

SYNOPSIS

AIRCRAFT ACCIDENT - CC13807

WEST OF CALGARY, 14 JUNE 1986

CIRCUMSTANCES

On the afternoon of June 14, 1986, Twin Otter 13807, call sign Rescue 807, took off from Calgary International Airport on a search mission associated with SAR WOLFF. The Aircraft Commander had been briefed at search headquarters and assigned an area southeast of Kananaskis. The crew of eight consisted of two pilots, a flight engineer, and five civilian spotters, members of the Civil Air Rescue Emergency Service (CARES).

Rescue 807, with the First Officer in the left seat, reported on task at 1400 hrs local and operations normal at 1457 hrs local. About one hour later, Rescue 807 completed a southeast to northwest sweep of a ridge with 6600 ft peaks east of Barrier Lake, turned left to re-position and then entered a small box valley to complete a left hand sweep at approximately 6100 ft. While doing this, the aircraft impacted a rock outcrop at the 5950 ft level on Sibbald Flats. The aircraft was destroyed and there were no survivors.

THE INVESTIGATION

In that there were no witnesses identified as observing the crash occur, a great deal of analysis was required to determine an accurate flight path during Rescue 807's final minutes. The precise sequence of events following the initial contact was proven by detailed component analysis.

The weather in the area at the time of the accident was good and was not a factor.

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The valley in which the accident occurred is relatively confined with a rocky outcrop on its northeast wall. The outcrop juts out into the valley in such a manner that from a distance, or from above, it appears insignificant. Rescue 807 carried out an overflight of the valley to determine the search method to be used. The orientation and topography of the valley would induce the crew to execute the planned pattern to provide 500 ft and half mile search coverage.

ACCIDENT SUMMARY

The aircraft entered the boxed valley approximately 30 seconds prior to impact and manoeuvred to achieve the required 500 and half mile coverage. Just prior to impact, the crew would have seen the obstruction of the protruding rock outcrop in the valley. At that time, in the attempt to miss the outcrop, the aircraft was in a very steep left bank near stalled condition when its left wing tip struck the outcropping. Investigation revealed that both engines were producing power and there is no evidence of control or structural failure prior to impact.

ACCIDENT CAUSES

Although inquiry into this accident is not complete, tentative cause factors have been assigned. It is considered that the cause of the accident was due to the physical environment and lack of visual cues (in the prevailing light condition). A visual illusion prevented the crew from being aware of the rock outcrop. During the subsequent investigation, a Twin Huey helicopter was tasked to follow the same flight profile as Rescue 807. Even though the crew of the helicopter was thoroughly briefed on the suspected visual illusion, they were totally unprepared for how dramatically the hazard suddenly appeared.

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CONCLUSION

The cause of this accident was due to the crew of Rescue 807 being unable to avoid an obstacle while conducting a mountain search. The crews had executed all manoeuvres in accordance with Search and Rescue standard operating procedures and had demonstrated all reasonable concern for terrain study. An insidious set of circumstances combined to create a situation which led to the loss of very experienced and highly qualified personnel.