



National Transportation Safety Board Aviation Accident Final Report

Location:	Nanwalek, AK	Accident Number:	ANC05FA090
Date & Time:	07/01/2005, 1200 AKD	Registration:	N1621U
Aircraft:	Cessna T207	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The airline transport certificated pilot and the two pilot-rated passengers traveled to Alaska for a Title 14, CFR Part 91 personal flying vacation. The pilot received a VFR check-out in a rented airplane, and was the only person authorized by its owner to fly it. The pilot obtained a weather briefing for the day of the accident flight, and queried an FAA automated flight service station (AFSS) specialist about VFR conditions for a sight-seeing flight. The FSS specialist stated, in part, "Well, it doesn't really look good probably anywhere today..." The area forecast included areas of marginal VFR and IFR conditions, and an AIRMET for mountain obscuration. The cloud and sky conditions included scattered clouds at 1,500 feet in light rain showers, with areas of isolated ceilings below 1,000 feet, and visibility below 3 statute miles in rain showers and mist. The weather briefing included a report from a pilot who was about 23 miles north of the accident scene about 2 hours before the accident airplane departed. The pilot reported fog and mist to the water, and said he was unable to maintain VFR. Five minutes after receiving the weather briefing, the accident pilot again called the AFSS and requested the telephone number to an automated weather observing system, located south of the point of departure, where VFR conditions were forecast. Local fishing charter captains reported fog in the area of the islands where the accident occurred. One vessel captain reported hearing an airplane in the vicinity of the islands, but could not see it because of the fog. The pilot did not file a flight plan, nor did he indicate any planned itinerary. The airplane was reported overdue two days after departure. The accident wreckage was located an additional two days later on the north cliff face of a remote island. The airplane had collided with the island at high speed, about 800 feet mean sea level, and a postcrash fire had incinerated the cockpit and cabin area.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's continued VFR flight into instrument meteorological conditions, which resulted in an in-flight collision with an island cliff during cruise flight. A factor contributing to the accident was fog in the area of the accident.

Findings

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

Findings

1. TERRAIN CONDITION - CLIFF
2. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
3. (F) WEATHER CONDITION - FOG

Factual Information

HISTORY OF FLIGHT

On July 1, 2005, at an estimated time of 1200 Alaska daylight time, a wheel-equipped Cessna T207 airplane, N1621U, was destroyed by impact and postimpact fire when it collided with the north side of West Amatuli Island, a part of the Barren Islands, located about 25 miles south-southeast of Nanwalek, Alaska. The airplane was being operated as a visual flight rules (VFR) local area personal flight under Title 14, CFR Part 91, when the accident occurred. The airplane was registered to Aero Tech Flight Service Inc., Anchorage, Alaska, and operated by the pilot. The airline transport certificated pilot, and the two pilot-rated passengers, received fatal injuries. Instrument meteorological conditions are presumed to have prevailed in the area of the accident. The flight originated at the Homer Airport, Homer, Alaska, on July 1, about 1105. No flight plan was filed, nor was one required.

On July 3, the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), was notified by Federal Aviation Administration (FAA) personnel that the accident airplane had been reported overdue. The wreckage of the airplane was located by a U.S. Coast Guard airplane on July 5, about 200 feet below the top of a ridge on the north face of West Amatuli Island. A U.S. Coast Guard helicopter was dispatched to the scene, but due to the steep terrain, did not land. An Air National Guard helicopter with pararescue personnel aboard was dispatched to the scene. They verified the airplane as the missing airplane and recovered the occupants.

According to information provided by Alaska State Troopers personnel, the pilot and the passengers traveled to Anchorage, Alaska, on June 25, 2005. Examination of a hand-written travel itinerary that was found by State Trooper personnel indicated the pilot and passengers planned to visit Juneau, Ketchikan, Sitka, and Homer, Alaska. Alaska State Troopers, and FAA personnel reported that the airplane arrived in Homer on the evening of June 29. On June 30, the airplane traveled to Kodiak, Alaska, and returned to Homer, and then conducted a flight during the evening hours of the 30th.

On July 1, at 0933, the pilot telephoned the Kenai Automated Flight Service Station (AFSS), Kenai, Alaska, and according to FAA transcripts of the recorded conversation, stated, in part: "...we're in Homer and we're wanting to do some flying sightseeing for the day, and just hope, wondering if you can point us toward the direction where we would have the best luck for VFR conditions."

The flight service station specialist replied, in part: "Well, it doesn't really look good probably anywhere today. Unfortunately, up in the Kenai area right now we've been IFR this morning. They do expect it to improve, but then we've got the fire up in the Sterling [Alaska] area, up in the Skilak [Alaska] area, and the one up in Hope [Alaska], so those gonna affect that. Then in the going the other direction, out further to the west, Big River Lakes is good in that area, but they've also been back and forth this morning, so right now they're marginal with visibility 4 [miles]. The Bristol Bay area is expected to stay that way pretty much, but they've got AIRMETS for IFR, and mountain obscurations over in that area, so you don't really wanna go to the Bristol Bay area. Kodiak, actually right now, looks probably about the best, heading south to Kodiak, cuz going up to Seward [Alaska] doesn't, which is unusual. Usually it's just the opposite, but if you go on up to the Seward area, they've got lower conditions and they're forecasting those for the central gulf coast to be a little bit lower today, which

would...(unintelligible)...ceilings they're forecasting marginal VFR, some isolated IFR conditions over in that area...so like I said, anywhere pretty much to the north it looks like it's gonna be worse for you today...it looks better going, like I said, which is usually just the opposite, Kodiak actually looks better today."

The pilot replied, "Well, we flew down to Kodiak yesterday, and things were pretty good until we got there, and they had fog lying in, so the, you know the main field there was socked in with ah Special VFR." The AFSS specialist stated, "I'm checking right now, let's see what Kodiak, what their current conditions are and what the terminal [forecast] is...but yah, it looks like for today, the rest of the areas look pretty bad. Kodiak currently, visibility is 10 [miles], 8,500 [feet] broken, and the terminal [forecast] is calling for wind, 330 [degrees] at 10 [knots], visibility greater than 6 [miles], few clouds at 300 hundred [feet], 1,000 [feet] scattered, 4,000 [feet] broken, and then they expect it to improve after 2 p.m."

The pilot stated that "It sounds like they're clearly VFR right now," to which the AFSS specialist replied, "Right, it does look better going that direction today." The pilot then stated, "Okay, what do you have in terms of just, Oh I don't know the right term, I think it, an area prognostication, or whatever, we, we're trying to make a decision to get the plane up tomorrow or the next day, are things clearing at all or."

The specialist replied, in part: "Right now, looking at the surface charts, which gives us the best...indicator, there is some low pressure down in the Gulf of Alaska, but the charts show that moving off the east, so that actually looks pretty good for tomorrow for the Cook Inlet, Susitna Valley, as that moves out of the area. Then that next low pressure hopefully, is not gonna move in til Sunday, so looking at the charts for tomorrow morning, we have a low pressure ridge that's gonna lay from like the Y-K Delta, and then head up north and go across the area, but it looks better for tomorrow. Looking at the area forecast, in the outlook portion for tomorrow, the forecast for the Cook Inlet, Susitna Valley, they're forecasting the outlook for VFR with some rain showers, so it actually looks better tomorrow." The pilot concluded the briefing at 0937 by stating, "Okay, well that is certainly what we need to know, and you have been very helpful."

At 0942, the pilot telephoned the Kenai AFSS and requested the Kodiak Automated Surface Observing System (ASOS) telephone number.

At 1100, the pilot made radio contact the Homer Flight Service Station (FSS) specialist and stated, "Homer traffic, skywagon 1621U is taxiing to [runway] 21." At 1105, the pilot reported that he was on the takeoff roll.

The Barren Islands are located about mid-way between the south end of the Kenai Peninsula, and the north end of Kodiak Island, along the Kennedy Entrance to Cook Inlet. It is comprised of West and East Amatuli, Ushigat, Sugarloaf, Sud, and Nord Islands that are within the Alaska Maritime National Wildlife Refuge.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with airplane single-engine and multiengine land ratings. He also held a flight instructor certificate with airplane single-engine, and instrument airplane ratings. The most recent second-class medical certificate was issued to the pilot on June 7, 2005, and contained the limitation that the pilot must wear corrective lenses.

No personal flight records were located for the pilot and the aeronautical experience listed on

page 3 of this report was obtained from a review of the airmen Federal Aviation Administration (FAA) records on file in the Airman and Medical Records Center located in Oklahoma City, Oklahoma. On the pilot's application for medical certificate, dated June 7, 2005, the pilot indicated that his total aeronautical experience consisted of about 8,432 hours, of which 254 were accrued in the previous 6 months.

AIRCRAFT INFORMATION

The pilot rented the airplane from Aero Tech Flight Services Inc., Anchorage, Alaska. He received a VFR airplane check-out by an Aero Tech instructor on June 26. Aero Tech personnel reported that all of the airplane's maintenance logbooks were on board the airplane at the time of the accident.

Maintenance on the airplane was performed by Hanger 5, Anchorage. The facility had a copy of the most recent annual inspection check list, which was performed on July 1, 2004. At that time, the airplane had accrued 7,416 hours. The engine had accrued 5,944 hours, and 852.2 hours since an overhaul. Examination of previous discrepancies noted on the airplane revealed no unresolved maintenance issues.

According to company personnel from Homer Air, Homer, the airplane was fueled with 40 gallons of aviation fuel on June 30, 2005, about 0900. At that time, the pilot requested that a fuel account be opened. The airplane was again fueled on June 30, about 1830, with 36 gallons of aviation fuel after landing in Homer about 1748. The airplane was fueled on the morning of July 1, with 16 gallons of aviation fuel.

METEOROLOGICAL INFORMATION

The closest official aviation weather observation station is Seldovia, Alaska, which is located 31 nautical miles north of the accident site. At 1153, an Aviation Routine Weather Report (METAR) was reporting, in part: Wind, calm; visibility, 10 statute miles; clouds and sky condition, 1,000 feet overcast; temperature, 54 degrees F; dew point, 52 degrees F; altimeter, 29.78 inHg; remarks, rain began at 1103, rain ended at 1148.

The National Oceanic and Atmospheric Administration maintains an automated weather data buoy system, and has a land-based sensor on East Amatuli Island, about 3 miles east of the accident site. At 1159, the weather sensor recorded, in part: Wind, 300 degrees (true) at 4 knots, gusts to 7 knots; visibility (not recorded); clouds and sky condition (not recorded); temperature, 51 degrees F; dew point, 49 degrees F; altimeter, 29.77 inHg.

The area forecast for the central gulf coast of Alaska, issued on July 1, at 0545, and valid until 1800 stated, in part: AIRMET for mountain obscuration, mountains obscured in clouds and in precipitation, no change. Clouds and sky condition, 1,500 feet scattered, broken to overcast 3,500 feet in light rain showers. Occasionally, 1,500 feet broken, 3,500 feet overcast; visibility, 3 to 5 statute miles in light rain showers and mist. Isolated ceilings below 1,000 feet; visibility below 3 statute miles in rain showers and mist. Outlook, valid until 1800, clouds and sky condition, 4,500 feet broken to overcast. Outlook, valid from 1800 to 1200 on July 2, VFR. Turbulence, nil significant. Icing and freezing level, nil significant. Freezing level, 9,000 feet.

An amended terminal forecast for Homer, issued on July 1, 2005, at 0856, and from 0900 to 0400 on July 2, stated, in part: Wind, calm; visibility, greater than 6 statute miles; clouds and sky condition, few clouds at 800 feet, 2,500 feet scattered, 6,000 feet overcast. Temporary conditions from 0900 to 1300, 800 feet scattered, 2,500 feet broken. From 1600, wind, 260

degrees at 12 knots; visibility, greater than 6 statute miles; clouds and sky condition, 4,000 feet scattered, 8,000 feet broken.

At 0911, the FAA received a pilot weather report (PIREP) from a Cessna 185 on a flight from Homer to Kodiak. The pilot reported that south of Flat Island (located about 3 miles south of Nanwalek), there was fog and mist to the water. The pilot indicated that he was unable to maintain VFR, and was returning to Homer due to weather.

A PIREP was received by the FAA at 0906 from a Cessna 172 on a flight from Homer to Kenai. The pilot indicated that 5 miles north of Homer, he was unable to maintain VFR due to clouds to the ground.

At 0915, the pilot of a Cessna 180 on a flight from Homer to Kasilof, Alaska, filed a PIREP that indicated the sky condition was 800 feet overcast, with 10 miles of visibility via the coast.

The captains of two fishing charter vessels operating from Homer, reported that on the day of the accident, the weather conditions around the Barren Islands included fog that obscured the islands. One vessel captain reported hearing an airplane in the vicinity of the islands, but could not see it because of the fog.

COMMUNICATIONS

After the pilot announced that he was departing runway 21 at Homer, no further communications were received from the airplane. The Homer FSS specialist reported that the pilot did not request a local airport advisory (LAA), or any other services.

A transcript of the communications between the airplane and all involved FAA ATC facilities is included in the public docket of this accident.

WRECKAGE AND IMPACT INFORMATION

The NTSB IIC, accompanied by another NTSB air safety investigator, and an FAA inspector, examined the airplane wreckage at the accident site on July 6, 2005. The accident site was the north face of the island that extended from a small saddle at the top of the face, to the ocean shore. The face of the island was sloping terrain of about 40 degrees that consisted of tundra grasses, boulders, and rock scree. A path of wreckage debris from the initial impact site, about 200 feet below the top of the saddle, to the main fuselage wreckage point of rest, about another 200 feet downslope, was on a magnetic heading of 180 degrees. (All heading/bearings noted in this report are oriented toward magnetic north.)

All of the airplane's major components were found at the main wreckage area. The initial impact site was about 800 feet mean sea level, and had disruption of the ground and gouging of an area of rock, extensive presence of oil, and burned grass. Interior and exterior fragments of the forward portion of the airplane, including engine parts, windshield, rudder pedal fragments, radio components, and fragments of the trim wheel were located at the initial impact site. Additional fragmented parts of the airplane, and areas of burned grasses were evident from the initial impact site, directly downslope, to the fuselage point of rest. There was no lateral distribution of wreckage debris at the crash site from the main debris path.

The right main landing gear strut, with its wheel attached, portions of the cockpit area including instrument panel parts, and the separated propeller assembly, were located downslope, about half-way between the initial impact site and the fuselage point of rest. The left main landing gear strut remained attached to the fuselage.

Examination of the three-bladed propeller assembly revealed that it had fractured where the crankshaft exited the engine case. The propeller blades were loose in the hub. All of the blades had extensive leading edge gouging, chordwise scratching, "S" bending, torsional twisting, and fracturing of two of the three propeller tips. A portion of a separated propeller blade tip was located forward, and upslope from the initial impact site.

Below the propeller point of rest, portions of seat frames, and seat belts were found. These had evidence of fire damage to each, and the seat belts were latched, with one belt portion still attached to a fragment of floor structure.

The wings remained attached to the fuselage. Both were extensively crushed aft and folded parallel to the longitudinal axis of the fuselage. Each retained their respective aileron and flap assemblies.

The postcrash fire incinerated most of the cabin and cockpit area from the empennage forward. The fuselage had extensive aft crushing and fragmentation. The crown of the fuselage was destroyed by fire. Due to impact and postimpact fire damage, the flight controls could not be moved by their respective control mechanisms, but flight control cables were attached from the empennage to the cockpit.

The empennage, at the point of rest, was upright and had not sustained extensive destruction. The leading edge of the left horizontal stabilizer had aft crushing, and the outboard end of the right stabilizer was bent downward. The elevators and rudder remained attached to their respective attach points.

The engine sustained extensive impact and fire damage to the underside and front portion of the engine. The engine case and cylinders were fractured. One exhaust extension tube was crushed and folded nearly flat, producing sharp creases that were not cracked or broken along the creases.

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the pilot was not conducted. According to the Alaska State Medical Examiner, 4500 South Boniface Parkway, Anchorage, Alaska, the pilot's remains were not recovered from the accident scene by search and rescue personnel.

A postmortem examination of the pilot-rated passengers, conducted by the Alaska State Medical Examiner on July 7, 2005, revealed that the cause of death for both passengers was attributed to massive blunt force injuries.

A toxicological examination of the pilot-rated passengers was conducted by the FAA's Civil Aeromedical Institute (CAMI) on August 25, and 26, 2005, and revealed putrefaction of specimens, and the presence of ethanol which the FAA attributed to sources other than ingestion.

FIRE

An extensive postaccident fire consumed the airplane fuselage forward of the empennage.

SEARCH AND RESCUE

Military search and rescue personnel reported that after identifying the airplane, they observed some incinerated remains of an occupant in the wreckage of the airplane. One burned occupant was located about 25 feet below the airplane's initial impact point. A third, unburned

occupant was located below the airplane point of rest. The two occupants located outside the wreckage were recovered.

ADDITIONAL INFORMATION

Among the pilot's personal affects, Alaska State Trooper personnel found a receipt for the purchase of Alaska IFR en route low altitude charts, sectional charts for Anchorage, Kodiak, McGrath, an Anchorage/Fairbanks terminal chart, and an FAA Airport Facilities Directory, Alaska Supplement.

A representative of the operator's insurance company, traveled to the accident scene to assess the logistics of removing the wreckage from the island. He reported to the NTSB IIC that he observed a damaged Garmin 295 GPS receiver among the wreckage debris. He did not recover the GPS unit, but he did take a picture of it, and forwarded the picture to the NTSB IIC. It received damage to the screen area, and the supplemental map memory card slot was empty. The insurance representative also reported that in conversations with the pilot's spouse, he learned that the Garmin 295 receiver was owned by one of the pilot-passengers. Further investigation about the mapping capabilities of a Garmin 295 revealed that the unit's base map does not display West Amatuli Island. Garmin does have supplemental terrain maps available that may be downloaded to a memory card that could contain terrain data for the island. It is unknown if the Garmin 295 was utilized during the accident flight. The pilot was reported to have owned a Garmin 296 GPS receiver, which was not observed in the wreckage debris.

At the time of this report, the airplane wreckage has not been recovered. The Safety Board did not take custody of the wreckage. No parts or components were retained by the Safety Board.

Pilot Information

Certificate:	Airline Transport; Flight Instructor	Age:	63, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Unknown
Other Aircraft Rating(s):	None	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	Yes
Instructor Rating(s):	Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	06/01/2005
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	8432 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N1621U
Model/Series:	T207	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	20700221
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	07/01/2004, Annual	Certified Max Gross Wt.:	3800 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	7416 Hours as of last inspection	Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520-F
Registered Owner:	Aero Tech Flight Services Inc.	Rated Power:	300 hp
Operator:	John H. Phillips	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PASO, 29 ft msl	Distance from Accident Site:	31 Nautical Miles
Observation Time:	1153 ADT	Direction from Accident Site:	360°
Lowest Cloud Condition:		Visibility	10 Miles
Lowest Ceiling:	Overcast / 1000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	Calm /	Turbulence Type Forecast/Actual:	/
Wind Direction:		Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.78 inches Hg	Temperature/Dew Point:	12 °C / 11 °C
Precipitation and Obscuration:	Fog		
Departure Point:	Homer, AK (PAHO)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1100 ADT	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:	2 Fatal	Aircraft Fire:	On-Ground
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal	Latitude, Longitude:	58.943056, -152.021667

Administrative Information

Investigator In Charge (IIC): Scott Erickson **Report Date:** 02/28/2006

Additional Participating Persons: Silvia Villa; FAA-AL-ANC FSDO 03; Anchorage, AK

Publish Date:

Investigation Docket: NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov, or at 800-877-6799. Dockets released after this date are available at <http://dms.nts.gov/pubdms/>.

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).