Aviation Investigation Final Report

Location:	Stallion Springs, California	**Accident Number:**	WPR19FA086
Date & Time:	February 21, 2019, 16:45 Local	**Registration:**	N533Q
Aircraft:	Beech D55	**Aircraft Damage:**	Destroyed
Defining Event:	VFR encounter with IMC	**Injuries:**	3 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

The pilot departed on a visual flight rules cross-country flight with two passengers. There were no communications with air traffic control, and the flight did not arrive at its intended destination. The wreckage was located the next day on rising, mountainous snow-capped terrain at an elevation of about 6,700 ft mean sea level.

Examination of the wreckage revealed that the airplane initially impacted trees and left a distribution path of about 392 ft, which is consistent with controlled flight into terrain. Examination of both engines at the accident site revealed no evidence of a mechanical anomaly that would have precluded normal operation. The propellers from both engines exhibited impact damage with rotational scoring on the cambered surfaces and torsional bending of the blades, and damaged trees around the wreckage exhibited 45° cut sections that appeared to be from the propeller blades, consistent with the engines producing power at the time of impact.

There were no records of the pilot obtaining a weather briefing or filing a flight plan before departure; it is unknown if the pilot reviewed other weather sources before the flight. Along the route of flight, the combination of a low-pressure system at the surface and at 500-hPa provided the support for upward vertical motion and the development of rain showers and thunderstorms, with snow showers in higher elevations. Terrain above about 4,600 ft in the vicinity of the accident site was likely obscured in clouds with light freezing conditions and snow about the time of the accident. The available weather reports, forecasts, and advisories depicted the conditions and identified instrument flight rules and icing conditions along the route of flight. Had the pilot obtained a weather briefing for his planned route of flight, he would have been aware of the weather hazards, and alternate routing may have allowed for safe operations in visual conditions.

Probable Cause and Findings

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

The pilot's continued visual flight into instrument meteorological conditions associated with mountain obscuration conditions, which resulted in controlled flight into rising terrain. Contributing to the accident was the pilot's failure to obtain a weather briefing.

Findings

Personnel issues	Weather planning - Pilot
Personnel issues	Decision making/judgment - Pilot
Environmental issues	Mountainous/hilly terrain - Contributed to outcome
Environmental issues	Obscuration - Effect on operation

Factual Information

History of Flight

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

On February 21, 2019, about 1645 Pacific standard time, a Beech D55 airplane, N533Q, was destroyed when it was involved in an accident near Stallion Springs, California. The pilot and two passengers were fatally injured. The airplane was being operated as a Title 14 *Code of Federal Regulations* Part 91 personal flight.

The pilot's son reported that a family friend had asked the pilot to fly two passengers to see a client but that the flight was not for compensation or hire. The airplane departed San Luis County Regional Airport (SBP), San Luis Obispo, California, about 1600, on the cross-country flight destined for Whiteman Airport (WHP), Los Angeles, California, but did not arrive. There was no contact with air traffic control. About 2116, an alert notice was issued for the missing accident airplane. On February 22, 2019, the wreckage was located by search and rescue crews on snow-covered rising terrain at an elevation of 6,700 ft mean sea level (msl).

Pilot Information

Certificate:	Commercial; Flight instructor; Private	**Age:**	74,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	Unknown
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane multi-engine; Airplane single-engine; Instrument airplane	**Toxicology Performed:**	Yes
Medical Certification:	BasicMed With waivers/limitations	**Last FAA Medical Exam:**	May 13, 2017
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4012 hours (Total, all aircraft), 100 hours (Total, this make and model), 38 hours (Last 90 days, all aircraft)		

The pilot, age 74, held a private pilot certificate for airplane multi-engine land with a restriction of visual flight rules only. He also held a commercial certificate for airplane single-engine land and instrument rating. He held an airframe and powerplant certificate and was an authorized inspector. He

was issued a third-class airman medical certificate on November 24, 2014, with the following limitation: Must have available glasses for near vision. The pilot's medical expired for all classes on November 30, 2016. According to the FAA, he completed the BasicMed Comprehensive Medical Examination Checklist (CMEC) on May 8, 2017 and the Basic Med Course on May 13, 2017.

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N533Q
Model/Series:	D55	**Aircraft Category:**	Airplane
Year of Manufacture:	1968	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	TE-616
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 4, 2018 Annual	**Certified Max Gross Wt.:**	5300 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:	4965.7 Hrs as of last inspection	**Engine Manufacturer:**	Continental
ELT:	C91A installed, activated, aided in locating accident	**Engine Model/Series:**	IO-520-C
Registered Owner:	On file	**Rated Power:**	285 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Unknown	**Condition of Light:**	Day
Observation Facility, Elevation:	KTSP,4001 ft msl	**Distance from Accident Site:**	9 Nautical Miles
Observation Time:	16:55 Local	**Direction from Accident Site:**	56°
Lowest Cloud Condition:	Few / 600 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 1900 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots / None	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	310°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.62 inches Hg	**Temperature/Dew Point:**	-2°C / -3°C
Precipitation and Obscuration:			
Departure Point:	San Luis Obispo, CA (SBP)	**Type of Flight Plan Filed:**	None
Destination:	Los Angeles, CA (WHP)	**Type of Clearance:**	None
Departure Time:	16:00 Local	**Type of Airspace:**	Class G

The National Weather Service (NWS) Surface Analysis Chart for 1600 depicted a low-pressure system associated with an occluded front over Utah, extending south into Arizona and back to the southwest into New Mexico as a cold front. Another low-pressure system was located over southern California, with a trough of low pressure extending between the two lows. The accident site was immediately north of the low in California and behind the occluded front. Station models depicted variable winds and variable cloud cover, with several stations reporting rain and snow, especially over Arizona and Nevada.

The NWS 500-hPa Constant Pressure Chart for 1600 depicted an upper-level low-pressure system over central California with a long wave trough extending southwest. The accident site was near the base of the upper-level low. Troughs are typically areas of favorable upward vertical motion and support the development of clouds and precipitation.

The closest weather reporting station to the accident site was Tehachapi Municipal Airport (TSP), Tehachapi, California, located about 9 miles northeast at an elevation of 4,001 ft. At 1635, the airport's automated weather observation system reported wind from 310º at 6 kts, visibility 10 miles or more in light rain, ceiling broken at 600 ft above ground level (agl), broken at 1,200 ft, overcast at 2,900 ft, temperature -2°C, dew point -2°C, and altimeter 29.61 inches of Mercury. Before this period, a band of heavy snow and unknown precipitation impacted the station, with the precipitation turning over to rain with below-freezing surface temperatures during the period before changing back to snow.

The next closest weather reporting location was the NWS Sandburg (SDB) automated surface observing system near the crest of Bald Mountain, located about 19 miles south of the accident site at an elevation of 4,521 ft. At 1653, SDB reported wind from 350º at 13 kts gusting to 24 kts, visibility 10 miles or more, ceiling broken at 500 ft agl, broken at 1,200 ft, temperature -2ºC, dew point -3ºC, and altimeter 29.59 inches of Mercury. Remarks included snow began at 1629 and ended at 1630, ceiling 200 ft, variable 800 ft, hourly precipitation a trace, temperature -2.2ºC, and dew point -3.3ºC.

The graphic forecast for aviation (GFA) forecast expected areas of restricted visibility in rain and snow showers in the vicinity of the accident site, with overcast clouds with bases near 5,000 ft msl and tops layered to 23,000 ft. The GFA also depicted the G-AIRMETs for mountain obscuration and moderate icing conditions current over the accident site.

A review of the observations indicated that a thunderstorm was reported at 1656 and ended at 1705.

A search of the FAA Automated Flight Service Station (AFSS) provider Leidos indicated that they had no requests from the pilot for a weather briefing, or to file a flight plan, and no other contact with him on February 21, 2019. A similar search with ForeFlight also came up with no contact for any weather briefing information. It is therefore unknown what the pilot reviewed to familiarize himself with regards to the reported and forecast weather conditions prior to flight. It is also unknown as to the pilot's intended flight route.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	2 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 Fatal	**Latitude, Longitude:**	35.0475,-118.59694(est)

Examination of the accident site revealed that the airplane impacted rising, mountainous snow-capped terrain that gradually sloped upward in a northwest-to-southeast direction. The wreckage debris field was orientated on a magnetic heading of 125° and at an elevation of 6,700 ft msl. All major structural components of the airplane were located at the accident site. The wreckage debris path was 392 ft from the initial impact point (IIP) to the last piece of wreckage. The IIP was identified as a severed treetop about 30 ft high and about 143 ft northwest from the first piece of identifiable wreckage. The latter was about 6 inches of the outboard section of the left horizontal stabilator. The last piece of identified wreckage was the forward section of the fuselage.

Flight control cable continuity could not be established due to fragmentation of the wreckage. All control cable separations observed were tension overload type separations. Sections of both ailerons, both elevators, the top of the rudder, and the flaps were observed in the wreckage path. The fuselage was observed in two major sections. Both wings were highly fragmented.

Both engines were separated from the wings and displayed extensive impact damage. Examination of both engines at the accident site revealed no evidence of a mechanical anomaly that would have precluded normal operation. Both propeller assemblies were separated from the engines. Both propellers exhibited impact damage with rotational scoring on the cambered surfaces and torsional bending of the blades. Damaged trees exhibited 45° cut sections consistent with cuts from propeller blades".

The wreckage was not recovered from the accident site.

Medical and Pathological Information

An autopsy was performed on the pilot by the coroner's office in Bakersfield, California. The cause of death was attributed to "blunt injuries instantaneously or within just a few seconds."

Toxicology testing by the FAA Forensic Sciences Laboratory revealed Tamsulosin and valsartan were detected in liver and muscle tissue. Tamsulosin (Flomax®) is used in the symptomatic treatment of benign prostatic hyperplasia. Valsartan is used to treat high blood pressure, congestive heart failure (CHF), and post-myocardial infarction (MI).

Administrative Information

Investigator In Charge (IIC):	Vanover, Jackie
Additional Participating Persons:	Cotry Shearrill; FAA; Van Nuys, CA Andrew Hall; Textron Aviation; Wichita, KS Mike Council; Continental Motors Group; Mobile, AL
Original Publish Date:	May 27, 2021
Last Revision Date:	
Investigation Class:	Class 3
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=99009

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.