Aviation Investigation Final Report

Location:	Redlands, California	**Accident Number:**	WPR20LA169
Date & Time:	June 5, 2020, 08:01 Local	**Registration:**	N9217B
Aircraft:	Cessna 175	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The noncertificated pilot was conducting a cross-country flight during daytime visual flight rules flight conditions. Recorded automatic dependent surveillance-broadcast (ADS-B) data showed that as the airplane was on a southerly heading, nearing the destination airport, it made a left 270° turn at an altitude of 5,125 ft msl. About 46 second later, the airplane completed the turn, and was established on a west-northwesterly heading, at an altitude of 5,275 ft msl. About 1 minute later, the airplane made a left turn to a southwesterly heading, at an altitude of 3,975 ft msl and continued to descend until ADS-B contact was lost 34 seconds later at an altitude of 2,775 ft, and about 436 ft northeast of the accident site. The accident site was in hilly terrain, about 3.47 miles southeast of the intended destination. There were no known witnesses to the accident sequence.

A postaccident examination of the recovered wreckage revealed no evidence of any preexisting mechanical malfunction that would have precluded normal operation.

Weather data for the area around the accident site depicted favorable conditions for overcast clouds and restricted visibility with haze and clouds from the surface with tops near 4,300 ft. In addition, marginal visual meteorological conditions to instrument meteorological conditions (IMC) prevailed during the period, with instrument flight rules (IFR) to low IFR conditions being reported at the two closest airports southwest of the accident site. Due to IMC, the pilot likely did not have visible reference to the horizon during the descent to the destination airport, which resulted in a collision with terrain.

Whether effects from the pilot's use of lamotrigine or some underlying medical condition contributed to the accident cannot be determined based on the limited available evidence. Some or all of the detected ethanol may have been from sources other than ingestion. It is unlikely that ethanol contributed to the accident.

Probable Cause and Findings

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

The noncertificated pilot's visual flight rules flight into instrument meteorological conditions and subsequent impact with terrain.

Findings

Personnel issues	Qualification/certification - Pilot
Personnel issues	Decision making/judgment - Pilot
Aircraft	Altitude - Not attained/maintained
Environmental issues	Clouds - Contributed to outcome
Environmental issues	Low visibility - Contributed to outcome
Environmental issues	Mountainous/hilly terrain - Effect on operation

Factual Information

History of Flight

Maneuvering	Loss of control in flight (Defining event)

On June 5, 2020, about 0801 Pacific daylight time, a Cessna 175, N9217B, was substantially damaged when it was involved in an accident near Redlands, California. The pilot and two passengers were fatally injured. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

Recorded automatic dependent surveillance-broadcast (ADS-B) data provided by the Federal Aviation Administration (FAA) showed that the airplane departed Big Bear City Airport (L35), Big Bear City, California, about 0745 and proceeded southwesterly as it climbed to 9,300 ft mean sea level (msl). At 0751:36, the airplane began a descent followed by a left turn to a southeasterly heading.

About 6 minutes, 12 seconds later, a right turn to a southerly heading was observed when the airplane was at an altitude of about 5,150 ft msl. The airplane then entered a left 270° turn, which it completed at an altitude of about 5,275 ft msl. About 1 minute later, a left turn to a southwesterly heading at 3,975 ft msl was observed. The airplane remained on a southwesterly heading and continued to descend until ADS-B contact was lost at 0800:58, at an altitude of 2,775 ft, about 436 ft northeast of the accident site.

Figure 1: ADS-B data overlay on Google Earth image.

There are no known witnesses to the accident sequence. San Bernardino County Sheriff Air Units located the wreckage about 1630.

Examination of the accident site by a FAA inspector revealed that the airplane impacted hilly terrain on a southwesterly heading and came to rest at an elevation of 2,874 ft. The wreckage debris path was about 80 ft in length and contained all major structural components of the airplane.

A postaccident examination of the recovered airframe and engine revealed no evidence of any preexisting mechanical malfunction that would have precluded normal operation.

At the time of the accident, the pilot did not hold a valid pilot certificate. The pilot's most recent FAA medical certificate was issued in 1994. The pilot's logbooks were not located.

A high-resolution rapid refresh numerical model data from the accident site area was plotted using the Universal RAwinsonde OBservation (RAOB) program software. The plotted data indicated nimbostratus type clouds from the lifted condensation level and level of free convection at 41 ft above ground level (agl), or 2,797 ft mean sea level (msl), to to 4,350 ft msl, with light rain and mist.

The closest weather reporting station was at San Bernardino International Airport (SBD), San Bernardino, California. The next closest weather reporting location was March Air Reserve Base (RIV), Riverside, California, located about 14 miles southwest of the accident site at an elevation of 1,536 ft. At 0758, recorded weather data at RIV captured wind calm, visibility 3 miles, light drizzle and mist, ceiling overcast at 400 ft agl, temperature 16° C, dew point temperature 15° C, and an altimeter setting of 29.84 inches of mercury.

The Terminal Aerodrome Forecast for the area, which was issued at 0427, indicated marginal visual flight rules conditions to prevail from 0500 through 1000, with winds variable at 3 knots, visibility better than 6 miles, and ceiling overcast at 1,400 ft agl.

A search of the FAA automated flight service station contract provider Leidos indicated that they had no contact with the pilot of the accident airplane for any weather briefing on the day of the accident and no third-party vendors utilized their system for any requests for weather data or to file any flight plans. It is therefore unknown what information the pilot may have used to familiarize himself with forecast weather conditions before departure or en route.

The Coroner's Division of the Office of the Sheriff, San Bernadino, California, performed the pilot's autopsy. According to the autopsy report, the cause of death was multiple blunt force injuries.

Toxicology testing performed at the FAA Forensic Sciences Laboratory detected 11 mg/dl of ethanol in the muscle and unspecified amounts of Lamotrigine in the liver and muscle. Lamotrigine, sometimes marketed as Lamictal, is a prescription medication that can be used to

treat seizure disorders, bipolar disorder, and migraine headache prevention. Lamotrigine typically carries a warning that it may cause dizziness, sleepiness, and other symptoms and signs of central nervous system depression, and users should not drive or operate other complex machinery until they have gained sufficient experience to gauge whether the drug adversely affects their mental and/or motor performance. In users with underlying heart disease, the drug may sometimes cause dangerous heartbeat disturbances. Lamotrigine use is generally disqualifying for FAA medical certification.

Ethanol is the intoxicating alcohol in beer, wine, and liquor. It can impair judgment, psychomotor performance, cognition, and vigilance. Ethanol can also be produced by microbes in a person's body after death.

Pilot Information

Certificate:	None	**Age:**	64,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N9217B
Model/Series:	175	**Aircraft Category:**	Airplane
Year of Manufacture:	1958	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	55017
Landing Gear Type:	Tricycle	**Seats:**	4
Date/Type of Last Inspection:	March 10, 2020 Annual	**Certified Max Gross Wt.:**	2299 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Continental
ELT:	Installed, not activated	**Engine Model/Series:**	GO-300-A
Registered Owner:	On file	**Rated Power:**	175 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KSBD,1159 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	07:50 Local	**Direction from Accident Site:**	283°
Lowest Cloud Condition:		**Visibility**	4 miles
Lowest Ceiling:	Overcast / 1100 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	6 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	230°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.84 inches Hg	**Temperature/Dew Point:**	17°C / 14°C
Precipitation and Obscuration:	Moderate - None - Haze		
Departure Point:	Big Bear City, CA (L35)	**Type of Flight Plan Filed:**	None
Destination:	Redlands, CA (REI)	**Type of Clearance:**	None
Departure Time:	07:44 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	REDLANDS MUNI REI	**Runway Surface Type:**	
Airport Elevation:	1574 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 Fatal	**Aircraft Fire:**	None
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	3 Fatal	**Latitude, Longitude:**	34.064723,-117.080001

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua
Additional Participating Persons:	Bruce A Theilbar; Federal Aviation Administration; Riverside, CA Henry Soderlund; Textron Aviation; Wichita, KS
Original Publish Date:	June 7, 2022
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=101394