



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	NOVATO, CA	<b>Accident Number:</b>	LAX02FA075
<b>Date &amp; Time:</b>	02/07/2002, 1825 PST	<b>Registration:</b>	N288G
<b>Aircraft:</b>	Cessna 525A	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

The airplane overran the runway and impacted a ravine off the departure end of the runway after landing. Prior to the cross-country flight, the pilot obtained a weather brief from the Flight Service Station, and he was unsure he would be able to land at the destination airport due to weather. He monitored Air Traffic Control transmissions and heard that an airplane had broken out of the weather at 1,200 feet and landed at the destination airport. The pilot was cleared for the GPS approach. He noted that he was higher and faster than normal. He activated the speed brakes to help slow down the descent. The airplane touched down about 1/3 of the way down the runway. He activated the ground flaps and spoilers, and the brakes. When the airplane did not decelerate the pilot elected to abort the landing. He added power, but forgot to retract the flaps and spoilers. The airplane continued off the departure end of the runway and came to rest in a ravine. Reported winds prior to landing were 230 degrees at 11 knots gusting to 17 knots. Right after the accidents winds were reported from 290 degrees at 20 knots gusting to 27 knots. The runway was 3,300 feet. According to the manufacturer, with a tailwind condition, the airplane needed approximately 3,400 feet to make a normal landing. The pilot stated that there were no mechanical malfunctions noted with the airplane.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's failure to achieve the proper touchdown point and his failure to retract the flaps and spoilers during an attempted landing abort, which resulted in a landing overrun. Also causal was the pilot's decision to attempt a landing in wind conditions that exceeded the landing performance capability of the airplane for the runway selected.

## Findings

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Occurrence #1: OVERRUN

Phase of Operation: LANDING - ROLL

### Findings

1. (F) WEATHER CONDITION - TAILWIND
2. AIRCRAFT PERFORMANCE, LANDING CAPABILITY - EXCEEDED
3. (C) PROPER TOUCHDOWN POINT - NOT ATTAINED - PILOT IN COMMAND
4. ABORTED LANDING - ATTEMPTED - PILOT IN COMMAND
5. (C) RAISING OF FLAPS - NOT PERFORMED - PILOT IN COMMAND
6. (C) SPOILER RETRACTION - NOT PERFORMED - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

### Findings

7. (F) TERRAIN CONDITION - RAVINE

## Factual Information

### HISTORY OF FLIGHT

On February 7, 2002, about 1825 Pacific standard time, a Cessna 525A, N288G, overran the runway and impacted a ravine off the departure end of runway 13 while landing at the Gness Field Airport (DVO), Novato, California. The owner/pilot operated the airplane under the provisions of 14 CFR Part 91. The airplane sustained substantial damage. The pilot, the sole occupant, was not injured. Instrument meteorological conditions prevailed for the cross-country flight that departed the Sacramento International Airport, Sacramento (SMF), California, about 1730 the day of the accident. An instrument flight rules (IFR) flight plan had been filed. The flight was scheduled to terminate at Gness Field.

The National Transportation Safety Board Investigator-in-Charge (IIC) interviewed the pilot. The pilot stated that he had received a full weather brief from the Flight Service Station (FSS) earlier in the day. Prior to departure he called the FSS again and received an abbreviated update. He stated that "the weather was pretty miserable," and it was a "hard IFR flight" from SMF to DVO.

The pilot stated that he was not sure that he would be able to make it into DVO because of the weather. While monitoring Oakland Center he heard an airplane had been cleared to, and had landed at DVO. He heard the pilot of the previous airplane report he had "broken out of it at 1,200 feet."

In the pilot's written statement he started his final descent at GOVLE, and noticed that he needed to descend faster than what he was used to. He activated the speed brakes to aid in the descent. The airplane touched down about 1/3 of the way down the runway. He applied 'ground flaps' and spoilers, and "got on the brakes hard." He stated that there was a light rain at the time, with no visible water puddles on the runway.

The pilot reported that the airplane was not decelerating normally, so he decided to abort the landing. He applied full power for takeoff; however, he forgot to retract the ground flaps and spoilers (which are interconnected on the ground). He stated that the airplane did not liftoff the ground and ran off the departure end of the runway coming to rest in a ditch. He shut the engines down and exited through the emergency door because he was unable to open the main door.

The 1825 DVO AWOS weather observation reported, in part, wind from 230 degrees at 11 knots with gusts to 17 knots.

A Federal Aviation Administration (FAA) inspector examined the airplane on-scene. The airplane landed with a tailwind, and came to rest about 200 feet from the departure end of the runway in a ravine. The nose of the airplane hit the far side of the ravine, and the fuselage section came to rest in the ravine. The FAA inspector stated that the flaps were fully deployed and the spoilers were extended.

### AIRCRAFT INFORMATION

According to the Cessna approved flight manual; section IV entitled PERFORMANCE APPROACH AND LANDING: at 10,800 pounds with a 10-knot tailwind and a temperature of 10 degrees Celsius, 3,400 feet of runway length is need to land. With a temperature of 15 degrees Celsius, 3,430 feet of runway length is need to land.

## AIRPORT INFORMATION

The Airport/ Facility Directory, Southwest U. S., indicated runway 13 was 3,300 feet long and 75 feet wide. The runway surface was composed of asphalt.

## METEOROLOGICAL CONDITIONS

A staff meteorologist for the Safety Board prepared a factual report, which included the following weather for the destination. The Airport/ Facility Directory, Southwest U. S., indicated that DVO Airport was equipped with an Automated Weather Observation System (AWOS)-3.

The closest official weather observation station was DVO. The elevation of the weather observation station was 2 feet msl. A meteorological aviation weather report (METAR) for DVO was issued at 1820. It stated: winds were from 230 degrees at 11 knots, gusting to 17 knots; light rain; temperature 13 degrees Fahrenheit; dew point 13 degrees Fahrenheit; and altimeter 30.12 inHg.

A METAR for DVO issued at 1840, stated that winds were from 290 degrees at 20 knots, gusting to 27 knots; moderate rain; temperature 12 degrees Fahrenheit; dew point 12 degrees Fahrenheit; and altimeter 30.12 inHg.

The next closest official weather observation station was the Napa County Airport (APC), Napa, California, located 14 nautical miles (nm) east of the accident site. The elevation of the weather observation station was 33 feet msl.

A METAR for APC issued at 1854, indicated that the winds were from 220 degrees at 16 knots, gusting to 24 knots; visibility 2 miles; skies 1,700 feet scattered, ceiling 1,500 feet broken, overcast at 2,900 feet; moderate rain and mist; temperature 12 degrees Fahrenheit; dew point 12 degrees Fahrenheit; and altimeter 30.14 inHg.

The next closest official weather observation station was the Charles M. Schulz - Sonoma County Airport (STS), Santa Rosa, California, located 25 nautical miles (nm) northwest of the accident site. The elevation of the weather observation station was 125 feet msl.

A METAR for STS issued at 1854 indicated that the winds were from 270 degrees at 6 knots; visibility 10 miles; skies a few clouds at 2,200 feet, ceiling 4,700 feet broken, overcast at 5,500 feet; temperature 11 degrees Fahrenheit; dew point 9 degrees Fahrenheit; and altimeter 30.15 inHg.

A cold front existed in the area of the accident location, with marginal VFR and IFR conditions. The cold front passage occurred between 1820 and 1840. Rain showers were also in the immediate vicinity of the accident site. Prior to the accident winds were from 210 degrees. Immediately following the accident the winds were from 290 degrees.

## COMMUNICATIONS

The pilot contacted the Oakland Automated International Flight Service Station (AIFSS) at 1045. He obtained a weather briefing for a test flight to SMF, Marysville, California, SMF, terminating at DVO. The AIFSS briefer provided a weather brief that included Airmets; however, the pilot interrupted the brief before it had been completed. The pilot asked for and received a weather forecast for Truckee, California, for the following day.

The pilot contacted the Rancho Murieta Automated Flight Service Station (AFSS) at 1641, filed

a flight plan, and obtained an abbreviated weather briefing to DVO.

The pilot was cleared for takeoff at 1733 by an SMF Air Traffic Control Tower (ATCT) controller. He was instructed to contact Sacramento Departure Control at 1734, and reported on frequency at 1735. He was cleared direct for STS and instructed to switch to Travis Approach Control at 1737. The controller for Travis made several unsuccessful attempts to contact the pilot. At 1741, the pilot reported in and instructed the pilot to switch to Oakland Air Route Traffic Control Center (ARTCC).

The pilot contacted Oakland ARTCC at 1741. He was instructed to track outbound on the approach for DVO and to maintain 6,000 feet. At 1753, the controller advised all aircraft on frequency that the ceiling at DVO was 1,200 feet reported by landing aircraft.

The pilot was directed to descend and maintain 4,000 feet. At 1759, he was cleared for the Global Positioning System (GPS) runway 13 approach to DVO. The controller terminated radar service and instructed the pilot to cancel his flight plan as soon as possible. At 1803, another aircraft (TWY71) was cleared for the GPS runway 13 approach to DVO. At 1805, a report of an ELT signal was made. The controller confirmed that an ELT had activated and cancelled TWY71 approach because N288G (the accident airplane) had not cancelled his flight plan. Several unsuccessful attempts were made to contact the pilot of N288G.

At 1815, a controller at Oakland AIFSS contacted the Glen County Sheriff's Department and requested that they conduct a ramp check at DVO. The controller also asked that the request be expedited as an ELT had been activated, and a pilot in the area had not checked in as required. Between 1820 and 1825, a family member advised the controller that she was speaking to the pilot, who had informed the family member that the airplane had gone off the runway, and he was okay. The controller advised the family member that a sheriff's deputy was already en route to the site.

## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	69, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<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 3 Valid Medical--w/ waivers/lim.	<b>Last Medical Exam:</b>	11/15/2000
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	10/03/2001
<b>Flight Time:</b>	2938 hours (Total, all aircraft), 78 hours (Total, this make and model), 2706 hours (Pilot In Command, all aircraft), 49 hours (Last 90 days, all aircraft), 9 hours (Last 30 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Cessna	<b>Registration:</b>	N288G
<b>Model/Series:</b>	525A	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	35
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	9
<b>Date/Type of Last Inspection:</b>	02/07/2002, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	12375 lbs
<b>Time Since Last Inspection:</b>	70.5 Hours	<b>Engines:</b>	2 Turbo Fan
<b>Airframe Total Time:</b>	70.5 Hours	<b>Engine Manufacturer:</b>	Williams International
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	FJ44-2C
<b>Registered Owner:</b>	Ray Dolby	<b>Rated Power:</b>	2400 lbs
<b>Operator:</b>	Ray Dolby	<b>Air Carrier Operating Certificate:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Instrument Conditions	<b>Condition of Light:</b>	Dusk
<b>Observation Facility, Elevation:</b>	APC, 43 ft msl	<b>Observation Time:</b>	1754 PST
<b>Distance from Accident Site:</b>	14 Nautical Miles	<b>Direction from Accident Site:</b>	55°
<b>Lowest Cloud Condition:</b>	Thin Overcast / 15 ft agl	<b>Temperature/Dew Point:</b>	13° C / 13° C
<b>Lowest Ceiling:</b>	None	<b>Visibility</b>	3 Miles
<b>Wind Speed/Gusts, Direction:</b>	11 knots/ 17 knots, 230°	<b>Visibility (RVR):</b>	
<b>Altimeter Setting:</b>	30.12 inches Hg	<b>Visibility (RVV):</b>	
<b>Precipitation and Obscuration:</b>			
<b>Departure Point:</b>	Sacramento, CA (SMF)	<b>Type of Flight Plan Filed:</b>	IFR
<b>Destination:</b>	Novato, CA (DVO)	<b>Type of Clearance:</b>	IFR
<b>Departure Time:</b>	1730 PST	<b>Type of Airspace:</b>	Class C

## Airport Information

<b>Airport:</b>	Gnoss Field Airpot (DVO)	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	2 ft	<b>Runway Surface Condition:</b>	Wet
<b>Runway Used:</b>	13	<b>IFR Approach:</b>	Global Positioning System
<b>Runway Length/Width:</b>	3300 ft / 75 ft	<b>VFR Approach/Landing:</b>	Straight-in

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<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>	38.133333, -122.561944

## Administrative Information

<b>Investigator In Charge (IIC):</b>	TEALEYE C CORNEJO	<b>Adopted Date:</b>	06/02/2004
<b>Additional Participating Persons:</b>	HARRY KARNAHAN; FEDERAL AVIATION ADMINISTRATION; ALAMEDA, CA		
<b>Publish Date:</b>			
<b>Investigation Docket:</b>	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 <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.ntsbt.gov/pubdms/">http://dms.ntsbt.gov/pubdms/</a> .		

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