



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Pearsall, TX	<b>Accident Number:</b>	CEN10CA087
<b>Date &amp; Time:</b>	01/01/2010, 1930 CST	<b>Registration:</b>	N2028U
<b>Aircraft:</b>	MAULE M-4-220C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Fuel exhaustion	<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Personal		

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## Analysis

While on a night cross-country flight the pilot experienced problems with the airplane's global positioning system (GPS) and elected to land to recharge the battery. Once airborne the pilot again experienced problems with the GPS and received vectors to his destination airport. While in the vicinity of the destination airport, the pilot was unable to activate the airport's runway lights or to see the airport beacon. The pilot then selected an alternate airport located 45 miles away; however, while en route the airplane's fuel supply was exhausted and the airplane experienced a complete loss of engine power. During the ensuing forced landing the main landing gear collapsed and the airplane came to rest upright in a ditch. The pilot and passengers were able to exit unassisted. A review of flight planning publications for the destination airport revealed that the rotating beacon was listed as out of service and that a frequency other than the Common Traffic Advisory Frequency was needed to activate the runway lights. In addition, Federal Aviation Regulations require a pilot flying at night to have enough fuel to arrive at the intended destination plus an additional 45 minutes worth of fuel.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: A total loss of engine power due to fuel exhaustion as a result of the pilot's inadequate preflight planning.

## Findings

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<b>Aircraft</b>	Fuel - Fluid level (Cause)
<b>Personnel issues</b>	Flight planning/navigation - Pilot (Cause)

## Factual Information

### History of Flight

Prior to flight	Preflight or dispatch event
Enroute	Fuel exhaustion (Defining event) Loss of engine power (total)
Emergency descent	Off-field or emergency landing

### Pilot Information

Certificate:	Private	Age:	40, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	No
Medical Certification:	Class 3 Without Waivers/Limitations	Last Medical Exam:	12/01/2008
Occupational Pilot:	No	Last Flight Review or Equivalent:	04/22/2009
Flight Time:	297 hours (Total, all aircraft), 43 hours (Total, this make and model), 245 hours (Pilot In Command, all aircraft), 25 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

### Aircraft and Owner/Operator Information

Aircraft Manufacturer:	MAULE	Registration:	N2028U
Model/Series:	M-4-220C	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	2016C
Landing Gear Type:	Tailwheel	Seats:	4
Date/Type of Last Inspection:	06/23/2009, Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:	1557 Hours	Engine Manufacturer:	FRANKLIN
ELT:	Installed, activated, did not aid in locating accident	Engine Model/Series:	6V 350 SERIES
Registered Owner:	CANDLEROCK INTERNATIONAL CORP	Rated Power:	235 hp
Operator:	CANDLEROCK INTERNATIONAL CORP	Air Carrier Operating Certificate:	None

## Meteorological Information and Flight Plan

Observation Facility, Elevation:		Observation Time:	
Distance from Accident Site:		Condition of Light:	Night
Direction from Accident Site:		Conditions at Accident Site:	Visual Conditions
Lowest Cloud Condition:	Scattered / 1300 ft agl	Temperature/Dew Point:	9° C / -1° C
Lowest Ceiling:	None	Visibility	10 Miles
Wind Speed/Gusts, Direction:	Light and Variable, Variable	Visibility (RVR):	
Altimeter Setting:	30.67 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Austin, TX (AUS)	Type of Flight Plan Filed:	None
Destination:	Crystal City, TX (20R)	Type of Clearance:	VFR Flight Following
Departure Time:	1730 CST	Type of Airspace:	

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None		

## Administrative Information

Investigator In Charge (IIC):	Timothy LeBaron	Adopted Date:	05/06/2010
Additional Participating Persons:	Jesus M Cavazos; Federal Aviation Administration; San Antonio, TX		
Publish Date:	05/06/2010		
Note:	This accident report documents the factual circumstances of this accident as described to the NTSB.		
Investigation Docket:	<a href="http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=75225">http://dms.nts.gov/pubdms/search/dockList.cfm?mKey=75225</a>		

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