Republic of the Philippines
DEPARTMENT OF TRANSPORTATION
CIVIL AVIATION AUTHORITY OF THE PHILIPPINES
MIA Road, Pasay City 1300

AIRCRAFT ACCIDENT INVESTIGATION AND INQUIRY BOARD

FINAL REPORT

RP-C2080
TEXTRON AVIATION INC., CE340A

OPERATOR: ENERGY DEVELOPMENT CORPORATION

TYPE OF OPERATION: GENERAL AVIATION

DATE OF OCCURRENCE: FEBRUAY 18, 2023

PLACE OF OCCURRENCE: ABOUT 6,300FT. AMSL SOUTH WEST SIDE SLOPE OF MT. MAYON VOLCANO WITHIN THE MUNICIPALITY OF CAMALIG, ALBAY, PHILIPPINES.

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(Textron Aviation Inc., CE340A, RP-C2080 Final Report)

FOREWORD

This report was produced by the Aircraft Accident Investigation and Inquiry Board (AAIIB), Civil Aviation Authority of the Philippines, MIA Road, Pasay City, Philippines.

The report is based upon the investigation carried out by the AAIIB in accordance with Annex 13 to the Convention on International Civil Aviation, Republic Act 9497 Section 42 and Philippine Civil Aviation Regulation Part 13.

Readers are advised that the AAIIB investigates for the sole purpose of enhancing aviation safety. Consequently, AAIIB reports are confined to matters of safety significance and may be misleading if used for any other purpose. It should be noted that the information in AAIIB reports and recommendations is provided to promote aviation safety and in no case is it intended to imply blame or liability.

Furthermore, No part of AAIIB report or reports relating to any accident or investigation shall be admitted as evidence or used in any suit or action for damages arising out of any matter mentioned in such report or reports.

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FINAL REPORT

TITLE: An accident involving a Textron Aviation Inc., CE340A type of aircraft with Registry Number RP-C2080 owned and operated by Energy Development Corporation that encountered Controlled Flight Into Terrain at the South West side slope of Mt. Mayon Volcano within the municipality of Camalig, Albay, Philippines, on February 18, 2023 at about 0650H/2250 UTC.

Notification of Occurrence to National Authority

The notification of accident to AAIIB CAAP was relayed by the Operator of the aircraft at 1100H (LOCAL) on February 18, 2023.

Identification of the Investigation Authority

The Aircraft Accident Investigation and Inquiry Board (AAIIB), the mandated accident investigation organization within the Civil Aviation Authority of the Philippines (CAAP) as the state of Occurrence/Registry/ Operator conducted the investigation.

Organization of the Investigation

In accordance with provisions of Philippine Civil Aviation Regulation (PCAR) Part 13, an Investigator-In-Charge and Deputy Investigator-In Charge were appointed.

Authority Releasing the Report

The Final investigation report was released by Aircraft Accident Investigation and Inquiry Board (AAIIB) and published on the CAAP website on **09 October 2023.**

Synopsis:

On February 18, 2023 at about 0650H, a Textron Aviation Inc., CE340A type of aircraft with Registry Number RP-C2080 operated by Energy Development Corporation that encountered Controlled Flight Into Terrain at the South West side slope of Mt. Mayon Volcano within the Municipality of Camalig, Albay, Philippines. The pilot and three (3) passengers onboard were fatally injured, and the aircraft was destroyed as a result of the occurrence. Visual Meteorological Condition (VMC) prevailed at the time of the accident. The cause of the occurrence was attributed to the pilot's failure to follow the flight plan and made an unauthorized deviation resulting to collision with terrain.

LIST OF ACRONYMS AND ABBREVIATIONS

AAIIB	:	Aircraft Accident Investigation and Inquiry Board
AANSOO	:	Air Navigation Services Oversight Office
AD	:	Aerodrome
AIP	:	Aeronautical Information Publication
AMSL	:	Above Mean Sea Level
ATC	:	Air Traffic Controller
ATS	:	Air Traffic Service
CAAP	:	Civil Aviation Authority of the Philippines
CFIT	:	Controlled Flight Into Terrain
CPL	:	Commercial Pilot License
(DOST-PHIVOLCS)	:	Department of Science and Technology, Philippine Institute of Volcanology and Seismology
ELT	:	Emergency Locator Transmitter
EDC	:	Energy Development Corporation/Operator
FIR	:	Flight Information Region
FT	:	Feet
GA	:	General Aviation
GPWS	:	Ground Proximity Warning System
IFR	:	Instrument Flight Rules
IFR	:	Instruments Flight Rules
LH	:	Left Hand Side
NOTAM	:	Notice to Airmen
M	:	Meter(s)
MACC	:	Manila Area Control Center
MDRRMC	:	Municipal Disaster Risk Reduction and Management Council
NTSB	:	National Transportation Safety Board
OFSAM	:	Office of the Flight Surgeon and Aviation Medicine
P	:	Pilot or Pilot in control of the aircraft
PA	:	Philippine Army
PAF	:	Philippine Air Force
PARCC	:	Philippine Aeronautical Rescue Coordinating Center
PN	:	Philippine Navy
PNP	:	Philippine National Police
QNH	:	Altimeter Pressure at Mean Sea Level
RH	:	Right Hand Side
RPLK	:	ICAO code for Bicol International Airport
RWY	:	Runway
SA	:	Situational Awareness
SOCO	:	Scene Of the Crime Operative
THR	:	Threshold
UTC	:	Universal Time Coordinated
US	:	United States
VFR	:	Visual Flight Rules
VMC	:	Visual Meteorological Condition
VOR	:	Very High Omni Range Radio Navigation

1. FACTUAL INFORMATION

Aircraft Registration No.	:	RP-C2080
Aircraft Type/Model	:	Textron Aviation Inc., CE340A
Operator	:	Energy Development Corporation
Address of Operator	:	5th floor, Rockwell Business Center, Tower 3, Ortigas Ave., Ortigas Center, Pasig City 1604, Philippines
Place of Occurrence	:	About 6,300ft. AMSL South West side slope of Mt. Mayon Volcano within the municipality of Camalig, Albay, Philippines
Date/Time of Occurrence	:	February 18, 2023 at about 0650H/2250 UTC
Type of Operation	:	General Aviation
Phase of Flight	:	Climb
Type of Occurrence	:	Aircraft collision - high terrain

1.1 History of Flight

On or about 0650H local time, 18 February 2023, a Textron Aviation Corporation Cessna CE340A type of aircraft with Registry Number RP-C2080 was involved in a Controlled Flight Into Terrain (CFIT) accident after it impacted into the slopes of Mt. Mayon Volcano located at Camalig, Albay.

The flight was bound for Manila with one (1) pilot, one (1) aircraft mechanic, and two (2) passengers on board. The aircraft was reported missing after it took off from Bicol International Airport (RPLK) at Daraga, Albay. The aircraft is being operated by the Energy Development Corporation (EDC) and was on a routine general aviation flight. All aircraft occupants were fatally injured in this accident.

The pilot submitted a VFR to IRF flight plan that will utilize standard departure on RWY 05 of RPLK. According to the flight plan, it will be transitioning to IFR and intercepting NAGA VOR. It will further continue W9 airway and proceed to ALABAT for the arrival procedure in Manila.

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The flight departed from RWY 05, made a procedural right upwind turn, and crossed the final approach of RWY 05. At 0647H, ATC established contact with the aircraft while passing 2,600ft. The ATC inquired if the flight had already passed Camalig by-pass, and the pilot responded "We're passing Camalig by-pass now". The pilot was instructed by ATC to continue climbing and report twenty (20) nautical miles out of RPLK, which was acknowledged by the pilot.

At 0650H, no position report was received from the aircraft. The ATC initiated contact with the aircraft several times, but no response was received.

The duty ATC contacted the Manila Area Control Center (MACC) for any signatures of the aircraft that they might have picked up. The MACC informed the ATC that there was an initial signature contact that later disappeared on the radar monitor. At about 0900H, the Philippine Aeronautical Rescue Coordinating Center (PARCC) elevated the alert to a DETRESFA on the missing aircraft.

On the next day, February 19, 2023, the operator launched their own search operation using an AW139 helicopter, which was able to locate the missing aircraft at about 6,300 feet on the south-west slope of Mt. Mayon Volcano with grid coordinates of 13°14'56.45 N and 123°40'57.79 E (Figure 1).

An aerial reconnaissance by CAAP-AAIIB investigators and EDC using a helicopter was conducted on 20 February 2023. The general impact area shows the scattered wreckage of aircraft debris and signs of post-impact fire. A joint search and rescue operation by the local government of Camalig Albay, AFP components (PA, PAF, PN, and PNP), and EDC was then launched on 21 February 2023. The rescuers were able to reach the area after a local farmer guided them towards the crash site on February 24 February 2023. The bodies of the four occupants were retrieved on 02 March 2023 and brought to SOCO for autopsy and identification.

Figure 1 – The aircraft at its final resting point at about 6,300ft.

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1.2 Injuries to Person (s)

Injuries	Crew	Passengers	Others	TOTAL
Fatal	1	2	1	**4**
Serious	0	0	0	**0**
Minor	0	0	0	**0**
None	0	0	0	**0**

1.3 Damage to Aircraft

The aircraft was destroyed upon impact with terrain and post impact fire.

1.4 Other Damages

There were no reported other damages in relation with the occurrence.

1.5 Personnel Information

1.5.1 Pilot (P)

Gender	:	Male
Date of Birth	:	August 23, 1963
Nationality	:	Pilipino
License	:	107467 – CPL
Valid up to	:	August 31, 2024 (CPL)
Type rating	:	Airplane: Multi Engine Land Instrument- CE340, BE-E90, BE-E350
Medical Certificate Valid up to	:	Class 1 valid until 11 May 2023
Grand Total time	:	5,254+24 Hours

1.6 Aircraft Information

The Cessna 340 is a twin piston engine pressurized business aircraft that was manufactured by Cessna (Figure 2). The 340 was conceived as a cabin-class development of the successful Cessna 310. The 340 is a six-seat aircraft, with four passenger seats, an aisle and an airstair door.

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Figure 2 – The CE340A aircraft.

1.6.1 Aircraft Data

Registration Mark	:	RP-C2080
Manufacturer	:	Textron Aviation Inc.
Country of Manufacturer	:	United States of America
Type/Model	:	Textron Aviation Inc./Cessna CE340A
Operator	:	Energy Development Corporation
Serial No./Line No.	:	340A0917
Year of Manufacture	:	1980
Certificate of Airworthiness	:	Valid until 28 April 2023
Certificate of Registration	:	Valid until 15 April 2023
Category	:	Normal
Number of Flight Crew	:	1
Number of Passenger Seats	:	5
Airframe total time	:	4,833 + 60 Hours

1.6.2 Engine Data

The Continental O-520 is a six-cylinder, horizontally opposed aircraft engine produced by Teledyne Continental Motors. First run in 1963 as a development of the IO-346, it has been produced in versions incorporating fuel injection (IO-520), turbo-charging (TSIO-520), and gearing (GTSIO-520).

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Manufacturer	:	Continental
Type	:	Piston
Model	:	TSIO-520NB (1) / TSIO-520NB (2)
Engine SN#	:	521699 (1) / 521702 (2)
Engine total time	:	3,341+ 50 Hours (1) / 3,341+ 50 Hours (2)

1.6.3 Propeller Data

Hartzell Propellers was founded in 1917 by Robert N. Hartzell. It produces composite and aluminium propellers for certified, homebuilt and ultralight aircraft. The company is headquartered in Piqua, Ohio, USA. The PHC-C3YF-2UF is a 78 inches diameter 3-bladed, aluminium hub propeller, it has a diameter reduction allowable to 76 inches with a 2,400 hours / 6 year TBO.

Manufacturer	:	Hartzell Propeller
Type	:	Constant Speed
Model	:	PHC-C3YF-2UF (RH) / PHC-C3YF-2UF (LH)
Propeller SN#	:	EB8529B (RH) / EB8533B (LH)
Date last Installed	:	23 September 2021 (RH) / 23 September 2021 (LH)
Propeller total time	:	161 + 70 Hours (RH) / 161 + 70 Hours (LH)

1.7 Meteorological Information

Visual Meteorological Conditions (VMC) prevailed at the time of the occurrence. The pilot managed to acquire weather information through the duty Air Traffic Controller on the departure airport, which indicates "2021Z runway 05 in use, wind 060 degrees @ 1 2 knots, visibility 9 km, sky condition broken at 3,600 feet, overcast at 4,800 feet, temperature 21 degrees Celsius, dew point 21 degrees Celsius, and QNH 1013 millibar.

1.8 Aids to Navigation

The flight departed under Visual Flight Rules (VFR), until 10,000 feet then transition to Instrument Flight Rules (IFR).

1.9 Communications

The aircraft is equipped with a standard radio transceiver. Communications were carried out between the pilot and the duty air traffic controller.

1.10 Aerodrome Information

Bicol Airport, also referred by some sources as Southern Luzon International Airport, is an airport serving the vicinity of Legazpi, the capital city of Albay and the regional center of Bicol Region, in the Philippines. The Airport is listed in the Aeronautical Information Publication (AIP) and is under the Civil Aviation Authority of the Philippines - Aerodrome and Air Navigation Services Oversight Office (CAAP-AANSOO) approved aerodrome facility data.

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1.10.1 General Information

Aerodrome Name	:	Bicol Airport (RPLK)
Coordinates	:	130646N 1234040E
Aerodrome Operator	:	Civil Aviation Authority of the Philippines Bicol Airport, Barangay Alobo, Daraga, Albay 4501
Runway Direction	:	05/23 (047.25º MAG)/(227.25º MAG)
Runway Length	:	2500M
Runway Width	:	45M
Surface	:	PCN 72 R/C/X/T CONC
Types of traffic permitted	:	VFR/IFR
AD Operator	:	Airport Operations: 0000 - 0900
ATS Communication Facility	:	Tower :118.70 Mhz Approach: 120.20 Mhz.
Security	:	24H
Restaurants	:	At AD and in the Municipality/City
Transportation	:	Vehicle for hire.
Medical facilities	:	Clinic at AD and nearest hospitals, 3KM from the AD
AD category for fire fighting	:	CAT VII.
Rescue equipment	:	Three (3) Fire trucks [Two (2) Oshkosh (6000 liters each) and one (1) SIDES (2500 liters)].
Capability for removal of disabled aircraft	:	Nil.
Supplementary equipment available for providing information	:	Automated Weather Observing System (AWOS): RWY05/23 - Anemometer, Wind Direction Indicator, Transmissometer (RVR) and Ceilometer. RWY05 - Barometer, Runway Temperature Indicator and Relative Humidity. HR of OPS: H24.
TORA 05/23	:	2500M
TODA 05/23	:	2500M
ASDA 05/23	:	2560M
LDA 05	:	2050M THR displaced by 450M.
LDA 23		1900M THR displaced by 600M.

1.11 Flight Recorders

The aircraft is not equipped with any flight recorders and existing Philippine Civil Aviation Regulation does not require such for that type of aircraft.

1.12 Wreckage and Impact Information

The evidence of the aircraft's initial impact point (Figure 3) is on the south-west side of the mountain and includes impact marks and pieces of aircraft debris. The initial impact site was at an approximate elevation of about 6,300 feet MSL with a 60-degree slope. The aircraft came into contact with its belly against the huge lava rock, forming a ridge. There was no crater observed as a result of the impact. The aircraft disintegrated, and it fell in different fractions down the lava channel.

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Figure 3 – The aircraft initial impact point.

All significant components of the aircraft were located within the main wreckage area, which was about one hundred (100) feet in diameter. A pictographic examination of the propellers exhibited substantial damage. (Figure 4).

Figure 4 – The left propeller.

The initial point of impact consisted of highly fragmented cabin and cockpit debris. The right engine (Figure 5) and its nomenclatures were found lying on the left side of the ridge. Some parts of the right wing were found approximately fifty (50) feet below (downhill) from the initial impact point.

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Figure 5 – The right engine.

The main wreckage (Figure 6) was about one hundred (100) feet below the initial impact point and on the right side of the ridge. It is composed of the fuselage, empennage, and parts of the left engine and left wing. The cabin, nose section, avionics component boxes, and cockpit instrument panel were found obliterated with thermal damage. The empennage exhibited rotational curling damage signatures on its vertical and horizontal stabilizers.

Figure 6 – The main wreckage.

The entire fuselage, cabin and both wings were subjected to a post-crash fire. The cockpit was highly fragmented. The instrument panel was destroyed, and most instruments were displaced

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from their panel mounts. Flight controls were fragmented and fire-damaged. The left engine was found lying about fifty (50) feet below the main wreckage (Figure 7).

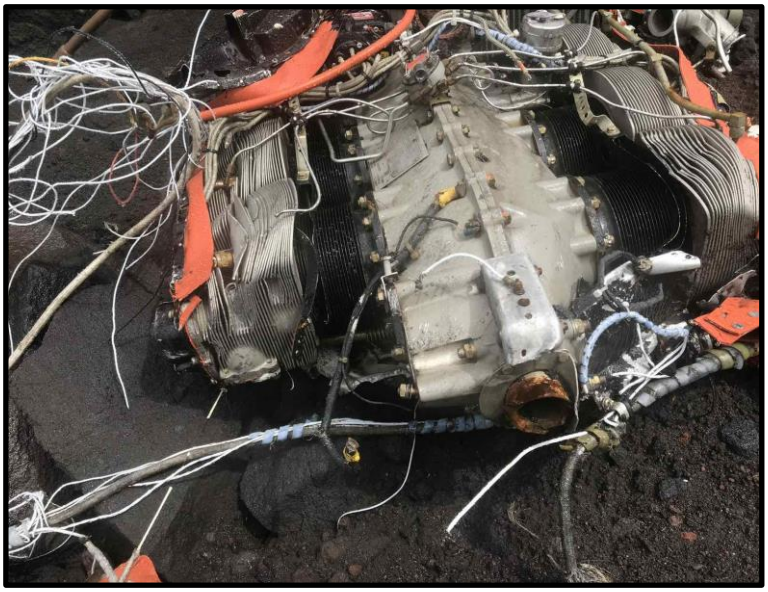

Figure 7. The left engine.

1.13 Medical and Pathological Information

The pilot possesses a medical certificate and underwent the medical examination at the Office of the Flight Surgeon and Aero Medical (OFSAM-CAAP) on 02 November 2022.

Based on the autopsy examination conducted on 02 March 2023 by the Philippine National Police (PNP) Regional Forensic Unit 5 at Camp Ola, Legaspi City. The pilot's cause of death was blunt traumatic injuries of the head, trunk, and extremities.

1.14 Fire

Post-crash fire ensued after the ground impact that destroyed most part of both wings, cabin area and cockpit of the aircraft.

1.15 Search and Survival Aspects

The search operation was conducted by the operator using a helicopter on 18 February 2023, on the second (2nd) day of the accident. The search team located the accident site at about 6,300 feet AMSL at grid coordinates 13°14'56.45 N and 123°40'57.79E, on the west side slope of Mt. Mayon Volcano.

The accident was not survivable, as the aircraft was destroyed upon impact with the terrain. The nature of the surrounding terrain and weather hampered the rescue operation. Likewise, the occurrence happened within the three (3) kilometres permanent danger zone of the volcano area, so search and rescue personnel were not able to access and immediately assist the occupants of the aircraft.

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The ELT was recovered during retrieval operations on February 28, 2023. There was no distress signal received by any Emergency Locator Transmitter (ELT) monitoring center worldwide. The ELT was found with the antennae detached due to the high magnitude of the impact force. The separation of the antennae from the ELT unit explained why no distress signal was transmitted.

1.16 Test and Research

The aircraft Emergency Locator Transmitter (ELT) was recovered during retrieval operations last February 28, 2023.

1.17 Organizational and Management Information

Energy Development Corporation (EDC) is the Lopez Group's global and diversified renewable energy company. With over 40 years of pioneering sustainable practices, it is the Philippines' leading renewable energy producer with an installed capacity of the country's total capacity, with geothermal as its primary source of power. The aircraft RP-C2080 is owned and operated by EDC. Its base of aircraft operations is located at GASTI Hangar. South General Aviation Area, Domestic Airport Road, Pasay City, Philippines. The maintenance function of RP-C2080 is being performed by a licensed EDC aircraft mechanic.

1.18 Additional information:

The United States (US) National Transportation Safety Board (NTSB) was notified as the state of airframe manufacturer and has appointed an Accredited Representative on September 17, 2023. On February 21, 2023, the Australian Transport Safety Board (ATSB) notified CAAP-AAIIB and appointed an expert in accordance with the provisions of Civil Aviation Organization (ICAO) Annex 13, 5.27, both of which were accepted by the Authority.

2.0 ANALYSIS

2.1 Flight from RPLK to RPLL

The pilot was properly certificated and qualified under PCAR to conduct the flight. During the investigation, it was revealed that the pilot filed an Instrument Departure Flight Plan before the flight to depart VFR RPLK and transition to Instrument Flight Rules (IFR) for Manila (Figure 8). Interviews with the ATC and company personnel also revealed that the pilot lands and departs RPLK on a regular basis.

A search and rescue operation was launched after the aircraft was proclaimed missing. It was later found to have collided with terrain along Mt. Mayon Volcano, which destroyed the aircraft. All aircraft occupants were fatally injured. The aircraft's technical records did not reveal any mechanical problems that were likely to have played a role in the occurrence, either before or at the time of the accident.

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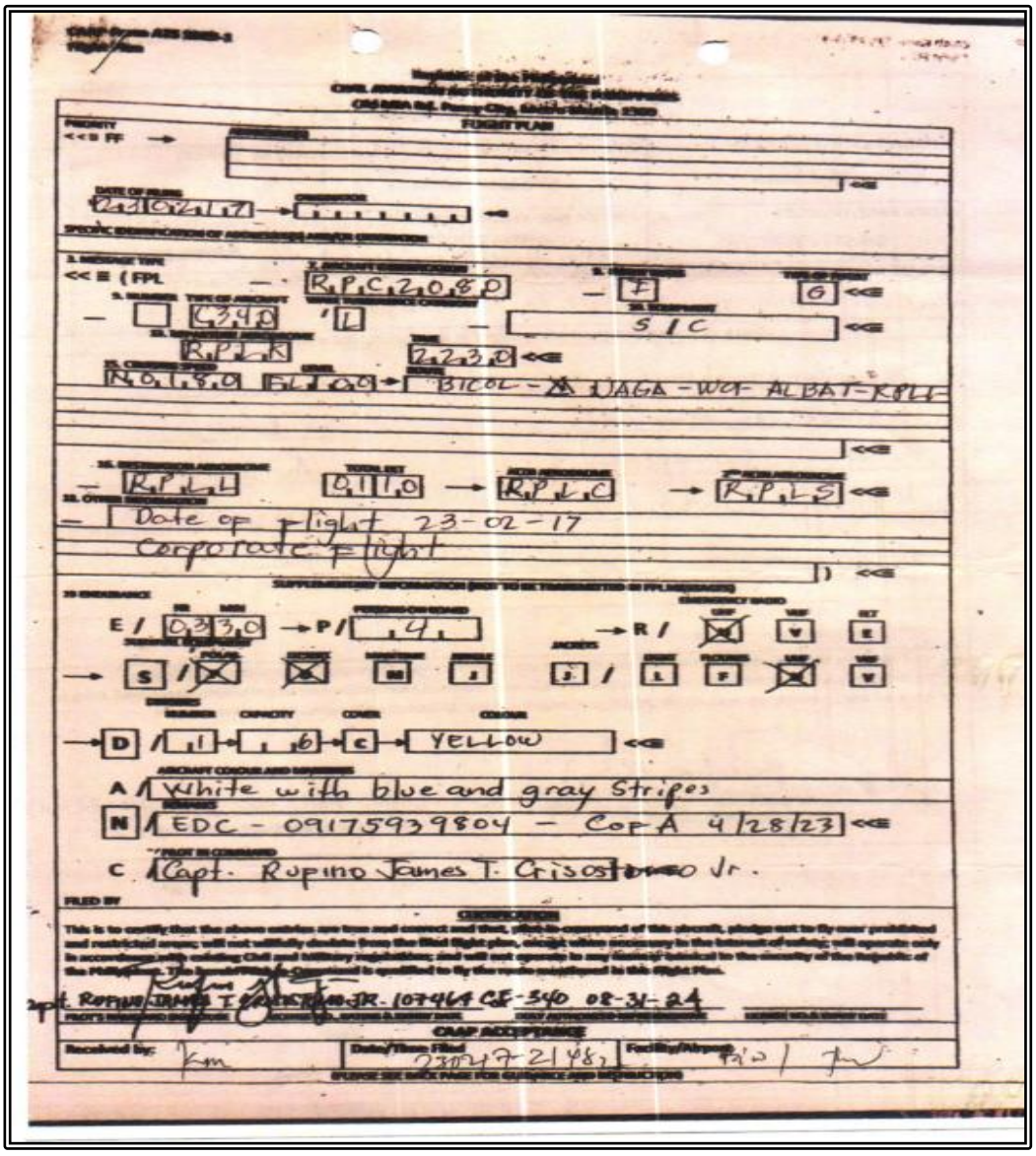

Figure 8: The Flight Plan.

2.2 Pilot Navigational and Situational Awareness

The pilot filed an instrument departure flight plan using standard departure on RWY 05. Based on the published AIP for RPLK RWY 05 departure, the pilot, after airborne, will make a procedural right upwind turn and request to cross the final approach of RWY 05 prior to flying towards the area abeam the Cement Plant/Camalig as a reporting point (Figure 9). The pilot will further report twenty (20) nautical miles out while climbing to an altitude of 10,000 feet. To intercept NAGA VOR, the pilot then continues to intercept Whiskey 9 towards Alabat for Manila. The chart also contains the height of the mountain and terrain information that gives the pilot a better understanding of whether the path he intends to fly is safe.

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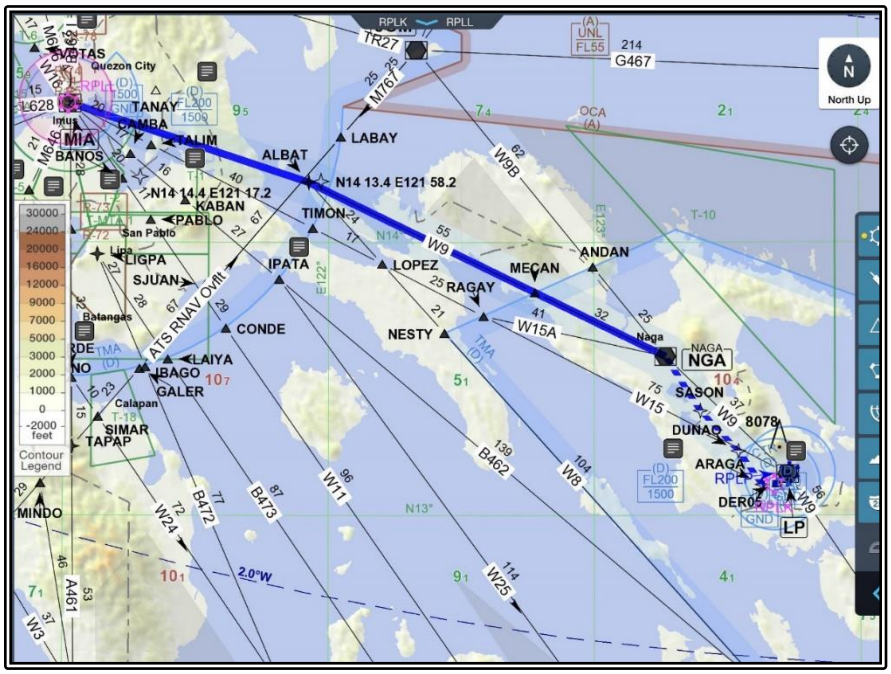

Figure 9: AIP VFR outbound RPLK.

In the course of the investigation, at 0647H, ATC established contact with the aircraft while passing 2,600ft. The ATC inquired if the flight had already passed Camalig by-pass, and the pilot responded "We're passing Camalig by-pass now". The pilot was instructed by ATC to continue climbing and report twenty (20) nautical miles out of RPLK, which was acknowledged by the pilot. At 0651H, no position report was received from the aircraft. The ATC initiated contact with the aircraft several times, but no response was received.

The pilot did not declare either an emergency or priority to the ATC as he continued with the flight. Some local farmers near Mt. Mayon Volcano heard an aircraft heading towards the top of the volcano prior to the accident.

Aside from the ATC, the monitoring of RP-C2080 and other aircraft within the Legaspi FIR was carried out through Manila RADAR. A RADAR simulation of the flight was captured to demonstrate the event and help review the occurrence. Prior to RP-C2080's departure from RPLK, Cebu Pacific Air Flight 322 on a regular flight schedule took off from the same airport bound for Manila (Figure 10).

The radar information depicts that the flight diverted from its path for an unknown reason. Based on the radar track, RP-C2080 diverted from its flight path, and the pilot is likely to have degraded situation awareness. Shown below are the navigational flight route and the possible route towards Mt. Mayon Volcano plotted on Google Earth for a more familiar representation (Figure 11). An interview conducted with farmers cultivating their lands near the crash site revealed that there was a buildup of clouds that covered the crater down to the foot of the mountain. The cloud situation was confirmed by the members of the rescue team, which hampered the rescue operation. It is reasonable to conclude that the cloud cover prevented the pilot from seeing the mountain terrain.

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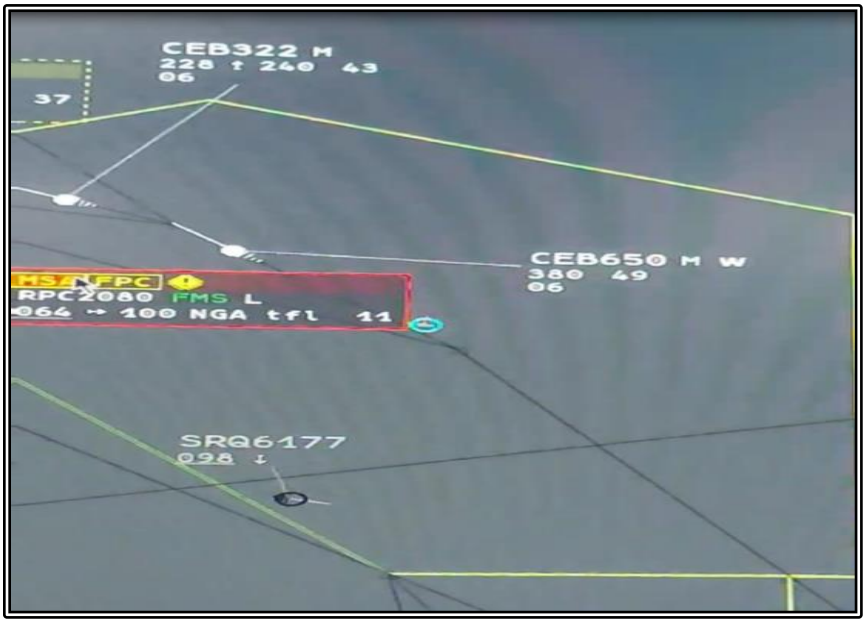

Figure 10: RADAR depicting the aircraft at an altitude 6,400 AMSL.

Figure 11: Navigational flight route plotted on Google Earth.

The flight was then charted and the radar overlay was added to represent that RP-C2080 came into contact with Mt. Mayon (Figure 12).

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Figure 12: The Flight route with RADAR track overlay.

2.3 Navigation Flight Information

Mt. Mayon Volcano is in Legaspi City, Province of Albay. It is situated in the southern part of the main island of Luzon, 500 kilometers south of Manila. It is an active volcano, towering at a height of 8,077 feet above sea level. It is a popular tourist spot, renowned for its "perfect cone" because of its symmetrical conical shape. Subsequent eruptions in the years 2000, 2006, 2009, 2014, and 2018 forced tens of thousands of people in nearby villages to evacuate.

CAAP-ATS has already issued a NOTAM (Figure 13) regarding Mayon Volcano's activity well before the time of occurrence. The Department of Science and Technology, Philippine Institute of Volcanology and Seismology (DOST-PHIVOLCS) also issued a Mayon Volcano Bulletin, which states "To avoid flying close to the volcano's summit" (Figure 14).

The aircraft is not equipped with a Ground Proximity Warning System (GPWS). The existing Philippine Civil Aviation Regulation only requires the installation of such equipment on aircraft with a maximum certificated take-off mass in excess of 5,700 kg.

Meteorological conditions permitting, the pilot is required to use "see and avoid" techniques to avoid traffic, terrain, and other obstacles. To avoid obstacles during a departure, the take-off minimums may include a non-standard ceiling and visibility minimum. These are given to pilots so they can depart an airport without being able to meet the established climb gradient. Instead, they must see and avoid obstacles in the departure path. In these situations, ATC provides radar traffic information for radar-identified aircraft outside controlled airspace and safety alerts to pilots believed to be in unsafe proximity to obstacles or aircraft.

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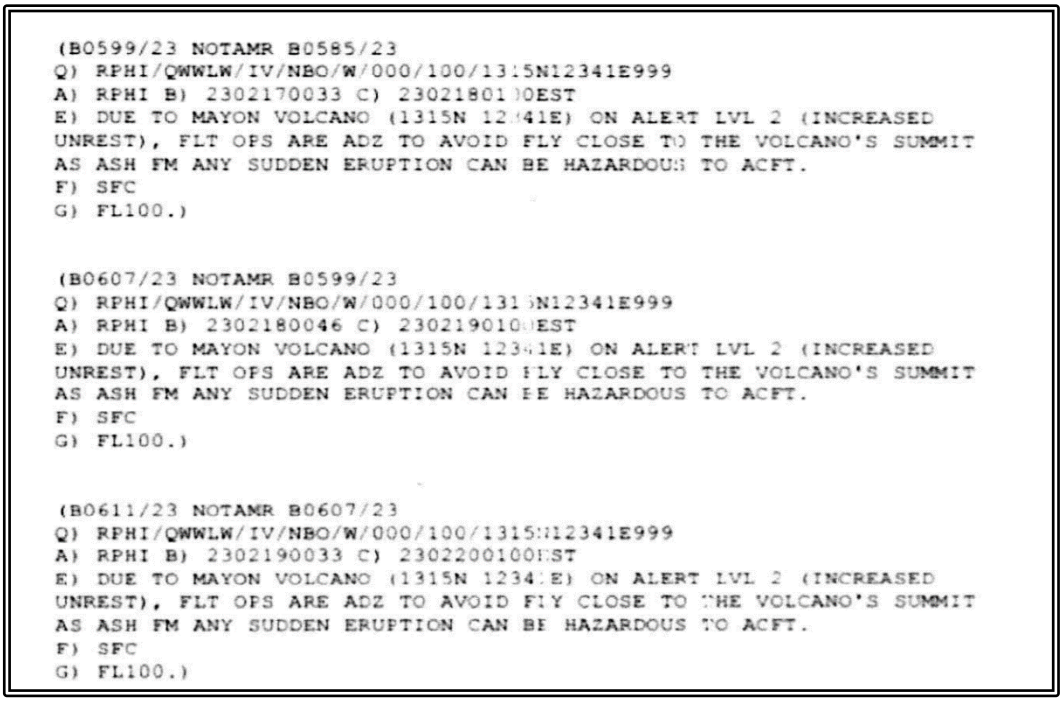

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A) RPHI B) 2302170033 C) 23021801 0EST
E) DUE TO MAYON VOLCANO (1315N 12 41E) ON ALERT LVL 2 (INCREASED
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AS ASH FM ANY SUDDEN ERUPTION CAN BE HAZARDOUS TO ACFT.
F) SFC
G) FL100.)

(B0607/23 NOTAMR B0599/23
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A) RPHI B) 2302180046 C) 230219010 EST
E) DUE TO MAYON VOLCANO (1315N 123 1E) ON ALERT LVL 2 (INCREASED
UNREST), FLT OPS ARE ADZ TO AVOID FLY CLOSE TO THE VOLCANO'S SUMMIT
AS ASH FM ANY SUDDEN ERUPTION CAN BE HAZARDOUS TO ACFT.
F) SFC
G) FL100.)

(B0611/23 NOTAMR B0607/23
Q) RPHI/QWWLW/IV/NBO/W/000/100/1315N12341E999
A) RPHI B) 2302190033 C) 230220010 ST
E) DUE TO MAYON VOLCANO (1315N 1234 E) ON ALERT LVL 2 (INCREASED
UNREST), FLT OPS ARE ADZ TO AVOID FLY CLOSE TO THE VOLCANO'S SUMMIT
AS ASH FM ANY SUDDEN ERUPTION CAN BE HAZARDOUS TO ACFT.
F) SFC
G) FL100.)
```

Figure 13: NOTAM issued by CAAP-ATS.

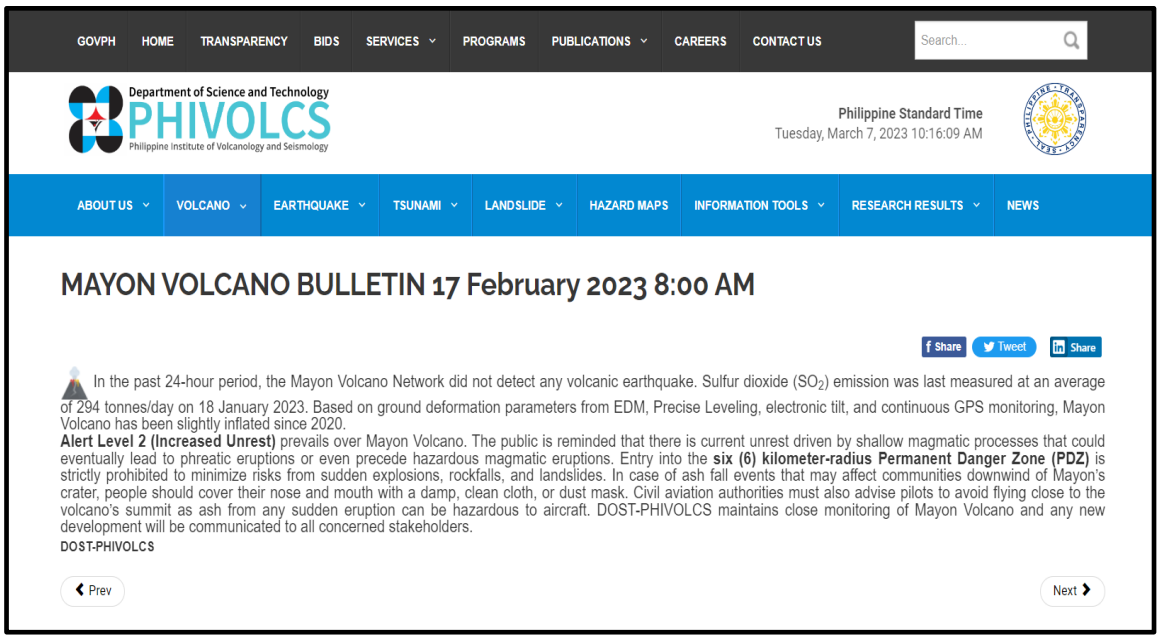

Figure 14: PHIVOLCS released bulletin.

2.4 Flight Weather Information.

The weather captured by DOST-PAGASA, RADAR satellite, and Daet station revealed that during the time of the occurrence at about 0600H, there was a large area of cloud concentration over Mt. Mayon Volcano. (Figure 15).

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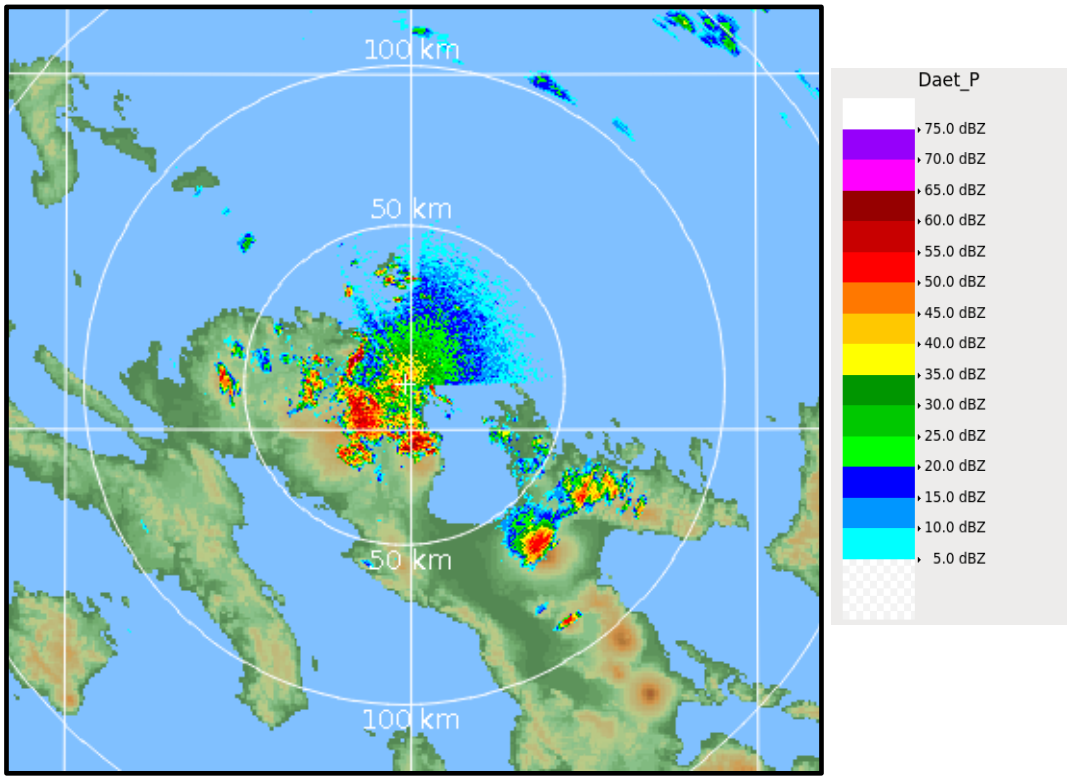

Figure 15: RADAR satellite image from DOST-PAGASA.

2.5 Aircraft Recovery

From a geographic point of view, discussion of the possibilities of examining the structural integrity of the airframe and engine in the sense of recovering the aircraft. It is deemed to contribute to the assessment of the aircraft accident investigation. Beyond the statement that the simplest consideration and suggested by the Municipal Disaster Risk Reduction and Management Council (MDRRMC), the Municipality of Camalig Province of Albay, as per notification issued by DOST-PHILVOCS on July 21, 2023, 1956H, "Alert Level 3 is maintained over Mt. Mayon Volcano", which means that it is currently in a relatively high level of unrest and a hazardous eruption within weeks or possibly days could still be possible. Increased vigilance against pyroclastic density currents, lahars, and sediment-laden stream flows along channels draining the edifice is also advised to affected and threatened Camalig communities." Camalig MDRRMC confirms that the wreckage of RP-C2080, a CE340A type of aircraft to the consideration of retrieval activity of its engine and airframe is unrecoverable.

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3.0 CONCLUSION

3.1 Findings

a. The aircraft has valid certificates of airworthiness and registration.

b. The aircraft was properly released for flight without any discrepancies noted in its logbook.

c. All aircraft occupants were fatally injured.

d. The pilot was qualified to operate the CE340A type of aircraft.

e. The pilot has a valid airman's license issued by the CAAP.

f. The pilot was not at the desired reporting point after the departure sequence.

g. The flight was under IFR.

h. The aircraft departed using RPLK RWY 05.

i. The pilot was instructed by ATC to report twenty (20) nautical miles out while climbing to an altitude of 10, 000 feet.

j. DOST-PHIVOLCS issued a Mayon Volcano bulletin stating that entry into the 6-kilometer-radius permanent danger zone is strictly prohibited and to avoid flying close to the volcano summit.

k. CAAP-ATS issued a NOTAM emphasizing that "Due to Mayon Volcano being on alert level 2, flight operations are to avoid flying close to the volcano's summit as ash from a sudden eruption can be hazardous to aircraft.".

3.2 Probable Cause

3.2.1 Primary Cause Factor

The pilot failed to follow the flight plan and made an unauthorized deviation.

3.2.2 Contributory Cause Factor

Pilot lack situational awareness

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4.0 SAFETY RECOMMENDATION

4.1 For **CAAP-FSIS** to ensure that:

a. The operator strictly adheres to the flight plan and published route.

b. The operator conducts additional training on IFR operations and flights over mountainous areas.

-End-

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