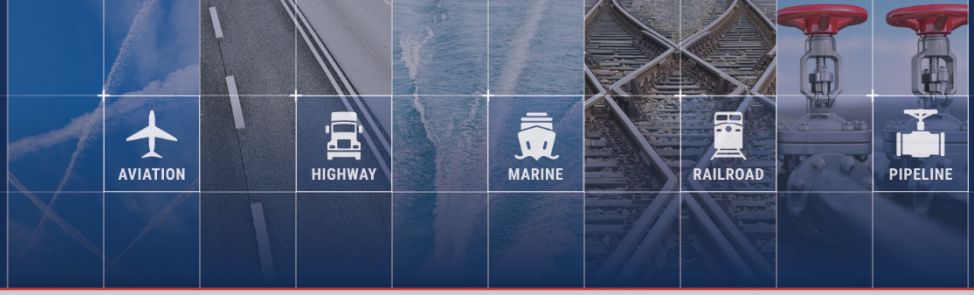

Aviation Investigation Final Report

Location:	KODIAK, Alaska	**Accident Number:**	ANC94FA100
Date & Time:	August 7, 1994, 13:55 Local	**Registration:**	N126UA
Aircraft:	de Havilland DHC-2	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	6 Fatal, 1 Serious
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

Analysis

The VFR only part 135 on demand sightseeing flight entered instrument meteorological conditions and collided with terrain. The surviving passenger reported that as the flight progressed, the ceiling and visibility deteriorated. Witnesses in the area reported heavy fog and estimated the ceiling and visibility to be 50 feet and one-fourth of a mile. The company's training program and operations policies and procedures did not address VFR flight in marginal weather conditions.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT OF THE VFR ONLY FLIGHT INTENTIONALLY ENTERED INSTRUMENT METEOROLOGICAL CONDITIONS. FACTORS IN THE ACCIDENT WERE THE INADEQUATE PROCEDURES/DIRECTIVES BY THE COMPANY/OPERATOR MANAGEMENT CONCERNING CONTINUED VFR FLIGHT IN MARGINAL WEATHER CONDITIONS AND THE FOG.

Findings

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

Findings
1. (F) WEATHER CONDITION - FOG

2. (C) VFR FLIGHT INTO IMC - INTENTIONAL - PILOT IN COMMAND
3. (F) PROCEDURES/DIRECTIVES - INADEQUATE - COMPANY/OPERATOR MANAGEMENT

Factual Information

HISTORY OF FLIGHT

On August 7, 1994, at approximately 1355 Alaska daylight time, a float equipped DeHavilland DHC-2 Beaver airplane, N126UA, registered to and operated by Uyak Air Service, Inc. of Kodiak, Alaska, collided with terrain between Miner's Point and Broken Point in Uganik Bay, approximately 45 miles west of the Kodiak Municipal Airport, Kodiak, Alaska. The coordinates of the accident site are 57'53".1N X 153'41".5W. The commercial certificated pilot-in-command and five of the revenue passengers on board the airplane received fatal injuries and one passenger sustained serious injuries. The airplane was destroyed by the impact and a post crash fire. The flight was conducted under the non scheduled rules contained in 14 CFR Part 135 for the purpose of sightseeing. The flight last departed the Kodiak inner harbor at 1307 on a local flight with a stop over at Camp Island on Karluk Lake to view the bears. Per company procedures, 70 gallons of 100 LL aviation fuel was on board the plane, distributed evenly in the forward and center belly fuel tanks. A company VFR flight plan was in effect. Fishermen in the area of the accident site reported that they heard but could not see the airplane due to the fog.

INJURIES TO PERSONS

Fatal: Pilot plus Five Passengers Serious: One Passenger

DAMAGE TO AIRCRAFT

The airplane was destroyed by the impact with the terrain and a post crash fire.

OTHER DAMAGE

None

PERSONNEL INFORMATION

PILOT

The pilot, Michael W. Merritt, born August 1, 1960, was the holder of commercial pilot certificate No. 477863766, with the privileges and limitations of airplane single engine land and sea, instrument. His second class medical certificate, issued on July 26, 1994, contained the limitation for corrective lenses. Mr. Merritt was initially hired by Uyak Air Service, Inc. as an airplane mechanic in February 1992. He began his ground and flight training with Uyak in May 1994 with initial qualification as a line pilot in the DHC-2 aircraft occurring on July 22, 1994.

At the time of the accident, he served in the capacity of pilot and director of maintenance. At the time of the accident, he had accrued a total of 1023 flight hours of which about 139 were in the DHC-2 aircraft. His total flight time in all aircraft the previous 90 days, 30 days, and 24 hours were 70.5 hours, 32.8 hours, and 3.9 hours, respectively. His total flight time in the DHC-2 aircraft the previous 90 days, 30 days, and 24 hours was 48.6 hours, 28.2 hours, and 3.9 hours, respectively. His flight time for the month of August 1994 totaled 12.6 hours and was accrued on the following dates: 1st: 1.2 hours, 5th: 7.5 hours, 6th: 3.9 hours.

PASSENGER INFORMATION

On August 7, 1994, at 1915, Andrea Olsen, Chief Nurse at the Kodiak Island Hospital, reported to AST Sgt. Darlene J. Turner, that she spoke to the surviving passenger, Mr. Barnhard Doeoes, while he was in the X-ray department. He was suffering from multiple fractures and was in a great deal of pain. He told Ms. Olsen they were flying along and all of a sudden it got very cloudy very fast and they could not see. Suddenly, there was a mountain in front of them. He recalled falling out of the airplane.

With the concurrence of the attending nurse and physician, the NTSB investigator-in-charge (IIC) interviewed Mr. Doeoes at Providence Hospital in Anchorage, Alaska. Mr. Doeoes reported that his aeronautical experience was limited to that of a passenger. He offered the following comments pertaining to the accident flight. The engine sounded normal. A large portion of the flight was conducted in weather in which he estimated the ceilings to between 200 ft. and 300 ft. with a horizontal visibility of 1/2 mile. Several minutes before the accident, the pilot began to descend to a lower altitude to where they ultimately were flying in the clouds about 60 feet above the shoreline. He could look down and see the water, but he could not see very far looking forward. The pilot made what he felt were several abrupt maneuvers with the airplane during the flight. Suddenly, the mountain was directly in front of them. He did not recall if the pilot made an attempt to avoid the ground. He faintly recalled being ejected from the airplane but nothing else.

WITNESS INFORMATION

The United States Coast Guard was notified of the crash by the crew of the F/V Voyager and by Mr. Roger Benney of Ashland, Oregon who had a set net site at Uganic Bay.

Mr. Benney was interviewed in person by AST personnel on the evening of August 7, 1994 and by the NTSB IIC at a later date. Mr. Benney reported that at approximately 1355, he was at his set net sight at Miner's Point when he heard an airplane. He could not see the plane because of the fog. He believed that the airplane came from the direction of Broken Point and was headed in the direction of Miner's Point. At the time he heard the airplane, he characterized the weather as "pea soup" with the fog mist right on the water and perhaps 1/4 of a mile visibility. He heard the plane's engine followed by momentary silence followed by a similar engine sound followed by what he believed be the sound of the crash/explosion. His

set net site is about 1/2 mile from the accident location.

Mr. Joseph F. Lilly of Ashland, Oregon was interviewed in person by AST personnel on the evening of August 7, 1994. Mr. Lilly reported that he was at Mr. Benney's set net site when he heard the sound of an engine, which he characterized as being very loud. Due to the weather, he thought the sound came from a boat. The engine cut out then came back on for a few seconds, then cut out again. He characterized the weather as very foggy with perhaps 1/4 of a mile visibility.

Mr. Christopher T. Daley of Ashland, Oregon, was interviewed in person by AST personnel on the evening of August 7, 1994. He reported that he was inside the cabin near Mr. Benney's set net site when he heard the sound of an airplane flying overhead. The plane sounded very close. The plane's motor cut in and out. The weather was very foggy and he could not see Broken Point from the accident site.

The fishing boat, F/V Voyager, based in Kodiak, Alaska, and skippered by Mr. Eric Manzer, was in the vicinity of Miner's Point at the time of the accident. Mr. Manzer was interviewed in person by AST personnel on the evening of August 7, 1994. Mr. Manzer reported that at approximately 1300 hours he heard the sound of an airplane engine. He reported that given the foggy conditions, it was remarkable to hear an airplane. He heard what sounded like the airplane's floats hit the water briefly and then shortly afterwards a thump. He stepped out of the boat's cabin but it was too foggy to see anything. A few minutes later, he saw Roger Benney come down the edge of the beach in his skiff. Mr. Benney was pointing to the east. He looked and saw a fire down the beach. The flames were shooting approximately thirty feet into the air. The cloud ceiling was only about fifty feet at the time of the crash.

AIRCRAFT INFORMATION

The airplane was manufactured in 1960.

The aircraft's daily record of operation log, which was normally kept in the airplane, was destroyed in the accident. The permanent aircraft logs were retained by the operator at the base facility. The records indicated that the airplane was given its most recent annual and 100 hour inspections on June 13, 1994, and July 24, 1994, respectively. At the time of the accident, the airframe had accrued approximately 22,200 flight hours.

The airplane was powered by a Pratt & Whitney Model R985-14B radial engine, SN:42-19076. The engine was installed on N126UA on June 13, 1994, after having undergone a major overhaul. At the time of the accident, the engine had accrued approximately 300 hours.

The engine was equipped with a Hartzell three blade propeller. SN:EM270. As of July 24, 1994, the propeller had accrued 887.1 hours since undergoing a major overhaul.

A review of the airplane's maintenance records by the NTSB IIC disclosed that there were no

reoccurring or outstanding maintenance deficiencies affecting the airworthiness of the airplane at the time of the accident.

METEOROLOGICAL INFORMATION

There were no official weather reporting facilities in close proximity to the accident site.

On August 7, 1994, at 0804, the pilot of N126UA telephoned the Kenai Automated Flight Service Station (AFSS) and asked for weather between Kodiak and King Salmon, Alaska. The pilot was advised that VFR flight was not recommended due to forecasted and current weather that was for IFR conditions.

The 1350 surface weather observation (SA) for the Kodiak Airport was measured ceiling 2100 ft. overcast, visibility 15 miles, temperature 60 degrees fahrenheit (F), dew point 55 F, wind 300 degrees true at 10 knots, altimeter 30.19.

WRECKAGE AND IMPACT INFORMATION

FOREWORD

On August 8, 1994, the NTSB IIC conducted the on scene investigation. The IIC was accompanied to the field site by Mr. Mike Dolson of the Federal Aviation Administration (FAA) and Alaska State Trooper (AST) Robert Meade.

STRUCTURE AND KINEMATICS

All of the major structural components of the airplane were accounted for at the accident site. The wreckage was comprised of four major components - the right wing, the floats, the fuselage, and the left wing. Continuity was established with the flight control surfaces.

At the time of the accident, the airplane was on a north easterly heading. The outboard leading edge of the right wing initially impacted the face of a cliff at an elevation of approximately 60 feet. The leading edge exhibited horizontal and vertical crushing. Dirt and green vegetation were imbedded in the leading edge. The right wing separated from the fuselage at its attachment hard points and was located about 25 feet west of the fuselage. The right flap and right aileron remained connected to the wing and both moved freely about their respective attachment points.

The nose section of the right float collided with the face of the cliff about 35 feet to the east of the initial impact point. Both floats separated from the fuselage.

The plane's propeller/engine assembly collided with the terrain within five feet of the right floats signature.

The fuselage slide about 15 feet downslope and 9 feet to the left of the point where the nose of the airplane initially impacted the terrain. The fuselage came to rest on a heading of about 140 degrees magnetic.

The left wing was found about 26 feet east of the fuselage upside down. The left wing separated from the fuselage at its attachment hard points. The primary damage to the left wing was along the leading edge which exhibited crushing about 18 inches in depth along a four foot section, starting at the wing root and traversing outboard. The left flap and left aileron remained connected to the wing and both moved freely about their respective attachment points.

ENGINE/PROPELLER

One of the three propeller blades remained attached to the hub. All three blades were bent and twisted rearward near 90 degrees and their leading edges were heavily scored. One of the blades was located about 49 feet behind and to the left of the main wreckage site.

COCKPIT

The cockpit and passenger cabin of the airplane, from the engine firewall to approximately three feet aft of the rearmost passenger seat, were completely consumed and destroyed by the post crash fire. The only easily recognizable interior components that inhabited this area were portions of seat frames, a section of the flight control yoke, and the flight control cables.

MEDICAL AND PATHOLOGICAL INFORMATION

The cause of death for the pilot was determined by the State of Alaska, Office of the Medical Examiner to be directly related to injuries sustained in the accident. Toxicological testing on tissue samples obtained posthumously from the pilot were negative for alcohol, major drugs of abuse, and prescription and over the counter medication.

ADDITIONAL INFORMATION

A video tape cassette was recovered from a camera found at the accident site. One segment of the tape showed a Uyak advertisement which stated, "bear viewing guaranteed". The later portion of the recording showed the accident flight at a low altitude over the water and progressing toward an area of reduced ceiling and visibility.

Pilot Information

Certificate:	Commercial	**Age:**	34,Male
Airplane Rating(s):	Single-engine land; Single-engine sea	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	July 26, 1994
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	1023 hours (Total, all aircraft), 139 hours (Total, this make and model), 70 hours (Last 90 days, all aircraft), 33 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	de Havilland	**Registration:**	N126UA
Model/Series:	DHC-2 DHC-2	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1400
Landing Gear Type:	Float	**Seats:**	7
Date/Type of Last Inspection:	July 24, 1994 100 hour	**Certified Max Gross Wt.:**	5370 lbs
Time Since Last Inspection:	10 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	22159 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed	**Engine Model/Series:**	R-985
Registered Owner:	UYAK AIR SERVICE, INC.	**Rated Power:**	450 Horsepower
Operator:		**Operating Certificate(s) Held:**	On-demand air taxi (135)
Operator Does Business As:		**Operator Designator Code:**	EPIA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 50 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	0°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	, AK (ADQ)	**Type of Flight Plan Filed:**	Company VFR
Destination:		**Type of Clearance:**	None
Departure Time:	13:05 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:**	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	5 Fatal, 1 Serious	**Aircraft Fire:**	On-ground
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	6 Fatal, 1 Serious	**Latitude, Longitude:**	57.789516,-152.400955(est)

Administrative Information

Investigator In Charge (IIC):	Borson, Timothy
Additional Participating Persons:	MICHAELL DOLSEN; ANCHORAGE , AK
Original Publish Date:	July 31, 1995
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=2448