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# AIB Bulletin

**AIB Bulletin No. 14A**  
**Aircraft Type & Reg.** PA31-350 **Reg.** 5H-AZM **Category:** 1.2  
**No. & type of Engines:** Two Lycoming TIO-540 J2BD & LTIO-540 J2BD **Serial No:** 31-8052207  
**Year of Manufacture:** 1980  
**Date and Time (UTC)** 1<sup>st</sup> November 1997 shortly after 1020 hrs  
**Location:** Mt Kilimanjaro, Kibo wing at Window Buttress.  
**Latitude:** 03° 04.973 'S **Longitude:** 037° 20.357 'E  
**Type of Flight:** Private  
**Persons on Board:** **Crew** - 1 **Passengers** Nil  
**Injuries:** **Crew** - 1 Killed **Passengers** N/A

**Nature of Damage** Aircraft completely destroyed by impact with terrain.

**Commander's Licence:** ATPL  
**Commander's Age:** 56 years  
**Commander's Experience:** 9969 hours

**Information Source:** Telephone call from the Coastal Travels Ltd.

**ALL TIMES UTC**

## History of the Flight

5H-AZM had been missing since 1<sup>st</sup> November 1997. The aircraft took off from Nairobi for a VFR flight to Zanzibar. It did not arrive. The last communications occurred at 1020 hours when he raised the Kilimanjaro Tower on 120.1 MHz and advised that he was on a VFR flight from Nairobi Wilson to Zanzibar at FL115 with estimates for FIR 1025 hours and the estimated time of arrival (at Zanzibar) being 1140 hours. Extensive search was conducted for 32 days but the aircraft and its pilot were not found.

When the official search was terminated on 4<sup>th</sup> December 1997 an accident to 5H-AZM was declared. The Tanzania Accident Investigation Branch subsequently issued an accident report No.CAV/ACC/14/97.

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The Bulletin contains facts relating to the accident, which have been determined up to the time of issue. This information is published to inform the public and the aviation industry of the general circumstances of the accidents at the preliminary/stage and must necessarily be regarded as tentative and subject to alteration or correction if additional evidence becomes available.

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On 28 August 2003 a Swiss tourist who was on a mountain - climbing expedition at Glacier camp (elevation 16000 feet on the Kibo wing of Mt. Kilimanjaro) reported to have sighted a wreckage of an aircraft through his binoculars. He also said that he could read the registration letters AZM on the fuselage tail section. The estimated position of the wreckage was 1.2 km south west of Glacier camp. The wreckage was inaccessible from this camp because of unfavorable terrain.

On 6<sup>th</sup> September 2003 a Cessna 406 flew abeam the wreckage and reported its coordinate position as Latitude 3° 04.973'S Longitude 037° 357'E. On 8<sup>th</sup> September 2003, AIB inspectors with the aid of professional mountain climbers, made an expedition to the crash site by helicopter. However, due to unfavorable terrain the helicopter could not land at the crash site. It could also not hover over the area due to altitude limitations and strong winds. The nearest place that a helicopter could land was near Barrancho camp which is about 500 meters south of the accident site. Professional climbers failed to negotiate the terrain from this point to the wreckage because of steep rock ridges in between.

#### **Examination of the Wreckage**

The wreckage was observed from the helicopter through several passes. Hovering at the crash site was not possible due to high altitude and a 35 knots wind, which prevailed in the area.

The wreckage consisting of many aircraft parts and a complete tail unit were lying on a platform of a ridge behind a near vertical wall of a rock. The absence of the nose and fuselage sections and the marks on the rock would indicate that the aircraft hit the rock nose first, most probably in a wings level attitude. The direction of the aircraft at the time of impact was north easterly (050°)

Also visible was a blackened section of the rock surface indicating that there was fire. The extent of the fire damage to the aircraft could not be assessed.

It is considered that this accident could not have been survivable. Since the wreckage could not be reached, the remains of the pilot and aircraft parts were not recovered from the wreckage.

#### **ANALYSIS**

##### **The sighting of the wreckage**

5H-AZM had been missing for 5 years and ten months (2127 days) when it was spotted at Window Butress on the Kibo wing of Africa's tallest mountain, Kilimanjaro. A mountain - climbing tourist from Glacier camp, 1.2 km away, saw it accidentally. He was able to read the registration marks on the remaining rear fuselage section and the identification of the accident aircraft.

It is considered that search parties and mountain climbers, because of two reasons, did not see the wreckage before: First, the unfavorable terrain in form of ridges makes the crash site inaccessible. Second is that this part of the mountain was previously covered by ice. Given that the color of the aircraft was white, it would have been difficult to see any exposed part of the aircraft from a distance. The snow has recently been melting due to global warming. This global phenomenon has left the crash site free from ice.

## Conduct of the Flight

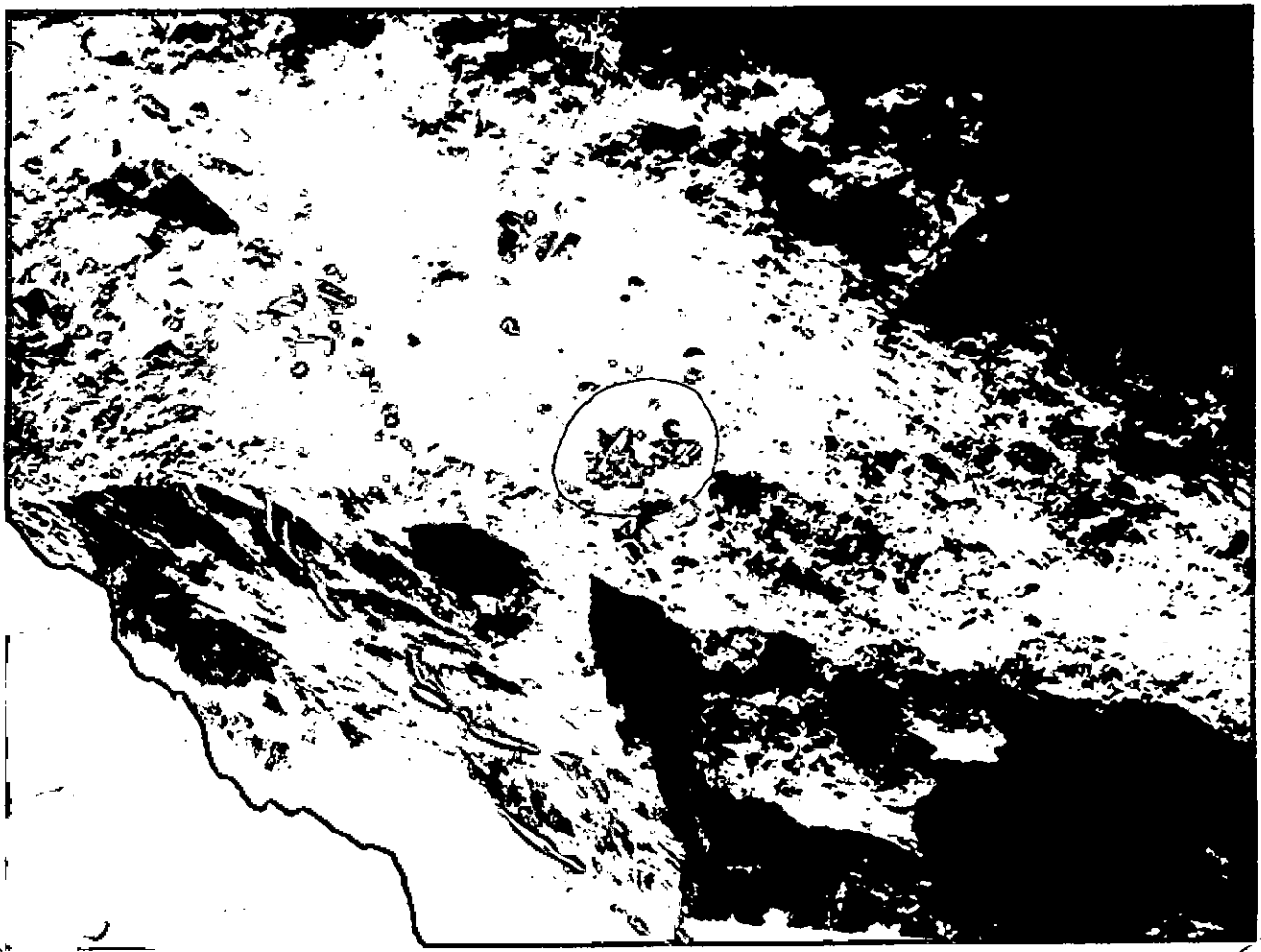
The flight plan filed with the Nairobi Tower indicated that 5H-AZM was conducting a VFR flight from Nairobi to Zanzibar, cruising at FL115. This implies that he was probably on a direct track to Zanzibar.

This route should have taken him to Zanzibar passing on the eastern side of Mount Kilimanjaro. However the wreckage was found on the western side of the mountain, which was 30 nautical miles off track and 3900 feet above his cruising flight level.

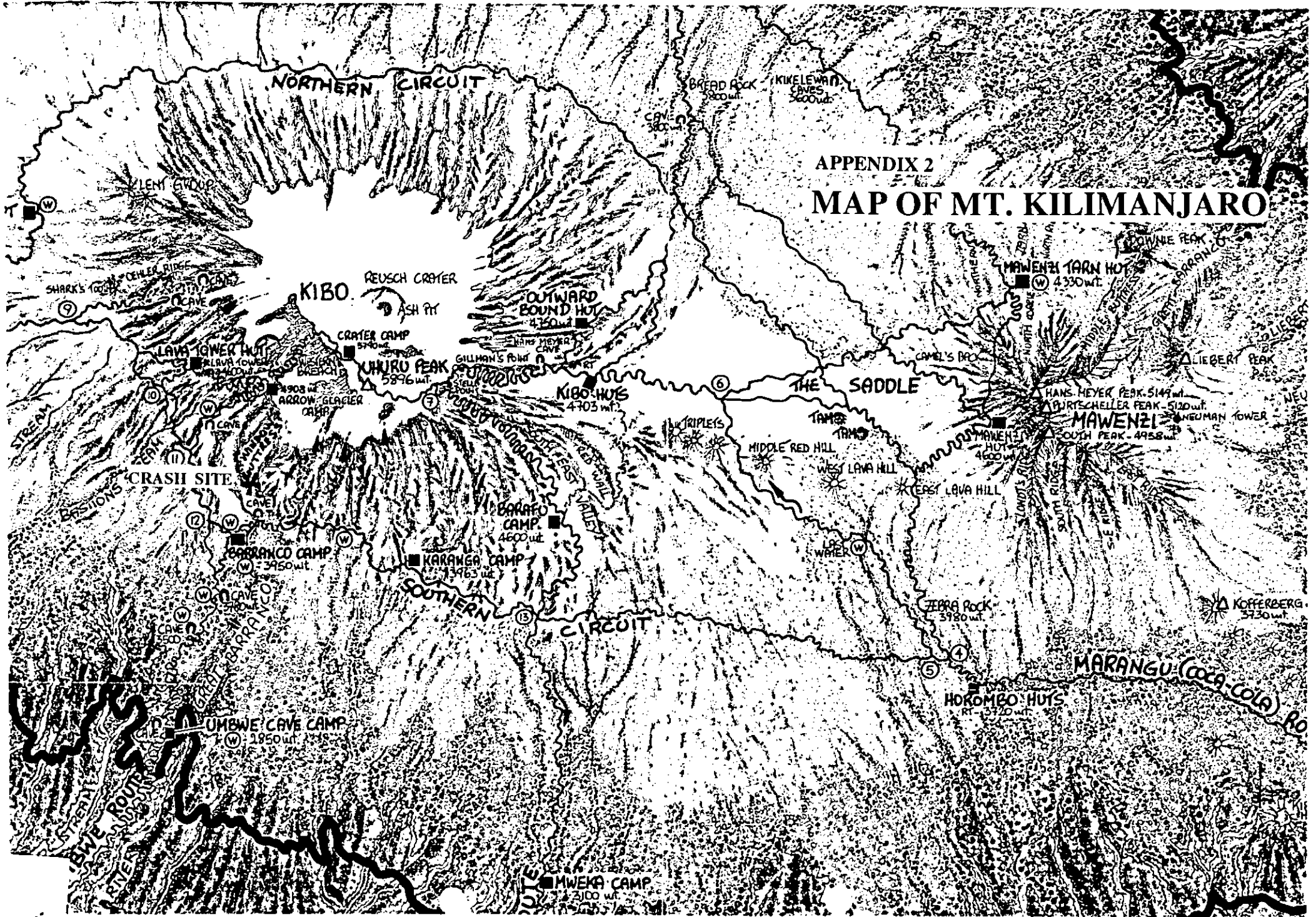
Residents of Marangu, at the foot of Mt Kilimanjaro (6000 ft) said that at about 2 pm in the afternoon of 1<sup>st</sup> November 1997 they saw a white plane circling high overhead. However, no person reported to have heard any impact noise.

The weather around Mount Kilimanjaro was reported as cloudy with rain. It would appear that 5H-AZM had already crossed the mountainous section of the Kilimanjaro since he was seen on the southern side of the mountain (Marangu). Since he was flying in bad weather, visibility was necessarily limited. He possibly did not know where he was because he was seen circling very close to high ground.

One theory is that the pilot believed that he was still on the northern side of the mountain and, with the reduced visibility, he had decided to gain extra height and head northeast before re-setting course for Zanzibar. This should have enabled him to remain clear of the mountains.







APPENDIX 2

MAP OF MT. KILIMANJARO

NORTHERN CIRCUIT

KIBO

REUSCH CRATER

ASH PIT

OUTWARD BOUND HUT  
4750 wt.

CRATER CAMP  
5700 wt.

KIJURU PEAK  
5896 wt.

KIBO HUTS  
4703 wt.

THE SADDLE

MAWENZI TARN HUT  
4330 wt.

LAVA TOWER HUT  
4400 wt.

CRASH SITE

BORARFO CAMP  
4600 wt.

KARANGA CAMP  
4346 wt.

MAWENZI SOUTH PEAK  
4958 wt.

BORARANCO CAMP  
3950 wt.

SOUTHERN CIRCUIT

ZEBA ROCK  
3980 wt.

UMBWE CAVE CAMP  
3950 wt.

HOROMBO HUTS  
3720 wt.

MWEKA CAMP  
2300 wt.

MARANGU (COCA-COLA) ROAD

