



# Aviation Investigation Final Report

<b>Location:</b>	ATIGUN PASS, Alaska	<b>Accident Number:</b>	ANC93FA134
<b>Date &amp; Time:</b>	August 4, 1993, 14:38 Local	<b>Registration:</b>	N477JC
<b>Aircraft:</b>	PIPER PA-32R-300	<b>Aircraft Damage:</b>	Destroyed
<b>Defining Event:</b>		<b>Injuries:</b>	1 Fatal
<b>Flight Conducted Under:</b>	Part 91: General aviation - Positioning		

## Analysis

THE PILOT-IN-COMMAND WAS UNFAMILIAR WITH THE PASS AND WAS ADVISED THAT THE WEATHER IN THE PASS WAS VERY POOR. HE STATED HE WOULD GO TAKE A LOOK. THE PASS MAKES AN 'S' TURN AT THE TOP IN LESS THAN 1 MILE OF DISTANCE. THE AIRPLANE IMPACTED THE SIDE OF THE MOUNTAIN NEAR THE MIDDLE OF THE 'S' TURN. WEATHER REPORTED BY ANOTHER PILOT 15 TO 20 MINUTES EARLIER INDICATED THE PASS WAS CLOSED.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT-IN-COMMAND'S INTENTIONAL VFR FLIGHT INTO INSTRUMENT METEOROLOGICAL CONDITIONS AND HIS UNFAMILIARITY WITH THE GEOGRAPHICAL AREA. FACTORS WERE THE RAIN AND FOG.

## Findings

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

### Findings

1. TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (F) WEATHER CONDITION - FOG
3. (F) WEATHER CONDITION - RAIN

4. (C) VFR FLIGHT INTO IMC - INTENTIONAL - PILOT IN COMMAND
5. (C) LACK OF FAMILIARITY WITH GEOGRAPHIC AREA - PILOT IN COMMAND

## Factual Information

### HISTORY OF FLIGHT

On August 4, 1993 at 1438 Alaska daylight time, a retractable gear, wheel equipped Piper PA-32R-300 Lance airplane, N477JC, registered to the Athabaskan Air Group and operated by Yutana Air Service of Tanana, Alaska, crashed in Atigun Pass, located 21 miles south of Galbraith Lake, Alaska. The repositioning flight, operating under 14 CFR Part 91, last departed Galbraith Lake and the destination was Bettles, Alaska. The Commercial Certificated Pilot in Command, the sole occupant, was fatally injured and the airplane was destroyed by post impact fire. A visual flight rules flight plan was in effect and according to another pilot, instrument meteorological conditions prevailed in Atigun Pass.

According to Yutana Airlines records, the Pilot departed Fairbanks at 0815 as a scheduled commuter flight stopping at Rampart, Stevens Village, Allakaket, Bettles, Anaktuvuk Pass, Galbraith Lake, back through Anaktuvuk Pass, Bettles, and return to Fairbanks. The flight plan that the Pilot had filed at Galbraith Lake indicated his intended return through Anaktuvuk Pass, a pass with which he was familiar. However, according to a witness, an Alaska Helicopter pilot working at Galbraith Lake, the Pilot of N477JC mentioned that he might attempt to go through Atigun Pass to return to Fairbanks. The Pilot indicated he was not familiar with the pass and he would "go take a look." The helicopter pilot advised him not to attempt passage through Atigun Pass especially with the meteorological conditions present and his unfamiliarity with the pass. The helicopter pilot stated an airplane attempted to go through the pass 15 to 20 minutes earlier but was unable due to weather.

### DAMAGE TO AIRCRAFT

The airplane instrument panel, cockpit and cabin area, and most of the empennage were destroyed by post impact fire.

### PERSONNEL INFORMATION

According to Federal Aviation Administration Records, the Pilot-in-Command had a total time of 1230 hours with 157 hours in the make and model involved in the accident. The records show he had flown 185 hours in the previous 90 days and had a duty time of 11 hours and 30 minutes in the previous 24 hours with 4.3 hours of flight time. Yutana Airlines was unable to provide pilot-in-command time from their records.

### AIRCRAFT INFORMATION

According to Yutana Airlines records, the airplane had a total time of 6819.4 hours as of the

last inspection which occurred on 8/3/93 in compliance with a 50 hour inspection. The airplane received a 100 hour inspection on 7/22/93 and an annual inspection on 6/29/93. According to Harley Holt of the FAA Flight Standards District Office 01 in Fairbanks, Alaska, the records indicate that the airplane was airworthy for operations.

#### METEOROLOGICAL INFORMATION

There are no official weather reporting stations located in Atigun Pass. Galbraith Lake, located 21 nautical miles to the North of the Pass, is privately owned and the oil company maintains a weather observer. The weather from Galbraith Lake is sent to the FAA system and is available to the public through the flight Service Stations.

The weather reported by Galbraith Lake showed a overcast ceiling at 5000 feet, visibility of 15 miles with light rain, a temperature of 51 degrees, dewpoint missing, the wind from 060 degrees at 3 knots, and an altimeter setting of 29.93 inches of mercury.

Weather described in the pass by Stan Parkerson, another pilot who attempted to fly through the pass, was "socked in." He stated he could see right up to the pass but the last 1/4 mile was closed. He was flying at 5400 feet above mean sea level. He indicated the ceiling was ragged with rain and fog.

#### WRECKAGE AND IMPACT INFORMATION

Atigun Pass is the pass through which the Alaska Pipeline and the Dalton Highway (the haul road) transgress the Brooks Range. The pass has a road height of 4800 feet. It is very narrow and the road and valley make an "S" curve at the top. When traveling the pass from the north to the south, the road crests the pass halfway through the "S" turn. Just after the road crests the pass it makes a turn to the west and begins its descent. When flying through the center of the pass, which places the flight path just to the east of the road, you can not see through the pass without making an "S" turn.

According to Yutana Airlines Director of Operations, who is thoroughly familiar with Atigun Pass, to successfully negotiate Atigun Pass at an altitude of 5000 to 5400 feet above mean sea level, the "S" turn must be accomplished in less than a mile. He states "a 180 degree turn at cruise airspeed (145 kts) is not possible once an aircraft has entered the area requiring the turns."

The airplane wreckage was found impacted on a mountain side at the 5000 foot level, east of the road, just past the crest of the pass. The airplane was in a wings level attitude on a 40 degree slope.

Examination of the wreckage showed that the airplane struck the slope in a nose high attitude. There was no damage to the front of the engine. All the damage was located on the bottom of the engine. The engine separated from the main wreckage and was found up slope.

All major flight control surfaces were located at the accident site and although turn buckles had melted away, the safety wire remained in place indicating control continuity.

The propeller was separated from the engine and the blades were broken into pieces ranging from large to fragments.

The accident site was covered with light snow.

### ADDITIONAL INFORMATION

A review of Yutana Airlines operations and training manuals, shows there is no training required for mountain pass operations, familiarization with passes, or weather encounters in passes. According to the FAA, the company's manuals meet the requirements of the Federal Aviation Regulations.

The company records show the pilot was trained and qualified according to the company's training program.

#### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	26, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Airplane single-engine	<b>Toxicology Performed:</b>	Yes
<b>Medical Certification:</b>	Class 1 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	July 28, 1993
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	1217 hours (Total, all aircraft), 142 hours (Total, this make and model), 120 hours (Last 90 days, all aircraft), 85 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	PIPER	<b>Registration:</b>	N477JC
<b>Model/Series:</b>	PA-32R-300 PA-32R-300	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	32R-7680469
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	6
<b>Date/Type of Last Inspection:</b>	July 22, 1993 100 hour	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	6819 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	IO-540-K1G5D
<b>Registered Owner:</b>	ATHABASCAN AIR GROUP	<b>Rated Power:</b>	300 Horsepower
<b>Operator:</b>	YUTANA AIRLINES	<b>Operating Certificate(s) Held:</b>	Commuter air carrier (135), On-demand air taxi (135)
<b>Operator Does Business As:</b>	YUTANA AIRLINES	<b>Operator Designator Code:</b>	YADA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Instrument (IMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>		<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>		<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	
<b>Lowest Ceiling:</b>		<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	/	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	0°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>		<b>Temperature/Dew Point:</b>	3°C
<b>Precipitation and Obscuration:</b>	N/A - None - Fog		
<b>Departure Point:</b>	GALBRAITH LAKE , AK (GBH )	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	BETTLES , AK (BTT )	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	14:15 Local	<b>Type of Airspace:</b>	Class G

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>		<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Fatal	<b>Aircraft Damage:</b>	Destroyed
<b>Passenger Injuries:</b>		<b>Aircraft Fire:</b>	On-ground
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	Unknown
<b>Total Injuries:</b>	1 Fatal	<b>Latitude, Longitude:</b>	64.809898,-147.719223(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Kobelnyk, George
<b>Additional Participating Persons:</b>	DON NELSON; FAIRBANKS , AK
<b>Original Publish Date:</b>	December 2, 1994
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=2310">https://data.ntsb.gov/Docket?ProjectID=2310</a>

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The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).