



National Transportation Safety Board Aviation Accident Final Report

Location:	LLANO, TX	Accident Number:	FTW96LA035
Date & Time:	11/01/1995, 1600 CST	Registration:	N68889
Aircraft:	HELIO HT-295	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Serious, 1 Minor, 2 None

Flight Conducted Under: Part 91: General Aviation - Business

Analysis

THE AIRPLANE DEPARTED FROM THE GRASS STRIP FOR A LOCAL FLIGHT AROUND THE RANCH. THE PILOT SELECTED 30 DEGREES OF FLAPS, AND THE AIRPLANE BECAME AIRBORNE PRIOR TO REACHING THE MIDFIELD POINT OF THE 2,600-FOOT RUNWAY. HE STATED THAT THE AIRPLANE CLIMBED TO APPROXIMATELY 100 FEET ABOVE THE GROUND AND THE CLIMB SUBSIDED UNTIL THE AIRPLANE NEARLY LEVELED OFF AS THE AIRPLANE WAS HEADED TOWARDS RISING TERRAIN. HE RETRACTED THE FLAPS TO 20 DEGREES TO IMPROVE THE CLIMB PERFORMANCE. HE MAINTAINED CONTROLLED FLIGHT AS HE MANAGED TO AVOID THE LARGER TREES WHILE LOOKING FOR AN OPEN AREA. CONTROL WAS LOST AS THE PILOT SLOWED THE AIRPLANE PRIOR TO IMPACTING TREES. A 10 TO 20 KNOT HEADWIND PREVAILED AND THE PILOT STATED THAT A DOWNDRAFT WAS 'CREATED BY THE OROGRAPHIC EFFECT OF THE WIND BLOWING OVER THE RIDGE LINE.' SEVERAL WORKERS AT THE RANCH WITNESSED THE AIRPLANE 'ATTEMPTING TO CLIMB IN THE DIRECTION OF RISING TERRAIN WITHOUT GAINING ALTITUDE.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT'S ENCOUNTER WITH A DOWNDRAFT AND HIS INABILITY TO OUTCLIMB RISING TERRAIN. FACTORS WERE THE RISING TERRAIN AND HIGH WINDS.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (F) TERRAIN CONDITION - RISING
 2. (F) WEATHER CONDITION - HIGH WIND
 3. (C) WEATHER CONDITION - DOWNDRAFT
 4. (C) CLIMB - NOT POSSIBLE - PILOT IN COMMAND
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Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: TAKEOFF - INITIAL CLIMB

Occurrence #3: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: DESCENT - UNCONTROLLED

Findings

5. OBJECT - TREE(S)

Factual Information

On November 1, 1995, at 1600 central standard time, a Helio HT- 295, N68889, was destroyed following a loss of control during initial takeoff climb near Llano, Texas. The airline transport rated pilot was seriously injured, one passenger sustained minor injuries, and two other passengers were not injured. The airplane was operated as a business flight by High Tech Inc., of Dallas, Texas, under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the local flight for which a flight plan was not filed.

According to the law enforcement officer who interviewed the pilot at the hospital, the aircraft departed from a grass airstrip at the Hickory Bluff Ranch near Llano, Texas, for a local flight around the ranch. Several workers at the ranch witnessed the airplane "attempting to climb in the direction of rising terrain without gaining altitude."

In a telephone interview conducted by the investigator in charge, and in enclosed NTSB Form 6120.1/2, the pilot stated that he selected a 30 degree flap setting as called for a short field takeoff. During the takeoff roll the engine sounded "normal" and the airplane broke ground prior to reaching mid field and a climb attitude was established. The pilot added that as the airplane climbed to about 100 feet above the ground, the "climb went from positive to approximately level," attitude as he approached rising terrain.

The pilot further stated that he elected to retract the flaps to a 20 degree setting to "improve on the climb performance" by reducing drag. The pilot attempted to maintain controlled flight and "flew around the larger trees looking for an open area" but the "rising terrain towards the ridge made it impossible to avoid contact." Control was lost as the pilot "pulled the yoke back" and slowed the airplane prior to impact with the trees.

The airplane came to rest approximately a 1/2 mile from the point of departure and a post-impact fire destroyed the airplane. The pilot and the front seat passenger of the airplane told a law enforcement officer that the engine "was operating normally during the flight."

On the enclosed Pilot/Operator Report, the pilot stated that a 10 to 20 knot headwind prevailed at the time of his departure from the 2,600 foot airstrip. During the telephonic interview with the investigator in charge, the pilot attributed the deterioration in climb performance to a downdraft "created by orographic effect of the wind blowing over the ridgeline."

Pilot Information

Certificate:	Airline Transport; Flight Instructor; Commercial	Age:	53, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	Airplane Multi-engine; Airplane Single-engine; Instrument Airplane	Toxicology Performed:	No
Medical Certification:	Class 2 Valid Medical--w/ waivers/lim.	Last FAA Medical Exam:	08/23/1995
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	5992 hours (Total, all aircraft), 483 hours (Total, this make and model), 5697 hours (Pilot In Command, all aircraft), 132 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	HELIO	Registration:	N68889
Model/Series:	HT-295 HT-295	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	1718
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	01/08/1995, Annual	Certified Max Gross Wt.:	3400 lbs
Time Since Last Inspection:	193 Hours	Engines:	1 Reciprocating
Airframe Total Time:	1887 Hours	Engine Manufacturer:	LYCOMING
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	GO-480-G1A6
Registered Owner:	HIGH TEST INC.	Rated Power:	295 hp
Operator:	HIGH TEST INC.	Operating Certificate(s) Held:	None
Operator Does Business As:	HIGH TEST INC.	Operator Designator Code:	

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	10 Miles
Lowest Ceiling:	None / 0 ft agl	Visibility (RVR):	0 ft
Wind Speed/Gusts:	10 knots / 20 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	24° C
Precipitation and Obscuration:			
Departure Point:	(NONE)	Type of Flight Plan Filed:	None
Destination:		Type of Clearance:	None
Departure Time:	1600 CST	Type of Airspace:	Class G

Wreckage and Impact Information

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

Administrative Information

Investigator In Charge (IIC):	HECTOR R CASANOVA	Report Date:	02/14/1996
Additional Participating Persons:	FRED J CECH; 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 pubinquiry@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](#).