceilings in rain and snow. Portage; marginal VFR/IFR ceilings in rain. All passes turbulent.

In addition, the NWS issued a notice to airmen (AIRMET) for turbulence which stated in part: Occasional moderate turbulence at or above 15,000 feet with isolated severe turbulence at or above 7,000 feet, specifically near mountains, continuing beyond 1200.

The closest official weather observation station is Talkeetna, Alaska, which is located 54 nautical miles south of the accident site. On April 14, 1995, the 2004 Talkeetna terminal forecast was: Sky condition; 3,500 feet scattered, ceiling 5,000 feet broken. At 0400 April 15, 1995, ceilings were forecasted to be: 3,500 broken; wind 030 degrees at 10 knots; chance of light rain.

On April 15, 1995, at 0650 hours, a surface observation at Talkeetna, was reporting in part: Sky condition and ceiling, estimated 6,000 feet overcast; visibility, 15 miles; temperature, 33 degrees F; dew point, 20 degrees F; wind, 020 degrees at 5 knots; altimeter, 29.85 inHg.

Search personnel reported that the weather conditions near the accident site were reported as

4,000 feet overcast with light snow, visibility 1/2 to 1 mile, temperature 32 degrees F, and severe turbulence.

Wreckage and Impact Information

Safety Board investigators examined the airplane wreckage at the accident site on April 20, 1995. Several inches of snow had fallen and drifted onto the site since the date of the accident. The wreckage examination revealed that the airplane struck 25 degree upsloping, snow covered mountainous terrain about 6,000 feet mean sea level (msl). The airplane was located in a large bowl shaped mountain pass about 1/2 mile south of a ridgeline that was about 500 feet higher than the accident site. The tail of the fuselage was oriented on a 295 degree heading, (all heading/bearings noted in this report are oriented toward magnetic north).

All of the airplane's major components were found at the main wreckage area. The right main gear was located buried in the snow about 20 feet downslope from the fuselage, separated at the fuselage attach point. Numerous pieces of windshield were located in the snow between the right gear and the fuselage. The forward portion of the airplane, from the forward edge of the door posts, was torn open with the instrument panel, firewall, and engine pivoted about 90 degrees to the right of the fuselage. The left main gear remained attached to the fuselage at the point adjacent to the firewall separation point. It was bent under the fuselage in an inboard direction.

The cabin portion and empennage was lying on its left side with the forward portion of the fuselage facing downslope. The left horizontal stabilizer was crushed and folded in an inboard direction, under the tail. The right horizontal stabilizer was attached to the empennage, standing vertically, and was undamaged. The vertical stabilizer with the rudder attached was undamaged and lying flat on the snow surface.

The right wing was attached to the fuselage and was folded aft along the right side and almost parallel to the fuselage, standing vertically with the leading edge upward. The wing carry-through section was separated at the upper end of the door posts and curled in an upward and aft direction. The right wing lift strut remained attached at its respective attach points; however, was bent about mid-span. The leading edge exhibited aft chordwise crushing and folding from about mid-span outboard to the tip with upward crushing evident on the underside of the wing. The leading edge was extensively shredded, exposing the interior wing structure. The aileron remained attached to the wing and exhibited a 90 degree bend about mid-span. The flap remained attached and was retracted.

The left wing remained attached to the fuselage and was lying flat on the snow surface. It had been bent 90 degrees upward from the fuselage orientation. The wing exhibited about 15 degree upward bending from about mid-span outboard to the tip. The leading edge exhibited aft chordwise crushing and folding with upward crushing on the underside of the wing, about 3 feet inboard from the tip. The aileron remained attached to the wing. The outboard trailing edge of the wing and the outboard half of the aileron were curled in a downward direction. The

flap remained attached to the wing and was retracted.

Due to the impact damage, Safety Board investigators were unable to operate the flight controls by their respective control mechanisms; they were, however able to establish continuity of the flight control cables to the cabin/cockpit area.

The propeller assembly remained connected to the engine crankshaft. Both blades were retained in the propeller hub and could rotate within the hub. One propeller blade was bent aft about 45 degrees, about 6 inches outboard from the hub. It exhibited slight torsional twisting. The second blade was relatively straight with slight forward bending, torsional twisting and slight "S" bending.

The engine sustained impact damage to the underside portion of the engine. The engine cowling was crushed upward toward the underside of the engine. The exhaust tubes and muffler were also crushed upward. The exhaust tube at the lower right rear portion of the engine exhibited a sharp bend with sharp folding of the tubing without any cracking or breaking. Ice was noted around the exhaust tubes and engine cylinders, melted and formed around the components.

Due to the snow, the propeller could only be rotated a few degrees. Hand rotation produced slight gear rotation of the vacuum gear drive. The vacuum pump drive spine was intact and could be rotated by hand.

The magnetos remained attached to the engine. Removal of the right magneto and hand rotation produced spark at the right, upper engine spark plug leads. Examination of the right side upper engine spark plugs revealed no unusual combustion signatures.

The carburetor air box was crushed upward against the carburetor. The carburetor separated from the engine at the intake housing and remained attached to the firewall by its fuel hose and control cables.

Medical and Pathological Information

A postmortem examination of the pilot was conducted under the authority of the Alaska State Medical Examiner, 5700 E. Tudor, Anchorage, Alaska, on April 18, 1995

Additional Information

The airplane wreckage has not been recovered and the National Transportation Safety Board did not take custody of any portion of the airplane.

Pilot Information

Certificate:	Commercial; Private	**Age:**	35,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 11, 1994
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	800 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	**Registration:**	N115F
Model/Series:	180B 180B	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	50495
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	December 27, 1994 Annual	**Certified Max Gross Wt.:**	2650 lbs
Time Since Last Inspection:	452 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	CONTINENTAL
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	O-470-K
Registered Owner:	JOHN K. BLOSBERG	**Rated Power:**	230 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Unknown	**Visibility**	1 miles
Lowest Ceiling:	Overcast / 4000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	20 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	0°C
Precipitation and Obscuration:	N/A - Blowing - Snow		
Departure Point:	TALKEETNA , AK (TKA)	**Type of Flight Plan Filed:**	None
Destination:	KANTISHNA , AK (5Z5)	**Type of Clearance:**	None
Departure Time:	06:20 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	63.010551,-149.399887(est)

Administrative Information

Investigator In Charge (IIC):	Erickson, Scott
Additional Participating Persons:	GEORGE MCCAMENT; ANCHORAGE , AK
Original Publish Date:	October 13, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=2580