



COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF TRANSPORT

AIRCRAFT ACCIDENT INVESTIGATION SUMMARY REPORT

Reference No.

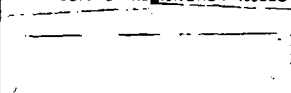
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Publication of this report is authorized by the Secretary under the provisions of Air Navigation Regulations 283 (1)

1. LOCATION OF OCCURRENCE

14 Km East of Tooraweenah, N.S.W.	Height a.m.s.l. 2700 feet	Date 10.5.78	Time (Local) 1939 hours	Zone EST
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2. THE AIRCRAFT

Make and Model Cessna 182 Q	Registration VH-UDM	Certificate of Airworthiness Valid from 10.11.77
Certificate of Registration issued to 	Operator	Degree of damage to aircraft Destroyed
		Other property damaged Fence
Defects discovered Nil		

3. THE FLIGHT

Last or intended departure point	Time of departure 1652 hours	Next point of intended landing Coonamble, N.S.W.	Purpose of flight Travel	Class of operation Private
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4. THE CREW

Name	Status	Age	Class of licence	Hours on type	Total hours	Degree of injury
	Pilot	29	Commercial	Not Known	6400 (approx.)	Fatal

5. OTHER PERSONS (All passengers and persons injured on ground)

Name	Status	Degree of injury	Name	Status	Degree of injury
	Passenger	Fatal			

6. RELEVANT EVENTS

The pilot submitted a flight plan at Moorabbin Airport for a private flight to Coonamble, via Griffith, under the Instrument Flight Rules. The pilot was the holder of a Class 1 Instrument Rating and the aircraft was fitted with radio navigation equipment appropriate to the flight.

The forecast relevant to the Condobolin - Coonamble section of the flight indicated considerable cloud cover with rain showers and isolated thunderstorms. At Coonamble, the surface wind was expected to be from the north-west at 10 knots, visibility better than 10 kilometres, showers, 3 oktas of stratus cloud at 1000 feet and 4 oktas of cumulus cloud at 2500 feet above aerodrome level. Gradually, between 1900 hours and 2100 hours, the wind would become westerly at 10 knots with a 30% probability that, for periods not exceeding 30 minutes, there would be thunderstorms with 5 oktas of stratus cloud at 1000 feet and 4 oktas of cumulus at 4000 feet.

The aircraft departed Moorabbin at 1537 hours and at about 1612 hours the pilot reported passing Mangalore at 5000 feet. He also advised that he would be landing at Shepparton and that the flight endurance of the aircraft on departure from that point would be 345 minutes. At Shepparton the aircraft was refuelled and the flight resumed at 1652 hours.

The pilot next reported abeam Lake Urana, N.S.W. and again amended his flight planned route to the effect that he would be tracking directly over Narrandera and continuing to Coonamble without prior landing. At 1734 hours he was given the current terminal weather forecast for Dubbo. The flight progressed apparently without incident and, at 1817 hours, the pilot was given a Special Weather report for Dubbo which indicated that the cloud base at that airport was 500 feet above ground level.

At 1830 hours the pilot reported passing Condobolin and subsequently, at 1905 hours, that the aircraft had passed abeam Dubbo at 5000 feet and was estimating Coonamble at 1928 hours. The pilot asked the Dubbo Flight Service Unit (FSU) at 1921 hours whether any pilot reports concerning the Coonamble non-directional beacon (NDB) had been received. Dubbo replied that the Coonamble NDB was monitoring normally. The pilot advised that he did not "seem able to pick up anything else bar Dubbo". Dubbo FSU confirmed with the pilot that the correct frequency for the Coonamble NDB was 206 KHz. At 1922 hours the pilot reported that VH-UDM was leaving 5000 feet on descent to 2640 feet, the altitude which he had shown on the flight plan as the lowest safe for that section of the flight between Condobolin and Coonamble.

6. RELEVANT EVENTS (Cont'd)

Shortly before 1932 hours the pilot called Dubbo FSU and advised "we're having problems with the NDB, Coonamble NDB, 206. We'll remain in the Coonamble area for another 15 minutes and then, if necessary, return to Dubbo". The FSU requested that the aircraft call again by 1945 hours or in the circuit area and the pilot acknowledged this request. There was no further communication with the aircraft.

A searching aircraft found the wreckage of VH-UDM on the following morning after picking up signals from the electronic locator beacon with which VH-UDM had been equipped. The aircraft had struck a tree and then the ground on a heading of 039° magnetic, while in a substantially wings level attitude and probably on a slightly descending flight path.

The accident site was about 80 kilometres south-east of the direct track between Condobolin and Coonamble. It was within the rated coverage of the Coonamble NDB but outside the limits of navigation normally applied to the calculation of the lowest safe altitude for flights approaching Coonamble from the direction of Condobolin. The reason for the diversion of the aircraft from the planned flight path has not been determined.

Examination of the wreckage did not reveal any pre-existing defect or malfunction of the aircraft which could have contributed to the accident. A post analysis of the weather in the Coonamble - Tooraweenah area covering the time at which the accident occurred indicated that very low cloud and poor visibility would have existed on the western slopes of the Warrumbungle Ranges in the general area of the accident site. The Coonamble NDB monitored normally at the Dubbo FSU throughout the time that the aircraft was in the area. The NDB was checked on the following morning and a flight check of the aid was conducted on 12 May between 1800 hours and 2000 hours. No significant abnormalities were noted.

The single automatic direction finder (ADF) with which the aircraft was fitted and which was the radio navigation facility appropriate for use relative to the Coonamble NDB was badly damaged. The final three figures on the frequency indicator of the unit were 2-0-6 which is consistent with the frequency of the Coonamble NDB. The first figure (if any) of the selected frequency could not be deciphered. The NDB is the sole radio navigation aid available at Coonamble. The aircraft was not fitted with any other radio navigation equipment, such as distance measuring equipment (DME), which could have assisted the pilot to accurately establish his position over Coonamble in the conditions of darkness and poor weather which existed.

7. OPINION AS TO CAUSE

The probable cause of the accident was that the pilot did not establish the position of the aircraft with a degree of accuracy appropriate to the operating conditions and as a consequence operated at an unsafe altitude.

Approved for
publication

K. J. Hughes

Delegate of the Secretary

Date

24.6.80