



National Transportation Safety Board Aviation Accident Factual Report

Location:	Chickaloon, AK	Accident Number:	ANC03FA106
Date & Time:	09/02/2003, 1000 AKD	Registration:	N72598
Aircraft:	Cessna T206H	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	3 Fatal
Flight Conducted Under:	Part 91: General Aviation - Personal		

HISTORY OF FLIGHT

On September 2, 2003, about 1000 Alaska daylight time, a wheel-equipped Cessna T206H airplane, N72598, was destroyed by impact and postimpact fire when it collided with mountainous terrain while maneuvering, about 23.5 miles east-northeast of Chickaloon, Alaska. The airplane was being operated as a visual flight rules (VFR) cross-country personal flight under Title 14, CFR Part 91, when the accident occurred. The airplane was operated by the pilot. The private certificated pilot and the two passengers received fatal injuries. Instrument meteorological conditions prevailed in the area of the accident. A VFR flight plan was filed from Homer, Alaska, to Whitehorse, Canada. The flight originated at the Homer Airport, about 0752.

At 0645, the pilot telephoned the Federal Aviation Administration (FAA) Kenai Automated Flight Service Station (AFSS) and filed a VFR flight plan. He stated, in part: "...departure point is Homer, proposed departure is 0800, altitude 5,500 feet (msl), route of flight is direct Potter Marsh (Anchorage, Alaska), direct Birchwood (Chugiak, Alaska), direct Palmer, then Gulkana, via Sheep Pass, Tahnetta Pass, direct Northway, direct Whitehorse." He indicated the en route time as 4.5 hours, with 5.5 hours of fuel on-board the airplane.

The route of flight specified by the pilot included terrain that went from sea level to mountainous, and generally followed Alaska Highway 1 through the mountains. The mountainous portion of the flight, where the accident occurred, is located between Palmer, Alaska, and Gulkana, Alaska, and traverses Tahnetta Pass. Commonly used points of geographical reference, eastbound along the highway from Palmer, are Sutton, Chickaloon, Sheep Mountain, Gunsight Mountain, Tahnetta Pass, Eureka, Snowshoe Lake, Tazlina, Tolsona, and then Gulkana.

The pilot obtained a standard weather briefing about the route of flight. The flight service station specialist provided a synopsis that stated, in part: "...we got a stationary low just north of Fairbanks and another low in the eastern Gulf, basically just southwest of Yakutat. It's moving to the northeast at about 5 knots, it looks like the occluded front is arcing still south of

your route, but that would be something to keep an eye on today." The specialist provided a weather advisory for Cook Inlet and Susitna Valley, valid through 0900, for isolated IFR conditions around Cook Inlet.

The AFSS specialist then provided current observations along the intended route and stated, in part: "Palmer just put out a special (observation) ten minutes ago, they're calm, with ceiling 2,300 feet broken, 4,100 feet broken, 5,000 feet overcast; heading into Tahneta Pass, I actually got a Sutton report this morning, calm conditions, with 3,500 feet scattered, ceiling 7,000 feet broken, 9,000 feet overcast; no word from Sheep Mountain and it appears that Eureka automated (observation) is not reporting; nothing from Snowshoe Lake either; from Gulkana, light winds at 4 knots, with ceiling 4,900 feet broken, 6,500 feet overcast, temperature and dew point still 7 degrees (C), altimeter, 29.48 (inHg), remarks indicate intermittent light rain conditions, higher northeast..." The specialist also stated that: "...I don't have any pilot reports anywhere along the route yet this morning."

The specialist then provided forecast en route weather conditions that included isolated IFR conditions around and in the vicinity of the Cook Inlet, valid until 0900; widely scattered rain showers in the Copper River basin with visibilities not expected to be any less than 5 miles. The Tahneta Pass conditions included a forecast of VFR with rain showers. The pilot concluded his briefing at 0655.

At 0748, the pilot contacted the Homer Flight Service Station (FSS) and obtained an airport advisory. The pilot's last radio contact with Homer FSS was at 0754, when his flight plan was activated as he departed.

Between 0930 and 1000, the airplane was observed to fly over a private airstrip located along Highway 1, about 1 mile west of Chickaloon. The airstrip is owned by a personal friend of the pilot.

The airplane did not arrive in Whitehorse, and was reported overdue at 1522. The pilot's son was familiar with the planned route of flight, and he began an aerial search for the airplane. He located the airplane, still burning, about 2100, at an elevation of approximately 3,700 feet msl, in tundra covered terrain, on the west face of Sheep Mountain.

The accident location is located about 4 miles west of Sheep Mountain Lodge which is on Alaska Highway 1. Tahneta Pass, elevation about 3,000 feet msl, is located along the highway about 7 miles north-northeast of Sheep Mountain Lodge, and about 10 miles northeast of the accident site.

PERSONNEL INFORMATION

The pilot held a private pilot certificate with airplane single-engine land and airplane instrument ratings. A review of the pilot's FAA medical records on file in the Airman and Medical Records Center located in Oklahoma City, revealed correspondence from the

aerospace medical certification division, dated August 13, 2002, that contained a 6-year authorization for the special issuance of a medical certificate due to the pilot's history of sleep apnea. The expiration date of the authorization was February 28, 2008, and was contingent on FAA medical examinations at the frequency prescribed in the Federal Aviation Regulations (FARs), and submission of a status report from the pilot's treating physician regarding his sleep apnea at 12-month intervals. In addition, the authorization contained instructions to the pilot that permitted an aviation medical examiner to issue a medical certificate that was not valid after February 28, 2004, if there were no significant adverse changes to his medical condition, and cautioned the pilot that due to his history of sleep apnea and psychiatric difficulties, operation of an aircraft was prohibited at any time new symptoms or adverse changes occur, or any time medication and/or treatment was required.

The pilot applied for a third-class medical certificate on December 30, 2002, from an aviation medical examiner. The application contained the limitations that the pilot must wear corrective lenses for near and distant vision, and was valid until February 28, 2004. The pilot's FAA medical file contained correspondence from the aerospace medical certification division, dated April 22, 2003, that informed the pilot he was eligible for a time-corrected, third-class medical certificate, which expired on December 31, 2003. The letter to the pilot indicated that the certificate superseded any previous issued certificates, and referred the pilot to the special issuance letter of August 13, 2002.

No personal flight records were located for the pilot. On the pilot's application for medical certificate, dated December 30, 2002, the pilot indicated that his total aeronautical experience consisted of about 1,440 hours, of which 50 were accrued in the previous 6 months.

AIRCRAFT INFORMATION

No maintenance records for the airplane were located. The pilot's son reported that records were carried in the airplane. He estimated the airplane had accumulated approximately 425 hours. Review of archived maintenance information from a maintenance facility in Anchorage, Alaska, revealed that the most recent annual inspection was accomplished on March 28, 2003. At that time, the airplane had accrued 300.1 hours on the recording tachometer, and 321 hours on the hobbs meter.

METEOROLOGICAL INFORMATION

The FAA provided weather data for September 2, that was certified as a true copy of the original data used by the flight service station specialist to brief the pilot about the weather conditions along the planned route. The area forecast, issued at 0545 stated, in part: Cook Inlet and Susitna Valley, valid until 1800, clouds and weather, 4,000 feet scattered, 10,000 feet scattered to thin broken, separate layers above, tops at 22,000 feet, occasionally 4,000 feet broken. Widely scattered light rain showers. Until 0900, valley areas and near Cook Inlet, isolated ceilings below 1,000 feet; visibility, below 3 statute miles in mist. Outlook, valid from 1800 to 1200 on September 3, VFR in rain showers... Freezing level, 7,000 feet.

The area forecast for the Copper River basin, stated, in part: Valid until 1800, clouds and weather, 6,000 feet scattered, 11,000 feet broken to thinly scattered, separate layers above, tops at 25,000 feet. Widely scattered broken conditions at 6,000 feet; visibility, 5 statute miles in light rain showers. Outlook, valid from 1800 to 1200 on September 3, VFR in rain showers. Tahnetta Pass, VFR in rain showers... Freezing level, 7,000 feet.

An amended terminal forecast for Palmer, issued at 0638 and valid from 0700 to 0400 on September 3, stated: Wind, calm; visibility, greater than 6 statute miles; clouds and sky condition, 2,300 feet scattered, 4,000 feet broken, 5,000 feet overcast. Temporary conditions from 0700 to 1100, 2,300 feet broken. From 1300, winds variable at 6 knots; visibility greater than 6 statute miles with showers in the vicinity, 7,000 feet broken. From 2100, winds variable at 6 knots; visibility greater than 6 statute miles with showers in the vicinity, 5,000 feet overcast.

The local observations included Aviation Routine Weather Reports (METARs) along the planned route, and included a 0553 automated observation from Palmer, that stated: Wind, 350 degrees (true) at 3 knots; visibility, 10 statute miles; clouds and sky condition, 3,000 feet broken, 3,800 feet overcast; temperature 48 degrees F, dew point, 46 degrees F; altimeter, 29.56 inHg. A special automated observation at 0632 at Palmer indicated: Wind, calm; visibility, 10 statute miles; clouds and sky condition, 2,300 feet broken, 4,100 feet broken, 5,000 feet overcast; temperature, 48 degrees F, dew point, 46 degrees F; altimeter, 29.56 inHg.

A METAR at 0555 from Jonesville, Alaska, located about 2.5 nautical miles northwest of Sutton, Alaska, indicated: Wind, calm; visibility, 5 statute miles; clouds and sky condition, 3,500 feet scattered, 7,000 feet broken, 9,000 feet overcast; temperature 46 degrees F, dew point, 45 degrees F; altimeter, 29.51 inHg.

No METAR information was listed between Sutton and Gulkana.

On September 5, the FAA provided a list of weather products to the National Transportation Safety Board (NTSB) investigator-in-charge (IIC), from the Kenai AFSS, valid on September 2, from 0850 to 1200, for the area of Tahnetta Pass. The weather data was certified as a true copy of the original FAA digital aviation weather network (DAWN) data received by the facility.

A review of the DAWN data from the FAA revealed that the earliest weather report listed along the accident airplane's planned route, was a METAR from Jonesville. At 0755, the METAR indicated: Wind, 190 degrees (true) at 3 knots; visibility, 5 statute mile in mist; clouds and sky condition, 2,000 feet scattered, 4,500 feet overcast; temperature, 46 degrees F; dew point, 46 degrees F; altimeter, 29.53 inHg.

The closest official weather observation station to the accident site is Sheep Mountain Lodge, Alaska, elevation 2,799 feet msl, located 4 nautical miles east of the accident. The observations are conducted at the lodge by a paid weather observer for the National Weather Service.

The first weather observation from the DAWN data at Sheep Mountain, was listed as 0859. The DAWN data also contained a pilot report at 0900 from Sheep Mountain that contained the following: Routine pilot report; location, over Chickaloon Pass; type aircraft, Cessna 206; remarks, westbound, unable King Mountain area, clouds to the ground, returning Gulkana, weather conditions of rain.

During the course of the accident investigation, the NTSB IIC conducted a search for weather data on the internet, and obtained a copy of the Sheep Mountain weather observations that began at 0659 with subsequent observations at 0755, 0859, and 1005, and continued until the end of the day.

On September 2, the first Sheep Mountain METAR observation of the day, obtained from the internet, was made at 0659, and was reported as: Wind, 220 degrees (true) at 4 knots; visibility, 1/2 statute mile in mist; clouds and sky condition, indefinite ceiling with a vertical visibility of 300 feet; temperature, 43 degrees F; dew point, 41 degrees F; altimeter, 29.45 inHg; remarks, estimated, [Tahneta] pass closed.

At 0755, the next Sheep Mountain METAR, obtained from the internet, was reported as: Wind, 250 degrees (true) at 8 knots; visibility, 1 statute mile in mist; clouds and sky condition, indefinite ceiling with a vertical visibility of 300 feet; temperature, 43 degrees F; dew point, 41 degrees F; altimeter, 29.51 inHg; remarks, estimated, pass closed.

At 0859, the Sheep Mountain METAR, obtained from the internet and from the FAA, was reported as: Wind, 250 degrees (true) at 8 knots; visibility, 1/2 statute mile in mist; clouds and sky condition, indefinite ceiling with a vertical visibility of 300 feet; temperature, 45 degrees F; dew point, 43 degrees F; altimeter, 29.52 inHg; remarks, estimated, pass closed.

At 1005, the Sheep Mountain METAR was reported as: Wind, 220 degrees (true) at 8 knots; visibility, 1 statute mile; clouds and sky condition, indefinite ceiling with a vertical visibility of 300 feet; temperature, 45 degrees F; dew point, 43 degrees F; altimeter, 29.53 inHg; remarks, estimated, pass closed.

At 1408, the Sheep Mountain METAR included the first report of improved visibility of 3 statute miles in mist and the pass was estimated as marginal. These conditions persisted to the end of the day.

A copy of the weather data that the FAA certified as a true copy of the DAWN data, and the original data used by the controller, and the weather data obtained from the internet, are included in the public docket of this accident.

COMMUNICATIONS

There were no reports of communications between the pilot and any FAA facility after the pilot departed from Homer. The pilot did not request any weather updates when he departed

Homer, and no en route requests for additional weather information were made.

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

WRECKAGE AND IMPACT INFORMATION

The NTSB IIC examined the airplane wreckage at the accident site on September 4, 2003, and again on September 23, after the wreckage was recovered. At the scene of the crash, the airplane was observed along the side of a small gully, with the nose of the airplane oriented on a magnetic heading of 310 degrees. (All heading/bearings noted in this report are oriented toward magnetic north.) A ground scar in the form of a disruption of the soil, from the first observed point of ground contact to the wreckage point of rest, was about 6 feet long. The airplane was resting upright on the south-facing slope of a tundra covered, easterly-oriented gully. The side of the gully was sloped about 40 degrees.

All of the airplane's major components were found at the main wreckage area. The right wing was positioned upslope and the left wing downslope. The entire cockpit and cabin, the engine compartment, and the majority of the right wing, were consumed by an extensive fire. Burned vegetation around the wreckage was confined to the immediate area of the fuselage and the upsloping side of the gully, along the right wing.

The wings remained in their normal position in relation to the fuselage, but the left wing was displaced slightly forward of its normal orientation. The upper wing attach points were consumed by fire. Each wing was consumed by fire from its inboard attach point to about mid span. The wing lift struts remained attached to their wing attach points, but each lower attach point was fire damaged. The wings and fuselage had extensive upward crushing of the underside of their structure, with almost no leading edge damage to either wing. Each wing flap and aileron remained attached to its respective attach points, but the inboard half of each wing flap was consumed by fire. The flaps appeared to be retracted. The outboard, trailing end of the left wing and left aileron had a slight upward curl. Each wing aileron and flap control cables was attached to its respective attach points.

The empennage aft of the cargo area was not fire damaged. The outboard end of the right horizontal stabilizer had a slight upward bend. The leading edges of the horizontal stabilizers were undamaged. The vertical stabilizer and rudder were undamaged.

The postcrash fire incinerated most of the cabin/cockpit area, with the upper crown and sides of the cabin/cockpit burned to the floor. Due to the postimpact fire damage, the flight controls could not be moved by their respective control mechanisms. The continuity of the flight control cables was established to the cabin/cockpit area.

The main landing gear were folded aft and upward against the bottom of the fuselage. The separated nose gear strut and wheel was located near the left wingtip.

The fire consumed the instrument panel, and extensively damaged the engine area. The lower portion of the engine was embedded in dirt and tundra. The engine sustained impact damage to the underside and front portion of the engine, and fire damage to rest of the engine. Two of the propeller blades were loose in the hub. One propeller blade was bent aft about 90 degrees about mid span, and had extensive chordwise scratching, "S" bending, torsional twisting, leading edge gouging and curling, and destruction of the tip. The second blade was embedded in the tundra on the right side of the engine. It had "S" bending, torsional twisting, and curling and destruction of the tip. The third blade was broken out of the propeller hub, positioned under the engine.

Following recovery, an examination of the engine revealed that the propeller assembly remained connected to the engine crankshaft. The crankshaft could be rotated by the propeller. Gear train continuity was established when the crankshaft was rotated by hand. The exhaust tubes were crushed and folded, producing sharp creases that were not cracked or broken along the crease. The throttle, mixture and propeller control cables were attached to their respective components. The turbocharger compressor vanes could be turned by hand.

The magnetos sustained extensive fire damage. Examination of the top massive center electrode sparks plugs revealed that each was dry and had no evidence of lead deposits.

MEDICAL AND PATHOLOGICAL INFORMATION

Severely charred human remains found in the wreckage were transported to the Office of the Alaska State Medical Examiner, 4500 South Boniface Parkway, Anchorage, Alaska. A postmortem examination of the remains was conducted on September 5, 2003, and attributed the cause of death for the pilot as blunt force injuries. The medical examiner's report of the examination describes identification of the pilot's remains as presumptive.

Due to extent of the postcrash fire, no toxicological examination was conducted.

ADDITIONAL INFORMATION

The FAA utilizes a network of weather observations from a variety of geographical locations, most of which, but not all, are located at airports. Weather observations are conducted by automated sensors both with and without any human augmentation, additions, or remarks, or solely by human observations. These observations are linked to the FAA's DAWN system, and are used by FAA personnel to provide weather briefings to pilots.

The National Weather Service, under the National Oceanic and Atmospheric Administration, also has a network of weather observations. Some, but not all of their observations, are used by the FAA.

According to FAA personnel at the Air Route Traffic Control Center (ARTCC) Anchorage, the paid weather observer at Sheep Mountain provides observations to the FAA by one of two

methods. A computer, provided by the FAA, sends the weather data via phone line, to the FAA's Weather Message Switching Center Replacement (WMSCR) hub, located in the Continental U.S. The data, combined with other sources of weather information, is then routed to the FAA's DAWN system. The data is then accessible to the flight service stations. This sequence should take between 3 to 5 minutes.

If the observer does not have a computer, the weather observations should be called via phone line, to the Kenai AFSS. The information would either be left on a recorder, or provided directly to a flight service station specialist.

Neither ARTCC personnel, or the paid weather observer at Sheep Mountain, could be certain how the weather observations for the accident date were entered into the FAA's DAWN system.

The Safety Board released the wreckage, located at Last Frontier Air Ventures, Chickaloon, Alaska, to the owner's representative on September 23, 2003. No parts or components were retained by the Safety Board.

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):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N72598
Model/Series:	T206H	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	T20608264
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	Annual	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Lycoming
ELT:	Installed, not activated	Engine Model/Series:	TIO-540-AJ1A
Registered Owner:	GLYN A. BINDON	Rated Power:	310 hp
Operator:	GLYN A. BINDON	Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PASP, 2799 ft msl	Distance from Accident Site:	4 Nautical Miles
Observation Time:	1005 ADT	Direction from Accident Site:	90°
Lowest Cloud Condition:		Visibility	1 Miles
Lowest Ceiling:	Indefinite (V V) / 300 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	8 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	195°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.53 inches Hg	Temperature/Dew Point:	7° C / 6° C
Precipitation and Obscuration:			
Departure Point:	HOMER, AK (PAHO)	Type of Flight Plan Filed:	VFR
Destination:	WHITEHORSE (CYXY)	Type of Clearance:	None
Departure Time:	0752 ADT	Type of Airspace:	Class G

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:	61.817222, -147.634444

Administrative Information

Investigator In Charge (IIC):	SCOTT ERICKSON
Additional Participating Persons:	GENE CORDLE; FAA-AL-ANC FSDO 03; ANCHORAGE, AK
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/ .