



Aviation Investigation Final Report

Location:	DUBOIS, Idaho	Accident Number:	SEA98FA081
Date & Time:	May 21, 1998, 12:20 Local	Registration:	N8669Z
Aircraft:	Cessna P206C	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

Prior to departure, the pilot had called the Flight Service Station for a standard weather briefing. During the briefing, the specialist reported that VFR flight was not recommended due to low ceilings, mountain obscuration and icing conditions along the proposed route of flight. After the weather briefing, the pilot was overheard talking with his passengers, and a decision was made to 'go and see how it was.' Witnesses traveling along a highway that paralleled the accident site, reported that the airplane was observed descending through the clouds in a nose down attitude and steep left bank. The weather at the accident site was reported as a low ceiling at approximately 200 feet AGL. The tops of the surrounding hills were obscured, and rain was falling. Further south, the direction in which the aircraft was traveling, the ceiling was lower and described as 'heavy fog.' During the on-site investigation, the wreckage distribution path was measured for 527 feet. Ground signatures indicated that the airplane touched down on the left main landing gear first, skipped about 10 feet, then all three landing gear touched down. Immediately following the landing gear signatures, a large crater was noted. After the impact crater, wreckage was scattered throughout the path leading up to the main wreckage. Post crash inspection determined that there was no evidence of a mechanical failure or malfunction. Toxicological samples detected positive for sedating over-the-counter antihistamines, and metabolites commonly resulting from the ingestion of multi-symptom over-the-counter cough and cold medications in the pilot.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Attempted VFR flight into IMC and a loss of aircraft control. An inadequate weather evaluation and drug impairment were factors.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

1. TERRAIN CONDITION - OPEN FIELD
2. (F) WEATHER CONDITION - LOW CEILING
3. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
4. (F) IMPAIRMENT(DRUGS) - PILOT IN COMMAND
5. (C) VFR FLIGHT INTO IMC - ATTEMPTED - PILOT IN COMMAND
6. (F) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On May 21, 1998, at 1220 mountain daylight time, a Cessna P206C, N8669Z, registered to and operated by the pilot as a 14 CFR Part 91 personal flight, collided with the terrain about 20 miles north of Dubois, Idaho. Instrument meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was substantially damaged and the private pilot and his two passengers were fatally injured. The flight had departed from Dillon, Montana, about 50 minutes prior to the accident.

Personnel at the Dillon Airport reported that the pilot had the aircraft fueled just prior to departure. The fueler reported that the right wing fuel tank was topped off. The fueler stated that both he and the pilot visually checked the left wing fuel tank and confirmed that the fuel quantity was about half full. The pilot did not want to add any fuel to this wing. The fueler stated that the pilot did not mention any problems with the aircraft, and no other services were provided.

The airport manager reported that he overheard the pilot on the telephone asking for a standard weather briefing from Great Falls Flight Service Station. The manager stated that after the briefing, the pilot asked his two passengers if they wanted to "go and see how it was." The passengers agreed, and they departed shortly thereafter. The manager stated that his observation of the pilot was that he appeared to be "impatient."

Witnesses who were traveling on the interstate, located about 500 feet west of the accident site, reported that the aircraft was observed descending through the clouds in a nose down attitude and steep left bank. The witnesses reported that the left wing contacted the surface first, and then the aircraft "slid," and went "end over end" along the field.

One witness, who was traveling north on the interstate, reported that they had just gone through heavy fog when they came upon the accident site just moments after the collision. Another witness reported that he had observed the aircraft flying low over the interstate about 10 miles south of Dillon, then saw the aircraft again flying over the highway about 20 miles north of Dubois just prior to the accident.

The Clark County Sheriff responded to the report of an aircraft accident, and was on-site approximately 30 minutes after the accident. The Sheriff stated that the wind was light, and the cloud bases were about 200 feet above ground level. The tops of the surrounding hills were not visible, and rain was falling.

PERSONNEL INFORMATION

At the time of the accident, the pilot held a private pilot certificate for single-engine land aircraft. The pilot's flight logbook, indicates that he had accumulated a total flight time of 2,185 hours, with 1,012 hours in the Cessna P206C. The pilot was not instrument rated.

METEOEROLOGICAL INFORMATION

At 1100, the pilot called Great Falls Flight Service Station and requested a standard weather briefing. The pilot indicated that he was at Dillon and wanted the weather out of Idaho Falls. The pilot indicated that the route of flight would be through Monida Pass (located 43 miles southeast of Dillon). The specialist reported that for the route of flight, there were airmets for mountain obscuration and moderate rime or mixed icing in the clouds with the freezing level up to 20,000 feet. Visual flight rules was not recommended. An unstable surface low was in the vicinity of Dillon with off-and-on rain showers. The current conditions at Idaho Falls and Rexburg were marginal VFR with a ceiling of 1,200 overcast. Visibility was 10 miles and the higher terrain was obscured.

The Specialist then gave the forecast for the Idaho Falls area. The surface winds were forecast through 1200, to be from 220 degrees at 17 knots, with gusts to 27 knots. Visibility was about six miles. Scattered ceilings were forecast at 2,700 feet, and broken at 3,500 feet with occasional light rain and overcast at 3,500 feet. The pilot asked the specialist if the weather was going to raise later on. The specialist stated that it would be a little higher, but not significantly. After 1200, the forecast was for a slight deterioration with periods of occasional thunderstorms and light rain showers.

The pilot then requested the weather for Ogden, Utah, his destination. The specialist reported that the weather was clear below 12,000 feet with visibility at 10 miles. The pilot of an aircraft flying over Logan, Utah, reported moderate mixed icing at 12,000. The pilot stated that he would not be flying at that elevation.

The pilot concluded the briefing at 1105, and stated to the specialist that he would "...sit here awhile, then I might take a run down there and take a look at the pass, but it looks like I might be driving home."

WRECKAGE AND IMPACT INFORMATION

The wreckage distribution was spread over a path measuring approximately 527 feet in length on a magnetic heading of 300 degrees. The terrain was level and covered with short grass. The ground was soft and saturated. The accident site elevation was approximately 6,600 feet.

Ground scars identified as the initial impact, indicate that the left main landing gear collided with the ground first, leaving a five foot long narrow scrape in the soft soil. Approximately 10 feet further, three similar ground signatures were noted. The three signatures paralleled one another and were about five feet in length. The left side (left main landing gear) and middle

mark (nose wheel) were about two feet apart. The third mark on the right (right main landing gear) was about four feet from the middle mark. Immediately following the ends of the three signatures, an impact crater was noted. The crater began about 15-feet into the distribution path and was 18-feet long, five feet wide, and about one-foot in depth. Following the impact crater, the surface of the ground displayed evidence of shallow slide marks and vegetation that was knocked over. These signatures ran the length of the distribution path leading up to the main body of the wreckage. Pieces of the aircraft were distributed along the path centerline and up to 40 feet on either side.

Approximately 90 feet into the path, another prominent ground signature was noted that bowed to the right. This signature was about 50 feet in length and appeared to be the result of contact with the right wing tip. The right wing tip was found at 177 feet into the path, and followed the same path direction as the 50-foot ground signature. The entire length of the right wing was found at 360 feet into the path, and right of centerline. The wing had separated from the fuselage at the root. The entire length of the strut remained attached at the wing. The flap and aileron remained attached at their respective hinges. The flap motor was exposed, and examination of the unit determined that the flaps were in the retracted position. The leading edge of the wing from the strut attach point and outboard to the tip displayed rearward crushing. The outboard four feet of the wing was bent upward about 30 degrees.

At 117 feet into the path, a piece of the engine exhaust was found. Other pieces from the engine followed. The engine throttle body was found at 323 feet into the path. The linkage was broken off. Two hoses remained attached. The butterfly valve was found in the closed position. The mixture control was loose and found positioned at the mid point.

The left wing strut was found at 190 feet into the path and left of centerline. The left side cabin door was found at 200 feet into the path.

At 472 feet into the path, and 30 feet right of centerline, the propeller assembly was found. The assembly separated from the crankshaft at the flange. Both blades remained attached to the hub. Both blades displayed severe "S" bending deformation, with 90 degree and 40 degree aft bending. Severe leading and trailing edge nicks and gouges were noted to both blades. Long scoring marks were noted on the blade faces. Chordwise and diagonal scoring was noted on the outboard halves of the blades. One blade tip was torn away.

At 510 feet into the path, the main wreckage was found. The fuselage with left wing attached was positioned inverted. Both the left wing flap and aileron remained attached to their respective hinges. The cockpit area was severely deformed. The empennage section remained intact. The horizontal and vertical stabilizers were intact, with the rudder and elevators attached to their respective hinges. The elevator trim tab was measured, and found to be positioned 10 degrees up. Control continuity was established from the empennage up to the cabin area, and from the left wing to the cabin area.

The engine was the furthest piece of wreckage found at 527 feet into the path. The engine

was positioned inverted and had broken away from the firewall at the mounts. On-site examination of the engine noted that the exhaust tubing was broken and crushed. Impact damage was noted to the accessory section. All of the cables, wires and hoses were broken between the engine and firewall. The fuel pump was removed. The coupler was found intact, and the drive shaft turned freely. No fuel was present. The oil sump was crushed and split open. The left side magneto was broken from its mount. The magneto was damaged and no spark was produced with hand rotation. The ignition leads were broken. The right side magneto was intact, and a spark was produced with hand rotation. The crankshaft turned freely, and compression was developed in all cylinders except for number five. Impact damage was noted. The spark plugs displayed normal operating signatures.

MEDICAL AND PATHOLOGICAL INFORMATION

An autopsy was performed on the pilot by Charles Overby, M.D., Eastern Idaho Regional Medical Center. The coroner determined that the pilot's cause of death was due to massive trauma, including secondary multiple fractures and lacerations.

Toxicological samples from the pilot were taken and sent to the Federal Aviation Administration Civil Aeromedical Institute, Oklahoma City, Oklahoma for analysis. The results of the analysis revealed positive results for:

Diphenhydramine - 0.011 (ug/ml, ug/g) detected in the blood, and 0.772 (ug/ml, ug/g) was detected in the urine. Doxylamine - 0.01 (ug/ml, ug/g) detected in the blood, and 0.459 (ug/ml, ug/g) was detected in the urine. Dextropran - was detected in urine. Nordextropran - was detected in urine. Pseudoephedrine - was detected in urine. Phenylpropanolamine - was detected in urine. Dextromethorphan - was detected in urine. Salicylate - 93 (ug/ml, ug/g) was detected in urine.

Diphenhydramine and Doxylamine are sedating over-the-counter antihistamines. The remaining positives that were detected in the urine are metabolites commonly resulting from the ingestion of multi-symptom over-the-counter cough and cold medications.

Toxicological samples were also sent to the FAA from the pilot rated passenger. The results of the tests were negative.

ADDITIONAL INFORMATION

The wreckage was retrieved by personnel from Rexburg, Oregon, and transported to the Rexburg Airport for storage. The wreckage was released to the owner's representative on July 2, 1998.

Pilot Information

Certificate:	Private	Age:	66, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	Yes
Instructor Rating(s):	None	Toxicology Performed:	Yes
Medical Certification:	Class 3 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	September 13, 1996
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	2185 hours (Total, all aircraft), 1012 hours (Total, this make and model), 2160 hours (Pilot In Command, all aircraft), 21 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N8669Z
Model/Series:	P206C P206C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	P206-0469
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	August 2, 1997 Annual	Certified Max Gross Wt.:	3300 lbs
Time Since Last Inspection:	83 Hrs	Engines:	1 Reciprocating
Airframe Total Time:	3830 Hrs	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520-A
Registered Owner:	ROBERT S. CROFT	Rated Power:	285 Horsepower
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	DLN ,5241 ft msl	Distance from Accident Site:	46 Nautical Miles
Observation Time:	11:53 Local	Direction from Accident Site:	150°
Lowest Cloud Condition:		Visibility	10 miles
Lowest Ceiling:	Overcast / 3200 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	220°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	9°C / 8°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	DILLON , MT (DLN)	Type of Flight Plan Filed:	None
Destination:	LOGAN , UT (LGU)	Type of Clearance:	None
Departure Time:	11:30 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:	Substantial
Passenger Injuries:	2 Fatal	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	44.219722,-112.370506(est)

Administrative Information

Investigator In Charge (IIC): Eckrote, Debra

Additional Participating Persons: JAY MOONEY; SALT LAKE CITY , UT
SCOTT BOYLE; ARVADA , CO
GREG SCHMIDT; WICHITA , KS
HENRY SODERLUND; WICHITA , KS

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Investigation Class: [Class](#)

Note:

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=42712>

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