Aviation Investigation Final Report

Location:	El Dorado, California	**Accident Number:**	LAX02FA038
Date & Time:	December 2, 2001, 18:15 Local	**Registration:**	N6946P
Aircraft:	Piper PA-24-250	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	4 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane collided with the ground in a steep nose down attitude at high speed. There were no known witnesses to the accident. No flight plan had been filed for the personal flight and no records were found of an FAA preflight weather briefing or en route communications with any FAA facility. The accident site is about 8 miles east of the flight's intended destination airport. Examination of available weather data disclosed that an unusually strong late fall weather system was affecting the general accident site area. Overcast clouds were banked over the Sierra Nevada foothills and consisted of a southwest-northeast oriented cloud band with scattered light rain showers present in the accident area. Cloud bases were probably 1,000 to 2,000 feet above ground level, and cloud tops were probably around 16,000 feet msl. Winds and temperatures at the accident airplane's estimated flight envelope of 3,000 to 4,500 feet msl were southwesterly at 30 knots and 34 to 41 degrees Fahrenheit, respectively. The freezing level in the accident area was about 5,000 feet msl with the possibility of moderate to severe mixed icing conditions above that altitude. The presence of a light rain shower near the accident site and an upslope flow condition indicated that super cooled large water droplets were likely present in the area. Occasional moderate turbulence was likely in the area with severe turbulence possible near convective activity. A deputy sheriff patrolling near the accident site reported that at the time of the accident there was heavy rain and wind. Local accident area residents reported that they were experiencing strong winds and heavy rain with lightning and thunder at the time of the accident. Examination of the wreckage disclosed no evidence of a preimpact mechanical malfunction or failure.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's intentional flight into adverse weather conditions and his subsequent failure to maintain aircraft control.

Findings

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

Findings
1. LIGHT CONDITION - DARK NIGHT
2. WEATHER CONDITION - LOW CEILING
3. WEATHER CONDITION - TURBULENCE
4. WEATHER CONDITION - RAIN
5. (C) FLIGHT INTO ADVERSE WEATHER - INTENTIONAL - PILOT IN COMMAND

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE

Findings
6. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
7. TERRAIN CONDITION - GROUND

Factual Information

HISTORY OF FLIGHT

On December 2, 2001, about 1815 Pacific standard time, a Piper PA-24-250, N6946P, was destroyed during an in-flight collision with terrain near El Dorado, California. The private instrument rated pilot and three passengers all received fatal injuries. The personal flight was operated by the owner/pilot under the provisions of 14 CFR Part 91. The flight originated at North Las Vegas, Nevada, and was destined for Cameron Park, California. No flight plan had been filed. There were no records found of a Federal Aviation Administration (FAA) preflight weather briefing nor en route communications with any FAA facility.

An airport check revealed that the airplane arrived at the North Las Vegas Air Terminal on November 30, 2001, about 1546. While no records were available to confirm an exact departure time, transient parking records established that the airplane likely left North Las Vegas just prior to 1600 on December 2, 2001. The pilot's route of flight and altitudes flown between Las Vegas and the accident site are unknown.

There were no known witnesses to the accident.

The accident site is about 8 miles east of the flight's intended destination airport.

PERSONNEL INFORMATION

Examination of the pilot's logbook revealed about 703 total flight hours, with 22 instrument hours and 63 night hours. The front page of the logbook was noted as No. 1, and dated April 1, 2000. The pilot's recency of flight could not be determined as the last few pages of his logbook were incomplete.

AIRCRAFT INFORMATION

Examination of the airplane logbooks revealed that the most recent annual inspection occurred on April 20, 2001, at 4875 total flight hours. The most recent altimeter calibration, static system check, transponder, and VOR receiver checks occurred on September 21, 2000. The time recording tachometer was destroyed.

Records at the North Las Vegas airport documented that the pilot made a fueling request to fill both main fuel tanks. A fueling invoice documented 12.1 gallons of 100LL fuel was added to the main fuel tanks. The airplane was fitted with two 30-gallon main fuel tanks and two 15-gallon auxiliary tip tanks. The amount of fuel in the tip tanks when the airplane departed Las Vegas is unknown.

METEOROLOGICAL INFORMATION

There was no FAA record of the pilot requesting a preflight weather briefing prior to the return flight to Cameron Park.

Safety Board meteorologists performed a weather study of the accident area and time. An unusually strong late fall weather system was affecting California on December 2. Overcast clouds were banked east of Sacramento over the Sierra Nevada foothills. A southwest-northeast oriented cloud band with scattered light rain showers was present from south of Sacramento through the accident area. A light rain shower was likely present in the accident area when the accident occurred. Cloud bases were probably 1,000 to 2,000 feet above ground level, and cloud tops were probably around 16,000 feet msl.

Winds and temperatures at the accident airplane's estimated flight envelope of 3,000 to 4,500 feet msl were southwesterly at 30 knots and 34 to 41 degrees Fahrenheit, respectively. The freezing level in the accident area was about 5,000 feet msl. The presence of a light rain shower near the accident site and an upslope flow condition indicated that super cooled large water droplets were likely present in the area.

Occasional moderate mechanical turbulence was likely in the area with severe turbulence possible near convective activity. National Weather Service aviation forecast and advisory products were reviewed and compared to reported weather conditions during the course of the investigation with no significant discrepancies noted.

Local area residents reported that they were experiencing strong winds, and heavy rain with lightning and thunder at the time of the accident. A sheriff's deputy reported that two separate weather cells were passing through the area. About 40 miles north at Blue Canyon, California, the weather reporting facility was reporting: wind 200 degrees at 15 with gusts to 28; 1/4 mile visibility and heavy snow; altimeter 29.69 inHg. About 23 miles southwest at Mather, California, the weather reporting facility was reporting: wind 180 degrees at 11; 10 miles visibility; 5,500 foot broken clouds; and altimeter 29.84 inHg.

WRECKAGE AND IMPACT INFORMATION

The wreckage was located at 38 degrees 36 minutes 289 degrees north latitude and 120 degrees 51 minutes 994 degrees west longitude, about 1,615 feet msl. Most of the airplane was located in an impact crater with some scatter uphill about 60 feet on a magnetic heading of 076 degrees. The scatter consisted of cabin roof, cabin door, cowl door, radio and instrument parts, personal baggage, and interior parts. A post accident fire consumed most of the airplane center section and other parts. The entire airplane was accounted for at the accident site except for the rudder counter weights. The rudder, vertical stabilizer, horizontal stabilator, and trim tab were overhanging the center of the fire area as an assembly. No evidence of overtravel or flutter were noted on the rudder. The wing flaps and landing gear

appeared to be in the retracted position.

Wing span accordioning near parallel to the wing chord center line was evident from wing tip to wing tip. The engine was located below the ground level average. Of the three propeller blades broken from the propeller hub, two were visible in the engine crater. All three propeller blades were examined with two revealing leading edge damage and trailing edge "S" bending. The third blade displayed a forward bend.

Examination of the center section revealed the two fuel selectors pointing to their respective wing tips, or left selector to the 9 o'clock and right to the 3 o'clock position. Traces of blue fuel were found in the wing tip fuel tanks. The main fuel tanks were destroyed. The recording tachometer was still attached to the drive cable in the center section area and was fire damaged. The altimeter was located uphill from the wreckage and damaged with the barometric window indicating about 29.83 inHg. The airplane 8-day clock was indicating 8:50 with the face glass missing. The gyro horizon and directional gyro were destroyed by impact forces and post accident fire. No other instrument information was recovered. The dry air vacuum pump was broken open revealing fractured carbon vane blocks. The vacuum pump splined drive coupling was destroyed by fire.

MEDICAL AND PATHOLOGICAL INFORMATION

The El Dorado County Medical Examiner was unable to perform an autopsy on the pilot nor obtain suitable samples for FAA toxicological analysis.

ADDITIONAL INFORMATION

The airplane wreckage was released to the insurance company representative on December 19, 2001.

Pilot Information

Certificate:	Private	**Age:**	39,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 1, 2000
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	October 2, 2000
Flight Time:	703 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N6946P
Model/Series:	PA-24-250	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	24-2081
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	April 20, 2001 Annual	**Certified Max Gross Wt.:**	2800 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	4875 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-540
Registered Owner:	Fix Signs, Inc.	**Rated Power:**	250 Horsepower
Operator:	Scott E. Mills	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	MHR	**Distance from Accident Site:**	
Observation Time:	18:45 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	5500 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	180°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.84 inches Hg	**Temperature/Dew Point:**	9°C / 7°C
Precipitation and Obscuration:			
Departure Point:	N. Las Vegas, NV (VGT)	**Type of Flight Plan Filed:**	None
Destination:	El Dorado, CA (O61)	**Type of Clearance:**	None
Departure Time:		**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	3 Fatal	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	4 Fatal	**Latitude, Longitude:**	38.604721,-120.849998

Administrative Information

Investigator In Charge (IIC):	Petterson, G.
Additional Participating Persons:	Charles Little; The New Piper Aircraft; Chino Hills, CA Mark Platt; Textron Lycoming; Williamsport, PA Dal Patno; Federal Aviation Administration; Sacramento, CA
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