Aviation Investigation Final Report

Location:	Teddys Peak, Colorado	**Accident Number:**	CEN12FA639
Date & Time:	September 13, 2012, 09:00 Local	**Registration:**	N58119
Aircraft:	Mooney M20J	**Aircraft Damage:**	Substantial
Defining Event:	Controlled flight into terr/obj (CFIT)	**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Radar data showed the airplane heading south after departure from the airport, turning to the southwest then west, and steadily climbing over rising mountainous terrain. The last radar target, about 2.8 miles east of the accident site, showed the airplane in a slow climb, about 11,200 feet mean sea level (msl), heading west. There were no witnesses to the accident and no reported distress calls from the airplane. A search was started when the airplane did not arrive at its destination, and 2 days later, the airplane was located about 300 feet below the top of a 12,300-foot ridgeline. Postaccident examination revealed ground scars and damage to the airplane indicating that it impacted the ground relatively flat and wings-level on an upslope heading, which is consistent with it being in a wings-level climb. No preimpact anomalies were discovered with the airframe or engine that would have precluded normal operation.

The nearest weather reporting station was located at the departure airport about 65 miles northeast of the accident site, and visual meteorological conditions prevailed at the time of departure. Because the accident occurred in a remote area in rugged mountainous terrain, the precise weather conditions at the time could not be determined. However, hikers who were in the area of the accident site about the time of the accident reported dense fog and cloud obscuration along the ridgelines on the airplane's flightpath. These observations suggest that the airplane encountered deteriorating weather conditions once it climbed above 11,000 feet msl. Further, these observations, combined with the physical evidence indicating the airplane was in a wings-level climb at impact, are consistent with the pilot continuing flight into clouds and/or fog and losing visual contact with the terrain, resulting in the airplane impacting the slope in controlled flight.

Probable Cause and Findings

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

The pilot's decision to continue flight into deteriorating weather conditions, including fog and mountain obscuration, and his failure to maintain clearance with known rising terrain along the route of flight, which resulted in controlled flight into terrain.

Findings

Aircraft	Altitude - Not attained/maintained
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Obscuration - Effect on personnel

Factual Information

History of Flight

Enroute-climb to cruise	VFR encounter with IMC
Enroute-climb to cruise	Controlled flight into terr/obj (CFIT) (Defining event)

HISTORY OF FLIGHT

On September 13, 2012, approximately 0920 mountain daylight time, a Mooney M20P, N58119, registered to Occuhealth INC., of Hurdle Mills, North Carolina, sustained substantial damage when it crashed in rugged mountainous terrain (12,300 feet MSL) while climbing over the San Isabel National Forest, Colorado. Both occupants, the pilot and his pilot rated passenger, sustained fatal injuries. Visual meteorological conditions prevailed along the enroute portion of the flight, however, obscuration and fog were observed to be present near the accident area. A flight plan was not filed for the cross-country flight being conducted under the provisions of 14 Code of Federal Regulations Part 91. The flight originated from the Pueblo Memorial Airport (PUB) approximately 0820, and was enroute to its intended destination of Reno, Nevada, when the accident occurred. An ALNOT was issued when the airplane did not arrive at its intended destination.

On September 15, 2012, after an extensive air and ground search, coordinated by the Huerfano County Sheriff's Department, the airplane's wreckage was reached by ground personnel near the top of a ridgeline at 37:20.25 N latitude 105:10.02 W longitude, at an elevation of 12,300 feet. The wreckage was found on a steep upslope and there was evidence of a post-impact fire that consumed most of the cabin area. The victims were removed and transported to the county coroner's office.

Radar data provided by the FAA showed the flight track of the airplane in a steady climb, heading south after takeoff from Pueblo. The airplane then turned to the southwest and then to the west and was climbing throughout its course, which was a typical route of flight for light airplanes enroute to destinations west of the Pueblo airport. The last radar target, about 2.8 miles east of the accident site, showed the airplane in a slow climb, about 11,200 feet MSL, heading west.

There were no witnesses to the accident. Once the ALNOT was issued, rescue personnel mobilized and began searching the presumed route of flight over the mountains, southwest of Pueblo Airport. Initial reports from ground personnel indicated that there was dense fog and cloud obscuration along the ridgelines along the airplane's flight path.

There were no reported distress calls from the airplane.

PERSONNEL INFORMATION

According to FAA airman records, the pilot held certificates for Airplane Single Engine Land, Airplane Multi-engine Land, Glider, Instrument Airplane, and Flight Instructor. His pilot experience, as reported on his most recent FAA medical exam, dated June 13, 2011, was 5,200 total flight hours. According to a

family member, the pilot had flown the accident airplane often, had about 1,100 hours in the accident airplane, and was proficient in cross-country flying. The family member stated that the pilot had experience in flying over the Rocky Mountains several years ago, when he used to live in the Denver area.

The pilot-rated-passenger held a certificate for Airplane Single Engine Land. His pilot experience, as reported on his most recent FAA medical exam, dated July, 16, 2012, was 1,125 hours in single engine airplanes.

It could not be determined whether the pilot or pilot-rated-passenger was at the controls at the time of the accident.

AIRCRAFT INFORMATION

A review of the airframe and engine logbooks did not reveal any uncorrected mechanical defects. Its most recent annual inspection was dated March, 26, 2012, with a total airframe time of 3,845 hours. The total engine time since overhaul at the time of the annual inspection was 1,121 hours.

Fueling records showed that the airplane was topped off at Pueblo Airport, taking 50 gallons, on September 11, 2012. The airplane had arrived in Pueblo on September 11th and according to a family member, the pilot opted to delay the trip to Reno until September 13th due to weather in Pueblo and along the intended route of flight.

METEOROLOGICAL INFORMATION

The nearest weather reporting station was located at Pueblo Airport (PUB), about 65 miles northeast of the accident site: METAR KPUB 131506Z 00000KT 10SM FEW011 BKN018 OVC060 12/09 A3051. The general conditions at the time of departure was VMC, however, hikers that were in the area of the accident site about the time of the accident, reported dense fog and cloud obscurations along the ridge lines along the airplane's flight path. These observations were consistent with marginal VMC once the airplane climbed above 11,000 feet MSL. Because the accident site was located in a remote area in rugged mountainous terrain, precise weather conditions could, not be determined.

WRECKAGE AND IMPACT INFORMATION

The NTSB IIC was transported to the accident site via helicopter and spent the entire day documenting the wreckage. Mountain rescue personnel had already been to the accident site and extracted the victims from the wreckage. Initial observations showed that the airplane impacted the ground, relatively flat and wings level, upslope, about 300 feet below the top of a 12,300 foot ridgeline. The approximate incline upslope was between 12-15 degrees airplane nose up. Mostly all of the fuselage, wing, and empennage structures were intact with the exception of the cabin area, which was consumed from a post-impact fire. Ground scars were consistent with the airplane impacting the ground flat, about 12-15 degrees nose up, then sliding upslope about 100 feet before turning downslope due to rocks and uneven terrain before coming to rest.

Flight control continuity was confirmed from the cockpit to all flight control surfaces. The propeller hub was found attached to the engine crankshaft. Marks on the hard ground showed propeller blade strikes

consistent with rotation at impact. Each of the three propeller blades showed uniform bending and twisting in the opposite the direction of rotation.

After the airplane was recovered to a secure facility, the engine was examined. Drive continuity was established from the crankshaft to the accessory drive. Both magnetos fired when rotated by hand. All spark plug electrodes showed normal wear. No pre-impact mechanical anomalies were found with the engine that may have contributed to the accident.

MEDICAL AND PATHOLOGOCAL INFORMATION

An autopsy of the pilot was performed and no physical issues were discovered that may have contributed to the accident. Toxicology tests on the pilot-rated-passenger were negative. Toxicology tests on the pilot were not conducted.

ADDITIONAL INFORMATION

The wreckage was released to the owner's representative.

Pilot Information

Certificate:	Commercial	**Age:**	69
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	Yes
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	June 13, 2011
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	5300 hours (Total, all aircraft), 1100 hours (Total, this make and model), 60 hours (Last 90 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Pilot-rated passenger Information

Certificate:	Private	**Age:**	57
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Unknown
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Without waivers/limitations	**Last FAA Medical Exam:**	July 16, 2012
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1125 hours (Total, all aircraft), 100 hours (Total, this make and model)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N58119
Model/Series:	M20J	**Aircraft Category:**	Airplane
Year of Manufacture:	1988	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-1646
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	March 26, 2012 Annual	**Certified Max Gross Wt.:**	2740 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	3865 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	IO-360
Registered Owner:	OCCUHEALTH INC	**Rated Power:**	200 Horsepower
Operator:	OCCUHEALTH INC	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	PUB,4790 ft msl	**Distance from Accident Site:**	65 Nautical Miles
Observation Time:	15:06 Local	**Direction from Accident Site:**	20°
Lowest Cloud Condition:	Few / 1100 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.51 inches Hg	**Temperature/Dew Point:**	12°C / 9°C
Precipitation and Obscuration:			
Departure Point:	Pueblo, CO (PUB)	**Type of Flight Plan Filed:**	None
Destination:	Reno, NV (RNO)	**Type of Clearance:**	None
Departure Time:	08:30 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	39.060455,-105.312042(est)

Administrative Information

Investigator In Charge (IIC):	Lemishko, Alexander
Additional Participating Persons:	Ronald Budnick; FAA FSDO Denver; Denver, CO
Original Publish Date:	January 20, 2015
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=85054