Aviation Investigation Final Report

Location:	SITKA, Alaska	**Accident Number:**	ANC98FA043
Date & Time:	April 27, 1998, 20:10 Local	**Registration:**	N33902
Aircraft:	Taylorcraft BL12	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The non-instrument rated private pilot departed on a cross-country flight over coastal fjords and mountainous terrain. Prior to departure, the pilot obtained a weather briefing that included AIRMETs for mountain obscuration in clouds and precipitation along the route of flight. No flight plan was filed by the pilot. About 10 hours after departure, an ELT signal was received from a location about 7 miles from the planned destination. Due to low ceilings, helicopter search personnel could not reach the accident site. The following day, the airplane wreckage was located on steep, snow covered mountainous terrain, about 3,000 feet mean sea level. Avalanche conditions prevented rescue personnel from reaching the wreckage until 18 days later.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's attempted VFR flight into instrument meteorological conditions. Contributing factors were clouds, the pilot's lack of instrument flight experience, obscuration and mountainous terrain.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: UNKNOWN

Findings

1. (F) WEATHER CONDITION - CLOUDS
2. (C) VFR FLIGHT INTO IMC - ATTEMPTED - PILOT IN COMMAND
3. (F) LACK OF TOTAL INSTRUMENT TIME - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: UNKNOWN

Findings
4. (F) WEATHER CONDITION - OBSCURATION
5. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY

Factual Information

HISTORY OF FLIGHT

On April 27, 1998, at an estimated time of 2010 Alaska daylight time, a tundra tire equipped Taylorcraft BL12 airplane, N33902, was destroyed during a collision with mountainous terrain, about 7 miles northeast of Sitka, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country personal flight, when the accident occurred. The airplane was registered to, and operated by the pilot. The certificated private pilot, the sole occupant, received fatal injuries. A VFR flight plan was not filed. The flight originated from the Yakutat Airport, Yakutat, Alaska, about 1000.

On April 26, 1998, at 0829:13, the pilot contacted the Kenai, Alaska, Automated Flight Service Station (AFSS), and requested a weather briefing. The pilot said his route of flight was from Anchorage, Alaska, to Cordova, Alaska, to Yakutat, and then to Sitka. The AFSS specialist provided a full briefing that included AIRMETs for mountain obscuration, moderate turbulence below 6,000 feet, and temporary moderate rime icing in clouds, from 4,000 feet to 12,000 feet. The airplane departed Merrill Field, Anchorage, on April 26, 1998, at 1107. The pilot did not file a flight plan.

Airport personnel in Yakutat reported the pilot arrived about 1700.

On April 27, 1998, at 0821:41, the pilot contacted the Juneau, Alaska, AFSS, and obtained a weather briefing for the flight from Yakutat to Sitka. The AFSS specialist provided a standard weather briefing that included an advisory for mountain obscuration and precipitation. The pilot did not file a flight plan.

The pilot purchased 13.6 gallons of fuel in Yakutat on April 27, 1998, and departed about 1000. No subsequent radio communication was received from the pilot.

About 2010, an emergency locator transmitter (ELT) signal was received by a search and rescue satellite. The exact time of the accident is not known. U.S. Coast Guard helicopter search and rescue personnel from Sitka began an aerial search in mountainous terrain, near Blue Lake, about 2130. Low ceilings, fog and rain showers, prevented the helicopter from locating the wreckage.

On April 28, 1998, about 0700, the wreckage was located about 3,000 feet mean sea level in an area of steep mountains.

The accident occurred during the hours of dusk at latitude 57 degrees, 05.33 minutes north and longitude 135 degrees, 06.18 minutes west.

CREW INFORMATION

The pilot held a private pilot certificate with an airplane single-engine land rating.

The most recent, and the only medical certificate issued to the pilot, was a third-class medical certificate issued on May 13, 1996, with no limitations.

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 FAA records, and from a personal acquaintance. On the pilot's application for medical certificate, dated May 13, 1996, the pilot indicated that his total aeronautical experience consisted of 8 hours. The pilot's mechanic estimated that at the time of the accident, the pilot had accrued about 100 hours of total flight time.

AIRCRAFT INFORMATION

An examination of the airplane's airframe logbook revealed the airplane was manufactured on April 16, 1941. The airplane was rebuilt on April 3, 1981, and issued an experimental airworthiness certificate. On May 20, 1981, after accumulating 13 hours since the rebuild, the airplane was issued a standard airworthiness certificate. The most recent annual inspection was conducted on January 5, 1998. At that time, the airframe logbook listed a total time of 712.0 hours.

The airplane's engine logbook listed the engine as a Continental A65-8F, serial number 5742668. The engine was overhauled on November 23, 1974, after accruing 2,788 hours. The engine was installed on the airframe on December 12, 1994. Examination of the engine logbook revealed a maintenance entry on October 1, 1983, that noted an annual inspection, and indicated the engine had accrued 508.3 hours since a major overhaul. The logbook contained several conflicting entries with dates in 1983, 1984, and 1987. The engine logbook then had an entry on November 30, 1994, that listed a total time of 3,295.7 hours, with 508.3 hours since major overhaul. The last entry was dated January 5, 1998. It indicated an annual inspection with 598.3 hours since a major overhaul.

METEOROLOGICAL INFORMATION

The closest official weather observation station is Sitka, which is located seven nautical miles southwest of the accident site. On May 27, 1998, at 1953, an Aviation Routine Weather Report (METAR) was reporting in part: Wind, calm; visibility, 10 statute miles; clouds, 4,300 feet overcast; temperature, 46 degrees F; dew point, 39 degrees F; altimeter, 30.18 inHg.

An AIRMET for mountain obscuration in clouds and precipitation was issued for the pilot's planned route of flight from Yakutat to Sitka.

An area forecast for the eastern gulf coast of Alaska, issued on May 27, 1998, at 0545, and valid until 1800, was reporting, in part: Clouds and weather, 1,000 feet scattered, 2,000 feet broken, increasing layers above, tops at 25,000 feet, light rain. Temporary conditions of 1,000 feet broken, 2,000 feet overcast, visibilities 3 to 5 statute miles in light rain and mist. The outlook, valid from May 27, 1998, at 1800, until May 28, 1998, at 1200, was indicating marginal VFR ceilings in rain showers and wind. Icing conditions; light isolated moderate rime icing in clouds from 3,500 feet to 12,000 feet. Freezing level, 3,500 feet.

An area forecast for southeast Alaska coastal waters, valid until May 27, 1998, at 1800, was indicating conditions of 2,000 feet scattered, 4,000 feet broken, tops at 10,000 feet. Temporary conditions of 2,000 feet broken, 4,000 feet overcast, isolated visibilities of 5 statute miles in light rain showers. The outlook, valid from May 27, 1998, at 1800, until May 28, 1998, at 1200, was indicating VFR in rain showers. The freezing level was 4,000 feet.

The terminal forecast for Sitka, issued on May 27, 1998, at 0340, and valid from 0400 until May 28, 1998, at 0400, was reporting, in part: Wind, 200 degrees at 10 knots; visibility greater than 6 statute miles; clouds and sky condition, 2,500 feet scattered, 4,500 feet broken, 10,000 feet overcast. Temporary changes expected between the valid forecast times, visibilities of 5 statute miles in light rain showers and mist; clouds and sky condition, 500 feet scattered, 2,500 feet broken.

COMMUNICATIONS

The pilot obtained weather briefings from the Kenai AFSS, and the Juneau AFSS. A transcript of the telephone briefings from each facility is included in this report.

WRECKAGE AND IMPACT INFORMATION

The National Transportation Safety Board investigator-in-charge (IIC) examined the airplane wreckage at the accident site on October 9, 1998. The accident site was located about 3,000 feet msl in an area of about 47 degree upsloping rock and tundra, adjacent to a small mountain ravine. The area of the mountain that appeared to be the first point of impact, was a small area of soil disruption. Since the date of the accident (4/27/98), movement of melting snow carried the airplane downslope about 150 feet into a snow filled ravine.

During the IIC's investigation of the wreckage, small portions of airplane wreckage debris, including paint chips, and broken Plexiglas, was observed scattered downslope from the initial point of impact, into the ravine. The line of debris, from the point of rest, to the believed point of impact, was oriented on a magnetic heading of 265 degrees.

Prior to the airplane moving downslope due to snow melt, the airplane was photographed by U.S. Coast Guard, Alaska State Trooper, and FAA personnel. Avalanche conditions, and the airplane's position in the ravine, prevented a complete examination of the airplane wreckage.

The wings remained attached to the fuselage, but were extensively distorted. The flight control surfaces remained connected to their respective attach points. Due to impact, and postaccident damage from the airplane movement, continuity of the flight control cables could not be established.

The instrument panel was crushed and twisted under the fuselage and engine. A single lever valve (on/off type valve) was installed between the airplane fuel selector handle and the engine. The handle of the valve was oriented in-line (open position) with its attached fuel line. The pointer portion of the fuel selector handle was also oriented in-line with the attached fuel line.

The propeller assembly remained connected to the engine crankshaft. Both blades exhibited almost 90 degree aft bending about mid-span, leading edge gouging, and chordwise scratching.

The engine sustained impact damage to the underside portion of the engine. The muffler was crushed upward and flattened against the engine, as was the muffler exhaust tube. The crushed, and folded edges of the muffler exhaust tube did not exhibit any cracking or breaks.

Both magnetos were broken away from the engine at their respective attach points.

The carburetor was broken away from the bottom of the engine. It remained attached to the airplane by the fuel inlet hose. The throttle cable was broken from the butterfly actuating arm. The butterfly was free to move throughout its operating range. The venturi was unobstructed.

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 May 18, 1998.

A toxicological examination was conducted by the FAA's Civil Aeromedical Institute (CAMI) on July 20, 1998. The examination revealed 50 ug/ml of salicylate was detected in the pilot's urine. Additionally, 0.076 ug/ml of benzoylecgonine was detected in the pilot's urine. Benzoylecgonine is an inactive metabolite of cocaine. No benzoylecgonine was detected in the pilot's blood.

SEARCH AND RESCUE

After being notified of the ELT signal, search and rescue personnel from the U.S. Coast Guard Air Station Sitka, along with Sitka Fire Department personnel, began a search for the airplane on the evening of April, 27, 1998. The Coast Guard helicopter was unable to search the mountainous areas above 1,000 feet msl due to low ceilings, and rain. The airplane wreckage was located on the morning of April 28, 1998. Steep terrain conditions, along with avalanche danger, prevented rescue personnel from recovering the body of the pilot until May 15, 1998.

Avalanche danger prevented any examination of the wreckage at that time.

WRECKAGE RELEASE

The Safety Board did not take custody of the wreckage. No parts or components were retained by the Safety Board.

Pilot Information

Certificate:	Private	**Age:**	46,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Front
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	May 13, 1996
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	100 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Taylorcraft	**Registration:**	N33902
Model/Series:	BL12 BL12	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	2753
Landing Gear Type:	Tailwheel	**Seats:**	2
Date/Type of Last Inspection:	January 5, 1998 Annual	**Certified Max Gross Wt.:**	1200 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	A65-8F
Registered Owner:	JAMES C. LANE	**Rated Power:**	65 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:**	Dusk
Observation Facility, Elevation:	PAS ,21 ft msl	**Distance from Accident Site:**	7 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	235°
Lowest Cloud Condition:	Unknown	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 4300 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	8°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	YAKUTAT , AK (PAYA)	**Type of Flight Plan Filed:**	None
Destination:	(PASI)	**Type of Clearance:**	None
Departure Time:	10:00 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:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	56.730491,-134.999374(est)

Administrative Information

Investigator In Charge (IIC):	Erickson, Scott
Additional Participating Persons:	JIM HETTWER; JUNEAU , AK
Original Publish Date:	March 30, 2000
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=3090