



# Aviation Investigation Final Report

<b>Location:</b>	COLORADO SPRING, Colorado	<b>Accident Number:</b>	DEN91LA096
<b>Date &amp; Time:</b>	July 4, 1991, 10:40 Local	<b>Registration:</b>	N40DP
<b>Aircraft:</b>	BELL 47G-3B-1	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 135: Air taxi & commuter - Non-scheduled		

## Analysis

DURING TAKEOFF FROM A HIGH ALTITUDE, HIGH DENSITY ALTITUDE HELICOPTER PAD, INSUFFICIENT POWER WAS AVAILABLE TO MAINTAIN FLIGHT OUT OF GROUND EFFECT AND THE HELICOPTER SETTLED INTO ROUGH AND UNEVEN TERRAIN. THE MAIN ROTOR BLADES STRUCK THE TERRAIN DURING LANDING. DENSITY ALTITUDE WAS 11,700 FEET.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT ATTEMPTING TO OPERATE THE HELICOPTER OUTSIDE THE DESIGN OPERATING ENVELOPE. FACTORS WERE: HIGH ALTITUDE, HIGH TEMPERATURE, AND HIGH DENSITY ALTITUDE.

## Findings

Occurrence #1: FORCED LANDING  
Phase of Operation: TAKEOFF

### Findings

1. TERRAIN CONDITION - ROUGH/UNEVEN
  2. (F) ALTITUDE - DISPATCHED - PILOT IN COMMAND
  3. (F) WEATHER CONDITION - ICING CONDITIONS
  4. (C) PERFORMANCE DATA - NOT USED - PILOT IN COMMAND
  5. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: DESCENT - UNCONTROLLED

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial; Flight instructor	<b>Age:</b>	42, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	August 27, 1990
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3300 hours (Total, all aircraft), 500 hours (Total, this make and model), 29023 hours (Pilot In Command, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N40DP
<b>Model/Series:</b>	47G-3B-1 47G-3B-1	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	3763
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2950 lbs
<b>Time Since Last Inspection:</b>	0 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>		<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	TVO-435V1
<b>Registered Owner:</b>		<b>Rated Power:</b>	270 Horsepower
<b>Operator:</b>	HELITECH, INC.	<b>Operating Certificate(s) Held:</b>	On-demand air taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	HTPA

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<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>	Clear	<b>Visibility</b>	65 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	3 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	270°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30 inches Hg	<b>Temperature/Dew Point:</b>	27°C / 1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>		<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	09:20 Local	<b>Type of Airspace:</b>	

## Airport Information

<b>Airport:</b>		<b>Runway Surface Type:</b>	
<b>Airport Elevation:</b>	0 ft msl	<b>Runway Surface Condition:</b>	
<b>Runway Used:</b>	0	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	0 ft / 0 ft	<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>	38.829154,-104.809951(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Wiemeyer, Norman
<b>Additional Participating Persons:</b>	BOB HOEFER; DENVER , CO
<b>Original Publish Date:</b>	May 5, 1993
<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=18110">https://data.nts.gov/Docket?ProjectID=18110</a>

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