



Aviation Investigation Final Report

Location:	Bondurant, Wyoming	Accident Number:	WPR13FA053
Date & Time:	November 17, 2012, 13:45 Local	Registration:	N61LN
Aircraft:	Cessna 182D	Aircraft Damage:	Destroyed
Defining Event:	Miscellaneous/other	Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The noninstrument-rated pilot departed on a visual flight rules cross-county flight. Visual and instrument meteorological conditions prevailed throughout the area around the time of the accident. Review of recorded radar data provided by the FAA (which did not record altitude) and recovered GPS data depicted the flight departing and proceeding on a south, southeasterly course then turning left to an easterly heading toward the intended destination; the last recorded radar return was about 1.5 miles northwest of the accident site. Throughout this timeframe, recorded GPS altitudes varied between 8,000 and 12,300 feet, however, an ascent to 13,450 feet mean sea level (msl) was recorded just before the end of recorded GPS data, about 22 miles west of the accident site. Examination of the accident site revealed that the airplane impacted trees and mountainous terrain on a southwesterly heading just below the top of a ridgeline at an altitude of about 10,030 feet msl.

A postaccident examination of the airframe and engine revealed no evidence of preimpact mechanical malfunctions or failures that would have precluded normal operation.

AIRMETs for instrument meteorological conditions, mountain obscuration, and moderate icing conditions were in effect throughout the area about the time of the accident. Geostationary Operational Environmental Satellite (GOES) imagery indicated that clouds with tops of 16,700 feet msl were within the accident area, however, the cloud bases could not be determined. There was no evidence that the pilot obtained a weather briefing for the flight. Wreckage impact signatures and radar data were consistent with a right turn away from the flight's intended destination just before the accident. It is likely that the pilot did not maintain sufficient altitude above the mountainous terrain while attempting to maneuver around the instrument meteorological conditions at the time of the accident.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The noninstrument-rated pilot's failure to maintain clearance from terrain while maneuvering around weather.

Findings

Personnel issues	Use of equip/system - Pilot
Aircraft	Altitude - Incorrect use/operation
Environmental issues	Mountainous/hilly terrain - Contributed to outcome
Environmental issues	Obscuration - Contributed to outcome

Factual Information

History of Flight

Enroute-cruise	Miscellaneous/other (Defining event)
Enroute-cruise	Collision with terr/obj (non-CFIT)

On November 17, 2012, about 1345 mountain standard time, a Cessna 182D, N61LN, was destroyed when it collided with terrain south of Bondurant, Wyoming. The airplane was registered to and operated by the pilot under the provisions of Title 14 Code of Federal Regulations Part 91 as a personal flight. The private pilot, sole occupant of the airplane, was fatally injured. Visual and instrument meteorological conditions prevailed throughout the route of flight and a flight plan was not filed. The cross-country flight originated from Stevensville, Montana, about 1130 with an intended destination of Pinedale, Wyoming.

Information provided by the Federal Aviation Administration (FAA) revealed that the family of the pilot contacted the FAA on the evening of November 17, 2012, after they became concerned when the pilot had not arrived at his intended destination. The FAA subsequently issued an Alert Notification (ALNOT). The Civil Air Patrol, United States Air Force, and local law enforcement, commenced search and rescue operations throughout the area of the pilot's intended flight path. The wreckage was located by aerial units on the afternoon of November 24, 2012.

Examination of the accident site revealed that the airplane impacted mountainous terrain approximately 35 miles west of the flight's intended destination. The wreckage debris path was about 133 feet in length and oriented on a magnetic heading of about 200 degrees at an elevation of about 10,150 feet. All major structural components of the airplane were located within the debris path.

FAA personnel reported that the purpose of the flight was to return the airplane back to the pilot's home airport following maintenance in Stevensville. Law enforcement personnel reported that the family of the pilot reported that his son and daughter-in-law were leaving the country on a prolonged trip out of the country and he was traveling back to take care of their ranch.

Review of radar data provided by the FAA depicted the flight departing from Stevensville and proceeded on a south, southeasterly course until reaching Freedom, Wyoming, where the data depicted a left turn to an easterly heading. The easterly track continued until about 1.5 miles northwest of the accident site. The radar data contained no altitude data for any of the recorded plots.

Pilot Information

Certificate:	Private	Age:	63
Airplane Rating(s):	Single-engine sea	Seat Occupied:	Left
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 With waivers/limitations	Last FAA Medical Exam:	March 1, 2012
Occupational Pilot:	No	Last Flight Review or Equivalent:	May 3, 2011
Flight Time:	159 hours (Total, all aircraft), 91 hours (Total, this make and model)		

The pilot, age 63, held a private pilot certificate with an airplane single-engine land rating which was issued on January 24, 2008. A third-class airman medical certificate was issued on March 1, 2012, with the limitation stating "must wear corrective lenses." The pilot reported on his most recent medical certificate application that he had accumulated 160 total flight hours. Review of the pilot's logbook revealed that as of the most recent entry, dated February 7, 2012, the pilot had accumulated 159.3 hours of total flight time of which 91.9 hours were in the accident make/model airplane. The pilot's most recent flight review was completed on May 3, 2011.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N61LN
Model/Series:	182D	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	18253398
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	June 28, 2012 Annual	Certified Max Gross Wt.:	3110 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1884 Hrs as of last inspection	Engine Manufacturer:	CONT MOTOR
ELT:	C91A installed, not activated	Engine Model/Series:	O-520
Registered Owner:	MCGINNIS MYLES M	Rated Power:	275 Horsepower
Operator:	MCGINNIS MYLES M	Operating Certificate(s) Held:	None

The four-seat, high-wing, fixed-gear airplane, serial number (S/N) 18253398, was manufactured in 1961. It was powered by a Continental P. Ponk O-470-50 engine, serial number 291076-R. The airplane

was also equipped with a McCauley D3A34C401-C adjustable pitch propeller.

Review of the aircraft maintenance logbooks revealed that the most recent annual inspection was completed on June 28, 2012, at an airframe total time of 1,884.1 hours and an engine time since major overhaul of 126.1 hours. The most recent airframe logbook entry, dated November 17, 2012, at an airframe total time of 1,886.8 hours, stated that the right hand outboard landing gear support was replaced with a serviceable part.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	BPI,6993 ft msl	Distance from Accident Site:	37 Nautical Miles
Observation Time:	13:53 Local	Direction from Accident Site:	141°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Broken / 7000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	5 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	130°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	30.09 inches Hg	Temperature/Dew Point:	4°C / -1°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Stevensville, MT	Type of Flight Plan Filed:	None
Destination:	Pinedale, WY	Type of Clearance:	None
Departure Time:	11:30 Local	Type of Airspace:	

A National Transportation Safety Board (NTSB) staff meteorologist prepared a factual report for the area and time frame surrounding the accident.

The National Weather Service (NWS) Surface Analysis Chart for 1400 depicted a regional high-pressure center of 1018 hectopascals (hPa) in northwestern Colorado. Station models in the region of the accident site generally depicted a light and variable wind; however some stations reported wind magnitudes of 10-15 knots. Southwest of the accident site, stations were reporting cloudy conditions, while stations northeast of the accident site were reporting relatively clear sky conditions.

A regional Next-Generation Radar (NEXRAD) mosaic for 1345 did not identify any areas of reflectivity close to the accident location.

Unofficial weather observations were retrieved from the Bridger Teton National Forest Avalanche Center station DEABT, which was located about 4.5 miles to the west of the accident site at an elevation of approximately 10,350 feet. Data recorded at 1345 was temperature -2.8 degrees Celsius, dew point -3.4 degrees Celsius, relative humidity 94 percent, wind from 217 degrees at 7.8 knots, gusting to 13.9 knots.

Jackson Hole Airport (JAC) in Jackson, Wyoming, was located approximately 37 miles north-northwest of the accident site at an elevation of 6,451 feet. At 135, JAC reported a wind from 190 degrees at 6

knots, visibility of 8 miles, snow showers between 5 and 10 miles from the airport, few clouds at 3,500 feet above ground level (agl), ceiling broken at 5,000 feet agl, overcast cloud base at 8,000 feet agl, temperature of 4 degrees Celsius (C) and dew point temperature of -1 degrees C, altimeter setting 30.06 inches of mercury.

Geostationary Operational Environmental Satellite (GOES)-13 and GOES-15 visible and infrared data indicated that there were clouds in the accident area. While it can be difficult to discriminate meteorological cloud from snow-covered terrain in individual visible images, an animation of the visible imagery surrounding the accident time assisted in identifying the meteorological clouds in the area. GOES-13 infrared data indicated cloud-top brightness temperatures near the accident site at 1345 were approximately -16 degrees C, which, when considering the NAM model sounding, corresponded to cloud-top heights of about 16,700 feet. GOES-15 infrared data indicated cloud-top brightness temperatures near the accident site at 1330 were approximately -15 degrees C, which, when considering the NAM model sounding, corresponded to cloud-top heights of about 16,100 feet. Cloud bases for the area surrounding the accident site were not determined.

An Airmen's Meteorological Information (AIRMET) advisories issued at 0745 for areas of Wyoming that included the accident site. The AIRMETs advised of mountain obscuration and moderate icing between the freezing level and flight level 220. At 1345, two AIRMETs were issued for areas of Wyoming that included the accident site. The AIRMETs advised of mountain obscuration and moderate icing between the freezing level and flight level 220. For further information, see the weather study report within the public docket for this accident.

It was not determined if the pilot obtained a weather briefing for the flight.

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:	43.008609,-110.563331

Examination of the accident site revealed that the airplane impacted mountainous terrain on a heading of about 200 degrees magnetic at an elevation of about 10,030 feet mean sea level (msl). The wreckage debris path was oriented on an approximate heading of 200 degrees magnetic and was about 133 feet in length. The first identified point of contact (FIPC) was a group of freshly topped trees about 15 feet in height. Extending from the FIPC was portions of both the left and right wings, and elevators, partially submerged within 12 to 24 inches of snow. The aft portion of the fuselage behind the baggage bulkhead came to rest upright on a heading of about 309 degrees magnetic. The forward portion of the fuselage was found inverted underneath the aft portion of the fuselage.

Both wings were separated from the fuselage. The empennage remained attached to the fuselage. The

outboard portions of the left and right elevators and horizontal stabilizers were separated. The top portion of the rudder and vertical stabilizer were separated. Numerous instruments were displaced from the instrument panel and located adjacent to the main wreckage.

The flap cables were separated. The rudder and elevator flight control cables were intact from their respective flight controls forward to the aft baggage bulkhead where the fuselage was folded over.

The engine was submerged within snow. The propeller assembly was separated from the engine. One of the three blades was separated from the propeller hub. The remaining propeller blades remained attached to the propeller hub, however, rotated freely within the hub.

All major structural components of the airplane were located within the wreckage debris path.

The emergency locator transmitter (ELT) was removed by Search and Rescue personnel. Review of photo documentation revealed that the ELT switch was in the "OFF" position and that both the remote switch cable and antenna cable remained attached. The ELT switch was placed in the "ON" position by the NTSB investigator-in-charge (IIC) and was found to function normally.

The wreckage was recovered to a secure location for further examination.

Medical and Pathological Information

The Sublette County Coroner conducted an autopsy on the pilot on November 28, 2012. The medical examiner determined that the cause of death was "...multiple blunt force trauma..."

The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report, carbon monoxide, cyanide, volatiles, and drugs were tested, and had negative results.

Tests and Research

A portable Garmin handheld GPS unit was located during wreckage recovery. The GPS was subsequently sent to the NTSB Records Laboratory, Washington, DC, for further examination. The data recovered from the GPS unit showed that following departure from Stevensville, the flight ascended to about 9,500 feet mean sea level (msl), and remained between 9,000 and 10,000 feet for about 25 minutes. The data depicted a climb to about 10,500 feet over a 2 minute time frame, before descending about 8,000 feet and remaining between 8,000 feet and 9,500 feet for about 27 minutes. The data further depicted that the flight climbed to about 12,300 feet over a 12 minute time frame before a descent was observed to about 8,700 feet across 19 minutes. The remaining 27 minutes of recorded GPS data depicted that the flight

climbed from 8,700 feet to an altitude of 13,450 feet at the last recorded data point near Freedom, Wyoming, about 22 miles west of the accident site.

Additional Information

Examination of the recovered airframe revealed that the forward portion of the fuselage from the rear seats forward was fragmented. The aft portion of the fuselage from the rear seats was crushed aft to about 12 inches aft of the baggage door. The upper half of the vertical stabilizer and rudder were separated. The outboard half of the left horizontal stabilizer and elevator was separated. The right horizontal and elevator remained attached; however, was impact damaged on the inboard leading edge and bent upwards about mid span. Both wings were fragmented into multiple pieces. The instrument panel was fragmented into multiple sections with numerous instruments displaced. The tachometer was located and displayed 1,700 rpm and 889.4 hours.

Control cable continuity was established from the empennage to the rear doorpost bulkhead. Both aileron control cables were located and exhibited signatures of tension overload. The left flap cables exhibited tension overload. The right side flap cables were cut by recovery personnel. The fuel selector was in the "right fuel tank" position. The flap bar was in the stowed position.

Examination of the Continental P-Ponk Aviation O-470-50 engine revealed that it was separated from the engine mount structure via all its mounts. The starter, right magneto, propeller, oil cooler, external oil filter, and carburetor were separated from the engine. The top spark plugs, starter adapter, and the vacuum pump were removed. The crankshaft was rotated by hand using a hand tool attached to the engine crankshaft. Continuity was established throughout to the rear of the engine and valve train. Thumb compression and suction was obtained on all six cylinders. All six cylinders were inspected using a borescope; all of the cylinders, valve faces, and pistons displayed normal operating signatures.

The left magneto remained attached to the engine and was intact. The magneto was removed and the magneto drive shaft was rotated by hand. Spark was produced on all six terminals. The right magneto was separated from the engine and was intact. The magneto drive shaft was rotated by hand. No spark was produced on all six terminals. The right magneto was installed on a magneto test bench and produced spark on all six posts.

The carburetor was impact damaged to the bottom portion of the float bowl. The mixture arm was separated. The throttle arm moved from stop to stop freely by hand. The fuel screen was removed and found free of debris. The carburetor bowl was removed. The floats were intact and as the bowl was removed, one float separated. The needle valve was intact.

The vacuum pump drive coupling was intact and undamaged. The drive coupling would not rotate by hand. The vacuum pump was disassembled and the vane and rotor assembly was damaged.

A postaccident examination of the airframe and engine revealed no evidence of preimpact mechanical malfunctions or failures that would have precluded normal operation.

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Bruce J Hanson; Federal Aviation Administration; Casper, WY Steve Miller; Cessna Aircraft Company; Wichita, KS Kurt Gibson; Continental Motors Inc; Mobile, AL
Original Publish Date:	May 8, 2014
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=85655

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](#).