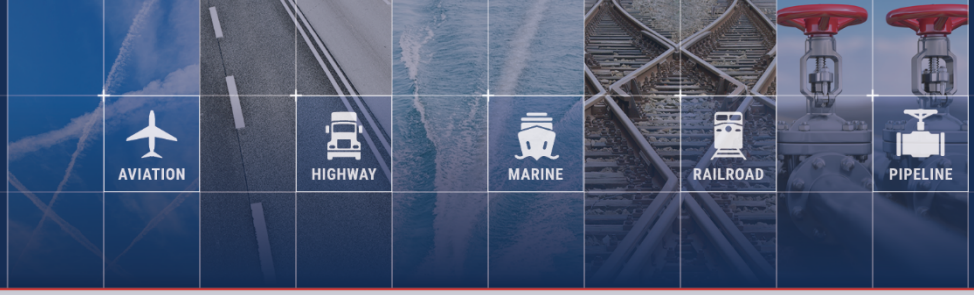

Aviation Investigation Final Report

Location:	GRANTSVILLE, Utah	**Accident Number:**	SEA95FA031
Date & Time:	December 18, 1994, 17:25 Local	**Registration:**	N175MC
Aircraft:	PIPER PA-32R-300	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	4 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE NON-INSTRUMENT RATED PRIVATE PILOT RECEIVED A WEATHER BRIEFING FOR A VFR FLIGHT OVER 5 HOURS BEFORE HE ACTUALLY DEPARTED. HE AND HIS THREE PASSENGERS DEPARTED AT NIGHT IN MOUNTAINOUS TERRAIN AND IN VFR CONDITIONS WITH THE INTENTION OF FLYING TO AN AIRPORT LOCATED 90 MILES AWAY FOR DINNER. THE PILOT RECEIVED ATC RADAR ADVISORIES AND REPORTED THAT THE CEILINGS WERE GETTING LOWER ALONG HIS ROUTE OF FLIGHT. HE WAS ADVISED BY ATC THAT AREAS OF LEVEL ONE AND TWO PRECIPITATION EXISTED IN FRONT OF HIM. THE AIRPLANE CONTINUED TO DESCEND AFTER ATC SERVICES WERE TERMINATED. RADAR DATA FOR THE AIRPLANE WAS LOST SHORTLY THEREAFTER. THE AIRPLANE IMPACTED A MOUNTAIN RIDGE ABOUT 6,200 FEET MSL AND WAS DESTROYED. THE RIDGE IS LOCATED ALONG A DIRECT LINE FROM THE DEPARTURE AIRPORT TO THE DESTINATION AIRPORT. NO DISTRESS CALLS WERE RECORDED FROM THE PILOT, AND NO EVIDENCE OF PRE-IMPACT MECHANICAL DEFICIENCIES WERE FOUND. LOCALIZED ADVERSE WEATHER CONDITIONS, INCLUDING LOW CEILINGS AND SNOW, WERE REPORTED MOVING WEST TO EAST AS THE AIRPLANE FLEW EAST TO WEST.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE VFR PILOT'S ATTEMPT TO CONTINUE THE FLIGHT INTO INSTRUMENT METEOROLOGICAL CONDITIONS, AND HIS FAILURE TO MAINTAIN ALTITUDE/CLEARANCE WITH MOUNTAINOUS TERRAIN.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE - NORMAL

Findings
1. WEATHER CONDITION - CLOUDS
2. (C) VFR FLIGHT INTO IMC - ATTEMPTED - PILOT IN COMMAND
3. WEATHER CONDITION - SNOW
4. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND
5. LIGHT CONDITION - DARK NIGHT

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: CRUISE - NORMAL

Findings
6. TERRAIN CONDITION - MOUNTAINOUS/HILLY

Factual Information

HISTORY OF FLIGHT

On December 18, 1994, about 1725 mountain standard time, N175MC, a Piper PA-32R-300, operated by the owner/pilot, collided with mountainous terrain during cruise flight near Grantsville, Utah. The airplane was destroyed. The non-instrument rated private pilot and his three passengers were fatally injured. Instrument meteorological conditions prevailed and no flight plan had been filed. The personal flight departed from Salt Lake City, Utah, at 1701 and was destined for Wendover, Utah. The flight was conducted under 14 CFR 91 at night.

According to relatives of the pilot, the pilot, the pilot's wife, and another couple decided to fly to Wendover and have dinner with the intention of returning that evening. According to the FAA, the pilot contacted the Cedar City FAA Automated Flight Service Station (FSS) at 1138 via telephone and received a weather briefing for the flight.

At 1653, about 5 hours after his weather briefing, the pilot requested and received a VFR clearance out of the Class B airspace from the Salt Lake City International Airport clearance delivery. The pilot stated that his intended destination was Wendover. At 1701, the pilot was cleared for takeoff from runway 35 at the Salt Lake City International Airport. Visual meteorological conditions prevailed at the airport at the time of departure.

According to FAA Air Traffic Control (ATC) voice recordings and radar data, the pilot was receiving radar services and was cleared to climb to 8,500 feet above mean sea level (msl) after departure. The airplane continued to climb to 6,500 feet msl. At 1715, the airplane began a gradual descent from 6,500 feet msl to 5,300 feet msl. At 1718, ATC asked the pilot if "... the weather was getting lower out that way?" The pilot responded, "... it's getting a little bit lower, that's affirmative." ATC then advised the pilot that the airplane was headed toward areas of level one and level two precipitation. The pilot acknowledged.

One minute later, at 1719, Salt Lake ATC advised the pilot that radar service was terminated because ATC "... would lose radar with [the airplane] momentarily..." due to the airplane's descent near mountainous terrain. The pilot acknowledged with a garbled transmission. This was his last radio transmission; no distress calls were recorded. At 1722, radar contact with the airplane was lost. The last recorded altitude, heading, and airspeed of the airplane were 5,000 feet msl, 250 degrees magnetic, and 107 knots respectively.

The airplane was found at the 6,200-foot msl level of a mountain ridge located along a direct line from the departure airport to the destination airport.

The accident occurred during the hours of darkness at 40 degrees, 46.28 minutes North and

112 degrees, 54.31 minutes West.

PERSONNEL INFORMATION

The pilot, age 52, was a certificated private pilot with a rating for single engine land airplanes. He did not hold an instrument rating. According to FAA records, the pilot was issued a FAA Second Class Medical Certificate on March 26, 1993, with no limitations. An examination of the pilot's personal logbook revealed that the pilot had logged a total of 311 hours of flight time, including 216 hours in type, 61 hours at night, and 76 hours of instrument time.

AIRCRAFT INFORMATION

The airplane, a 1977 Piper PA-32R-300 "Lance," is a single- engine, low-wing, six-seat aircraft design powered by a Lycoming IO-540 engine. The airplane was purchased by the pilot in December 1990. The 300-horsepower engine had received a supplemental type certificate for two RayJay turbochargers.

The airplane's engine and airframe logbooks were not recovered. The airplane's "squawks" record was found in the wreckage; no entries were made indicating any unresolved discrepancies prior to departure the day of the accident. The record indicated that the last recorded tachometer time was 2936.96 hours on December 10, 1994. The tachometer time found in the wreckage was 2937.57. According to a fixed base operator in the Salt Lake City area, the accident airplane was "topped off" with 56 gallons of aviation gasoline on December 11, 1994.

METEOROLOGICAL INFORMATION

The accident site is located 43 nautical miles west of Salt Lake City International Airport, the departure point of the flight, and 51 nautical miles east of Wendover, the intended destination of the flight. Weather reports from the day of the accident indicated that localized adverse weather conditions were traversing easterly from Wendover toward Salt Lake City.

At 1615, 75 minutes prior to the accident, the Wendover Automated Weather Observation Station (AWOS) reported the following: Sky conditions of scattered clouds 2,300 feet above ground level (agl), 3,600 feet agl scattered; cloud ceiling 7,000 feet broken; winds from 300 degrees at 16 knots with gusts to 20 knots. At 1655, 30 minutes prior to the accident site, the Wendover AWOS reported clear skies below 12,000 feet agl; visibility 3 1/2 miles; winds from 290 degrees magnetic at 31 knots with gusts to 34 knots. The Wendover AWOS is located at an elevation of 4,240 feet above mean sea level (msl).

At 1715, 10 minutes prior to the accident, the Salt Lake City surface observation reported clear skies below 12,000 feet agl, visibility of 10 miles, winds from 260 degrees at 17 knots with gusts to 22 knots. At 1820, 55 minutes after the accident, Salt Lake City reported a cloud

ceiling of 1,300 feet agl, visibility of 7/8 miles, winds 020 degrees magnetic at 11 knots, and light snow showers. The Salt Lake City International Airport is located at an elevation of 4,227 feet msl.

At 1718, 7 minutes prior to the accident, Salt Lake ATC advised the pilot of the accident airplane: "... three miles ahead of you I show a level one weather area and then about three miles into [that is] a level two, it's another three miles across, then another three miles [is a] level one...." Level one is defined as light precipitation, and level two is defined as moderate precipitation.

WRECKAGE AND IMPACT INFORMATION

The airplane wreckage was examined at the accident site on December 19, 1994. The airplane was found at the 6,200-foot msl level of a rocky mountain ridge. The slope of the terrain was measured to be about 40 degrees from the horizon. No evidence of fire or explosion was noted.

A ground scar about 2 feet in depth was found in the terrain about 25 feet upslope from the wreckage. The width of the ground scar was similar to the width of the front of the engine. Pieces of Plexiglas and engine cowling were found near the ground scar. The pieces of wreckage and the face of the ground scar were oriented along a magnetic bearing of 194 degrees.

Except for the piece of engine cowling and the propeller, the entire airplane wreckage was found within the confines of its pre-impact dimensions. The longitudinal axis of the fuselage and cabin area was oriented along a magnetic bearing of 260 degrees. The tailcone was partially detached and lying on the left side of the wreckage as viewed from aft to forward. The right wing was torn in half; the outboard half was lying adjacent to the inboard half. The engine remained partially attached to the fuselage. The propeller was separated from the engine and found about 25 feet downslope from the engine. The front cabin area and instrument panel was partially disintegrated and crushed aft.

Both wing fuel tanks and associated fuel lines were compromised. A strong odor of fuel was detected in the cockpit.

All primary and secondary flight control surfaces were accounted for at the accident site. No evidence was found to indicate a flight control deficiency. The leading edges of both wings of the airplane exhibited evidence of "accordion" crush damage.

Both main landing gear were found in the extended position. The landing gear is designed to be held up with hydraulic pressure from an electrically-driven pump. The manually-operated wing flaps and attachments were too damaged to determine wing flap position.

The following engine readings were observed on the instrument panel: Engine tachometer,

2,150 revolutions per minute; vacuum pressure, 5.5 inches of mercury; oil pressure, 70 pounds per square inch.

The engine, a Lycoming model IO-540-K1G5D, and associated hardware were examined; no evidence of preimpact mechanical deficiencies were noted. Crankshaft drive and valve train continuity was verified for all six cylinders during crankshaft rotation. Fuel was found in the fuel flow distribution valve. The magnetos produced a spark when rotated.

The two-blade Hartzell metal propeller was examined. One blade exhibited evidence of chordwise scratching, leading edge gouging and "S" bending. The other blade was bent aft about 60 degrees beginning about six inches from the blade's root and exhibited some "S" bending at the tip.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by Dr. Edward A. Leis, M.D., of the Utah Office of the Medical Examiner, Salt Lake City, Utah, on December 20, 1994. A toxicological analysis (attached) was performed on specimens taken from the pilot by the FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma.

ADDITIONAL INFORMATION

The aircraft wreckage was released to Mr. William A. Provance, an adjustor for Howe Associates, Inc., St. Louis, Missouri, on December 22, 1994. Mr. Provance is representing the the registered owner of the airplane.

Pilot Information

Certificate:	Private	**Age:**	52,Male
Airplane Rating(s):	Single-engine land	**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 2 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	March 26, 1993
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	311 hours (Total, all aircraft), 216 hours (Total, this make and model), 234 hours (Pilot In Command, all aircraft), 17 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	**Registration:**	N175MC
Model/Series:	PA-32R-300 PA-32R-300	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	32R-7780241
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	August 24, 1994 Annual	**Certified Max Gross Wt.:**	3400 lbs
Time Since Last Inspection:	30 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2938 Hrs	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	IO-540-K1G5D
Registered Owner:	PETERSON, CRAIG M.	**Rated Power:**	300 Horsepower
Operator:		**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night/dark
Observation Facility, Elevation:	SLC ,4227 ft msl	**Distance from Accident Site:**	43 Nautical Miles
Observation Time:	18:20 Local	**Direction from Accident Site:**	74°
Lowest Cloud Condition:	Unknown	**Visibility**	0.88 miles
Lowest Ceiling:	Broken / 1300 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	20°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	1°C / -2°C
Precipitation and Obscuration:	Light - None - Snow		
Departure Point:	SALT LAKE CITY , UT (SLC)	**Type of Flight Plan Filed:**	None
Destination:	WENDOVER , UT (ENV)	**Type of Clearance:**	VFR on top
Departure Time:	17:01 Local	**Type of Airspace:**	Class G

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	3 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 Fatal	**Latitude, Longitude:**	40.6693,-112.760711(est)

Administrative Information

Investigator In Charge (IIC):	Guzzetti, Jeffrey
Additional Participating Persons:	JAY MOONEY; SALT LAKE CITY , UT GREGORY ERICKSON; WAYNE , IL
Original Publish Date:	September 24, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=42041

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