



National Transportation Safety Board Aviation Accident Final Report

Location:	EL INDIO, TX	Accident Number:	FTW95LA105
Date & Time:	02/01/1995, 1500 CST	Registration:	N6SR
Aircraft:	BELL 47G-4A	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Minor, 2 None

Flight Conducted Under: Part 91: General Aviation - Other Work Use

Analysis

THE HELICOPTER, BEING USED FOR PREDATOR CONTROL, WAS 25 FEET ABOVE THE GROUND AND WAS CHASING A BOBCAT. THE PILOT SAID A RIGHT QUARTERING TAILWIND GUST CAUSED THE HELICOPTER TO LOSE TAIL ROTOR EFFECTIVENESS AND IT BEGAN SPINNING TO THE RIGHT. THE PILOT INCREASED COLLECTIVE AND THROTTLE IN AN ATTEMPT TO REGAIN AIRSPEED, BUT THIS CAUSED THE MAIN ROTOR RPM TO DROOP AND ALTITUDE WAS INSUFFICIENT TO ALLOW THE HELICOPTER TO REGAIN AIRSPEED BY LOWERING THE NOSE. THE PILOT THEN REDUCED COLLECTIVE TO REGAIN RPM, BUT THE HELICOPTER CONTINUED TO SPIN AND IMPACTED THE TERRAIN.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE LOSS OF TAIL ROTOR EFFECTIVENESS. A FACTOR WAS THE GUSTY RIGHT QUARTERING TAILWIND.

Findings

Occurrence #1: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: MANEUVERING

Findings

1. LOW ALTITUDE FLIGHT/MANEUVER - INTENTIONAL - PILOT IN COMMAND
2. (C) LOSS OF TAIL ROTOR EFFECTIVENESS - INADVERTENT - PILOT IN COMMAND
3. (F) WEATHER CONDITION - GUSTS
4. (F) WEATHER CONDITION - CROSSWIND
5. (F) WEATHER CONDITION - TAILWIND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Factual Information

On February 1, 1995, approximately 1500 central standard time, a Bell 47G-4A, N6SR, was destroyed when it impacted terrain while maneuvering near El Indio, Texas. The airline transport rated pilot and one passenger were not injured, but a second passenger received minor injuries. Visual meteorological conditions prevailed.

The following is based on the pilot/operator report. The helicopter was being used for predator control and was chasing a bobcat about 25 feet above the ground. The pilot said a right quartering tailwind gust caused the helicopter to lose tail rotor effectiveness and it began spinning to the right. He increased collective and throttle in an attempt to regain airspeed, but this caused the main rotor RPM to droop and altitude was insufficient to allow the helicopter to regain airspeed by diving. He then reduced collective to regain RPM, but the helicopter continued to spin and impacted the terrain.

Pilot Information

Certificate:	Airline Transport; Commercial	Age:	45, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt
Instrument Rating(s):	Helicopter	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--no waivers/lim.	Last FAA Medical Exam:	06/01/1994
Occupational Pilot:	Last Flight Review or Equivalent:		
Flight Time:	9000 hours (Total, all aircraft), 800 hours (Total, this make and model), 8000 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	BELL	Registration:	N6SR
Model/Series:	47G-4A 47G-4A	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	7516
Landing Gear Type:	Skid	Seats:	3
Date/Type of Last Inspection:	12/07/1994, AAIP	Certified Max Gross Wt.:	2950 lbs
Time Since Last Inspection:	31 Hours	Engines:	1 Reciprocating
Airframe Total Time:	15926 Hours	Engine Manufacturer:	LYCOMING
ELT:	Not installed	Engine Model/Series:	VO-540-B1B3
Registered Owner:	SMITH HELICOPTERS, INC.	Rated Power:	280 hp
Operator:	SMITH HELICOPTERS, INC.	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	CNYA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
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	25 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots / 15 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	315°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:		Temperature/Dew Point:	24° C
Precipitation and Obscuration:			
Departure Point:		Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1300 CST	Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Destroyed
Passenger Injuries:	1 Minor, 1 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Minor, 2 None	Latitude, Longitude:	

Administrative Information

Investigator In Charge (IIC): ARNOLD W SCOTT, **Report Date:** 05/09/1995

Additional Participating Persons: EDWARD C GREER; SAN ANTONIO, TX

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.nts.gov/pubdms/>.

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).