

Aviation Investigation Factual Report

Location:	MCINTOSH, South E	Dakota	Accident Number:	CHI94LA056
Date & Time:	December 21, 1993,	19:30 Local	Registration:	N8003P
Aircraft:	PIPER	PA-24-250	Aircraft Damage:	Destroyed
Defining Event:			Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General avia	ation - Personal		

Factual Information

HISTORY OF FLIGHT

On December 21, 1993, at 1930 mountain standard time, a Piper PA-24-250, N8003P, registered to Gerald S. Olmstead of Berryton, Kansas, and piloted by a private pilot, was destroyed when it collided with a hill during cruise flight. Instrument meteorological conditions prevailed at the time of the accident. The 14 CFR Part 91 flight had been operating on a VFR flight plan with air traffic control flight following services. The pilot was fatally injured. The flight departed Colorado Springs, Colorado, at 1540.

Before departure the pilot obtained four separate preflight weather briefings. During his first briefing, at 0759, the pilot was advised that a "... front has pushed through and is well southeast of your entire route" The briefer said that scattered to broken clouds existed in Nebraska and the visibility was more than 20 miles. He said that clouds in South Dakota were between 5,000 and 7,000 feet above ground level (agl) with unrestricted visibilities. The briefer told the pilot that North Dakota had "... some station's IFR in fog and low stratus"

The pilot obtained a second weather briefing at 1014. The pilot was told there were no amendments to the original forecast he obtained approximately two hours previously. The briefer stated, "That really isn't any change I mean that's about what they expect all day." The pilot filed a VFR flight plan and concluded his conversation.

The pilot obtained a third weather briefing at 1218. The briefer told the pilot that "... we'll have a weak cold front coming through probably around midnight tonight, nothing real significant for Colorado ... but we could have some snow shower activity up through ... the Dakotas." The pilot was told that North and South Dakota were forecast to have "... less than 50 percent coverage of ... snow shower activity" The briefer advised the pilot that the forecast outlook stated "... marginal VFR or IFR conditions up to Minot area ... (and) after 1500 zulu they're expecting IFR conditions with moderate snow, blowing snow"

The pilot's response to the weather information was, "Yeah, so if a person left about four o'clock he could probably get in, there before that." The briefer responded by stating the forecast showed marginal weather conditions with snow showers and low stratus cloud conditions. He told the pilot, "... I wouldn't attempt VFR flight up into the Dakotas at all" The pilot was advised if he waited an extra day he probably could fly around the back side of the weather system.

During a fourth weather briefing at 1551 the pilot was advised that scattered to broken cirrus type clouds were tracking southeast at a rapid rate through northern Nebraska. The briefer advised the pilot that the Minot altimeter had been falling slowly all afternoon. The briefer told

the pilot that a fast moving cold front was approaching the Minot area and it "... might be best for you to get underway shortly." The pilot responded, "I'm leaving right now."

The pilot arrived at the departure airport and told the mechanic he had to depart for Minot because a storm was moving into the area the next morning. The mechanic stated he asked why the pilot was flying into conditions like that to which the pilot stated, he'd turn around if he encountered poor weather. He said the pilot obtained a weather briefing and told him that the weather was going to be in Minot around 2200. The mechanic said he told the pilot not to go and was told by the pilot, "Ah, I can beat it or I'll turn around."

While en route, the pilot received two additional weather briefings. During the first briefing, at 1615, the pilot was advised of icing potential as he flew closer to Minot. At 1715 the pilot obtained a weather update. The briefer advised the pilot, "... there are no flight precautions for that route ... they are forecasting a development of ... four miles with light snow" The briefer continued, "... there doesn't really seem to be any indication of it yet"

At 1814 the pilot requested, and obtained, a weather update for the area between Rapid City, South Dakota, and Minot, North Dakota. He was advised that the altimeter for Minot was 29.66 in. hg., and that the satellite showed "... a pulse of moisture in western North Dakota ... (and the) forecast for Dickinson call for occasionally IFR ceilings and visibilities through zero three zulu"

At 1844, the pilot contacted the Federal Aviation Administration's (FAA) Air Route Traffic control Center (ARTCC) located in Denver, Colorado. ARTCC advised the pilot he was 48 miles southwest of Dupree, South Dakota. The pilot requested flight following service and reported he was flying at 8,250 feet mean sea level (msl). The flight was transferred to the Minneapolis, Minnesota, ARTCC about ten minutes later. At 1902 the pilot advised the ARTCC controller, "... it looks kind of cloudy" and that he was descending to 6,500 feet msl "... to keep sight of the lights on the ground."

The ARTCC controller advised the pilot he was no longer in radar contact. The pilot asked the controller what his present position was from Bismark, South Dakota. He was told that he was 93 miles from the Bismark VOR and on the 189 degree radial. The pilot was advised that a no wind heading to the VOR would be about 010 degrees. The pilot advised the controller that he was "... in snow showers now and I have trouble seeing where I'm at"

As the pilot flew toward Bismark, he was advised that Pierre, South Dakota, had visual meteorological conditions. Approximately one minute later, at 1916, the controller advised the pilot that Bismark's "... weather is moving in from the west" The controller advised the pilot that Bismark's airport reported a 1,100 foot agl broken ceiling with 12 miles visibility and light snow. The pilot acknowledged the controller's message at 1917. There were no further radio contacts with the pilot of N8003P.

PERSONNEL INFORMATION

The pilot obtained his private pilot certificate on November 20, 1991. At the time of his certification flight check, the pilot's logbook showed .4 hour of simulated instrument flight time. There were no other instrument flight entries made in the logbook. The logbook showed the pilot had 3.1 hours of night, cross country, flight training before his pilot certification flight check. The logbook entry for this flight stated, "DR, pilotage, visual illusions, hood work; unusual attitudes, landings w/0 landing light (13)."

During the review of the pilot's logbook, several pilot operations comments were observed in the logbook entry's remarks section: "Cross country - evade weather changes ..."; "Ran out of fuel 1 tank start in air-refuel"; "Cross country - low level flying watch weather conditions change rain ..."; "Cross country T.S. light rain weather avoidance... "; "Cross country through level 1 rain showers ..."; "... storm evasion ..."; and "Cross country - weather emergency....."

METEOROLOGICAL INFORMATION

According to the weather information supplied to the pilot, a fast-moving cold front, along the Canadian/U.S. border, was moving southeastward, and the Minot, North Dakota, altimeter setting was steadily decreasing. The area forecast outlook for the pilot's destination was for marginal VFR weather due to low ceilings and snow. The amended terminal forecast for Minot showed a ceiling of 2,000 broken with light snow at 1900. Winds aloft forecasts for the Minot area showed winds 300 degrees magnetic at a velocity of 34 knots at 6,000 and 9,000 feet msl.

WRECKAGE AND IMPACT INFORMATION

N8003P collided with the top of a knoll on a heading approximately 340 degrees magnetic. Six additional ground collision points, over a distance of 350 yards, were observed before the beginning of the final ground scar. The final ground scar was approximately 115 yards long.

A section of the airplane's fuselage center section bottom and right wing tip were found near the first collision point. Outboard sections of the right wing were located along the path created by the six individual ground collision points.

The remaining wreckage was found inverted with the fuselage forward of the instrument panel tucked under the fuselage center section. The left wing had separated at the root and was facing aft, parallel with the fuselage. The left wing was bent downward next to the wing flap/aileron junction rib. N8003P's right wing had separated from the fuselage at the wing root. The inboard half was found inverted within the wreckage, facing toward the airplane's empennage.

The right side of the stabilator was bent approximately 100 degrees upward from its normal position. The left side of the stabilator had separated from the assembly, pieces of it were located along the wreckage trail.

Examination of the propeller blades revealed leading edge and chordwise scaring. One propeller blade was curled aft approximately nine inches in from its tip. The second propeller blade was bent 90 degrees aft at the hub.

N8003P's engine was examined on March 10, 1994. The FAA Principal Maintenance Inspector participating in the tear-down examination stated, "The tear-down revealed no indication of any engine malfunction or related accessory malfunction."

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy was conducted by the Clinical Laboratory of the Black Hills, Rapid City, South Dakota. The autopsy report states "... the cause of death was due to multiple blunt trauma injuries sustained in a plane crash."

ADDITIONAL INFORMATION

A party to the investigation was Avco-Lycoming.

Certificate:	Private	Age:	51,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 3 Unknown	Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:	489 hours (Total, all aircraft), 175 hours (Total, this make and model), 441 hours (Pilot In Command, all aircraft), 66 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Pilot Information

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	Registration:	N8003P
Model/Series:	PA-24-250 PA-24-250	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	24-3243
Landing Gear Type:	Retractable - Tricycle	Seats:	4
Date/Type of Last Inspection:	April 15, 1993 Annual	Certified Max Gross Wt.:	2800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	IO-540-C1B5
Registered Owner:	GERALD S. OLMSTEAD	Rated Power:	250 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:	PIR ,1742 ft msl	Distance from Accident Site:	85 Nautical Miles
Observation Time:	19:52 Local	Direction from Accident Site:	160°
Lowest Cloud Condition:	Scattered / 1900 ft AGL	Visibility	5 miles
Lowest Ceiling:	Broken / 2800 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	7 knots / None	Turbulence Type Forecast/Actual:	/
Wind Direction:	250°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-4°C / -6°C
Precipitation and Obscuration:	N/A - Blowing - Snow		
Departure Point:	CO. SPRINGS (00V)	Type of Flight Plan Filed:	VFR
Destination:	MINOT (MOT)	Type of Clearance:	None
Departure Time:	15:40 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:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	45.920734,-101.349227(est)

Administrative Information

Investigator In Charge (IIC):	Gattolin, Frank
Additional Participating Persons:	LYLE E ALEXANDER; RAPID CITY , SD
Report Date:	September 28, 1994
Last Revision Date:	
Investigation Class:	<u>Class</u>
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=9445

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