National Transportation Safety Board
Aviation Accident Final Report

Location:	FRAZIER PARK, CA	**Accident Number:**	LAX94FA149
Date & Time:	03/03/1994, 2346 PST	**Registration:**	N78DE
Aircraft:	PIPER PA-31-350	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	1 Fatal
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled		

Analysis

THE PILOT ELECTED NOT TO USE THE STORED INSTRUMENT FLIGHT PLAN, AND HE DEPARTED WITH A SPECIAL VFR CLEARANCE. THE FLIGHT WAS BEING FOLLOWED BY RADAR. AFTER REACHING VISUAL FLIGHT CONDITIONS, THE PILOT PROCEEDED TOWARD HIS INTENDED DESTINATION AND CLIMBED TO 8,500 FEET. MINIMUM SAFE ALTITUDE WARNING SERVICE WAS AVAILABLE, BUT NOT REQUESTED BY THE PILOT. A REVIEW OF RADAR DATA INDICATES THAT THE AIRPLANE'S TRACK REMAINED ALMOST CONSTANT AT 300 DEGREES WITH A 160-KNOT GROUND SPEED. THE LAST RADAR HIT ON THE AIRPLANE OCCURRED ABOUT 0.3 MILES FROM WHERE THE AIRPLANE CRUISED INTO 8,500 FOOT MSL TERRAIN WHILE STILL TRACKING ALONG A NORTHWESTERLY COURSE. THE ACCIDENT OCCURRED IN DARK, NIGHTIME CONDITIONS.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's failure to select a cruise altitude which would ensure adequate terrain clearance. Contributing factors related to the dark, nighttime condition and to the pilot's lack of attentiveness.

Findings

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

Findings
1. TERRAIN CONDITION - MOUNTAINOUS/HILLY
2. (C) PROPER ALTITUDE - NOT SELECTED - PILOT IN COMMAND
3. (F) INATTENTIVE - PILOT IN COMMAND
4. (F) LIGHT CONDITION - DARK NIGHT

Factual Information

HISTORY OF FLIGHT

On March 3, 1994, at 2346 Pacific standard time, a Piper PA-31- 350, N78DE, operated by Ameriflight, Inc., as flight 107, cruised into rising mountainous terrain approximately 9 nautical miles west of Frazier Park, California. Visual meteorological conditions prevailed during the dark nighttime flight. A company flight plan was filed for the on-demand air taxi flight. The airplane was destroyed and the airline transport pilot was fatally injured. The nonstop all cargo bank check flight to Oakland, California, had originated from the Burbank Municipal Airport, Burbank, California, at 2327.

A review of recorded communications between the accident airplane and Federal Aviation Administration (FAA) facilities, recorded radar data, and personnel statements, indicated that the accident pilot requested and received a special visual flight rules (SVFR) clearance for departure. An instrument flight plan had previously been filed, but not activated.

The pilot taxied to runway 08, and was instructed to turn left at the Hansen Dam (a visual check point). The pilot was cleared for takeoff and was directed to report reaching VFR flight conditions. A few minutes later, the pilot reported reaching VFR conditions.

The pilot was issued a discrete squawk code and, in accordance with air traffic instructions, he changed communication frequencies to Burbank Departure Control and then to Los Angeles Air Route Traffic Control Center (LAX ARTCC).

While cruising on an approximate magnetic course of 300 degrees, at 2335:28, the pilot transmitted to LAX ARTCC "...checking in eight thousand five hundred." LAX ARTCC provided the pilot with the Burbank altimeter setting of 30.15 inHg, which was repeated by the pilot.

At 2342:09, LAX ARTCC provided the pilot with the Bakersfield altimeter of 30.16 inHg. The last transmission from the pilot commenced 4 seconds later, at 2342:13, when the pilot repeated the altimeter setting with the following transmission: "three zero one six one oh seven."

At 2346:19, the airplane's last recorded position was at approximately 34 degrees, 48 minutes, 34 seconds north latitude, by 119 degrees, 07 minutes, 48 seconds west longitude. Its altitude was recorded at 8,400 feet msl (mean sea level).

The next transmission on frequency occurred at 2347:51. At this time, LAX ARTCC transmitted: "amflight one oh seven i've lost your transponder reset squawk one zero five five."

From a review of radar data, during the last 36 seconds of the airplane's recorded flight (between 2345:43 and 2346:19) the airplane tracked along a west-northwesterly course of about 300 degrees at (transponder) altitudes between 8,400 and 8,500 feet msl. The airplane's average ground speed during this period was approximately 160 knots.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate for single- engine and multiengine land airplanes. He had an estimated 3,600 total flight hours of which approximately 135 hours were in the Piper PA-31-350.

On December 10, 1993, the pilot passed a FAR Part 135 flight check in the PA-31-350. During

the 90-day period which preceded the accident, the pilot had flown the model airplane for about 114 hours.

Prior to taking off on the accident flight, the pilot had been off duty at Ameriflight for about 18 hours. The operator's evening flight dispatcher reported to the National Transportation Safety Board that when the pilot reported to work he looked as though he had just gotten out of a shower because his hair was damp. The pilot appeared alert and ready to fly.

AIRPLANE INFORMATION

The airplane was equipped with a three-axis autopilot. A review of operator-supplied data indicated the airplane's altimeter and pitot-static system had been examined during the previous year. A review of the airplane's cargo manifest was made in conjunction with operator-supplied loading distribution records. The operator reported that the airplane had been loaded in compliance with weight and balance limitations.

METEOROLOGICAL INFORMATION

At the time of the accident, the moon was not visible. The operator reported that its pilots' experience flying a few miles west of Interstate Highway 5 was that even on a dark night traffic along the roadway and surrounding terrain would be visible. En route flight conditions were reported adequate for flying by visual references. The weather reporting facilities at Sandberg and Bakersfield reported clear sky conditions and visibility of 5 and 10 miles, respectively.

AIDS TO NAVIGATION, COMMUNICATIONS, AND SERVICES

The FAA reported that all required navigation aids in the vicinity of the accident site were in service. All communications and services to the airplane pilot were normal, and no difficulties were experienced.

WRECKAGE AND IMPACT INFORMATION

From an examination of the accident site and airplane wreckage, the airplane was found to have initially contacted several pine trees prior to colliding with hilly snow-covered terrain. The estimated elevation of the tree limbs and crash site was between 8,500 and 8,700 feet msl. The initial point of tree impact (IPI) occurred around 34 degrees, 48 minutes, 48 seconds north latitude, by 119 degrees, 08 minutes, 02 seconds west longitude. The Safety Board calculated that this location was about 0.3 miles from the airplane's last recorded position on radar.

Wreckage was found scattered over an estimated 30-foot wide by 450-foot long path on a west-northwesterly magnetic track of about 310 degrees. Fragmented wing tip and tail components were found below impacted pine trees at the IPI. The engines were found separated from the wings near the main impact crater. A postimpact ground fire consumed portions of the fuselage, cockpit, and wings.

The entire airplane structure was accounted for in the vicinity of the crash site. The aileron and flight control system was found impact and fire damaged. The elevator and rudder flight control surfaces were found attached to the tail.

Both engines were found separated from the wings. Several propeller blades from each engine were found torsionally deformed, gouged, and bent into an "S" shape. One of the blades from the right engine was found broken from its hub assembly clamps. The blade was found near the base of a tree which had been impacted. The tip portion of this blade was missing.

MEDICAL AND PATHOLOGICAL INFORMATION

The operator's evening flight dispatcher reported to the Safety Board that he had observed the pilot on a daily basis, and when the pilot reported to work for the accident flight nothing unusual was noted. The pilot appeared in good health.

On March 4, 1994, an autopsy was performed by the Kern County Coroner's Office. The autopsy did not disclose any evidence of any physical incapacitation or impairment that would have adversely affected the pilot's ability to operate the airplane. Toxicology tests were negative for all screened drugs and alcohol.

TESTS AND RESEARCH

On March 10, 1994, the operator's chief pilot reported to the Safety Board that, while en route during nighttime cross-country flights, pilots are required to fly at least 2,000 feet above terrain.

The operator further reported to the Safety Board that it did not have a policy which required pilots to always fly under instrument flight rules (IFR). It also did not have a policy that pilots request they be provided with minimum safe altitude warnings (E-MSAW) when flying during nighttime VFR conditions.

The FAA Western-Pacific Regional Office Quality Assurance staff verbally reported to the Safety Board that on the route between Burbank and Oakland, E-MSAW radar service may be provided to VFR aircraft upon request by the pilot. However, aircraft pilots proceeding under vfr conditions generally do not request this service.

ADDITIONAL INFORMATION

The entire airplane wreckage was released to operator on March 3, 1994. No records were retained.

Pilot Information

Certificate:	Airline Transport; Flight Instructor	**Age:**	27, 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:**	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	**Toxicology Performed:**	Yes
Medical Certification:	Class 1 Valid Medical--no waivers/lim.	**Last FAA Medical Exam:**	12/01/1993
Occupational Pilot:		**Last Flight Review or Equivalent:**	
Flight Time:	3600 hours (Total, all aircraft), 135 hours (Total, this make and model), 3430 hours (Pilot In Command, all aircraft), 180 hours (Last 90 days, all aircraft), 33 hours (Last 30 days, all aircraft), 5 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	PIPER	**Registration:**	N78DE
Model/Series:	PA-31-350 PA-31-350	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	No
Airworthiness Certificate:	Normal	**Serial Number:**	31-7852087
Landing Gear Type:	Retractable - Tricycle	**Seats:**	2
Date/Type of Last Inspection:	03/24/1994, AAIP	**Certified Max Gross Wt.:**	7000 lbs
Time Since Last Inspection:	32 Hours	**Engines:**	2 Reciprocating
Airframe Total Time:	9136 Hours	**Engine Manufacturer:**	LYCOMING
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540-J2BD
Registered Owner:	AMERIFLIGHT, INC.	**Rated Power:**	350 hp
Operator:	AMERIFLIGHT, INC.	**Operating Certificate(s) Held:**	On-demand Air Taxi (135)
Operator Does Business As:		**Operator Designator Code:**	JIKA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Night/Dark
Observation Facility, Elevation:	, 0 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	0000	**Direction from Accident Site:**	0°
Lowest Cloud Condition:	Clear / 0 ft agl	**Visibility**	10 Miles
Lowest Ceiling:	None / 0 ft agl	**Visibility (RVR):**	0 ft
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	
Precipitation and Obscuration:			
Departure Point:	BURBANK, CA (BUR)	**Type of Flight Plan Filed:**	Company VFR
Destination:	OAKLAND, CA (OAK)	**Type of Clearance:**	Special IFR; ; VFR on top
Departure Time:	2327 PST	**Type of Airspace:**	Class E

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	WAYNE POLLACK,	**Report Date:**	02/24/1995
Additional Participating Persons:	GERALD E PARROTT; VAN NUYS, CA JOHN W HAZLET, JR.; BURBANK, CA MARK W PLATT; AMERIFLIGHT, CA CHARLES R LITTLE; CHINO, CA		
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.ntsb.gov/pubdms/.		