

No. 5

South African Airways, DC-3, ZS-DJC, accident 7 miles north of Seymour, Cape Province, South Africa, on 6 March 1962. Accident report released by the Department of Transport, Republic of South Africa.

1. Historical1.1 Circumstances

SAA Flight 512 was a scheduled domestic public transport service which originated at Malan Airport, Capetown at 0800 hours\*, destination Collondale, with scheduled stops en route at Oudtshoorn, George, Plettenberg Bay, Port Elizabeth, Grahamstown and Queenstown. The pilot-in-command filed an instrument flight rules (IFR) flight plan for the flight although there are no communications, navigation or approach facilities at Grahamstown and Queenstown. Due to adverse weather the flight made its first landing at Port Elizabeth at 1035 hours where the latest weather forecast was obtained by the pilot-in-command. The route forecast issued at 1130 hours stated "Cloudy to overcast over coastal regions. Partly cloudy inland." The aerodrome forecasts read: "Grahamstown - visibility 15 miles, cloudy to overcast. Queenstown - visibility 15 miles, partly cloudy, risk of thunderstorms." The flight up to arrival at Grahamstown was uneventful. There were 4 crew and 3 passengers aboard when the aircraft took off from Grahamstown at about 1350 hours. At 1402 the flight radioed ATC Port Elizabeth "Port Elizabeth 512 was off Grahamstown 50, my Echo Tango Alpha Queenstown 25 minutes past the hour and I'm going Victor Foxtrot below over." In reply to Port Elizabeth ATC at 1404 the flight advised that there were 3 passengers. There were no further messages from the flight. According to the co-pilot the aircraft flew below the clouds after leaving Grahamstown, at about 300 - 500 ft above the ground. It was the pilot-in-command's intention to fly through the Katberg Pass below cloud and as the aircraft approached the mountains the cloud ceiling became lower and the pilot was faced with a critical situation. He called for METO (maximum except take-off) power and in an attempt to clear the hills the right wing first made contact with the trees and then the right engine propeller cut into the rising ground. The aircraft came to rest against a rock face approximately 250 yd from the initial point of impact with the trees and approximately 500 ft from the top of the hill. The time of the accident was 1415 hours.

1.2 Damage to aircraft

The aircraft sustained major damage.

1.3 Injuries to persons

The pilot-in-command and one of the co-pilots were killed in the accident. The other co-pilot was seriously injured.

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\* All times are South African standard time.

## 2. Facts ascertained by the Inquiry

### 2.1 Aircraft information

The certificate of airworthiness was valid until 22 July 1962. All prescribed periodic maintenance had been carried out. There was no evidence to show that the aircraft was improperly loaded.

### 2.2 Crew information

The pilot-in-command held a valid airline transport pilot licence properly rated for the flight. He had a total flying time of 9 127 hours of which 2 484 hours were in DC-3 aircraft. In the preceding 90 days he had completed 79 hours 45 minutes flying time. His rest period prior to the commencement of the flight was 16 hours 20 minutes.

Both co-pilots held valid commercial pilot licences and were properly rated for the flight.

### 2.3 Weather information

The forecast indicated cloudy to overcast conditions. Witnesses on the ground stated that the aircraft was flying in rain below clouds in the area of the accident. No further details are given in the report.

### 2.4 Navigational aids

There are no navigational aids at Grahamstown and Queenstown. The aircraft was equipped with a radio compass and ILS (Instrument Landing System) receiver.

### 2.5 Communications

Communications were normal up to the time of the accident.

### 2.6 Aerodrome installations

This information is not required in this instance.

### 2.7 Fire

A small fire occurred under the left engine after impact. This was extinguished by one of the occupants of the aircraft before it could develop further.

### 2.8 Wreckage

All major components of the aircraft were found at the site of the accident indicating there had been no inflight loss or separation of parts. There was no physical evidence of structural, control, instrument or power plant failure.

### 3. Comments, findings and recommendations

#### 3.1 Discussion of the evidence and conclusions

In noting the radio transmission from SAA 512 to ATC Port Elizabeth at 1402 "... I'm going Victor Foxtrot below" and the fact that Queenstown is essentially a VFR airport, it was apparent that the pilot-in-command was of the opinion that the weather conditions in the Katberg Pass were such that he would be able to remain VFR below the cloud base. The weather forecast he received prior to flight would justify this contention. It was also noted that there were no radio aids at Queenstown and there would have been no point in the decision to climb through the overcast in the hope that Queenstown area would be clear enough of cloud to permit a safe descent on the other side of the mountains. It was the opinion of the Board that there was nothing untoward in the initial decision of the pilot-in-command to stay below the cloud ceiling. However, flight conditions deteriorated as he approached the 6 000 - 8 000 ft mountain range ahead of him and he began running into difficulties due to rising ground and low cloud and was suddenly and unexpectedly faced with a critical situation where the aircraft was in cloud. Although a climb at full power was initiated he was unable to clear the foothills ahead. Although he was an experienced DC-3 pilot he had only recently been promoted to captain on internal routes, some sections of which, due to lack of radio navigational and communications facilities, require an almost intimate knowledge of local terrain, airfields, and weather conditions. The limited experience of the two co-pilots was of no assistance to him in this respect. The post mortem examination of the pilot-in-command and the co-pilot excluded all possibilities of their having suffered from the influence of drugs or alcohol at the time of the accident.

#### 3.2 Probable cause

The accident was attributed to an error of judgement on the part of the pilot-in-command who attempted low visual flight, beneath the cloud base, near mountains in deteriorating weather conditions.

#### 3.3 Recommendations

No recommendations were made in the report.

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