



# Aviation Investigation Final Report

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<b>Location:</b>	RIO RANCHO, New Mexico	<b>Accident Number:</b>	DEN01LA116
<b>Date &amp; Time:</b>	June 13, 2001, 07:35 Local	<b>Registration:</b>	N7507V
<b>Aircraft:</b>	Cameron Balloons N-210	<b>Aircraft Damage:</b>	None
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious, 5 Minor, 3 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Aerial observation		

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## Analysis

The pilot received weather information from several sources beginning at 0300 that morning. Additionally, he obtained wind data from a remote sensor northwest of Rio Rancho and from another near Sandia Peak. The forecast he received indicated winds from 200 degrees at 8 knots till 1000 and then changing to 250 degrees at 13 knots gusting to 22 knots. He launched a pibal to check the current wind speed at the launch site and he determined it was "favorable." He launched with eight passengers on board and when he first checked his airspeed it was 4 knots. After climbing over a mesa, he noted that his airspeed had increased to 8 knots and was increasing. At that point of the flight, there were no favorable landing sites. He found a suitable landing site of open desert and briefed the passengers on high wind landing procedures. The pilot said that as the balloon descended, it passed through a wind shear zone with surface winds up to 30 knots. The winds on the lower half of the balloon created a false heavy and the pilot could not slow the excessive descent. After impact, the balloon skidded approximately 100 yards before its envelope could be deflated and the balloon stopped. During the landing, one passenger broke an ankle.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the pilot's inadvertent weather encounter with wind shear, and the resulting inability to maintain the proper landing descent rate, which resulted in a hard landing. A factor was the high wind weather condition.

## Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: LANDING

### Findings

1. (C) FLIGHT INTO ADVERSE WEATHER - INADVERTENT - PILOT IN COMMAND
  2. (F) WEATHER CONDITION - HIGH WIND
  3. (F) WEATHER CONDITION - WINDSHEAR
  4. (C) PROPER DESCENT RATE - NOT POSSIBLE - PILOT IN COMMAND
  5. (C) DESCENT - EXCESSIVE - PILOT IN COMMAND
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Occurrence #2: HARD LANDING

Phase of Operation: LANDING

### Findings

6. TERRAIN CONDITION - LOOSE GRAVEL/SANDY

## Factual Information

On June 13, 2001, at approximately 0735 mountain daylight time, a Cameron Balloons N-210 balloon, N7507V, received minor damage during a hard, high wind landing near Rio Rancho, New Mexico. The commercial pilot and two passengers were not injured; however, one passenger was seriously injured, and five passengers received minor injuries. The balloon was being operated by World Balloon LLC, Albuquerque, New Mexico, under Title 14 CFR Part 91. Visual meteorological conditions prevailed at the time of the accident. The local flight originated from Rio Rancho, New Mexico, approximately 45 minutes before the accident. No flight plan was filed.

The pilot said he received weather briefings from a variety of sources beginning at 0300 that morning. His first weather briefing was from a website on his home computer. A Flight Service Station briefing was obtained by two other pilots (who were launching with him), and he was briefed by them. Additionally, he obtained wind data from a remote sensor northwest of Rio Rancho and from another near Sandia Peak. The forecast he received indicated that winds would be from 200 degrees at 8 knots till 1000, and then changing to 250 degrees at 13 knots gusting to 22 after 1000. He launched a pibal (a small helium filled balloon) to check the current wind speed at the launch site and he determined it was "favorable."

The pilot launched with eight passengers on board, and after liftoff noted on his global positioning system that his airspeed was 4 knots. After climbing over a mesa, his airspeed increased to 8 knots. He said that 20 minutes into the flight, his airspeed was between 16 to 20 knots. At that point, there was not a suitable landing area due to a housing area and electrical transmission lines. He attempted to descend behind a hill to obtain shelter from the wind, but the wind shear became too severe for balloon operations. He found a suitable landing site of open desert and briefed the passengers on correct high wind landing procedures. During descent, the balloon's speed increased to 30 knots and directional control became difficult. During the final descent, he fired both burners all the way to the ground. Despite the firing of both burners, the balloons glide path deteriorated to 45 degrees. The balloon skidded approximately 100 yards before the envelope could be deflated and the balloon stopped. During the landing, one passenger broke an ankle.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	53, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Unknown
<b>Other Aircraft Rating(s):</b>	Balloon; Glider	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	None	<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	May 6, 2002
<b>Flight Time:</b>	6000 hours (Total, all aircraft), 250 hours (Total, this make and model), 6000 hours (Pilot In Command, all aircraft), 45 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Cameron Balloons	<b>Registration:</b>	N7507V
<b>Model/Series:</b>	N-210	<b>Aircraft Category:</b>	Balloon
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	5808
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	9
<b>Date/Type of Last Inspection:</b>	June 29, 2000 Annual	<b>Certified Max Gross Wt.:</b>	3600 lbs
<b>Time Since Last Inspection:</b>	36 Hrs	<b>Engines:</b>	
<b>Airframe Total Time:</b>	660 Hrs at time of accident	<b>Engine Manufacturer:</b>	
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	
<b>Registered Owner:</b>	WORLD BALLOON, LLC.	<b>Rated Power:</b>	
<b>Operator:</b>		<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	ABQ,5355 ft msl	<b>Distance from Accident Site:</b>	
<b>Observation Time:</b>	07:56 Local	<b>Direction from Accident Site:</b>	
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	12 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	220°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	29.81 inches Hg	<b>Temperature/Dew Point:</b>	21°C / -2°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	RIO RANCHO, NM (NONE)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>		<b>Type of Clearance:</b>	None
<b>Departure Time:</b>		<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	None
<b>Passenger Injuries:</b>	1 Serious, 5 Minor, 2 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	1 Serious, 5 Minor, 3 None	<b>Latitude, Longitude:</b>	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Struhsaker, James
<b>Additional Participating Persons:</b>	Kearnes Branham; Albuquerque, NM
<b>Original Publish Date:</b>	September 20, 2002
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=52483">https://data.ntsb.gov/Docket?ProjectID=52483</a>

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).