National Transportation Safety Board
Aviation Accident Final Report

Location:	Neihart, MT	**Accident Number:**	SEA04FA166
Date & Time:	08/17/2004, 2340 MDT	**Registration:**	N199GL
Aircraft:	BEECH BE-99	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

While on the return leg of a non-scheduled 14 CFR Part 135 VFR cross-country flight, the airplane collided with mountainous terrain at approximately 9,100 feet above mean sea level. Prior to the accident, the pilot informed air traffic control that he was VFR and level at 8,500 feet MSL. Dark night conditions prevailed at the time of the accident. The aircraft crashed on the south-facing slope of the 9,100-foot mountain near the last recorded radar position. Wreckage and impact signatures at the crash site were indicative of high energy and shallow impact with the terrain. The investigation revealed no evidence of any aircraft mechanical problems.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to maintain adequate terrain clearance during cruise, which resulted in the in-flight collision with mountainous terrain. Dark night conditions and mountainous terrain were contributing factors.

Findings

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

Findings
1. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (C) CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
3. (F) LIGHT CONDITION - DARK NIGHT

Factual Information

HISTORY OF FLIGHT

On August 17, 2004, about 2340 mountain daylight time, a Beech 99 Airliner, N199GL, operated as Alpine flight 5071, was destroyed during a collision with mountainous terrain approximately six nautical miles northeast of Neihart, Montana, near the summit of Big Baldy Mountain. The airplane was operated by Alpine Aviation, Inc, dba Alpine Air, of Provo, Utah, as a visual flight rules (VFR) non-scheduled domestic air cargo flight under the provisions of Title 14, CFR Part 135, when the accident occurred. The airline transport pilot-in-command and pilot rated, non-revenue, passenger received fatal injuries. Visual meteorological conditions prevailed, and a company VFR flight plan was filed. The flight originated from Billings, Montana, at 2305. The flight-planned destination was Kalispell, Montana (FCA).

On the evening of August 17, Salt Lake Center issued an Alert Notice (ALNOT) after radio and radar contact with the accident aircraft was lost. The following day, about 1145, the aircraft wreckage was located near the summit of Big Baldy Mountain.

The accident flight was the return leg of a planned round-robin flight from Kalispell to Billings and back. The first leg of the flight arrived in Billings at 2156 MDT. The purpose of the CFR Part 135 cargo flight was to transport mail for the US Postal Service.

The pilot rated passenger was a personal friend and a former flight student of the pilot-in-command.

PILOT INFORMATION

The pilot-in-command held an airline transport pilot (ATP) certificate with airplane multi-engine land rating, and commercial privileges for airplane single-engine land, airplane single-engine sea and gliders. The pilot also held multiple instructor ratings.

The pilot's most recent FAA second-class medical certificate was issued on January 28, 2004, and contained limitations requiring the pilot to wear corrective lenses.

According to the Pilot/Operator accident report (Form 6120.1/2), furnished by Alpine Air, the pilot had approximately 15,440 hours total flight time, including 14,440 hours as pilot-in-command (PIC) time; 4,440 hours as PIC of multi-engine airplanes; 1,300 hours of actual instrument time and 3,000 hours of PIC time in make and model.

The report indicated that the pilot had flown 126 hours in the last 90 days; 34 hours in the last 30 days and 1.5 hours in the last 24 hours, all in the accident airplane make and model (BE-99).

According to records furnished by the Federal Aviation Administration, the pilot's most recent 14 CFR Part 135 competency/proficiency check had been accomplished on December 3, 2003. On this competency/proficiency check the pilot demonstrated (among other items) current knowledge of the Beech 99 Airliner as per 14 CFR 135.293(a), flight competency in a Beech 99 Airliner as per 14 CFR 135.293(b), and IFR proficiency as per 14 CFR 135.297. The records indicated that the pilot's 14 CFR 135.297 check expired in June of 2004.

AIRCRAFT INFORMATION

The accident airplane, a 1968 Beech 99 airliner (serial number U-15) is powered by two Pratt & Whitney PT6A-27/28 turboprop engines, rated at 680 shaft horsepower each. The twin-engine

airplane is certified for, among other things, night IFR operations and known icing conditions. The airplane was not equipped with an autopilot or global positioning system (GPS).

The airplane's last inspection (in accordance with an Approved Aircraft Inspection Program [AAIP]) was completed on July 28, 2004, at 40,521 hours aircraft total time (ACTT). The operator indicated the airplane had flown approximately 51 hours since the inspection. An altimeter and static system test on the airplane was accomplished on April 29, 2003. According to the operator, there were no open maintenance discrepancies with the airplane at the time of the accident.

METEOROLOGICAL INFORMATION

The closest weather observation facility to the accident site was Great Falls International Airport (KGTF), Great Falls, Montana, located approximately 43 miles west-northwest of the accident site at an elevation of 3,677 feet MSL. The airport was equipped with an Automated Observation System (ASOS) and reported the following conditions surrounding the time of the accident:

On August 17, 2004, at 1053, the hourly Aviation Routine Weather Report (METAR) was, in part, wind from 040 degrees (true) at 13 knots; visibility 10 statute miles; scattered clouds at 11,000 feet; temperature 23 degrees C; dew point 9 degrees C; altimeter 30.06 inches.

At 1153, the METAR was, in part, wind from 250 degrees (true) at 13 knots; visibility 10 statute miles; broken clouds at 5,500 feet, overcast skies at 8,000 feet; temperature 21 degrees C; dew point 11 degrees C; altimeter 30.09 inches.

At 0009 (August 18), the METAR SPECI report was, in part, wind from 350 degrees (true) at 20 knots; visibility 7 statute miles with light rain and thunderstorms; broken clouds at 5,500 feet, overcast skies at 7,500 feet; temperature 19 degrees C; dew point 12 degrees C; altimeter 30.11 inches.

The next closest weather reporting station was Helena Regional Airport (KHLN), Helena, MT, located approximately 62 miles west-northwest of the accident site at an elevation of 3,877 feet msl. The following conditions were reported surrounding the time of the accident:

On August 17, at 1054, the hourly METAR report was, in part, wind from 140 degrees (true) at 3 knots; visibility 10 statute miles; clear skies; temperature 16 degrees C; dew point 8 degrees C; altimeter 30.06 inches.

The GOES-10 (Geostationary Operational Environmental Satellite) infrared imagery surrounding the period was reviewed and depicted a band of low to mid-level stratiform clouds extending over the accident site. No cumulonimbus clouds were identified in the immediate area of the accident site. Some enhanced areas were detected to the west and northwest of the accident site near the Great Falls area.

The closest Doppler radar information (NWS WSR-88D) was from Great Falls (KTFX), 45 miles northwest of the accident site. The base reflectivity images at 1138 and 0543 depicted no echoes over the accident site. The image did depict an area of convective cells near and to the northwest of Great Falls (KGTF). A large ground clutter pattern existed around the radar site indicating ducting of the radar beam due to a low-level temperature inversion.

COMMUNICATIONS

According to a transcript of the accident aircraft's air-to-ground communications with Salt

Lake City Air Route Traffic Control Center (ARTCC), the accident flight checked on with Salt Lake Center at 2315 and the pilot advised the ARTCC specialist that he was VFR. Approximately 10 minutes later, at 2325, the ARTCC specialist advised the pilot that radar contact was lost and to contact Salt Lake City ARTCC on 133.4.

At 2339 the pilot was contacted by Salt Lake City ARTCC (on 133.4) and asked to verify radio contact with Salt Lake City. After acknowledging radio contact, the pilot was given the Great Falls altimeter setting and the ARTCC specialist asked for his altitude. The pilot advised the ARTCC specialist that he was at eight thousand five hundred and his current position was approximately 40 miles southeast of Great Falls. The ARTCC specialist acknowledged the pilot and confirmed that he was radar identified.

At 2351 the ARTCC specialist informed the pilot that radar contact was lost and that he was "probably" in Great Falls Approaches airspace. The specialist queried the pilot concerning his current position, however the pilot did not answer the specialist's transmission.

From 2351 to 0002 the ARTCC specialist, and company aircraft in the area, made multiple unsuccessful attempts to contact the pilot. No additional communication transmissions from the accident pilot were received.

FLIGHT RECORDERS

The airplane was not equipped with flight data or cockpit voice recorders.

WRECKAGE AND IMPACT INFORMATION

Representatives from the National Transportation Safety Board, Federal Aviation Administration and Raytheon Aircraft performed an on-site examination of the aircraft wreckage on August 19.

The main wreckage was located near the summit of Mt. Baldy at 46 degrees 58.397 minutes' north latitude and 110 degrees 35.941 minutes' west longitude. The elevation at the main wreckage site was approximately 9,079 feet above sea mean level. The aircraft impacted the southern slope of Mt. Baldy in the middle of a large skree field approximately 150 feet below the summit. A large burn area, generally northwest- southeast oriented, was identified as the first point of contact. The terrain sloped down hill from the initial point of contact.

All airplane components were located at the accident site. The airplane sustained extensive impact and thermal related damage and was heavily fragmented. The aircraft wreckage was burned; however, no evidence of inflight fire was found. The main wreckage, consisting of the empennage section of the airplane and pieces of the fuselage, was located near the main burn area. The cockpit controls and instrumentation sustained significant impact related damage and were scattered between the initial point of contact and the summit. Pieces of both the right and left propeller blades, additional system components, section of both wings, and engine components were scattered between the initial point of contact and the summit of the mountain. Internal engine components, pieces of cockpit instrumentation and furnishings were located above the wreckage on the summit. Both engine cases were located below the skree field, in a relatively flat area, approximately 700 feet below the main wreckage.

MEDICAL AND PATHOLOGICAL INFORMATION

Yellowstone Pathology Institute, Inc, Billings, Montana, performed the autopsy on the pilot-in-command under the authority of the Judith Basin County Coroner on August 18, 2004. According to the postmortem report, the cause of death was determined to be "severe blunt traumatic injuries".

The FAA Civil Aeromedical Institute (CAMI), Oklahoma City, Oklahoma, conducted toxicology testing on the pilot. According to the postmortem toxicology report, results were negative for carbon monoxide, cyanide, and ethanol, legal and illegal drugs. See attached report for specific test results.

ADDITIONAL DATA/INFORMATION

On September 21, representatives from the National Transportation Safety Board, Raytheon Aircraft and Alpine Air examined the airframe wreckage and engines in a hangar facility in Greeley, Colorado. Investigators found no evidence of a pre-impact malfunction of any airframe, system or engine component during the examination.

On May 18, 2005, the airplane, engines and associated components were released to United States Aviation Underwriters, Inc, Englewood, Colorado.

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	**Age:**	53, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider	**Restraint Used:**	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Glider; Instrument Airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With Waivers/Limitations	**Last FAA Medical Exam:**	01/28/2004
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	12/03/2003
Flight Time:	15440 hours (Total, all aircraft), 3000 hours (Total, this make and model), 14440 hours (Pilot In Command, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BEECH	**Registration:**	N199GL
Model/Series:	BE-99	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	U015
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	07/28/2004, AAIP	**Certified Max Gross Wt.:**	10900 lbs
Time Since Last Inspection:	51 Hours	**Engines:**	2 Turbo Prop
Airframe Total Time:	40521 Hours as of last inspection	**Engine Manufacturer:**	Pratt & Whitney Canada
ELT:	Installed, not activated	**Engine Model/Series:**	PT-6A-27/28
Registered Owner:	ALPINE AIR INC	**Rated Power:**	680 hp
Operator:	ALPINE AIR INC	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	YDAC

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Night/Dark
Observation Facility, Elevation:	KGTF, 3677 ft msl	**Distance from Accident Site:**	43 Nautical Miles
Observation Time:	1153 MST	**Direction from Accident Site:**	310°
Lowest Cloud Condition:		**Visibility**	10 Miles
Lowest Ceiling:	Broken / 5500 ft agl	**Visibility (RVR):**	
Wind Speed/Gusts:	13 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	250°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.09 inches Hg	**Temperature/Dew Point:**	21°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	BILLINGS, MT (BIL)	**Type of Flight Plan Filed:**	Company VFR
Destination:	KALISPELL, MT (FCA)	**Type of Clearance:**	None
Departure Time:	2310 MDT	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-Ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	46.977778, -110.609722

Administrative Information

Investigator In Charge (IIC):	Dennis J Hogenson	**Report Date:**	10/27/2005
Additional Participating Persons:	Chuck L Clark; FAA-FSDO; Helena, MT Eddie Webber; Raytheon Aircraft Co; Wichita, KS Bill Distefano; Alpine Air; Provo, UT		
Publish Date:	11/17/2009		
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, or at 800-877-6799. Dockets released after this date are available at http://dms.ntsb.gov/pubdms/.		