

Outstanding airmanship and aeronautical decision-making by OU flight student Billy Kreikemeier, Private Pilot (185 hours)

Pilots inevitably encounter unforeseen meteorological conditions. How they collect and interpret additional information are critical steps to proper aeronautical decision-making (ADM). This story provides an excellent example of how well trained pilots should plan and execute a flight. Additionally, it demonstrates the steps a Pilot in Command must go through when considering alternative courses of action, selecting and committing to a decision in the interest of safety.

Single-pilot resource management is no easy task—it takes deliberate attention and the ability to prioritize, thinking outside the cockpit to gather and utilize all available resources. The questions this pilot asks himself during his aeronautical event, along with his highly detailed preflight planning and effective use of outside resources (ATC and Flight Service), are the gold standard of self-awareness as a pilot.

External pressures are very real and their influence on our decision-making cannot be ignored. When pressures mount, it can be difficult to make the decision to discontinue a flight. Pilots have an *obligation* to think about each flight objectively and digest all available information, blocking out the infamous “get-there-it-is” to which we are inevitably subjected.

It is my hope that you read this Safety Corner article and put yourself in this pilot’s shoes. Ask yourself: how would you have reacted? What alternatives or solutions would you have considered? Chair-flying these scenarios is excellent training for even the most experienced pilots. Boomer Sooner!

-Tom Bishop, Safety Officer

Reduced Inflight Visibility and Diversion

By William Kreikemeier

University of Oklahoma student and Private Pilot

-Monday April 10, 2017

The following is my account of my attempted flight to Kansas City Downtown airport (KMKC) in Secondary Flying AVIA 2341 lesson 5-11 (the 6hr XC)

Route: KOUN -> BVO -> CNU -> KMKC

This route was to allow me to avoid the Eureka Low MOA that lies in southeastern Kansas, and to brush up on VOR navigation. I was planning on flying directly to KMKC and on the way back I would stop in Bartlesville, OK (KBVO) to fulfill the 3 landing points on the syllabus ticket.

Aircraft and Time: I was going to complete the flight in Crimson 6, and I was scheduled from 1230 local to 2130 local. In my VFR flight plan, I filed an expected departure time of 1815Z (1315 local).

Weather: I had been looking at the weather for 24 hours prior to my flight. The longer cross country flights gave me some stress because I wanted to make sure that I was going to make a safe, legal flight. I always monitor the weather 24 hours in advance of a longer flight to see what the trend of the forecasts are doing. I woke up in the morning and immediately checked the TAFs for the airports along my route before I went to my morning classes on campus. During my English class (1030-1120) I logged onto my computer and into my DUATS account and got a standard briefing at around 1100 (glad my screen faces away from the professor). Initially I was concerned about the moderate turbulence that was forecasted along my entire route. I was not looking forward to getting tossed around for six hours. Furthermore, I noticed that the winds up in Kansas City were forecasted to be over at the maximum demonstrated crosswind component of the Warrior at 17kts. I saw no signs of low visibility or low ceilings in any Area Forecast or TAF. There had been a cold front that stretched from 50NM or so East of Kansas City, down East of Tulsa and East of Dallas that was causing squall lines to build up on ahead of where the front was moving. With a forecast of moderate turbulence below 10,000 and a cold front that had just passed, I expected visibility to be excellent. I quickly ate lunch, got another DUATS standard briefing, and flight planned when I got back to my dorm room. I was not expecting to go fly due to the crosswind component but I filed my flight plan anyway. I elected to show up at the airport in case the winds were forecasted to die down in Kansas City as the 18Z TAF would be coming out around the time I got to dispatch. I got to dispatch after and discussed my concerns about the moderate turbulence and high crosswinds with Nick Pugh. Luckily there had been a couple of PIREPS of negative turbulence along the route which eliminated my concern about being tossed around. We looked at the TAF that had just been released as we talked, and the winds were forecasted to straighten up down the runway, and die down as well. Now comfortable with the conditions, I chose to go fly and finally knock out secondary (or so I thought).

The Flight: I departed Westheimer at around 1830Z (1330 local), and proceeded to climb to my filed altitude of 5,500. I felt only an intermittent light chop during my climb, so upon reaching 5,500 I called up McAlester Radio on 122.65 and gave them a PIREP in case anyone else was going out that direction and had the same concerns that I did. I also opened my flight plan with them in the air as the RCO, 122.15, wasn't working when I was trying to depart. About 30NM into the trip, I remember smiling thinking about how the next time I would be back in Norman I wouldn't have to worry about getting weathered out of the long XCs since I would be done with them. I guess I jinxed myself.

As I was approaching Cleveland, OK I started to see something out on the horizon that looked like a combination of an overcast layer and low visibility. Confused, I called up Flight Service and requested an enroute briefing. The briefer thought that I saw just seeing the thunderstorms out to the east, and told me that every airport was reporting 10sm visibility and clear below 12,000. Adamant, I assured the briefer that I was not seeing the storms ahead of me. I informed him that I could see them way out in the distance, but that there was something out on the horizon. I asked him if he could see anything on satellite, and he said he wasn't seeing anything on satellite either. Confused, I pressed onward, and let the briefer know that I would call back as I got closer. I could see a couple of isolated brush fires that were contributing smoke plumes into the sky, but they looked too far offset to create this wall of bad visibility that I saw. It was very odd to me as I had never seen anything like it in my experience flying. There seemed to be a very definitive line, where on one side was near perfect visibility, and on the other was what I would imagine would be 1 mile visibility or lower. This line extended northwest bound into the Eureka Low MOA, and southwest bound to the East of Tulsa and further south almost to where I'd imagine the Fort Smith, AR area to be.

As I got closer and closer, I began to realize that it was unlikely that I would be able to pass through. I began to weigh my options. Could I climb over it? No. I couldn't even tell how high up it was, and if it was actually smoke, it could rise higher and trap me in with nowhere to go. Could I go North around it? Nope, there was an MOA to the North that I wouldn't be able to go through. What next? Ah here we go, I could get closer and see if there is a gap that I could shoot through. But then I thought about that decision. What if I am going through and the gap closes up on me? Should I even try to fly through smoke? Would I suffocate? That would totally suck. Would the smoke kill the engine? Is there even enough visibility to be legal? What if it gets worse and I get trapped on the North side and I can't get back to Norman? Not only was that bouncing around in my mind but I could feel the pressure to just get the lesson done, in the back of my mind. I knew that I could not let that pressure get in the way of making a good decision. I had gone a month and 10 days without flying from my second 4 hour XC to the first 5hr XC because of winds being over solo maximums, IMC, storms, and other weather that wouldn't safely allow me to go. What if there is another stretch of bad weather on the days that I am available to fly, just like earlier in the semester? What if I can't find another day to finish this 6hr? Every time one of those thoughts about "needing" to finish the flight crossed my mind, I thought of all the NTSB reports I've read that sounded like how this was playing out. I thought of all those AOPA Air Safety Institute videos about people who were pressured into continuing a flight when they really shouldn't have. I thought about how bad of an idea it would be to just "take a look" at what things were like. Straight ahead of me looked like 0/0, I wasn't going to put myself in that situation. I called up Kansas City Center and told them that I was going to have to

turn around and proceed back southbound. I knew I had made the right decision even before I started the turn. I quick looked at my sectional, and decided to go to 95F. It had a 4000ft runway, and was not even a mile off course on my way back to KOUN. I saw that there wasn't any fuel available at the field, but I knew that I had roughly four hours of fuel still on board, plenty to make it back to Westheimer. It was also far enough away from the smoke so I wouldn't get trapped from it. I then called the local FSS and let them know that I could not make it through and filed a PIREP with them. I told them that I was going to land at 95F and then I'd call over the phone to close my flight plan. The briefer advised me that there were no NOTAMs at 95F and I continued trucking along to Cleveland. Kansas City then handed me off to Tulsa Approach/Departure and I let them know about the poor visibility in case the controller was sending anyone out that direction. I continued on to Cleveland and landed. After a few phone calls, re-filing a VFR flight plan, and getting a full weather briefing, I made an uneventful flight back to Westheimer.

Although I was disappointed that I was unable make it to Kansas City, I knew that I had made the made the right decision. I had never had to divert in the air due to changing weather conditions, and I was proud of the fact that I did the right thing. This first real in flight decision making challenge gave me a lot of confidence in my own ADM.

If I may, I'd like to suggest telling people to file PIREPs, and chat with Flight Service and get enroute briefings. After talking with a few of my peers, I've found that not many give PIREPs (I try to give one on every XC) or get enroute weather briefings. I find the enroute briefings to be extremely useful, and a good way to assure that the weather isn't changing for the worse.