



# Aviation Investigation Final Report

<b>Location:</b>	SILVERCLIFF, Colorado	<b>Accident Number:</b>	FTW95LA315
<b>Date &amp; Time:</b>	July 24, 1995, 11:30 Local	<b>Registration:</b>	N9304B
<b>Aircraft:</b>	CESSNA 175	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 Serious
<b>Flight Conducted Under:</b>	Part 91: General aviation - Aerial observation		

## Analysis

WHILE ON A LOCAL AREA FLIGHT, THE ENGINE LOST POWER AND THE PILOT CONDUCTED A FORCED LANDING TO ROUGH TERRAIN. EXAMINATION OF THE AIRCRAFT PROVIDED NO EVIDENCE OF FUEL IN THE TANKS, LINES OR OTHER PORTIONS OF THE FUEL SYSTEM. NO FUEL STAINS WERE FOUND AT THE ACCIDENT SITE.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: FAILURE BY THE PILOT TO FUEL THE AIRCRAFT WHICH RESULTED IN FUEL EXHAUSTION. A FACTOR WAS UNSUITABLE TERRAIN FOR A FORCED LANDING.

## Findings

Occurrence #1: LOSS OF ENGINE POWER(TOTAL) - NONMECHANICAL  
Phase of Operation: MANEUVERING

### Findings

1. (C) FLUID,FUEL - EXHAUSTION
  2. (C) REFUELING - NOT PERFORMED - PILOT IN COMMAND
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Occurrence #2: FORCED LANDING  
Phase of Operation: EMERGENCY DESCENT/LANDING

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Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER  
Phase of Operation: EMERGENCY DESCENT/LANDING

Findings

3. TERRAIN CONDITION - MOUNTAINOUS/HILLY
4. (F) TERRAIN CONDITION - NONE SUITABLE

## Factual Information

On July 24, 1995, at 1130 mountain daylight time, a Cessna 175, N9304B, impacted the ground while maneuvering near Silvercliff, Colorado. The commercial pilot and passenger received serious injuries and the aircraft sustained substantial damage. Visual meteorological conditions prevailed and no flight plan was filed for this local area 14 CFR Part 91 observation flight which departed Westcliffe, Colorado at 1045.

According to the pilot, the purpose of the flight was to "view the valley." At the time of the accident, the weather reported by the pilot was clear skies with light and variable winds, and a temperature of 80 degrees Fahrenheit.

The pilot stated that the engine lost power at 100 feet above ground level. He said that switching fuel tanks, turning on boost pump and advancing the mixture did not change the power loss and he made a forced landing on hilly terrain covered with trees at an elevation of about 9,000 feet above mean sea level.

During examination of the aircraft by an FAA inspector following the accident, he noted that there was no fuel present in any tank, in the lines, strainer, carburetor, fuel pump, nor were there any fuel stains on the ground. The aircraft recovery people verified that they found no evidence of fuel, and during an engine examination, following recovery of the aircraft, no evidence of fuel was found by this investigator. The engine examination provided no evidence of failure or malfunction.

According to the pilot, he had approximately 20 gallons of fuel on board at the time the flight originated, about 45 minutes prior to the accident, and he stated that the left tank gauge indicated about 1/2 full at the time the engine lost power. Verification of the fuel measuring system accuracy could not be accomplished following the accident due to aircraft damage.

According to the aircraft manual, the fuel system consists of two 26 gallon aluminum tanks. Each tank useable capacity is 21.5 gallons. The fuel selector provides the pilot with options of off, right tank, left tank, or both.

Based on operating data from the aircraft manual, takeoff weight was approximately 1,865 pounds, 485 pounds below maximum, and fuel burn at 9,000 feet in normal cruise, lean mixture, averaged about eight gallons per hour.

## Pilot Information

<b>Certificate:</b>	Commercial; Private	<b>Age:</b>	55, Male
<b>Airplane Rating(s):</b>	Single-engine land; Multi-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	Airplane	<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>	November 15, 1994
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	3134 hours (Total, all aircraft), 163 hours (Total, this make and model), 3134 hours (Pilot In Command, all aircraft), 34 hours (Last 90 days, all aircraft), 17 hours (Last 30 days, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	CESSNA	<b>Registration:</b>	N9304B
<b>Model/Series:</b>	175 175	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	55-104
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	October 30, 1994 Annual	<b>Certified Max Gross Wt.:</b>	2350 lbs
<b>Time Since Last Inspection:</b>	50 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	3600 Hrs	<b>Engine Manufacturer:</b>	LYCOMING
<b>ELT:</b>	Installed, activated, did not aid in locating accident	<b>Engine Model/Series:</b>	O-360-A1D
<b>Registered Owner:</b>	CARLA J./FRANK E. HARDY	<b>Rated Power:</b>	180 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>		<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>	100 miles
<b>Lowest Ceiling:</b>	None	<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>	27°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	WESTCLIFFE , CO (4C03)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	10:45 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>	Forced landing

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 Serious	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 Serious	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 Serious	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Wiemeyer, Norman
<b>Additional Participating Persons:</b>	BOB LOFLIN; DENVER , CO
<b>Original Publish Date:</b>	November 6, 1995
<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=19512">https://data.nts.gov/Docket?ProjectID=19512</a>

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