

No. 12

Taxi Aéreo Opita Limitada, DC-3C, HK-1202, accident near Cerro del Diablo,  
Algeciras, Colombia on 8 November 1965. Report, not dated,  
released by the Administrative Department of  
Civil Aviation, Colombia.

1.- Investigation1.1 History of the flight

The flight was a scheduled domestic flight from La Manguita Airport, City of Neiva to San Vicente del Cagüan. It took off from Neiva at 1207 hours and its estimated time of arrival at its destination was 1245 hours local time. At 1500 hours, when there was no report from the aircraft, the Bogotá Control Centre declared a state of alert and at 1540 hours a state of emergency.

On 11 November at approximately 1207 hours, the pilot-in-command of another aircraft informed Neiva through Airway Control that he had spotted the remains of the aircraft at a place named Cañón del Paraíso close to the Cerro del Diablo, co-ordinates 02°46'N and 75°05'W in the district of Algeciras, Department of Huila. It was estimated that the accident had occurred at 1225 hours.

1.2 Injuries to persons

Injuries	Crew	Passengers	Others
Fatal	3	23	
Non-fatal	2	7	
None		1	

1.3 Damage to aircraft

The aircraft was destroyed by the impact and subsequent fire and explosion.

1.4 Other damage

There was no other damage.

### 1.5 Crew information

The pilot-in-command held an airline transport pilot's licence and a radio operator's licence. He was also an instructor and inspector. In 1950 he had been penalized for flying with an expired radio operator's licence. He had been involved in an accident while in command of a Taxader aircraft at Barranquilla on 28 October 1961 and the Board ruled that pilot error in executing procedure was a contributing factor. He was fined for violation of part of the Flight Rules Manual and was reprimanded by the Chief of the Department for non-observance of Civil Aviation Regulations. He had a valid medical certificate.

The co-pilot had a pilot's licence and a radio operator's licence both issued on 22 December 1964.

The flight engineer had an aircraft mechanic's licence with the following limitation "work to be carried out under the supervision of a fully licensed mechanic".

The dispatcher held no civil aviation licence as such and therefore was not authorized to carry out such functions either on the ground or aboard an aircraft.

Also aboard the aircraft was a crew assistant who boarded the aircraft at the last moment.

### 1.6 Aircraft information

The aircraft's certificate of airworthiness was valid until 26 January 1966.

Major overhauls and scheduled inspections were carried out in accordance with the airline maintenance schedule at the CIAC workshop in Madrid (Cundinamarca). The last overhaul had been carried out in January 1965, service inspection No. 2 on 5 October, service inspection No. 1 on 20 October and service inspection No. 3 on 5 November. Daily inspections were carried out in accordance with the relevant check list. It was noted that the log book pages were not numbered in continued sequence as required.

According to the testimony of the survivors, the arrangement of the passengers' compartment was as follows: from the middle of the compartment forward the seats had been removed to accommodate the cargo and a boat; from the middle of the compartment rearward, seven double seats were in service providing seating for 14 passengers. Under such conditions, 13 passengers were without seats; in addition, flammable goods consisting of three 15-gallon and three 5-gallon cans of fuel were carried on board in violation of regulations covering the carriage of passengers.

It was calculated that with the quantity of fuel aboard the maximum payload available was 1 035.5 kg and that the maximum gross weight had been exceeded by 1 456.5 kg.

The dispatcher had improperly prepared the passenger and cargo manifests and the load and trim sheet. He failed to record 1 adult passenger, 9 children and 4 infants and overloaded the aircraft by 1 456.5 kg.

The type of fuel being used was not stated in the report.

### 1.7 Meteorological information

According to the Chief of the Meteorological Section of the DCA, weather conditions along the route were as follows:

IMC: very cloudy during the morning hours until noon with isolated thunderstorm clouds and a thick layer of Ns with a wide area of rain. Under such conditions, the tops of the mountains were entirely covered with low Cu, Sc and St type clouds. During the evening the overcast changed to scattered vertical development clouds of the Cu and Cc Cu type with showers of short duration.

The wind velocities at the 5 000 ft, 10 000 ft and 15 000 ft levels were 160° and 200°/6 kt, a situation which was due to the influence of the intertropical area of convergence with its wave motion.

The flight crew of a DC-4 aircraft which had been flying IFR at an altitude of 12 000 ft on the same route at approximately 1150 hours local time observed the following weather conditions:

Cordillera completely hidden by cloud along selected route; same conditions up to 5 minutes after Garzón; weather in area to the right of airway over the Cordillera visibly worse towards the north.

### 1.8 Aids to navigation

Not mentioned in the report.

### 1.9 Communications

Not mentioned in the report.

### 1.10 Aerodrome and ground facilities

Not relevant to this accident.

### 1.11 Flight recorders

Not mentioned in the report.

### 1.12 Wreckage

The first impact of the aircraft was against trees on the mountain near Cerro del Diablo. Probably the right wing struck a spur of the peak, which explains why it was found separated from the centre section.

Both engine propellers were found separated from their engines with blades bent rearwards, indicating that the engines were not developing power at the time of the accident.

### 1.13 Fire

An explosion and fire followed impact.

#### 1.14 Survival aspects

No information was contained in the report.

#### 1.15 Tests and research

No information was contained in the report.

### 2.- Analysis and Conclusions

#### 2.1 Analysis

The Colombian Air Route Manual provided two authorized routes for VFR flights; these routes were:

- (a) on a heading of  $120^{\circ}$  and 34 NM up to the check-point located  $02^{\circ}39'N$  and  $24^{\circ}49'W$ ; then 31 NM to San Vicente on a heading of  $170^{\circ}$
- (b) on a heading of  $153^{\circ}$  and 27 NM up to the check-point located  $02^{\circ}34'N$  and  $75^{\circ}06'W$ ; then 33 NM to San Vicente on a heading of  $139^{\circ}$ .

According to the survivors, the flight was carried out visually from Neiva to Campoalegre and Algeciras, and subsequently the aircraft was flown on instruments up to the accident site, a point fairly remote from all authorized VFR routes.

#### 2.2 Conclusions

##### (a) Findings

The pilots' licences were validated for the aircraft type and their medical certificates were valid.

The dispatcher and the flight engineer did not hold appropriate licences.

The aircraft's certificate of airworthiness, certificate of registration and radio certificate were valid.

Maintenance of the aircraft had been carried out in accordance with the airline's maintenance schedule which had been duly approved by the DCA.

The aircraft had been improperly dispatched. The passenger and cargo manifests were not properly completed; the maximum gross weight was exceeded by 1 456.5 kg, no seats were available for 13 of the passengers and dangerous cargo (fuel) was carried in the passengers' compartment.

The aircraft crashed outside the two approved VFR routes provided in the Colombian Airways Manual.

Weather conditions contributed to the accident.

(b) Cause or  
Probable cause(s)

The primary cause of the accident was a pilot error in that the pilot-in-command of the aircraft continued to fly VFR in adverse weather conditions on a route which was not authorized for an IFR flight by the Colombian Airways Manual.

A contributing cause was an error by other personnel in that the dispatcher improperly prepared the passenger and cargo manifests and the load and trim sheet and overloaded the aircraft by approximately 1 456.5 kg.

3.- Recommendations

All commercial airline pilots should be reminded of the need for complying strictly with the Aeronautical Regulations Manual, Part IV, Article 40.6.1.1, as regards VFR and IFR flights on routes authorized for either of the flight plans.

The Sanctions Committee should be convened to determine what sanctions should be imposed on Taxi Aéreo Opita Ltda, for authorizing the flight during which the accident occurred in violation of the standards established in the Aeronautical Regulations Manual, namely:

(a) Preparing an incomplete passenger manifest in violation of the Regulations Manual, Part IV, Article 40.6.3 (sub-paragraph 3).

(b) Allowing excess passengers (13) and failing to provide usable seats, since those in the aircraft had been folded to accommodate cargo and a boat, in violation of the provisions of the Manual, Part IV, Article 40.4.1.

(c) Allowing excess cargo on board, in violation of Articles 40.6.11 (Sub-paragraph 2) and 44.4.4 of the same Manual.

(d) Carrying 60 gallons of gasoline with passengers, in violation of the provisions of Article 40.7.2 of the Regulations Manual.

(e) Failing to provide a licensed flight engineer, in violation of Article 40.10.4.

(f) Failing to comply with Resolution No. 602 dated 22 August 1963 (Article 40.4.18) concerning the requirement that log book pages be numbered in continued sequence.