



# Aviation Investigation Final Report

<b>Location:</b>	PLAINVIEW, Minnesota	<b>Accident Number:</b>	CHI82DA279
<b>Date &amp; Time:</b>	July 28, 1982, 14:30 Local	<b>Registration:</b>	N19JM
<b>Aircraft:</b>	BELL 47G-2	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 137: Agricultural		

## Analysis

WHILE MAKING CLEANUP SWATHS OVER AN ODD SHAPED PORTION OF A CORN FIELD, THE PILOT MADE TWO TURNS OF ABOUT 220 DEGREES EACH IN CLOSE PROXIMITY TO EACH OTHER. THE SECOND TURN WAS MADE DOWNWIND FROM TWO PREVIOUS SWATHS THAT HAD JUST BEEN COMPLETED. DURING A TIGHT TURN, THE HELICOPTER ENCOUNTERED ITS OWN WASH, THEN STRUCK THE GROUND. THE PILOT REPORTED A LIGHT AND VARIABLE WIND FROM THE NORTHEAST.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

### Findings

Occurrence #1: VORTEX TURBULENCE ENCOUNTERED  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

#### Findings

1. (F) WEATHER CONDITION - DOWNDRAFT
2. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

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Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: MANEUVERING - AERIAL APPLICATION

## Factual Information

### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	29, Male
<b>Airplane Rating(s):</b>		<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Helicopter	<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--no waivers/lim.	<b>Last FAA Medical Exam:</b>	May 14, 1982
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	2537 hours (Total, all aircraft), 175 hours (Total, this make and model), 2534 hours (Pilot In Command, all aircraft), 28 hours (Last 90 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	BELL	<b>Registration:</b>	N19JM
<b>Model/Series:</b>	47G-2 47G-2	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>		<b>Serial Number:</b>	1921
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	2
<b>Date/Type of Last Inspection:</b>	Unknown	<b>Certified Max Gross Wt.:</b>	2450 lbs
<b>Time Since Last Inspection:</b>	63 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	4700 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	VO-435
<b>Registered Owner:</b>	AGRI-HELICOPTER	<b>Rated Power:</b>	260 Horsepower
<b>Operator:</b>	AGRI-HELICOPTER	<b>Operating Certificate(s) Held:</b>	
<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>		<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>	7 miles
<b>Lowest Ceiling:</b>	Unknown	<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>	85°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	FARM STRIP , MN	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	FARM STRIP , MN	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	00:00 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>		<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 None	<b>Latitude, Longitude:</b>	

## Administrative Information

**Investigator In Charge (IIC):**

**Additional Participating Persons:**

**Original Publish Date:** July 28, 1983

**Last Revision Date:**

**Investigation Class:** [Class](#)

**Note:**

**Investigation Docket:** <https://data.nts.gov/Docket?ProjectID=72249>

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