



# Aviation Investigation Final Report

<b>Location:</b>	COUDERSPORT, Pennsylvania	<b>Accident Number:</b>	NYC00LA044
<b>Date &amp; Time:</b>	November 27, 1999, 16:15 Local	<b>Registration:</b>	N940B
<b>Aircraft:</b>	Bell 47G	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

The pilot with a passenger, landed the helicopter in a clearing that was about 40 feet wide, by 150 feet long, and surrounded by 'very tall trees.' The pilot said he made a normal run-up and lifted the helicopter to a hover. He used full throttle and maintained 3,100 RPM. When the helicopter started to accelerate forward, at about 12-15 knots, the RPM dropped to 3,000 and the pilot lowered collective to keep the RPM from dropping further. The helicopter's main rotor blades contacted a pine tree about 30 feet above the ground. The helicopter then rolled to the left and impacted the ground. The elevation at the accident site was about 1,800 feet Ms. The pilot did not report any mechanical malfunctions with the helicopter's airframe or engine. After the accident, the pilot stated that the helicopter was with-in it's maximum gross weight; however, the helicopter did not have enough power available to climb and he should have never landed in the clearing.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's improper preflight planning and decision to attempt a takeoff with the passenger from the confined area.

## Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT  
Phase of Operation: TAKEOFF

Findings

1. (F) OBJECT - TREE(S)
2. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: TAKEOFF

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

On November 27, 1999, about 1615 Eastern Standard Time, a Bell 47G, N940B, was substantially damaged when it struck a tree while departing from a clearing near Coudersport, Pennsylvania. The certificated private pilot and a passenger were not injured. Visual meteorological conditions prevailed and no flight plan had been filed for the personal flight conducted under 14 CFR Part 91.

Earlier in the day, the pilot and passenger departed a private heliport in Glen Rock, Pennsylvania, and flew to the Grand Canyon State Airport (N38), Wellsboro, Pennsylvania, where the helicopter was refueled. They then departed N38, and landed in a clearing, located about 1/2 mile northwest of Coudersport.

According to the pilot, the clearing was about 40 feet wide, by 150 feet long, and was surrounded by "very tall trees." The pilot said he made a normal run-up and lifted the helicopter to a hover. He used full throttle and maintained 3,100 RPM. When the helicopter started to accelerate forward, at about 12-15 knots, the RPM dropped to 3,000 and the pilot lowered collective to keep the RPM from dropping further. The helicopter's main rotor blades contacted a pine tree about 30 feet above the ground. The helicopter then rolled to the left and impacted the ground.

According to a Federal Aviation Administration Inspector, the elevation at the accident site was about 1,800 feet msl.

The pilot did not report any mechanical malfunctions with the helicopter's airframe or engine.

After the accident, the pilot stated that the helicopter was within its maximum gross weight; however, the helicopter did not have enough power available to climb and he should have never landed in the clearing.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	28, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical-w/ waivers/lim	<b>Last FAA Medical Exam:</b>	October 17, 1997
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	156 hours (Total, all aircraft), 76 hours (Total, this make and model), 18 hours (Pilot In Command, all aircraft), 14 hours (Last 90 days, all aircraft), 11 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Bell	<b>Registration:</b>	N940B
<b>Model/Series:</b>	47G 47G	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	672
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	July 7, 1999 Annual	<b>Certified Max Gross Wt.:</b>	2350 lbs
<b>Time Since Last Inspection:</b>	32 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	7510 Hrs	<b>Engine Manufacturer:</b>	Franklin
<b>ELT:</b>		<b>Engine Model/Series:</b>	6V-355-A
<b>Registered Owner:</b>	LAWRENCE W. VANCE	<b>Rated Power:</b>	210 Horsepower
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ELM ,955 ft msl	<b>Distance from Accident Site:</b>	56 Nautical Miles
<b>Observation Time:</b>	16:53 Local	<b>Direction from Accident Site:</b>	65°
<b>Lowest Cloud Condition:</b>	Unknown	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	7500 ft AGL	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	260°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29 inches Hg	<b>Temperature/Dew Point:</b>	10°C / 1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	(NONE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	GLEN ROCK , PA (NONE)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	16:15 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>	None
<b>Runway Length/Width:</b>		<b>VFR Approach/Landing:</b>	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.770744,-78.00933(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Schiada, Luke
<b>Additional Participating Persons:</b>	BILL MILLER; HARRISBURG , PA
<b>Original Publish Date:</b>	March 2, 2001
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=47842">https://data.nts.gov/Docket?ProjectID=47842</a>

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