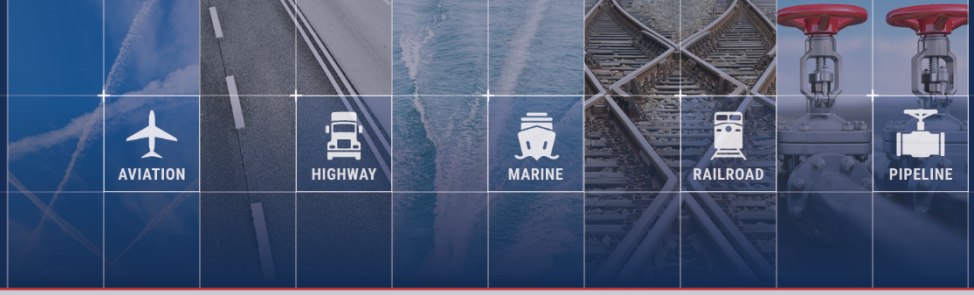

Aviation Investigation Final Report

Location:	Phoenix, Arizona	**Accident Number:**	SEA08LA119
Date & Time:	May 3, 2008, 07:20 Local	**Registration:**	N6004K
Aircraft:	Cameron Balloons C-100	**Aircraft Damage:**	Minor
Defining Event:	Windshear or thunderstorm	**Injuries:**	1 Serious, 2 Minor, 1 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

During the approach to landing, the balloon's descent rate was about 300 feet per minute. About 200 feet above the ground the balloon encountered a strong windshear, increasing its horizontal speed over the ground to about 30 knots. The balloon continued descending at about 300 feet per minute until touching down, at which time its basket tilted over and began to drag for about 200 yards, with the last 125 yards over rocky ground. One of the passengers sustained a serious injury due to his arm being stuck between the basket and the ground. The chase crew arrived at the scene about 40 seconds later. No anomalies were reported with the balloon prior to the flight.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's inadequate weather evaluation during the landing approach. Contributing to the accident were windshear and rocky terrain.

Findings

Environmental issues	Windshear - Not specified
Personnel issues	Weather planning - Pilot
Environmental issues	(general) - Not specified

Factual Information

History of Flight

Approach-VFR pattern final	Windshear or thunderstorm (Defining event)
Landing-flare/touchdown	Hard landing

On May 3, 2008, about 0720 mountain standard time, a Cameron Balloons C-100, N6004K, received minor damage following a hard landing near Phoenix, Arizona. The certificated private pilot and one passenger received minor injuries, one passenger received a serious injury, and one passenger was not injured. Visual meteorological conditions prevailed for the personal flight, which was operated in accordance with 14 Code of Federal Regulations (CFR) Part 91, and no flight plan was filed. The flight departed from a location about 3 miles east of the landing site at 0620.

In a statement submitted by the pilot, it was reported that during the approach to landing, the balloon's rate of descent was about 300 feet per minute (fpm). The pilot stated that about 200 feet above ground level (agl) he encountered a very strong wind shear, which caused the balloon to rapidly accelerate to 25 to 30 knots in the descent. The pilot reported that as the approach continued he managed to get enough heat into the balloon to avoid a hard vertical landing; however, the balloon was descending at 200 to 300 fpm during touchdown, moving horizontally at 25 to 30 knots. The pilot noted that after touching down the balloon's basket immediately tilted over and began dragging. The pilot stated, "The first 75 yards were [a] textbook, high wind landing; everyone was low in the basket. Then we moved into rocky ground and continued to drag for another 100 to 125 yards, with one passenger getting his arm stuck between the basket and the ground. The chase crew was only 20 to 40 seconds away." The pilot reported minor damage to the balloon, and that no anomalies existed with the balloon prior to the flight.

Pilot Information

Certificate:	Private	**Age:**	50,Male
Airplane Rating(s):	None	**Seat Occupied:**	
Other Aircraft Rating(s):	Balloon	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	March 1, 2007
Flight Time:	539 hours (Total, all aircraft), 400 hours (Total, this make and model), 509 hours (Pilot In Command, all aircraft), 5 hours (Last 90 days, all aircraft), 2 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cameron Balloons	**Registration:**	N6004K
Model/Series:	C-100	**Aircraft Category:**	Balloon
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	5981
Landing Gear Type:	None	**Seats:**	0
Date/Type of Last Inspection:	April 1, 2007 Annual	**Certified Max Gross Wt.:**	2000 lbs
Time Since Last Inspection:		**Engines:**	
Airframe Total Time:	440 Hrs at time of accident	**Engine Manufacturer:**	
ELT:		**Engine Model/Series:**	
Registered Owner:	Sandra K Carter	**Rated Power:**	
Operator:	Dwayne D Osborne	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	DVT,1478 ft msl	**Distance from Accident Site:**	8 Nautical Miles
Observation Time:	07:53 Local	**Direction from Accident Site:**	350°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	10°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.95 inches Hg	**Temperature/Dew Point:**	18°C / -13°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Phoenix, AZ	**Type of Flight Plan Filed:**	None
Destination:	Phoenix, AZ	**Type of Clearance:**	None
Departure Time:	06:20 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Minor
Passenger Injuries:	1 Serious, 1 Minor, 1 None	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious, 2 Minor, 1 None	**Latitude, Longitude:**	33.7975,-112.136947

Administrative Information

Investigator In Charge (IIC):	Little, Thomas
Additional Participating Persons:	Fred Murray; Federal Aviation Administration; Scottsdale, AZ
Original Publish Date:	August 28, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=67926