

No. 4

Filipinas Orient Airways, Inc. (Fairways), Douglas DC-3A, PI-C-948, accident on Mt. Tangcong Vaca, Bo. Tanag, Libmanan, Camarines Sur, Philippines, on 8 March 1965. Report dated 31 March 1965, released by the Aircraft Accident Investigation Board, the Philippines

1. - Investigation1.1 History of the flight

Flight 43 was a non-scheduled domestic flight from Manila International Airport to Naga-Pili Airport. It took off from Manila at 0943 hours, Philippine local time*, on a DVFR flight plan at 7 500 ft. Estimated time en route was 1:10 hours. At 1010 hours the flight reported over Alabat at 5 500 ft, estimating arrival at Pili Airport at 1045 hours. No difficulties were reported by the crew. This was the first and last message from the flight. At 1515 hours a communication search was initiated. Alert phase and distress phase were respectively declared at 1350 and 1455 hours, then an aerial search was initiated which continued up to the receipt of the information from the two survivors that the aircraft had crashed and burned on the steep and thickly forested slope of Mt. Tangcong Vaca (height: 2 480 ft). The site of the accident was 19 NM north-west of Pili Airport, at approximately 1 500 ft AMSL. The accident occurred at approximately 1030 hours.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal	3	7	
Non-fatal		2	
None			

1.3 Damage to aircraft

The aircraft was destroyed due to impact and subsequent fire.

1.4 Other damage

None reported.

1.5 Crew information

The pilot-in-command, aged 49, held a currently valid airline transport pilot's licence with a rating on DC-3 aircraft, without waiver but with limitation to wear correcting lenses while exercising the privileges of his licence. It was not ascertained whether or not he was wearing them at the time of the accident. He also held a currently valid instrument

* GMT plus 8 hours.

rating. He had flown a total of approximately 4 454 hours, including 3 646 hours on the DC-3. Since 1 January 1965, he had flown approximately 100 hours and had undergone two route qualification checks on the Manila-Naga-Manila routes.

The co-pilot, aged 29, held a currently valid commercial pilot's licence with rating on DC-3 type aircraft, without waiver and/or limitation. He also held a currently valid instrument rating. He had flown a total of 1 462 hours, including 761 hours on the DC-3, and was being trained as pilot-in-command.

Nothing indicated that crew fatigue might have been a factor in this accident.

1.6 Aircraft information

The aircraft had a valid certificate of airworthiness and was rated VFR day and night. The airframe had a total time of 31 929 hours, including 5 749 hours since overhaul.

At the time of take-off the aircraft's payload (624 kg) was well below the maximum payload of 2 416 kg, and it was properly distributed.

The type of fuel being used was not stated in the report. There were 475 gal. of fuel on board at take-off.

1.7 Meteorological information

The terminal forecast for Bicol was as follows:

Ceiling:	2 500 - 3 000 broken lowering to 900 m broken with occasional showers
Visibility:	15 to 20 km except 8 to 10 km in precipitation
Surface wind:	north-easterly 10 to 15 km/h

Ground witnesses in the area of the crash testified that ground visibility was poor, and it was raining at the time of the accident.

1.8 Aids to navigation

No navigational aids were available at Pili Airport. However, there were two privately-operated commercial radio broadcasting stations located at Naga City, approximately 7 NM north-east of Pili Airport.

1.9 Communications

The aircraft made its first and last radio contact at 1010 hours. No difficulties were reported.

1.10 Aerodrome and ground facilities

Not relevant to the accident.

1.11 Flight recorders

Not mentioned in the report.

1.12 Wreckage

The aircraft was found approximately 1 500 ft AMSL on a steep slope of a thickly forested mountain, 2 480 ft high. The main wreckage which was more or less concentrated, rested on the ground with its nose pointing uphill with a compass heading of 150°. It was determined from tree cuts along the flight path that at impact the aircraft was flying level at a heading of 120°.

1.13 Fire

An explosion and a ground fire followed impact.

1.14 Survival aspects

The two survivors escaped through an opening at the tail of the aircraft and were rescued by four deer hunters.

One survivor testified that the injuries he suffered were caused not by the impact but while escaping from the wreckage and fire.

The pilot-in-command was found on a tree approximately 5 m uphill from the burned wreckage. Most probably he was not in his seat at the time of the crash. The co-pilot was found near the control pedestal in the uphill portion of the wreckage. The flight attendant and seven passengers were found burned in the rear portion of the passenger cabin. All the victims died of severe shock following multiple injuries. However, some of the victims might have been still alive before they were burned.

1.15 Tests and research

None mentioned in the report.

2. - Analysis and Conclusions

2.1 Analysis

Evidence revealed that both engines were delivering power on impact.

From 24 February to 4 March 1965, the log-book of the subject aircraft showed that the pilot-in-command's and co-pilot's altimeters were indicating different altitudes at the same setting. The pilot-in-command's was indicating 100 to 300 ft lower than the co-pilot's. This discrepancy persisted even after the co-pilot's altimeter was changed on 24 February and again on 28 February 1965. On 3 March the pilot-in-command's and co-pilot's altimeters were indicating 1 100 ft and 1 400 ft respectively when set at 29.97 inches of mercury. On the same date, the co-pilot's altimeter was disconnected and apparently remained so up to the date of the accident. The aircraft had been dispatched more than 20 times while the above altimeter discrepancy remained uncorrected and the cause of the discrepancy remained undetected. During the same period the records showed that neither of the two altimeters were subjected to calibration. The airline's approved flight manual allowed VFR flights with only one altimeter functioning.

However, in view of the testimony of the lone adult survivor who stated that the flight was smooth and conducted in accordance with the planned VFR, the Board concluded that even if an altimetry error existed, it was not the causal factor of the accident.

Assuming that the last report of the flight at 1010 hours was correct and considering that the reported altitude was 2 000 ft lower than that indicated in the flight plan, it was believed that the ceiling was lowering, as forecasted. Therefore, in order to maintain VMC the crew must have started descending either before, over or after Alabat. It appeared most probable that the flight, as it approached the crash site, momentarily encountered poor forward cockpit visibility which resulted in collision with rising terrain. The crash site being more or less 5 NM right of the straight line joining Alabat and Pili Airport, it was presumed that the flight followed the said straight line track.

2.2 Conclusions

Findings

The crew were currently certificated.

The aircraft had a valid certificate of airworthiness.

It was raining at the time of the accident.

It appeared most probable that the crew being confronted with a ceiling which was lowering started to descend in order to remain VMC and that poor forward visibility resulted in the collision with the rising terrain in front of the aircraft.

Cause or Probable cause(s)

The probable cause of this accident was VFR flight into instrument meteorological conditions resulting in collision with the rising terrain.

3. - Recommendations

None were contained in the report.
