

# **Balloon Federation of America**

## **Accident Report**

### **ACCIDENT DCA16MA204**

Location: Lockhart, Texas

Date: July 30, 2016

Time: 0742 central daylight time (CDT)

Aircraft: Heart of Texas Balloons Balony Kubicek BB85Z, registration N2469L

The Lockhart accident was a tragedy that resulted in the needless loss of life of 16 people. The mechanics of this accident were no different to other powerline accidents the NTSB has investigated, but it is the magnitude of the loss that separates the Lockhart accident from previous accidents.

What makes this accident even more unfortunate is that the facts strongly suggest that it would have been avoided had the pilot employed normal, industry-standard decision making practices in two key areas: go/no-go decision, and obstacle avoidance. Other decisions such as aborting the flight, could also have led to a positive outcome, but the first two are clear differentiators.

### **Go / No-Go Decision**

Available weather sources clearly indicate that the airmass was saturated through approximately 3000' during the flight window. The pilot was aware of the strong potential for low ceilings and low visibility. The fact that the other pilots in the immediate area who were scheduled to fly that morning all cancelled – prior to meeting passengers – is a clear indication that the available data showed the weather was not conducive for safe flight.

Additionally, the pilot had enough experience in the local flying area to know that the moist air mass often leads to rapid onset of low ceilings and IMC.

His pre-flight remarks to the weather briefer regarding “flying around” clouds display his cavalier attitude about the weather conditions that kept his more sensible cohorts on the ground. This is yet another indication of his attitude that the rules did not apply to him.

### **Pressure to Fly**

It is not clear if the pilot felt pressure to fly that morning for any reason – financial or other. A witness indicates that the accident pilot might ‘push the limits’ towards the end of the month if he had not flown in a while and bills were due. Even if this characterization is accurate, the pilot had made numerous flights in the previous 2 weeks making the financial pressure unlikely.

In reviewing the available records and pilot history, it is more likely that the pilot saw ‘nothing wrong’ with the weather conditions that morning and did not feel he was putting himself or others in jeopardy. There is no evidence to suggest the pilot was thrill seeking, or believed himself to be taking undue risks.

NTSB interviews of the crew do not indicate if the weather conditions for the accident flight were atypical of this pilot's operations.

Such pilot decision-making is indicative of denial, a machismo attitude about flying, and a lack of ongoing training/mentoring to counteract this personality trait.

### **Aborting the Flight**

The track data suggests that there were opportunities to abort the flight. There were several points where the track shows the aircraft to be low, moving slowing, and in an area suitable for landing. While we don't know the actual visibility at that time, the fact of being near the ground indicates that visibility was good enough to have made a landing.

We believe that not exercising the opportunity to abort the flight indicates that the pilot perceived the conditions to be 'good enough' to make a safe flight.

### **Managing 'VFR On Top'**

Judging from the available track data and knowing the amount of time spent flying in the area, conclude that the pilot was generally familiar with the area, and it is likely that he was aware of the presence of these major transmission lines in the vicinity.

However, we also know that the pilot had an iPad on board, and regularly used Glympse software to notify the crew of his position. If the pilot was in a hopeless situation of 'VFR on top' with no visibility of the ground he could have used the iPad's apps to show his position relative to obstacles like these major powerlines, and remain aloft until the map showed his location to be near the middle of a large field, thereby dramatically increasing the odds of a normal landing.

The pilot could also have better utilized his crew, in combination with the iPad position/map imagery, to scout for suitable landing sites, ensuring that the descent was made into a field free from powerlines.

The fact that he did not appear to use such tools is further indication that he felt the situation to be 'under control' and that the conditions were good enough to make the descent to low level.

Also, given the extent of the fire, it seems likely that there was sufficient fuel to continue flying for some time.

### **Obstacle Avoidance**

Every balloon pilot learns that powerlines are fatal, regardless of the size. Balloon pilots are trained and re-trained to avoid powerlines. The phrase "if in doubt, rip-out" is drilled into every pilot. This phrase means that if there is ANY doubt that you can safely clear the powerlines, then you must 'rip-out' (open the deflation system), to make a hard landing prior to the obstacle – even if it means injuring the passengers, damaging the aircraft, or the upper part of the balloon making contact with the powerlines. Every possible negative outcome of ripping-out is preferable to contacting powerlines at basket-height.

The need to make the decision to rip-out is a rarity, and is equivalent in the fixed-wing world to deciding to land straight ahead or turn around, after an engine failure on takeoff. Most pilots will never face making that decision, nonetheless, it is drilled into every pilot not to make the 'impossible turn'.

We know from interviews with people that trained with this pilot, that such ‘ripping-out’ was practiced during training, such that the students learned not to be afraid of ripping-out.

Before reviewing the track data, there are only a few possible scenarios in the moments leading up to the crash.

- The aircraft was above a cloud deck, and upon descending through, contacted powerlines without ever seeing or being able to avoid them
- The aircraft was flying in level flight in low visibility and didn’t see the powerlines until it was too late
- There was some emergency on board, such as inoperative fuel system, or pilot incapacitation, and the aircraft contacted the lines while under diminished control
- The pilot did see the lines, and attempted to climb over them, failing to do so.

Sadly, the track data seems to indicate that a descent to near-surface level was made in the last minute of flight, followed by a rapid transition to climb, rapid climb, and finally contact with powerlines.

This implies that the pilot did see the powerlines and elected to climb (believing he could clear them) instead of employing the industry-standard practice of ripping out.

The rate of climb attained during the last 30 seconds of flight, along with previous climbs during the earlier phase of flight seem to indicate that the aircraft had the necessary performance to meet or exceed certification standards, so it is unlikely that there was a performance-related emergency.

## **Reputation**

According to other pilots in the immediate area, this pilot was a ‘free spirit’ who shunned advice and offers of support. There is no record of him participating in safety seminars, joining industry organizations, or otherwise seeking additional knowledge, training, mentoring, or consultation with peers. Likewise, his history of drug and alcohol use shows a complete lack of respect for regulation.

Ironically, others that knew him, describe an attention to detail regarding aircraft airworthiness – despite expense – especially when others were to fly his aircraft. It is unfortunate that this attention to detail did not carry over to his flight decision-making.

It is equally unfortunate that when reported to the FAA for his flying practices, the system failed – in this instance – allowing the issue to go stale, preventing further action.

## **Medical Factors**

Much emphasis has been placed on medical factors, and there is no doubt that the pilot had a history of drug and alcohol use. However, it is not clear if or how the drugs affected his decision-making in this case, or if his basic personality alone predisposed him to underestimating risk.

We submit that even if a medical certificate had been required, it is unlikely to have prevented this pilot from flying in this case, given that drug use is still reported through self-disclosure.

## **Conclusion**

This accident was caused by grossly inadequate pilot decision making, both before and during flight. The accident pilot was predisposed to underestimating or being unaware of the risks associated with flying in forecast IMC. He launched in conditions that were forecast to be, and were quickly becoming IMC, and was flippant with Flight Service about flying in clouds. He did not exercise the opportunity to abort the flight, nor use the available tools, including his crew, to extend the flight to a suitable landing area. Finally, he committed the cardinal sin of balloon piloting, by not ripping-out when approaching powerlines that he may not be able to clear.

It is very difficult to influence a pilot who refuses to accept training, mentoring, counseling, or other advice, unless there is a strong incentive to do so and/or a structure requiring it. However, it is difficult to see how regulatory changes would have affected his decision-making practices.

While there may in this case be regulatory changes that could have disqualified this pilot from flying, in our opinion, the underlying cause is inadequate pilot decision-making that is likely to have existed regardless of medication or medical history. Such decision making, while fundamentally being driven by pilot personality and attitude, may be also be a function of training, continuing education, awareness and mentoring. The focus of the industry should be to develop, through a public-private partnership, a system where it is hard for a pilot to exist outside of 'sphere of influence' regarding proper Safety Management and decision-making. We believe that this system has the highest chance of success.

Respectfully Submitted



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