Aviation Investigation Final Report

Location:	Santa Fe, New Mexico	**Accident Number:**	CEN19FA032
Date & Time:	November 26, 2018, 19:50 Local	**Registration:**	N113TA
Aircraft:	Mooney M20C	**Aircraft Damage:**	Destroyed
Defining Event:	Unknown or undetermined	**Injuries:**	1 Fatal
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

The private pilot departed on a cross-country flight which continued into night visual meteorological conditions across sparsely-populated terrain. The destination airport was located about 600 nautical miles (nm) northeast of the departure airport; however, the airplane impacted terrain almost 5 hours after takeoff near an airport about 330 nm east-northeast of the departure airport and about 120 nm east-southeast of a direct course between the departure and destination airports. The airplane's route of flight could not be determined; however, the location of the accident site suggests that the pilot had become lost at some point during the flight. Investigators were not able to determine what, if any route of flight planning was conducted by the pilot prior to the flight.

A witness near the accident site saw the airplane flying over the airport with "no lights whatsoever." His perception was that the pilot was not trying to land, but may have been trying to attract the attention of the tower controller. The landing gear and wing flaps appeared to be retracted, and the engine was running smoothly.

The airplane impacted a ravine about 1/3-mile south of the airport and was destroyed by impact forces and a postimpact fire. Postaccident airframe and engine examinations did not reveal any anomalies consistent with a preimpact failure or malfunction; however, portions of the airplane were damaged by the postimpact fire to the extent that a complete examination of some airplane systems, such as the electrical system, were not possible. The airplane did not have a current annual inspection, nor had the pilot requested a ferry permit for the flight.

Based on the available information, the reason the pilot was circling the airport and the airplane's subsequent impact with terrain could not be determined. It is likely the pilot became lost at some point during the flight and the airplane was likely near its fuel endurance limit at the time of the accident. The pilot may have been trying to orient himself by circling the airport or was attempting to alert the tower controller before setting up for a landing. However, the investigation was unable to determine whether a loss of control preceded the impact with terrain or whether the pilot became low on a landing approach.

Probable Cause and Findings

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

Collision with terrain for reasons that could not be determined based on the available information. Contributing to the accident was the pilot's poor preflight planning and poor decision to depart on the accident flight.

Findings

Not determined	(general) - Unknown/Not determined
Personnel issues	Flight planning/navigation - Pilot
Personnel issues	Decision making/judgment - Pilot

Factual Information

History of Flight

Unknown	Unknown or undetermined (Defining event)
Unknown	Collision with terr/obj (non-CFIT)

On November 26, 2018, about 1950 mountain standard time, a Mooney M20C airplane, N113TA, impacted terrain about 1/3-mile south of the Santa Fe Municipal Airport (SAF), Santa Fe, New Mexico. The pilot was fatally injured. The airplane was destroyed by impact forces and a post-impact fire. The airplane was registered to Nelson Flying Service and operated by the pilot as a Title 14 Code of Federal Regulations Part 91 positioning flight. Night visual meteorological conditions prevailed, and the flight was not operated on flight plan. The flight originated from the Phoenix Goodyear Airport (GYR), Goodyear, Arizona, about 1500 and was destined for the Colorado Plains Airport (AKO), Akron, Colorado.

Federal Aviation Administration (FAA) records indicate that the airplane was repossessed from the previous owner on June 7, 2018. The accident owner subsequently purchased the airplane from the repossessing bank on September 27, 2018. On November 25, 2018, at 2010, the pilot sent a text message to a friend stating, "Found 113TA. Clear across the field and gathering dust." At 2023, he sent another text message noting that he planned to be "in the air" tomorrow by 1030 and at AKO about 1400.

Personnel at the fixed base operator (FBO) at GYR reported that the pilot arrived at the airport the day before the accident and slept in the pilot lounge. While at the airport, the pilot installed a new battery in the airplane, borrowed a 5-gallon bucket, possibly for an oil change, and requested use of an air compressor. The pilot also purchased an FAA mechanic handbook. FBO personnel did not perform or assist the pilot with any maintenance work on the airplane. FBO records indicated the airplane had been fueled with slightly over 40 gallons on October 23, 2018. The pilot requested that ramp personnel standby with a fire extinguisher when he started the engine.

A local pilot noticed that one of the access panels on the engine cowling was open while the pilot was taxiing on the ramp near the FBO. He got the pilot's attention and attempted to latch the panel; however, it could not be latched. The accident pilot returned to the FBO and subsequently taxied out again, with blue tape holding both access panels closed.

The local pilot subsequently noticed that the wing speed brakes were extended. He recalled hearing the tower controller ask the accident pilot if he wanted to stow the speed brakes before attempting to take off. The accident pilot subsequently stowed the speed brakes. After takeoff, the controller informed the accident pilot that the landing gear was still down and that the transponder was not being received. After several attempts by the tower controller, the accident pilot simply responded, "I can't hear you, it's really loud in here".

A friend of the pilot stated that she exchanged text messages with the pilot during the flight. At 1836, the pilot texted that he was over Colorado Springs. At 1914, he asked for the VOR frequency and she

subsequently provided the frequency for AKO.

A witness near SAF stated that he observed the airplane twice shortly before the accident. Initially, he heard the airplane but did not see it. He was only able to locate it from the ambient lighting surrounding the airport because there were "no lights whatsoever" on the airplane. The airplane appeared to be on an "abbreviated" left downwind for runway 20 at SAF, then turned and crossed over the approach end of the runway before he lost sight of it. About 2 or 3 minutes later, he saw the airplane again on the same approximate flight path with no lighting before losing sight of it again. His perception was that the pilot was not trying to land but may have been trying to attract the attention of the tower controller. The landing gear and wing flaps appeared to be retracted. The engine sounded as if it was at a "medium" power setting and he did not suspect any issues with the engine. He did not witness any portion of the accident sequence.

At 1950, local authorities received a call reporting the accident. SAF is about 310 miles southwest from AKO, the intended destination. Investigators were not able to determine the flight path taken by the pilot nor were they able to determine the intended route of flight for the original destination of AKO.

Pilot Information

Certificate:	Private	**Age:**	73,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	1200 hours (Total, all aircraft)		

The pilot did not hold a current medical certificate. His most recent application for a medical certificate, dated May 4, 2010, was denied because he did not provide additional information as requested by the FAA. No subsequent applications were on file. The pilot had reported a total flight time of 1,200 hours at the time of his medical certificate application. His logbook was not available for review.

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N113TA
Model/Series:	M20C No Series	**Aircraft Category:**	Airplane
Year of Manufacture:	1966	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	3402
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	July 7, 2013 Annual	**Certified Max Gross Wt.:**	2575 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	2189 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-360-A1D
Registered Owner:	On file	**Rated Power:**	180 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Airplane maintenance records were located with the wreckage. The most recent annual inspection was dated July 7, 2013, at an airframe total time of 2,189 hours. At that time, the engine had accumulated about 2,189 hours total time, with about 1,288 hours since overhaul.

The airport manager at GYR reported that the airplane was kept in a T-hangar from February 2010 until August 18, 2017. From then, the airplane was tied down on the ramp until the day of the accident.

Performance data contained in the airplane owner's manual indicated that fuel endurance at 75% power was about 5 hours.

There was no record that the pilot requested a ferry permit for the flight.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	SAF,6349 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	19:53 Local	**Direction from Accident Site:**	360°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.22 inches Hg	**Temperature/Dew Point:**	-1°C / -14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Goodyear, AZ (GYR)	**Type of Flight Plan Filed:**	None
Destination:	Akron, CO (AKO)	**Type of Clearance:**	None
Departure Time:	15:00 Local	**Type of Airspace:**	Class E

Sunset occurred at 1652 and civil twilight ended at 1719. The moon set at 1015 and did not rise again until 2034.

Airport Information

Airport:	Santa Fe Municipal SAF	**Runway Surface Type:**	Asphalt;Concrete
Airport Elevation:	6349 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	2	**IFR Approach:**	None
Runway Length/Width:	8366 ft / 150 ft	**VFR Approach/Landing:**	Traffic pattern

Runway 2 was equipped with a visual approach slope indicator.

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal	**Latitude, Longitude:**	35.617221,-106.089447(est)

The airplane impacted a shallow ravine about 1/3 mile south of SAF. The fuselage and empennage were consumed by a postimpact fire. The wings were located in position relative to the fuselage and exhibited leading-edge crushing damage along their entire spans. The inboard portions of the wings were damaged by the postimpact fire. The engine and propeller were located with the wreckage.

Examinations of the airframe and engine did not reveal any anomalies consistent with a preimpact failure or malfunction.

Medical and Pathological Information

An autopsy performed by the State of New Mexico, Office of the Medical Investigator, Albuquerque, New Mexico, attributed the pilot's death to multiple blunt force injuries. Toxicology testing was performed by the FAA Forensic Sciences Laboratory. No drugs or ethanol were detected.

The autopsy identified polycystic kidney disease, hypertensive heart disease, and coronary artery disease. A friend of the pilot indicated that he was undergoing routine dialysis treatment, although, he had likely missed two sessions in the days before the accident flight.

Additional Information

FAA regulations require a pilot hold a medical certificate appropriate to the operation (§61.3). In the case of a private pilot certificate, that person must hold at least a third-class medical certificate issued within the preceding 24 months (§61.23). Alternately, a pilot may operate in accordance with the requirements of BasicMed. However, a pilot is not eligible for BasicMed certification if his/her most recent medical certificate application was denied by the FAA.

Regulations further state that no person my operate an aircraft unless within the preceding 12 calendar months, it has had an annual inspection [§91.409(a)(1)]. A current annual inspection is not required if a special flight permit had been issued and is carried in the aircraft [§91.409(c)(1)]. However, there was no record that a special flight permit had been issued for the airplane.

Administrative Information

Investigator In Charge (IIC):	Sorensen, Timothy
Additional Participating Persons:	Dennis Beattie; FAA Flight Standards; Albuquerque, NM Troy Helgeson; Lycoming Engines; Williamsport, PA
Original Publish Date:	May 19, 2020
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB traveled to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=98687