Aviation Safety Investigation Report 199202112

Boeing Co
B767

20 October 1992

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Occurrence Number: 199202112 **Occurrence Type:** Incident
Location: 37 km S Cairns
State: QLD **Inv Category:** 3
Date: Tuesday 20 October 1992
Time: 1120 hours **Time Zone** EST
Highest Injury Level: None

Aircraft Manufacturer: Boeing Co
Aircraft Model: 767-238ER
Aircraft Registration: VH-EAL **Serial Number:** 23306
Type of Operation: Air Transport High Capacity International Passenger Scheduled
Damage to Aircraft: Nil
Departure Point: Brisbane Qld
Departure Time: 0908 EST
Destination: Cairns Qld

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	ATPL 1st Class	3348.0	7632
Co-Pilot/1st Officer	ATPL 2nd Class	652.0	4317
2nd Officer	ATPL 2nd Class	52.0	6654

Approved for Release: Tuesday, August 6, 1996

The flight was enroute from Brisbane to Cairns and at 1118 hours Eastern Standard Time, the pilot contacted Cairns Approach. The aircraft was on descent to 7,000 ft on the Cairns VHF Omni Range (VOR) 153 radial, and the approach controller then cleared the aircraft to descend to 3,000 ft not below the Distance Measuring Equipment (DME) Arrival steps.

After receiving the initial clearance the pilot asked for confirmation of the clearance, and, at 1119 hours, the controller repeated the descent clearance, "cleared to three thousand not below the DME steps" which the pilot acknowledged.

Approximately two minutes later the approach controller noticed on the radar display that the aircraft was descending below the DME steps and immediately asked the pilot for his inflight conditions. After a short delay the pilot reported that they were visual and the controller then cleared the aircraft to descend to 3,000 ft visually. The aircraft landed at Cairns without further incident at 1132 hours.

The captain was a training captain, and was acting in this capacity in the left hand control seat. He had decided to execute a straight in approach for runway 33 to save time, although the prevailing wind favoured runway 15. The Automatic Terminal Information Service (ATIS) indicated the surface wind was from the southeast at 10 to 15 knots, altimeter setting (QNH) 1014 hectopascals, temperature 29 degrees celsius, one octa of cloud at 2,500 ft, two octas of cloud at 3,000 ft, and visibility 30 kilometres.

The captain was operating the aircraft radio, and when he obtained the clearance from Cairns Approach, interpreted the clearance to mean that the aircraft was required to maintain 1,000 ft above the Control Area (CTA) steps, as they were not making a DME arrival. (The CTA steps mark the lower limits of controlled airspace.) The descent, below 7,000 ft, was being conducted on this basis, maintaining at least 1,000 ft above the CTA steps.

When the controller asked the pilot to report in-flight conditions, the second officer was unable to see Cairns due to a small amount of cloud ahead, and this resulted in a 30 second delay before the crew was able to report visual.

The co-pilot was acting in the capacity of safety pilot and was occupying the right hand observers seat. He did not have a DME Arrival chart available for reference, and was not monitoring the approach. The duty of the safety pilot is to provide backup support for the captain when the second officer is the pilot flying. There were no specific procedures defining the duties of the safety pilot under the existing circumstances.

The second officer was undergoing training for an upgrade to co-pilot and was in the right control seat. He was the pilot flying and had briefed the crew for a DME Arrival at Cairns followed by a visual approach and landing on runway 15. The DME Arrival had been entered in the Flight Management Computer but was later deleted when the captain rebriefed for a straight in approach for runway 33 providing the downwind component did not exceed the limit of 15 knots. A left circuit for runway 15 would be carried out if the downwind component was above this limit.

The second officer disconnected the autopilot at 7,000 ft and was hand flying the aircraft to become better accustomed to the feel of the controls prior to carrying out the landing. He had the DME Arrival chart available on his chart holder but did not refer to it as he was preoccupied with flying the aircraft. The second officer was aware that the captain was referring to the Cairns Area chart. The captain had read out distances and altitudes, and the second officer had assumed they were DME distances and altitudes corresponding to the DME Arrival steps.

CONCLUSION

Findings

1. The captain misinterpreted the terms of the clearance.

2. The captain was not familiar with the term "not below the DME steps" and incorrectly associated it with the CTA steps which in some instances are below terrain altitudes.

3. The second officer did not cross check, and wrongly assumed the information given to him by the captain was valid for the descent.

4. The co-pilot had not been adequately briefed by the captain as to his role and responsibilities during the approach and took no active part in it.

Significant factors

1. The captain misinterpreted the terms of the airways clearance.

2. The co-pilot was not monitoring the approach and was not adequately performing his role as safety pilot.

3. The second officer did not cross check the DME Arrival chart and assumed that the information given by the captain was correct.

4. The aircraft was descended below the DME steps in an area of high terrain.