

AAIPU# A12-01552



AIR ACCIDENT INVESTIGATION AND PREVENTION UNIT CIVIL AVIATION DEPARTMENT

NASSAU, N. P., BAHAMAS

AIRCRAFT ACCIDENT REPORT

**LOSS OF CONTROL & UNCONTROLLED FLIGHT INTO TERRAIN
CESSNA C402C**

C6-FLM

STANIEL CAY, EXUMA, BAHAMAS

AUGUST 18, 2012





**Bahamas Department of Civil Aviation
Air Accident Investigation and Prevention Unit
P. O. Box AP-59244
Lynden Pindling International Airport
Nassau N. P., Bahamas**



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CESSNA C402

C6-FLM

**LOSS OF CONTROL & UNCONTROLLED FLIGHT INTO TERRAIN
STANIEL CAY, EXUMA, BAHAMAS**

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Abstract: This report outlines the circumstances involving the accident of Flamingo Air Limited's aircraft a Cessna C402C that crashed into bushes south of the extended center line of runway 16 while attempting a go-around after landing on wet runway at Staniel Cay, Exuma, Bahamas on August 18, 2012.



Bahamas Department of Civil Aviation Air Accident Investigation and Prevention Unit

The Air Accident Investigation and Prevention Unit (AAIPU) is the accident investigation unit of the Bahamas Civil Aviation Department (BCAD).

The AAIPU's function is to promote and improve safety and public confidence in the aviation industry through excellence in:

- independent investigation of aviation accidents and other safety occurrences
- safety data recording, analysis and research
- fostering safety awareness, knowledge and action.

The AAIPU does not investigate for the purpose of apportioning blame or to provide a means for determining liability.

The AAIPU performs its functions in accordance with the provisions of the *Bahamas Civil Aviation (Safety) (Amendment) Regulations (CASAR) 2010, Schedule 19, International Civil Aviation Organization (ICAO) Annex 13* and, where applicable, relevant international agreements.

The Civil Aviation Department is mandated by the Ministry of Transportation and Aviation to investigate air transportation accidents and incidents, determine probable causes of accidents and incidents, issue safety recommendations, study transportation safety issues and evaluate the safety effectiveness of agencies and stakeholders involved in air transportation.

The AAIPU makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations and safety alerts. When the AAIPU issues a safety recommendation, the person, organization or agency must provide a written response within 90 days. That response must indicate whether the person, organization or agency accepts the recommendation, any reasons for not accepting part or all of the recommendation, and details of any proposed safety action to give effect to the recommendation.

Copies of accident reports can be obtained by contacting:

Captain Patrick L. Rolle
Director
Bahamas Department of Civil Aviation
P. O. Box N975
Nassau N. P., Bahamas
(242) 326-0339/40

August 31, 2012

Captain Patrick L. Rolle
Director
Bahamas Civil Aviation Department
P.O. Box N-975
Nassau, N.P.,
Bahamas

Sir

I am duty-bound to submit this report on the circumstances of the accident involving C6-FLM, a Cessna C402C aircraft, registered in the Bahamas to Raymond Meadows Sr. of Tarpum Bay, Eleuthera, Bahamas and operated by Flamingo Air Limited, a certified Bahamas Air Operator Certificate Holder. This accident occurred on August 18, 2012 at 2:50 pm local time (1850 UTC) in bushes at the end of runway 16 at Staniel Cay Airport, in the Exuma Cays, Bahamas.

This report is submitted pursuant to Part XII, Regulation 80, and Schedule 19 of the Bahamas Civil Aviation (Safety)(Amendment) Regulation (CASR 2010) and in accordance with Annex 13 to the Convention on International Civil Aviation Organization (ICAO).

In accordance with Annex 13 to the Convention on International Civil Aviation (ICAO), and Schedule 19 of the Bahamas Civil Aviation (Safety)(Amendment) Regulations (CASAR), the fundamental purpose of such investigations is to determine the circumstances and causes of these events, with a view to the preservation of life and the avoidance of similar occurrences in the future. It is not the purpose of such investigations to apportion blame or liability.

This report contains facts, which have been determined up to the time of publication. Information is published to inform the aviation industry and the public of the circumstances surrounding this accident. The contents of this report may be subjected to alterations or corrections if additional factual information becomes available.

Regards



Delvin R. Major
Investigator in Charge
Air Accident Investigation and Prevention Unit
Bahamas Department of Civil Aviation
Lynden Pindling International Airport
Nassau, N. P., Bahamas



BAHAMAS CIVIL AVIATION DEPARTMENT
AIR ACCIDENT INVESTIGATION AND PREVENTION UNIT

TITLE

Registered Owner: Mr. Raymond Meadows Sr.

Operator: Flamingo Air Charters Limited

Manufacturer: Cessna

Aircraft Type: C402C

Nationality: Bahamas

Registration: C6-FLM

Place of Accident: In bushes 314 feet south of extended centerline of Runway 16 at Staniel Cay Airport, Staniel Cay, Exuma

Date and Time: August 18, 2012 at 1850 UTC (2:50pm DST)

Notification: DCA, NTSB, FAA

Investigating Authority: Civil Aviation Department
Air Accident Investigation and Prevention Unit

Investigator in Charge: Mr. Delvin R. Major

Accredited Representatives: None Assigned

Releasing Authority: Civil Aviation Department, Nassau, N. P., Bahamas

Date of Report Publication: August 31, 2012

Factual Report

On August 18, 2012 about 1850 UTC / 2:50pm Eastern Daylight Time (EDT), C6-FLM a turbo charged, fuel injected, fixed wing, multi-engine aircraft Cessna C402C registered to Mr. Raymond Meadows Sr., and operated by Flamingo Air Charters Limited crashed in bushes 314 feet south of the extended centerline of runway 16 due to a failed attempt at a go-around after touchdown due to poor runway conditions on landing.

The aircraft was a scheduled flight from Lynden Pindling International Airport (MYNN), Nassau, Bahamas to Staniel Cay, Exuma, Bahamas. The aircraft was on a visual flight rules (VFR) flight plan. Instrument meteorological conditions prevailed at the time of the accident according to occupants of the aircraft.

The official notification of the accident was made to the Bahamas Civil Aviation Department Air Accident Investigation & Prevention Unit at Lynden Pindling Int'l Airport, Nassau, N. P., Bahamas where investigations began immediately.

Mr. Lance Marvin Francis was listed as the pilot in command on the flight. He was the holder of a valid Bahamas Commercial Pilot Certificate issued on 15 June 2012 with an Airplane Multi-engine Land and Instrument Airplane Category and Class rating with no limitations. Additionally, he held a Private Pilot License with Single Engine Land Privileges. Mr. Francis's total flying experience as well as experience on this particular aircraft estimated to be in excess of 3,000 flying hours.

Mr. Francis was the holder of a Bahamas first class medical certificate issued June 20 2012 with no limitations.

C6-FLM was a twin engine, all metal, low wing airplane with retractable tricycle landing gear. The fuselage is of semi-monocoque construction: the wing, tailplane and fin are of conventional aluminum construction. The aircraft was configured for passenger usage. In the passenger role, the two forward seats are pilot's seats. A maximum of eight (8) passenger seats may be installed aft of the pilot seats. Minimum flight crew required is one (1) pilot.

The airplane sustained substantial damages as a result of the controlled flight into terrain. Nine passengers and one crew were onboard the aircraft at the time and reports are that a few passengers sustained minor injuries and scrapes.

C6-FLM serial number C402-0353 had a valid Certificate of Airworthiness issued March 1 2012. It was certified in the normal category.

Bahamas Meteorological Department at the Lynden Pindling International Airport issued the Bahamas Area Forecast at 1800 UTC. The report dated August 18, 2012 valid for 12 hours from 1800 UTC reported under special features, mid to upper level trough north of the Bahamas resulting in scattered rain showers and thundershowers across the northwestern Bahamas while surface hi pressure dominates the remainder of the Bahamas through the period.

Under significant weather: over northwestern Bahamas few scattered cumulonimbus clouds at 1,800 feet, scattered and broken clouds at 2,000 and 2,500 feet. Widely scattered rain showers and isolated thundershowers with cumulonimbus clouds were forecasted with tops above flight level 25,000 feet. IFR with ceilings, visibility and moderate to severe turbulence reported in rain and thundershowers.

Over the remainder of the Bahamas few clouds were reported at 1,800 feet some scattered at 2,500 feet with isolated showers and thundershowers. IFR conditions were forecasted due to rain and thundershowers. Forecasted Upper Winds and Temperature for the same time period from 1800 UTC at the 2,000 feet level in the Central Bahamas were winds 130° at 12 knots.

Pilot reported that he landed on runway 16 at Staniel Cay but due to the wet runway he hydroplaned. He stated that he "tapped on the brakes but it didn't have no effect, so I pushed the rudder which also didn't work so I

pushed full power, selected flaps up, reached 95 knots and proceeded with the takeoff.” The pilot stated that he got airborne and was about 20 to 30 feet but crashed shortly thereafter.

According to two occupants of the aircraft the rain was really hard at the time they touched down, so hard that they could not see outside their windows. They further stated that on touchdown, the aircraft slid and was obviously out of control and then the pilot took off again and shortly thereafter they were hitting trees until the aircraft came to a stop at which time the pilot got out thru the window next to him and opened the back door, helped the passengers out and advised them to move away from the plane as the smell of gasoline was present. They estimated that the pilot took off again about ½ to ¾ way down the runway.

Investigation revealed that the aircraft crashed shortly after takeoff, landing gears were still extended. However, flaps were retracted. The investigation further revealed that this accident was not a runway excursion as the aircraft had already cleared the end of the runway. The first trees that made impact with the aircraft were approximately 7 feet high, so it is estimated that the aircraft was less than 10 feet above the surface when it made contact with trees. Average height of trees in the immediate area surrounding the crash site was approximately 9 feet.

The early retraction of flaps may have played a pivotal role in the aircraft not being able to gain adequate altitude to clear the trees at the end of the runway. Additionally, the fact that the decision to initiate a go around in heavy rain showers, from a wet runway, when more than half of the runway was already behind the aircraft, insufficient runway remained for the aircraft to build up the required momentum for continued flight.

The aircraft came to rest at coordinates N24°42'009” and W076°16'381” some 341 feet from the extended centerline of runway 16 on a heading of 163°. First contacts with trees were made 147 feet from the end of the runway at coordinates N24°09'922” and W076°26'272”.

The causal factors in this investigation has been determined as

- Poor judgment exercised in continuing an approach to a short, wet runway
- Poor judgment exercised in attempting a go around after touchdown with insufficient runway remaining
- Unfamiliarity with aircraft systems
- Unfamiliarity with aircraft performance
- Unfamiliarity with weather phenomenon

Contributing factor in this accident has been determined as

- Weather
- Pilot decision making abilities

As a result of this accident the following recommendations were made to the Flight Standards Inspectorate;

1. Immediately advise Mr. Francis, the pilot of C6-FLM that he not exercise the privileges of his license CP620 in commercial operations.
2. Immediately notify management of Flamingo Air Limited not to roster Mr. Francis for any commercial flights pending the outcome of this investigation.
3. Schedule an audit of Flamingo Air Limited (operations and maintenance)
4. Conduct a re-examination of pilot before he be allowed to operate in commercial air transport for Flamingo Air Limited or any other carrier that conducts commercial air transport.
5. Re-examination needs to be focused on aircraft systems, performance and decision-making and weather phenomenon, as these areas seem to be poorly understood by the pilot based on the interview conducted with him.
6. Flamingo Air Limited should be required to amend or institute policies and training on decision making, areas of operations and reinforce aircraft systems and performance into a ground school that must be accomplished on a bi-annual basis. From interviews conducted with management it appears that Flamingo

Air Limited has policies reference flight procedures and weather decision making, however, they are spoken not written.

7. All check airman authorizations extended to Flamingo Air Limited should be suspended and the Flight Standards Inspectorate should once again conduct all check rides until such time as the Flight Standards Inspectorate is comfortable with the performance of Flamingo Air Limited.