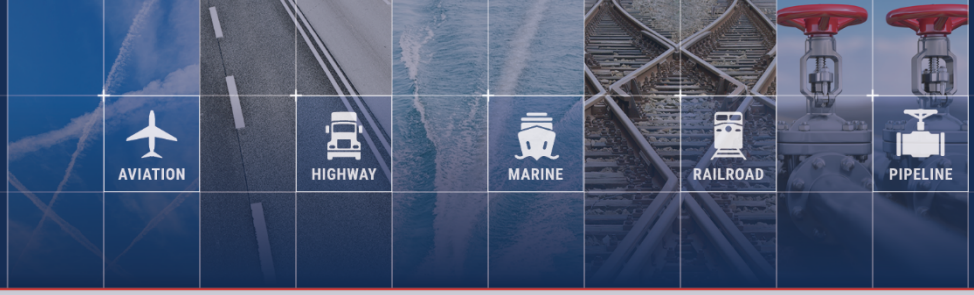

Aviation Investigation Final Report

Location:	ESTES PARK, Colorado	**Accident Number:**	DEN00FA086
Date & Time:	April 30, 2000, 12:11 Local	**Registration:**	N7421S
Aircraft:	Smith, Ted Aerostar AEROSTAR 601	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

While on a cross-country flight, according to radar data and weather information, the pilot descended below terrain clearance altitude and entered IMC conditions. The aircraft impacted a mountain peak approximately 100 feet below the summit. No flight plan had been filed and the pilot was not instrument rated.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A descent below the surrounding terrain, by the pilot, in IMC conditions. Factors were high mountainous terrain, clouds, inaccurate weather evaluation by the pilot, and the pilot's flight into IMC conditions.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: CRUISE

Findings
1. (F) TERRAIN CONDITION - HIGH TERRAIN
2. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
3. (F) WEATHER CONDITION - CLOUDS
4. (F) WEATHER EVALUATION - INACCURATE - PILOT IN COMMAND

5. (F) VFR FLIGHT INTO IMC - INITIATED - PILOT IN COMMAND
6. (C) ALTITUDE/CLEARANCE - INADEQUATE - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On April 30, 2000, at 1211 mountain daylight time, a Smith Aerostar 601, N7421S, was destroyed when it impacted Commanche Peak in Rocky Mountain National Park near Estes Park, Colorado, at 12,600 feet above mean sea level (msl). The private certificated non-instrument rated pilot and his passenger received fatal injuries. The aircraft was destroyed. The flight was a cross-country flight from Page, Arizona, to Fort Collins, Colorado, operating under Title 14 CFR Part 91, and no flight plan was filed. Instrument meteorological conditions prevailed at the accident site. The flight departed Page, at approximately 1030.

It became known that the aircraft was overdue to its destination of Fort Collins, when the family contacted Denver flight service on the morning of May 1, 2000. The pilot and his passenger were expected to be back in Fort Collins from Page on the afternoon of April 30th.

After an alert notice (ALNOT) was issued, the route airports were checked, and an electronic search was completed. The Civil Air Patrol (CAP), and other airborne units conducted an aerial search. The aircraft was located on May 4th by the crew of a Colorado National Guard helicopter.

PERSONNEL INFORMATION

The pilot held a private pilot certificate issued February 26, 1982, with a single engine land rating. He added a multiengine rating on April 9, 1982. He did not posses an instrument rating.

At the time of the accident, the pilot held a third class medical certificate, issued on June 11, 1998. There were no limitations on the medical certificate.

No flight experience records were found during the course of the investigation. A review of the pilot's medical certificate application revealed that he reported he had 4,400 hours of flight experience with 50 hours flown in the preceding 6 months. His single engine/multiengine experience, and his experience in the accident aircraft make and model are unknown. He purchased the accident airplane on April 4, 1999, and according to associates, he flew frequently, with numerous trips to Page.

AIRCRAFT INFORMATION

This Smith Aerostar 601, serial number 61-0006, was built in 1969. Two Lycoming IO-540 series turbocharged engines powered the aircraft. It was not a pressurized design. No

aircraft, engine, or propeller records were located during the course of the investigation.

The aircraft was equipped with a II Morrow Apollo GX-55 Global Positioning System navigation receiver. According to the manufacturer, the unit had both altitude and minimum safe altitude readout capability. Its use during the flight was not known.

A work order from Av-West Avionics documented that the mode C transponder had been checked in accordance with FAR 91.413 on December 2, 1999.

Fuel slips provided documentation that prior to leaving Fort Collins, the aircraft was serviced with 124.4 gallons of 100LL gasoline, and 80.6 gallons of 100LL gasoline prior to departing Page. It was calculated that the aircraft had approximately 44 gallons of fuel remaining when the accident occurred. It was also calculated that the aircraft average fuel burn rate was approximately 32 gallons per hour.

METEOROLOGICAL INFORMATION

The nearest weather observation facility to the accident site was Hayden, Colorado, located approximately 92 miles to the west. At 1215, that facility was reporting scattered clouds at 5,000 feet above ground level (agl) and overcast skies at 10,500 feet agl. The temperature was 28 degrees Fahrenheit (F), and the wind was from 230 degrees magnetic heading at 9 knots.

One witness, who was located on Cameron Pass (elevation 10,276 feet MSL), approximately 10 miles west of the accident site, described the weather where he was located as being overcast skies with the mountain peaks known as the Nokhu Crags (elevation 12,265 feet msl) obscured by a solid cloud cover. He said the wind was calm and the temperature was 28 degrees F. In his interview, (transcript attached) he said he heard the sound of an aircraft engine that suddenly stopped. He said it might have been because the aircraft went behind the mountains.

A pilot, who was flying a Beech 35, passed through the area approximately 15 minutes after the accident aircraft. He described the weather in the area where the accident occurred as being overcast skies with the base of the clouds at about 12,500 feet msl. He said he diverted to the north up over the Wyoming border to stay in visual conditions. (Transcript attached).

COMMUNICATIONS

The only known radio contact with the aircraft during the flight was with Denver Flight Service Station (DEN AFSS) at Grand Junction, Colorado. The pilot contacted them at 1115 while transiting the Grand Junction area and received a weather update for the intended route of flight and the Fort Collins area. The briefing provided information to the pilot that there was mid to high level clouds with some icing along his route, and that the Fort Collins area was experiencing visual meteorological conditions. A transcript of that communication is attached.

WRECKAGE AND IMPACT INFORMATION

The aircraft was on an easterly heading at the time of impact and impacted on the west side of Comanche Peak (12,702 feet msl) at 12,600 feet msl. It disintegrated on impact and the wreckage scatter pattern was distributed over an area estimated to be about 2 acres in size. Part of the wreckage went over the top of the mountain and was located on the east side of the peak. All major aircraft components were found within the impact scatter pattern. The aircraft did not burn; however, there was a small area of scorching around one of the engines, which was located about 50 feet upslope from the initial impact point. (Wreckage photographs and scatter diagram attached).

TESTS AND RESEARCH

One of the circuit boards from the global positioning system was found in the wreckage and appeared to be relatively intact. It was sent to the manufacturer for possible readout. They found that damage to the board was too severe to retrieve any information. The board was destroyed during testing.

Radar data for the entire flight provided information that the last normal transponder generated altitude of the aircraft was 13,300 feet msl at a point approximately 40 miles southwest of the accident site. Additional "maintenance dump" radar data provided information that the aircraft descended to 12,900 feet msl approximately 20 miles from the accident site and continued the descent to 12,600 feet msl between that point and the accident site. (Maps attached).

ADDITIONAL INFORMATION

Toxicology was performed on both occupants of the aircraft. No substances of abuse or alcohol were found.

The owners' representative removed the wreckage from the accident site on August 8, 2000, and the wreckage was released. A circuit Board from the global position system navigation equipment was retained for further examination.

Pilot Information

Certificate:	Private	**Age:**	53,Male
Airplane Rating(s):	Single-engine land; Multi-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 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	June 11, 1998
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:	4400 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Smith, Ted Aerostar	**Registration:**	N7421S
Model/Series:	AEROSTAR 601 AEROSTAR 6	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	61-0006
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	Unknown	**Certified Max Gross Wt.:**	6000 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:		**Engine Manufacturer:**	Lycoming
ELT:	Installed	**Engine Model/Series:**	IO540-P1A5
Registered Owner:	ROBERT C. DONOHO	**Rated Power:**	290 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:**	Day
Observation Facility, Elevation:	HDN ,6602 ft msl	**Distance from Accident Site:**	92 Nautical Miles
Observation Time:	12:15 Local	**Direction from Accident Site:**	280°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Overcast / 10500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	230°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	-2°C / -10°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	PAGE , AZ (PGA)	**Type of Flight Plan Filed:**	None
Destination:	FORT COLLINS , CO (3V5)	**Type of Clearance:**	None
Departure Time:	10:30 Local	**Type of Airspace:**	Class E

Airport Information

Airport:		**Runway Surface Type:**	
Airport Elevation:		**Runway Surface Condition:**	
Runway Used:	0	**IFR Approach:**	
Runway Length/Width:		**VFR Approach/Landing:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	40.369846,-105.520881(est)

Administrative Information

Investigator In Charge (IIC):	Wiemeyer, Norman
Additional Participating Persons:	RICK HOSKER; DENVER , CO
Original Publish Date:	April 6, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=49140