



RECORD OF CONVERSATION

All persons listed were interviewed by Zoë Keliher

The following is a summary of conversation:

PAPILLON PILOTS

JOHN DAVIS (53); DEPARTED 16:38

I had landed my helicopter at Quartermaster Base. And Scott was about a minute and a half, 2 minutes behind me. I have experience flying in mountains and I knew it was windy so I thought there might be a wind shear right after crossing the river and was prepared for it. And when it hit me, it was more than I expected and it took everything I had to control that helicopter and land it. But I was prepared for it, and I could have got on the radio and said, hey, there -- don't come this way; there's a wind shear. I don't know what happened, all I know is it easily could have been me too.

I almost lost control of the helicopter. I had to pull power completely up and as much right pedal as I could to keep the nose back, coming back straight. I made that turn to go into Quartermaster, my nose swung 90 degrees to the left and I went from having airspeed to not having any at all. I don't know how I kept it straight. I keep thinking about that. Had I said something on the radio, maybe he would have not followed that direction. I was just relieved I was on the ground, and I knew that people behind me knew what they were doing. As soon as I had made my left turn, the nose whipped around to the left. And I kind of started sinking, pulled in all the power I had. Got some forward airspeed because I lost all my airspeed, and just forward and right cyclic, lots of power, and every bit of right pedal that I had. The EC130 tail acts like a sail in wind and when going from having airspeed to no airspeed you are not left with a lot of pedal authority. Of not having that airspeed requires a lot more power and a lot more pedal.

I told myself when I got in the canyon that, if it was still bad, if the wind was bad, I wasn't going to land and it was nice (much worse above the canyon). And so it was a real comfortable approach in. But I knew that I had a tailwind coming in and so I knew that there might be wind shear right before Quartermaster. And I was ready for it. It was nothing like what I expected (much stronger). I don't know if he hit the same shear I did since was 2 minutes behind me.

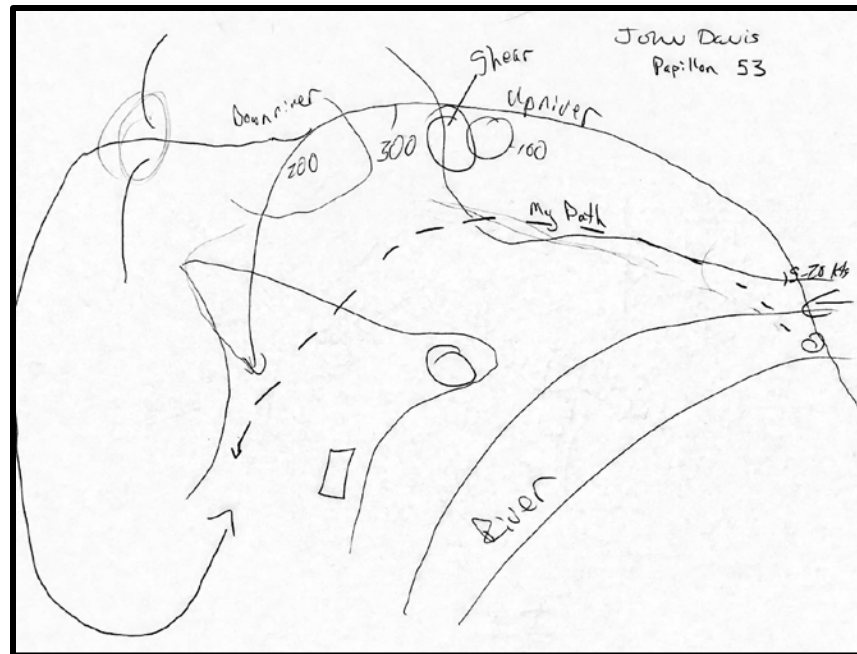
My helicopter blades were slowing down. They were almost to a stop. I looked out my left window, the pilot's window. I saw a helicopter on final approach. He was probably still 400 or 500 feet above the ground. I watched him cross the Colorado River, which is where we start our approach into Quartermaster Base. I was making sure my blades were stopped, because I didn't want the blades moving from him landing behind me. I saw him cross the river, and then I looked back to my helicopter, made sure the blades were stopped. He looked stable, in control. I didn't see anything unusual. And as he got to the bluff, I lost sight of him. I didn't see anything after that point. I was still in the helicopter when somebody told me that a helicopter had crashed. I didn't know if it was that one behind me or another one at that point.

I determined the landing pad that I'm going to use, by seeing which one is open. I usually kind of base where I'm going to land, how I'm going to land based on who's here when I was coming in. All of the downriver locations were taken so I chose to come in upriver. I knew I was giving myself a tailwind, that I was going to come around a little bit more and make sure I had more of a headwind component. I was farther left than I usually would, because I didn't want to be over here in case there was a shear. This was my first windy day at quartermaster, and would estimate the wind to be 15 to 20 kn. When approaching into the canyon he went

from 50 to 60 kts to about 0 kts. I was new and thought the shear right here would be worse so I figured I had a better option doing this than going through the notch.

Notes:

- Started Papillon in January
- Was taught settling with power in a R66, but not at Papillom



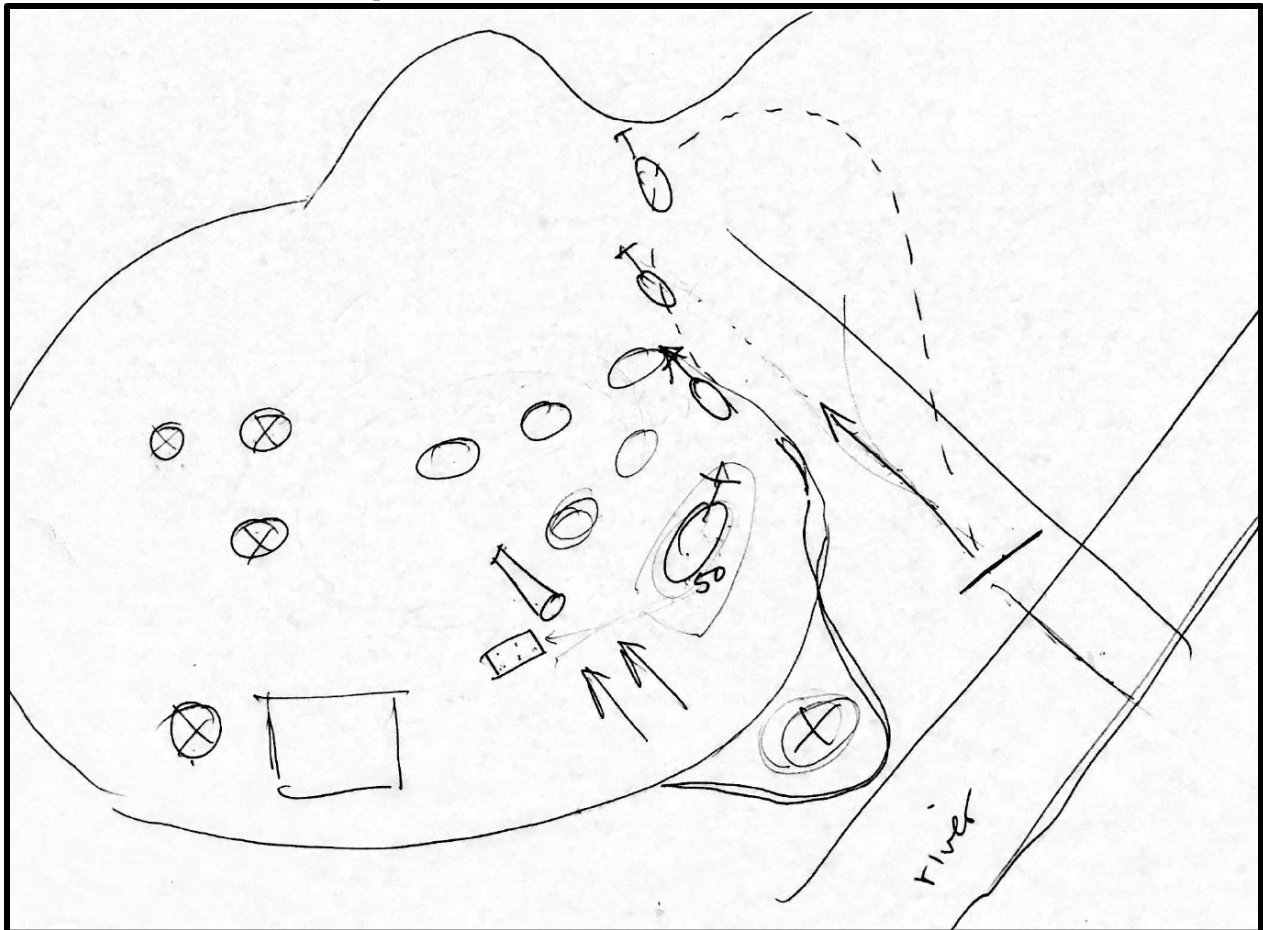
I started my descent into Quartermaster base from the Bat towers and even though the wind and been blowing hard above it wasn't as bad down in the canyon. Wind was blowing up river at approximately 15-20 knots. Scott was behind me approximately 2 minutes. Upon crossing the river I chose to land up river in front of the notch which created a left quartering tail wind. As soon as I passed the bluff starting my left turn towards the EAST and I immediately encountered a very strong wind shear. My indicated airspeed went from 55 knots to 0 immediately creating a very strong sink rate and a large pull on the nose to left. I immediately pulled in power to about 9.7 on the FLI and applied full right pedal. I corrected the yaw and tilted the disc forward and right arresting any strong descent rate. I had anticipated the shear so I was trying to hug the left side of the terrain to prevent the strongest of it. I established a stabilized normal approach into a landing at Quartermaster base. Upon set down I waited 30 seconds and started my shutdown procedure. As soon as I got the blades stopped I saw everyone running outside my window towards the back of the helicopter. I opened my door and one of the other pilots notified me that Scott had crashed so I immediately notified GUANO Base on FM about the crash. The helicopter following Scott chose to go around and fly to GCW also relaying on FM about the crash. While one of the other pilots unloaded my passengers I began running over to the crash site. It was located approximately 300 meters horizontally from my location and 500-600(estimated) ft vertically. I noticed a lot of smoke coming from the wreckage and several loud bangs that sounded like something blowing up. It took me approximately 15 minutes to make it down to the wreckage. I was probably the 3rd or 4th person down to the scene. I surveyed the wreckage and knew we couldn't get anyone else from there because it was burning and there was no chance of any other survivors. I located 3 passengers that were badly injured approximately 40 ft east of the wreckage and the pilot was about 20 ft south east of the wreckage. I started checking all the injured for the most grievous wounds and did my best to ensure that they were comfortable and began trying to treat them as best we could while trying to coordinate which passengers who were down at the crash site assisting and maintaining positive control of the situation until EMS could arrive.

I came in about 2100 ft msl across the river and stayed higher than normal for turbulence/wind. I took an extra fly sideways toward the landing point to give myself a headwind and then when you get into ground effect you can reposition with terrain. I made sure to keep my airspeed up to 60 kts. When there are upriver winds (coming from the west) the best option is to go through the notch and land facing West. Alternatively, you can go over the canyon and then land on the west side facing east. The east pads were taken up when I came in to make the approach and I knew that there were a lot of new guys and I try to give them the easy spots. I remember when I was coming into land that I was having trouble keeping the helicopter steady to touch down on the gravel.

I was setting up my baskets and realized that there were still more helicopters that were going to come in, and I didn't want them to blow the cups off the table. Because there was pads available right near the area of the picnic tables. I looked up and to this general direction here so I could see how far away the next helicopter was from coming in and determine how much time I had to kind of reassemble my table a little bit and prepare for the downdraft that we would get. And at this point, as soon as I looked over, I saw a helicopter spinning. And at the time when it was rotating, I would say that it was about 100 feet from that elevation, so I estimated it to be about 1800 MSL. It was already pretty low.

NOTES:

- Started Papillon July 2016- TT 2200, EC130 950 hours (normally flies the T2)
- Wind was 15 to 20 knots- wasn't concerned with the wind/turbulence- wasn't abnormal
- Never did SWP training in a turbine (talked about it, but no practical training)
- Her turbine transition was at Papillon



At approximately 4:20 pm Nevada time on 2/10/18, I was setting up the picnic for the Passengers at quartermaster base. My passengers were walking close to the table taking photos. As I completed assembling the table, I looked up at our approach path for landing at the LZ. (The winds I would say were approx. 15 knots and we were making mostly downriver landings.) As I looked up I saw 34 at an altitude of about 1800' MSL (roughly 100-200 feet above the LZ altitude). The helicopter was spinning; I cannot recall which direction it was rotating). It completed 2 full turns as it descended. At that moment I turned back toward the picnic area and yelled for one of the other pilots. Once I turned around the helicopter disappeared below. I did not hear any impact; however I saw a black plume of smoke about 10 seconds later.

BRETT AHOLA (30); DEPARTED 16:32

It was turbulent in the canyon as we began the descent. Everything was normal for the most part. Passing, there's a boat dock that we call the Ramada. And down, there's a windsock down there that I always look at. And you're about 3,000 feet when you're abeam or next to that Ramada, that windsock.

So I noticed that there was an up canyon wind. So when I see that, I always prepare myself if I'm going to be going -- which direction on how to land. Obviously, the goal is always to be in a headwind. So I always doublecheck that. Then I'm coming down from 3,000 feet to below 2,000 feet. I was about 1800 feet as I crossed the river approaching to Quartermaster Base, and then looked off to my left down below, and on the windsock confirmed the exact same thing. And the pilot in front of me had gone over the river and then -- I don't know if you know, but it's called through the Notch. It's just going around to give myself the headwind approach down into Quartermaster Base.

I noticed there was one last spot open. So as I came across the river and noting -- looking down at that point, I had a left quartering tailwind. As you go through the Notch, there was a little bit of turbulence, as I expected. And then flew around, continued that left turn to end up on final approach, and checking the windsock one more time. And in that situation, that put me at a right quartering headwind for my approach to land.

And as I set down, I had switched over my frequency from the C-TAC frequency into the Grand Canyon to our company frequency. And there was three people behind me that I knew of. Christina Sotos Rascon, was in 50 and so I warned her to watch out for a tailwind and be careful on the approach. She responded that she would still land going upriver. As I was setting up the meals, John Davis, he came in to land and the windsock was still standing in up canyon wind.

I've done this same exact approach as the accident pilot when I was probably 3 months into flying out here. During this experience, I lost airspeed and started a descent that I did not anticipate. And I had gotten caught in this same situation that he got caught in, where that I experienced a loss of wind entirely and sunk out and had to get out. There was this little spine of a ridge before that bowl. And I've experienced that wind coming up canyon. Rises up that spine, comes down and swirls, where the wind is a swirling motion with a downward flow. I've gotten a pocket where it just sinks the helicopter. It sinks you right down and it looks like that was what happened. And so, with that experience, I didn't want to do that again, so I took the headwind. I knew there was an issue with flying to the west pads feeling bad about what the pilots should do and the approach they have to make.

I looked up and watched the accident pilot come in. As he was coming in descending down to 2,000 feet, at which point he comes across the river. The helicopter continues to decelerate. He then goes in a nose-up attitude, I'd say, of about 15 degrees. Nose up, decelerating to turn to land. You can tell that he was trying to turn around to make this approach to land. I'm assuming he was trying to land in one of those spots, the west pad. As he decelerated, he began the left turn to come in to face the pads (the helicopter is assuming a nose-up attitude and yawing left). And when he comes around to face the landing zone, the helicopter transitioned to a nose level attitude. Then it turns from a level-pitch attitude into a nose low. And this is right

where I noticed an aft motion, which appeared to be from the wind. And then as he comes nose low, then the yaw continued. I could tell he was trying to gain airspeed to come back in, but as he was in nose low, he was slightly moving aft. It was that much of a wind shift, from that nose up to trying to get back into it, moving aft.

And now in the nose level attitude, that yaw did not stop and continued to a full 360 at that point. Then you could tell he just pulled aft to try to hold level and control the yaw, but it didn't stop. And it started to descend. The aircraft was descending, a flat pitch. Then it continued a second 360, still descending. I started to run over, and then as it began the third 360, it disappeared below the bluff and continued into the impact. I'd say 5 to 10 seconds later, fire started.

NOTES:

- Estimated wind was 20-25 kts up the canyon
- TT-2350



On the sunset flight to the canyon the wind had picked up. On approach to quarter master base I noted a large up canyon wind, I can estimate the wind velocity to be 20 kts gusting 25 and decided to land through the notch for a down river headwind approach to quarter master. As I went through the notch I experienced a good amount of turbulence. As I come on short final I again noted the strong headwind and warned incoming pilots of the up canyon wind. I shut down, unloaded passengers and went over to the tables to set up the meals. As I finished setting up meals I looked up and saw 34 coming in to land and saw he was going for an upriver landing. As the aircraft crossed the river the nose pitched up and started to slow, I could tell he was attempting to lose altitude and airspeed as he brought the aircraft into a slow nose up, descending left turn. Then the aircraft continued to yaw left and the nose dropped to a nose low attitude. As the aircraft began to point towards the landing zone the nose did not stop rotating and continued to spin left. As the aircraft completed a full 360 degree turn the nose became level and continued to descend straight down at zero airspeed. The aircraft completed a second 360 left spin and the descent rate increased. I began to run over towards 34 and I saw it complete a third 360 degree spin straight down before it disappeared below the plateau and impacted with the ground. I heard the impact and then a few seconds later smoke began to rise with the fire engulfing the aircraft.

JAMES FINNEY (23); DEPARTED 16:36

As I was coming into the canyon, it would have been a little bit windy. It was windy when we went in. We took off and windy throughout the flight. Once we entered the canyon, a little bit of turbulence, a little bit of bumps here and there, which would have been a symptom of the northerly winds that we had that day. As I was dropping down into the canyon and making my turn to Quartermaster base, the bumps still continued a little bit, and I recognized that I had a bit of a tailwind, not -- I didn't recognize necessarily how extensive it was, but there was a tailwind. As I continued descending, I tried to slow up airspeed a little bit because of the tailwind.

As I was approaching the river, surveying the landing zone, I recognized that there were four aircraft that were parked on the upriver side of our landing area there. There was one aircraft that was parked on Wedding Point. All of those, those five aircraft, were the nose was pointed downriver. Papillon 50, which was parked on the other side of the landing zone, had its nose pointed upriver. As I was coming in, observing the windsock, I verified that there was a tailwind as I was approaching the river.

So at this point in time I was making a decision which way to make my path and approach. My first option was to do the normal approach into the landing zone, which is what I ended up doing; or my second option was to go through the notch and skirting to the uphill side of all the other aircraft parked on the other side of the landing zone, to land to the far end of the parking zones that were on the western side of the landing zone there. The windsock was for the most part full out, so anywhere from at least 10 knots to 15 and above. I'm assuming is a 15-knot windsock.

I knew there was a couple aircraft in relatively close proximity behind me, and to circle around may have potentially been a collision hazard. Therefore, I determined it maybe a little bit more prudent to take the direct crosswind for the approach coming into the landing zone. I crossed over the river, over a slight rise in terrain and up into a slight valley. Thereafter, I did the normal turn to set up for landing. During that turn the helicopter shifted pretty rapidly and the tail tried to "kick behind me." With the larger, fenestron tail on the EC130, it acts similar to a sail and pushes the helicopter's direction when there is wind (weathervane).

With the major shift, I was immediately concerned of my rate of descent and noted that the airspeed indicator showed 45 to 50 kts with a descent rate of about 400 feet per minute. I attempted to arrest the descent to about 300 feet per minute. As the helicopter was descending down into the landing zone, I decided to set down on the farthest pad to the east, enabling another helicopter to land behind me. I noted that the

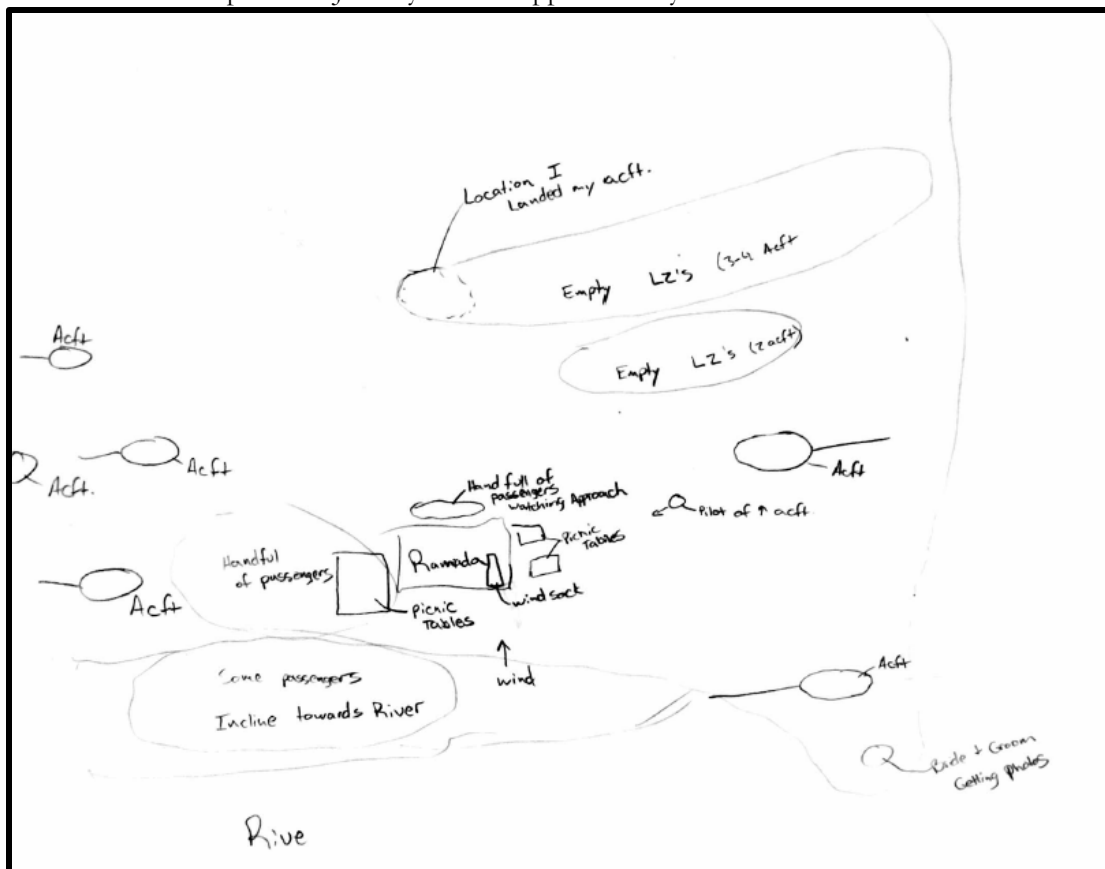
windsock, appeared to be, as I expected, a direct left crosswind about 10 to 15 knots. There were some gusty conditions and the windsock was bouncing back and forth a little bit, which created a tailwind component.

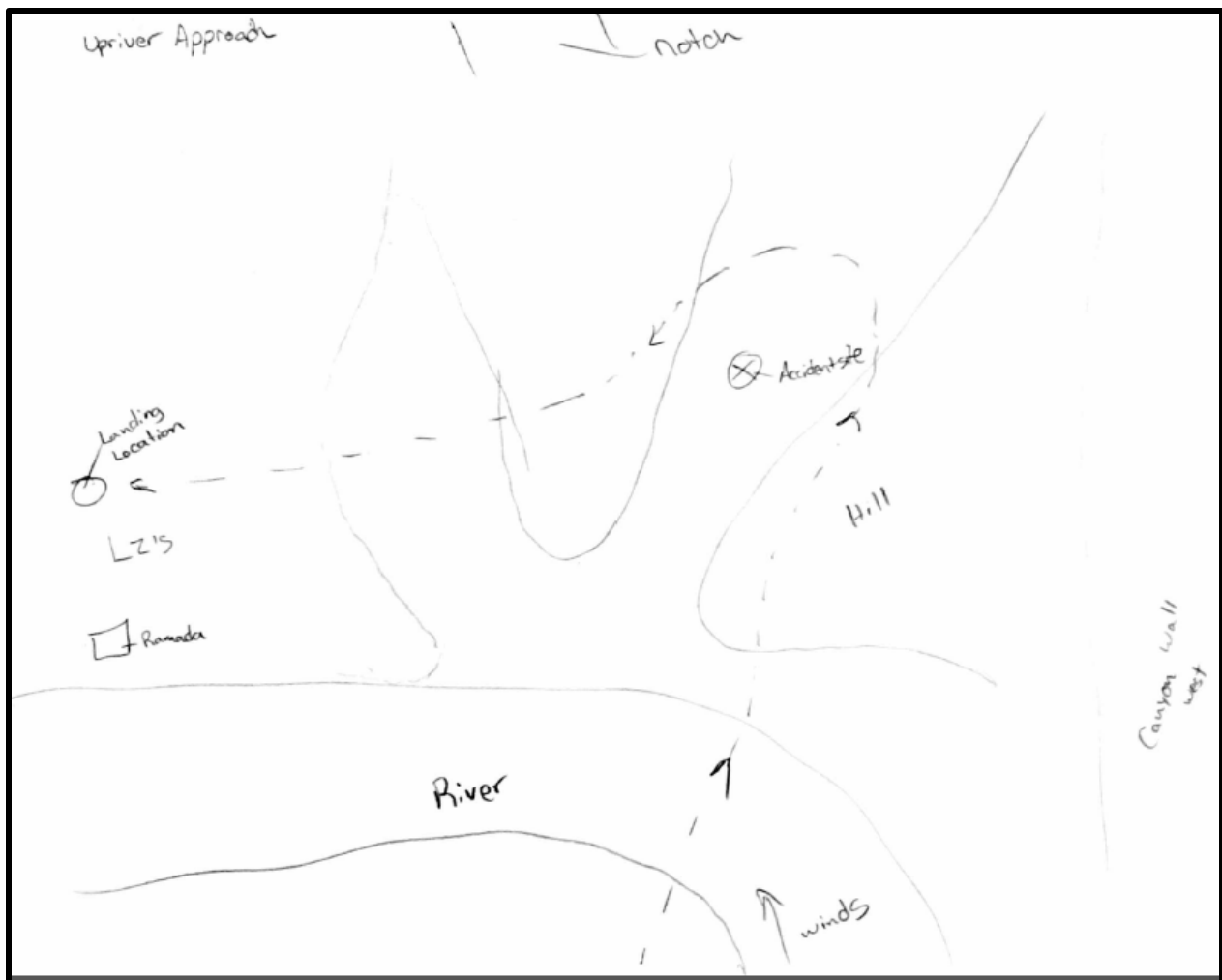
As I continued descending, watching the rate of descent, he continued toward the landing zone, applying heavy amount of right pedal to try to keep the nose straight because the wind was heavily pushing on that tail. While coming inbound, the helicopter was crabbed, until reaching about 15-20 feet agl, at which point I was able to actually straighten out and touchdown parallel to the slope. John Davis was the pilot that landed the helicopter immediately after me. As per the company protocol, when the helicopter's rotor blades are slowing down, you have to notify the person behind you to avoid potentially chopping off the tail boom. When I initially touchdown, I asked Mr. Davis to let me know when he landed so he could protect the helicopter. When I started to apply the rotor brake, I noticed that all the pilots were running to the canyon, which was directly behind the helicopter.

After I ran down the canyon and began to attend to the accident pilot, we were wrapping his leg. Since, I am a new pilot I didn't know the accident pilot very well and he was talking to another pilot, Derrick Mojica, who he knew better. It was at this time that he said something along the lines of "bro, I got settling" or, "bro, I settled," which in helicopter terms automatically assume that settling power was his evaluation of what happened to him. It could have been a number of other things, but that was from the pilot's mouth.

NOTES:

- He did not make any radio calls about the wind
- He has had training regarding settling with power but could not recall practical training in a turbine.
- He was hired at Papillion in January and has approximately 2400 hrs total time.





In the series of events leading to the accident, I was piloting the aircraft that was two in front of the accident aircraft. As I was descending down to quartermaster towards the south I had a tailwind, as I made the turn towards the east for landing to the LZ in quartermaster the tail of my aircraft swung around quite quickly as I turned to the left, which I attributed to turning to the crosswind. On approach into the LZ observing the windsock that was present at the LZ I had a direct left crosswind with a little variability shifting slightly aft. Judging by the windsock the winds were upwards of 10 to 15 knots if not slightly more. Once on the ground one other aircraft landed behind my aircraft. I was still in the aircraft when the accident occurred so I was not able to observe the accident.

On another note I was the first person on the scene of the accident, and began giving aid to the injured. At the moment the pilot was the most urgent due to the nature of his injuries. As myself and another pilot were placing a tourniquet on his leg he stated to the other pilot assisting me, "Dude, I got settling."

These are all the pertinent details of the moments leading up to and following the accident that I can recall.

DERRICK MOJICA (41); DEPARTED 16:11

So I come up to the Bat Towers at an altitude of 5,000 ft, airspeed indicated somewhere just above 100. I know it wasn't very high. I began my descent. I lowered down collective. I usually will lower it down to

about 7 on the FLI6 to begin my descent. I had already heard Venida Hayes on the radio taking Wedding Point. So the other wedding site that we use is a east spot. So I began my descent, coming down in. As I come down, I always take note of the Ramada where the windsock was showing that the wind was coming from the west.

I remained at 1900 as I crossed over the river. Noted the windsock again, and it was showing a pretty significant wind from the west. I also note my groundspeed versus airspeed to determine the wind. Made my call for Papillon 41 going through the notch, landing Quartermaster. Went through the notch, I had noted Venida, when she had landed she was also facing west favor of the wind. And they were already starting to get out of the aircraft to start setting up for their event, their wedding. I came through the notch. As I did, it was a little bumpy as I went through, behind the hill there, coming in. So I maybe started setting up for my approach, to making sure that I had enough airspeed and my approach angle was proper to get to the site that I wanted. I started making my left turn in, nice and shallow, lined myself up. Once I got into the headwind, I noted my airspeed was probably -- was around 50 to 60, between those two increments, and my ground speed was showing below 40.

I approached my spot. I always like to come in a little bit slow to that spot, especially with the wind coming up. As I came in, came in 2-foot hover, noticed that my airspeed indicator was still showing readable airspeed but it was below the 20 indication mark. After landing I shut the helicopter off and soon as I opened the door, I really felt how strong that wind was because it was pushing back against it and kind of closing back on me.

The windsock was gusting, but the windsock was about straight every time I saw it, just straight horizontal. The first one that came in was Pollyanna. She came through the notch to -- and made a left turn to make her approach downriver with the wind. And on the downriver pads (east), there was four of us. I looked to the helicopters that were starting to come in. Now that the downriver pads were all filled up, they started making their approaches to the upriver (west) pads. The first one that I noted coming in was Helicopter 50 with Christina Rascon.

When she came in she made a wide left turn to come in so that way, as she came in, she favored at least the headwind before pedal turning and setting down. I don't remember but there was two other helicopters, maybe three other helicopters, that came in behind her. I didn't really pay attention to their approaches because I was watching the photographer take his photos. I did discuss the wind a little bit, talking about it was not too often there was that much, that strong of wind at the bottom of the Canyon.

The accident helicopter started coming in and everything looked normal (height above the ground, etc). He began to make his left turn. It didn't seem as deep of a turn in as 50, but it wasn't just a direct. As he came in, the helicopter started kind of rotating to the left, and it appeared as if he was doing this to get into the headwind. As he did that, I kind of thought like, okay, that's how we're going to come in to avoid so much -- like too much of a, like a tailwind there. And as he came in, he turned, and it seemed like the helicopter had lost any forward speed, because once it started its rotation it wasn't moving forward. It wasn't moving to the side. It seemed it was going straight down.

So as he came in, kind of keeping on approach, and it's not like -- he wasn't banked over real hard. He wasn't in just a super shallow turn. It looked just like a normal turn like the rest of us had been doing. But as he came out here, the helicopter went almost from a normal turn and it seemed to have leveled out, began its leftward rotation, and as it rotated it just seemed to catch -- like the rotation almost began to speed up, but it dropped out of my view before he made one full rotation.

I ran to the accident site and another pilot, James Finney, was already helping the accident pilot. I was sitting next to the accident pilot with his head near my lap. He told me he was in a lot of pain. And he just said, I don't know what happened; it just fell. He might've said something else and I didn't hear it. But I just heard him saying, like, he fell.

We practice approached into Quartermaster in our training. We all have route training, and every time we go down, each person does an approach to each pad. So everyone will come around to land on this side at least one time. So everyone will come around to land on this side, and they'll even take us to Wedding Point because since it's kind of more a pinnacle. And as we come in and we land there, they have us go all the way

in, and then they'll have us set down, then they'll have us pick up and do a departure. Now when it comes to the land, they always tell us, keep it into the wind. So if a wind is a crosswind from either direction. Coming on this side, we'll make an approach and we always want to make the approach into the headwind, and if we have to, then pedal turn to our spot. We're always told to make our approach into a headwind, even if it's not something like -- let's say if these are all filled up and it's like, oh, no, I have to take a tailwind, we still have the option of going through to make that tailwind or not to -- To make a headwind. I mean, of course, you don't want to just fly over them, but again, if you have to, at the same -- but with this situation, you know, with -- Scott was, I think he was the last one or one of the last ones in, and all that was open was that -- those -- these spots back here.

But everyone, if they still land in this direction, we can still come into this as much as we need to so that way when we re approach, we could be facing this way, come into ground effect, and then do our pedal turn to set down. So I believe that's what he was doing. But this area right here, like, in my experience, this area right here, it could get a little difficult to tell the winds because it's kind of a bowl right there. So with the terrain and everything, it'll shift the wind where it could make it kind of tricky to come in. Even if the windsock shows one direction, like, it can change in that area. So that's where it makes it, you know, kind of hard to predict what the winds are doing in here because it's just a bowl, and the ledge up here is up here. So at that time, you know, we see how the winds are here, just sometimes the winds aren't doing the same thing here, which, you know, I've experienced a little bit of a -- you know, coming in, and all of a sudden it starts to descend a little bit. I didn't -- it wasn't anywhere near extreme, but I decided to do a go-around and remake my approach.

NOTES:

-Started April 2017, TT 1800, EC130 525 hours

-At Papillon they discussed settling with power but would not physically go and try it. They have discussed the Vuichard maneuver



While doing a wedding out of Las Vegas I was parked at the lowest downriver pad. The wind were strong and gusting up river. All four down river pads were filled and three or four other helicopters occupied the upriver pads and themselves had a hard time landing. 34 was making his approach to one of the remaining open up river pads. As he did a circling left turn to quarter master the aircraft began to rotate to the left and sink. It continued to rotate over 180 degrees before disappearing below my line of sight. I started to run over the ledge along with other pilots. Shortly after the helicopter dropped out of sight there was an explosion followed by smoke and fire. After a brief moment of silence I began to hear screaming for help coming from the sight and saw two women emerge from the crash. While making my way toward 34 I tried to get passengers to return to quarter master but most disobeyed. Once I reached the bottom I saw three passengers who had severe burns and no clothes and bleeding. They appeared dazed and in shock. After I saw Booth. He was conscious and talking. He had an open broken leg at the shin and most of his body burned with no clothes on. Finny had began to apply a tourniquet to Booths leg. I made my way back to the top and noted how late it was getting. We tried to use the Sat phone but the battery was dead. We had to plug power adapter to another helicopter but had no service. After about an hour the EMS crew arrived and the remaining pilots began to collect passengers to return to our bases.

MARTIJN ADRIAANSE (40); DEPARTED 16:39

I took off from Boulder City. Flew out there and got to the Bad Towers pretty much, you know, without incident. It was windy, breezy but nothing out of the ordinary. I made the radio call to get office at Green 4, and started descending. Got to Quartermaster Point and noticed a lot of turbulence, a lot of gusting wind, wasn't super comfortable. I'm new, still getting a feel for the aircraft, and so I had already kind of decided that if I couldn't get a pad that I liked, I was to go around, go up top and call it a day. So the way the wind was blowing, and I was kind of looking at my groundspeed versus airspeed, which is, you know, a good primary indicator what the wind's doing. I noticed I had a tailwind.

And sure enough, I get there, I didn't see anything I liked. So I'd already kind of decided I was going to go away. And then I hear, helicopter down, smoke. And sure enough, you know, I come up to the site, see the smoke as I approached, and, you know, see a fire, piece of tailboom laying on the ground. The east pads you'd have a right quartering headwind, and these three pads would have been sweet. These were taken, as well as a couple people, you know, parked here, sort of with a left quartering tailwind, which I'm not super excited about. So I think there was a little spot here that I could have landed but I just wasn't comfortable with that.

I was piloting Papillon 40 on a sunset canyon landing tour with 6 passengers and a baby. Aside from strong winds and turbulence the flight was going normally. As I was approaching our landing zone at quartermaster I noticed very strong gusting winds and turbulence. So much so that I decided if I could not get an ideal landing zone into the wind I would go around and break off to 1G4. (As I was one-way fuel). Right as I was thinking about this decision I heard a radio call about a helicopter down and there being smoke. I noticed the smoke coming up from the canyon before quartermaster at that time. As we passed the crash site I noticed a sea of flames and pieces of a red helicopter. Chaos on the radio ensued. At that point we continued climbing out to 1G4 and I dropped off the passengers and got 10gals fuel so I could drop off three EMT's at the bottom. There were issues with communication between helicopters at the bottom of the canyon and the base at 1G4. The ride down with the EMT's was very turbulent but the landing at the bottom worked out ok as I was able to secure a spot into the wind. After the EMT's were dropped off I flew solo back to 1G4 and got fuel and my passengers. The flight back to KBVU, although very windy/turbulent went without issues.

DAVID GUTIERREZ (39); DEPARTED 16:30

I was on the sunset landing flight leaving from Las Vegas on February 10, 2018. Since we had two weddings and three landings total leaving from Las Vegas, we all had to land at Quarter Master Base. I was the last aircraft to land from the Las Vegas birds. The two wedding birds landed down river as well as I did. As I was serving my passengers champagne all the other aircrafts from Boulder City were landing. The first few took the down river pads and the last couple begin to land up river. I was in the middle of serving champagne to my pax's as I first heard Venida scream " Someone call base," "We need help!" I turned around and everyone was running towards the crash site and as I got closer is when I saw the black smoke fill up the sky. We all began to see who it was and bring the fire extinguisher and first aid kit closer to the crash site. We also began to try to use the satellite phone thats located there, but was dead and needed a recharge. Passengers began to hike the hills to get closer and ignored our orders to stay close to the picnic tables. Once one passenger came back from the crash site, he began to yell that they needed water and a first aid kit. We all began to put bottle waters in one of the meal bags and myself and another passenger took them to the crash site. I didn't go all the way down to the crash sit, but got close enough where I could see the aircraft and the survivors laying on the floor screaming for their loved ones. I began to hike back as I realize it was getting late and dark. When I got back to quartermaster base, Christina Rason told me to get my pax's and get out of there. I got up to the top to get fuel and Guano base said to get fuel and return back to Las Vegas per John Becker's orders. I got 75 Gallons of fuel and went back to Las Vegas.

POLIANA PEROTTO (10); DEPARTED 16:35

#34 was coming for the sunset landing at quartermaster, winds are strong coming upriver...
#34 came for a upriver landing , when #34 was to turn base to final for its app, it was on a left, downwind configuration when the helicopter started to spin and settled all the way to the ground.
attached is the picture where I believe #34 crashed

I was at wedding point with my wedding party. I was preparing them for the trip back to vegas. I believe 5 aircraft from boulder have already landed at Quartermaster. I was on the pilot side with the Reverend and the Photographer when one of them said "Is the helicopter supposed to do that?" That's when I looked over and 34 (which I didn't identify at the time) was spinning uncontrollably and descending fast. The helicopter then hit the edge of the ridge line tail and fuselage separating, then tumbled to the bottom. When it hit the bottom, an explosion immediately went off and was in a ball of fire.

I immediately yelled to any pilot to get on the radio for help over and over. When the helicopter hit I was already running to the edge. I saw Sotos immediately go to her helicopter and was on the radio. I had no idea what to do next so I ran back to my helicopter to get on the radio. It took me a few seconds to figure out how to turn them on. I heard immediately on the SFRA frequency that a Papillon helicopter was heading back to the backside and someone else was calling it in. More pilots on base were heading over to the edge. We were all asking each other who it was. All I recalled was seeing a 3.

From this point on we didn't know how to handle the customers. 2-3 of them were already heading to the crash sight. I was trying to call them back because it was dangerous terrain and the helicopter was still in flames with blasts going off every 5 minutes or so. I first saw only one survivor at this point and I could hear screaming. No idea if it was from inside or the survivor walking around.

The battle at this point was what do we need to do. Start getting the passengers out of there or stay. Sotos was on the radio again and GUANO base told her for us to stay put. The passengers and pilots that went to the crash site kept coming back up asking for First Aid Kits, water, tourniquet, ect. We tried to provide them with anything that they needed. I believe it was 40 that first showed up with the first set of rescuers. Probably 30-45 minutes after the crash.

At one point pilots and I tried to get on the Satellite phone to call boulder for any further directions or updates on when an EMS helicopter will be here. There were quite a few customers at the site trying to help and were having a hard time controlling the passengers. They were everywhere. 20 minutes to sunset, 4 of us, Poly, David, Mojica and I decided to head out. I lifted first. As I was climbing the wall I called GUANO. I asked permission to drop my passengers off then to head back down to get more. He got back on saying that I can but to bring more EMS crew down.

I landed at A8 where our line crew took my passengers and helped the EMS crew with loading their gear and them. I had 81 gallons and their equipment were heavy and the line crew asked how many crew I could take. Since I didn't have manifest or any idea how much the equipment weighed, I told them only 2. When I lifted from A8, I heard Chris get on the radio saying something to the 4 of us pilots. I had him repeated after I told him I had lifted. He was stating what Becker said for the other to head back to boulder and Vegas.

On the way back down the rescue crew was asking questions about the site, if it was still on fire and such. When I lifted it didn't seem like it was still on fire but there was a small flame still when I came in on approach. My approach to go through the notch was a wide left to show them the site. Then proceeded through the notch and landed downriver at the edge of the upriver pads. Sotos and Ahola came up the helicopter to help the crew out and get their gear. They then helped get a party of 5 loaded up in the helicopter. I let Sotos know what Chris told the 4 of us and said ill try to come back down for more if he will let me.

COMPANY

SIMON WHITELEY- CHIEF PILOT

It was always my aim in life, it was one of my goals, I wanted to become a chief pilot. I see that as being somewhat of a pinnacle for a pilot to become one. So anyway, a position was here available and I was in the expo at the job fair where Air Methods had a stand. And I went and talked to my current employers' recruitment group, and then merrily walked across to the Papillon booth and said hello.

And when I hire them on, I spell it out to them, that I expect you to move here because then -- not that I'm trying to snag them or snare them into anything. I want them to appreciate the situation that they can enjoy here. This is a very solid, very good company. And when I interview pilots, I want to see that they appreciate not just the professional opportunity, and I I spell out to them; I tell them, you're going to be flying upwards of four airframes, nice aircraft, well-maintained. Average age of the fleet here is, I don't know, 5 or 6 years old. You're flying in a nice part of the world in weather like this is February.

And what I also try and talk to people is -- I enjoy when we get visits from flight school owners who come here. And I -- because there's this tribal knowledge, I think, and within the industry. And, again, I had no real knowledge of this until I'd come here, that the typical path of a civil pilot, they get their private, they get their commercial. Once they've got their commercial, then, evidently they're an expert and they can start training other pilots.

We're currently at about 60 pilots now full-time working on the 5/2 or 4/3. We have four legacy B2, AS350s; we have six B3e's. So what was that? Ten. So, and then 20 EC130s, which -- and that includes two of the T2s.

So in line with TOPS, we're a TOPS member. So minimum requirements is a thousand hours, PIC. And these are minimums. Typically, I'm hiring way higher than this. But thousand hours PIC, obviously Part 135 Compliance. The typical stumbling block there is the 25 hours a night cross-country.

We'll typically bring three or four in on any given day. There's a written test to begin with -- all basic stuff. If you're a active instructor, this should be bread and butter. It's amazing how many stumble. So we have a written test that we review -- typically myself and Tyler Carver, the training director. We review all of their application paperwork, all their log books -- log books, there's a good one. And then we progress into an interview phase where we have interview forms.

We question them about all manner of things, not just their flying but their personal side, how do they do under stress, you name it. Because I want to get a feel for the people. As I explain to them, one of the best ways we can gage where a pilot's knowledge is at is the knowledge of his current aircraft. And we ask them, right, what is -- which aircraft are you most comfortable in at the moment, whether it is Robinson 22 or 44.

And that's something else I talk to them about on Day 1. When I have my welcome meeting with a new-hire class I have a little PowerPoint in there that goes for about an hour. And one of the things I stress there is I say, when you become a Papillon pilot, you don that uniform and you walk out the front door of your house, you represent yourself as a professional, you represent this profession.

It's not a job. This is a profession, as a pilot. And, furthermore, you represent this company. And, last of all, you represent me. And I sign off on you. Your actions reflect on me from the minute you walk out the door to the minute you walk back. And don't think, for a minute, I won't be on you if I find you're not to stretch.

Regarding tipping: No, because I think some pilots they wouldn't be able to survive if they didn't have it, to be honest.

JOHN BECKER- DIRECTOR OF OPERATIONS

I started working at Papillon in July of 1994. So that puts me, this is my, I believe, 25th season with the company. And my current role is as the chief operating officer for Papillon, as well as the director of

operations. His job is a very complex position, that covers many bases. I want to make sure that we operate this company safely first and foremost. I want to make sure that we comply with all FAA regulations. I want to make sure that we maintain our fleet professionally and that we oversee our operations on all our duties that we perform.

When I joined the company, Papillon, I believe we had 12 helicopters. We were operating off of the strip at the South Rim of the Grand Canyon. At that particular point, we were only flying the Bell 206 copters. We had Jet Rangers, and we had Long Rangers, both the L1 and the L3. Some of them had a C28 engine in them. Some of them had a C30 engine in them.

And I watched that grow into our fleet of helicopters now which is 56 helicopters. We're flying the AS350 B3e, the AS350 B2, EC130 B4 and T2 and the Bell 206. We do have one MD-900 on contract. So the growth of the fleet was large. The growth of the bases that we operate were far.

There's not very many jobs that we do in the tourism business or in the utility business that I haven't done myself. So I know pitfalls along the way, and I can guide people on what they should do and what areas to avoid, that kind of thing.

Well, the EC130 is a requirement for the Grand Canyon National Park. Remember, we are a tour company. It's a wider aircraft. It's a more comfortable aircraft. So that aircraft made sense plus the Grand Canyon National Park requires quiet aircraft technology by the year 2027. So anybody flying the Grand Canyon in the year 2027, has to be flying what is a quiet technology aircraft and the Grand Canyon National Park has designated the EC130 as quiet technology in an aircraft that meets that requirement.

The chief pilot answers to me, and I've got two chief pilots. I've got a chief pilot for the 119 certificate which is Simon, and I've got Mark Diamond who is the chief pilot for the South Rim Operation. Jeff Gubiere (ph.) who is the general manager for South Rim Operations. He's also the drug and alcohol coordinator for the company, and he also manages my fuel funds for me. Peggy Sterns is a customer service manager for South Rim. Elsa Harvey (ph.), human resources for South Rim. And you can look down the company org chart and you can see the people that answer to me there. The utility division manager answers to me for utility operations.

Burl's got a responsibility to audit the company quarterly. Burl manages all of the external audits that the company, TOPS, IS-BAO, clients who come in that want to audit us, bus companies that want to come in and audit us. So we talk about those audits all the time, when they're scheduling them, how those things are going on. We converse on things that he might have found within the company that need fixing, and we come up with a plan to get them fixed.

I'll go back and say that we've operated out of that Quartermaster Landing Site since 1997 with thousands and thousands and thousands of landings down there, and thousands and thousands and thousands of departures every single year, and have had not one incident up until this point.

I give the lead pilots the ability to -- the lead pilots advise me when -- or they advise Simon when something's out of the ordinary, right. Everybody in this company has the ability to say no with no punitive action. That's what a just culture is, right. So nobody is ever penalized for anything. Everybody, to include a loader, a fueler, a customer service, has the ability to say, stop operations, because we see something in conflict here, where we can review that. So if a lead pilot decides that the winds are too high or the temperatures are too high or the weather doesn't look right or they just don't feel comfortable, they have the ability to throw up the red flag and stop at any given time. No punitive action.

The process would be that the director of safety gets the irregularity report. He determines the seriousness of that report, and who is responsible to take action on that report. Once the action has been taken, if it's an issue that the line pilots need to be aware of, then that information should go into the daily safety briefing in the morning, and we have notes in the safety briefing that "X" amount -- we've noticed this in it. You need to be aware that this happened.

WITNESSES

LYSANDER SANDBERG

Unfortunately I wasn't looking in the direction nor in the area of the crash when it was happening (I had thought to look for a way down to see the Colorado river) so really anything that i witnessed started at least a minute after the crash. However, after being involved with helping the patients I'd rather not have to recount too much unless it's necessary, if that's alright?

MARK BRANCH

I sent over the photos that I had. I can also tell you, there was a wind advisory for that day. There were gusts of wind up to 30 mph if I had to guess. A cold front moved in quickly and there was a drop in temperature of at least 20-25°. We experienced a lot of turbulence that day. I recall coming up around the canyon on our decent, and that is when the crash happened. I saw helicopter catch fire and black smoke rolling. At that point you could barely see the tail of the helicopter. I hope I was some help. Please let me know if you need anymore info.

MITCHELL WOOD

Was on 1545 flight out of Boulder City. Pilot warned before departure it would be a bit windy. There were some pretty big gusts over the Lake Mead area, but approach to the Landing Zone (LZ) seemed pretty smooth.

Was on ground for 5-6 minutes prior to crash. Two other helicopters landed in the time between them and the incident helicopter. Was facing the other way and did not hear any noise. Noticed people at the landing zone running the other way and then saw black smoke. There was the LZ, a ravine, a ridge and then another ravine. The smoke was coming from the second ravine. Started running to the site with Johnson and two civilian males (one ex-marine). 2-3 Pappillon pilots yelled at them to come back. Was scared and torn, but knew had to get to the site when heard screams. 2 pilots caught up with the group and a third was with them when they got to the site. The seven of them were the first on the scene.

On arrival saw three people with the helicopter off to the left. The tail section had separated and was facing the other way, perched on a rock. Couldn't tell which way the fuselage was facing, but it looked to be 180 degrees out. The fuselage was burning like a fuel fire, black smoke, very hot, big fireball. Tail wasn't burning. Small parts were strewn down the hill. Honey combed metal and red body sections of the aircraft. Couldn't tell if there was another impact area. Wreckage seemed to be centralized within a 10m radius.

Scott, the pilot, didn't make it far from the wreckage.

EMS landed 40-45 later, then plus the 30 minutes to get to the site. Assisted EMS with drips and painkillers for Scott. Recollection is vague, but recalls a conversation with Scott along the lines of; tried to give it power to get out of it, but it was too late. Johnson was with Jenny, trying to calm her down.

There were no communications with the LZ, so ran a message to LZ of a list of supplies to radio back with. At start of ferries it was for water and first aid kits. Smashed open locked first aid box (no one had combination for lock) at LZ to get access to two stretchers, one metal one and one backpack one. People started to bring down what they could. A female vet and female anesthetist arrived. The anaesthetist was awesome, instructed people how to treat burns including washing off chemicals with water. Gave proper medical advice.

At some stage a decision was made to move Jon and Ellie to the river. They didn't send a scout and found they could only get $\frac{3}{4}$ of the way there before encountering a big drop.

Frustrated that the survivors wouldn't be airlifted. Quite a while before the Blackhawk plan came about. It seemed to be planning in isolation, Plan A until it didn't work and then switch to Plan B. thought could have had multiple parallel plans in effect.

Has photos from LZ, none of incident helicopter. Last photo at 1618 Arizona time, incident not even a minute after that.

Wind on the ground was very gusty, sustained, but gusts a lot stronger. Wind got stronger at night, surprised they were flown out at 2220-2230.

NEAL FOXWELL

Had been in the landing zone for five minutes, had back to the incident. Did not hear anything at all prior to screams from the victims. Turned around and saw black smoke and fire. The site was about 500m away. Made way toward the crash site and heard 5-7 popping sounds on the way. Started to see parts of the wreckage 30m away from the fuselage site. The aircraft tail boom was intact. The fuselage was destroyed by fire, could not even tell the orientation.

When applying first aid to female survivor, Ellie Woodward, she stated that she couldn't get her seat belt off and couldn't get out. It took 45 minutes for assistance to arrive in the form of 2 x firefighters and 1 x EMT. Weather at the time was clear with the wind strong and gusty.

WEI-LUN KAO

At approximately 1630 (Arizona time) saw incident helicopter coming in on approach. It was doing the same S manoeuvre from over the river to line up with the landing zone that their helicopter had just done. During the turn the helicopter started spinning, not sure which way, but did two full rotations before going out of view behind the ridgeline. Before the spin the helicopter was level and approaching the point it would start its descent. The first spin was level then it appeared the pilot lost control and it accelerated downward. Spin rate was constant. Couldn't hear any engine or other noise due to the helicopters running at the landing zone. At the time it went out of view it was approximately 3 degrees pitch down. Did hear a faint pop over the other noise which assumed was the impact.

The crash site was about 400m away, Johnson and Wood ran straight to the site. They would be there in 10-12 minutes. Kao waited at landing zone until saw survivors, grabbed a first aid kit and made way to crash site. Was at crash site about 20 minutes after the crash. Once there saw that the rotor was snapped off, the tail and fuselage were both pointing up hill. The fuselage was on fire, the tail was intact. There was a constant popping sound for about 30 minutes from the fire.

Spent the rest of the time ferrying supplies from LZ to crash site (water, lighting, IV).

Has photos from the LZ before the incident, none of the incident helicopter, last one taken at 1614.

DANIEL JOHNSON

Had been at the landing zone (LZ) for about five minutes. Heard screams, turned around and saw people running. Saw black smoke from behind the ridge. Started running toward the site and was amongst the first to arrive. On way over heard 2-3 explosions. 7-800m, 10 minutes travel over the ridge.

Wreckage on fire, looked pretty destroyed, tail intact with paint still on it.

Some more bangs and pops, but nothing as loud as before. The wreckage was burning pretty bad and burned for the rest of the time first responders were there.

One of the female survivors said she couldn't get her seatbelt off. She just kept asking what happened.

It took 90 minutes to 2 hours for rescuers to arrive.

The weather at the time was clear. Gusts of wind. Felt the gusts in the helicopter on the way in, they were noticeable. In the canyon it got a bit hairy, not scared but 'whoa'.

The wind increased that night.

Photos of the LZ up to 1618. No helicopters in them.

JOEL TREMBATH

Was on the other side of the tourist viewing area. Heard shouts and yelling from the other side and started running. Saw black smoke which recognised as aircraft fire from the Growler accident two weeks prior. Grabbed a fire extinguisher from the four located in the centre of the tourist area. Dropped the fire extinguisher when saw how far it was and the terrain. Helicopter in the next ravine over, 6-700m away. Only had partial view of the fire itself, black smoke indicated it was intense.

Looked for the rest of own group. Saw Johnson and Wood on way over to site. Could hear pops which associated with aircraft fire. Pappillon pilots were saying to go back to tables. Asked female pilot about first aid kits, grabbed one from the back of a helicopter and sprinted toward site. As they approached the crash site, another pilot told them to go back, responded that had a first aid kit, was told that he didn't care.

Ignored direction, gave the first aid kit to Wood who instructed Trembath to get water. Went back to LZ to get water.

On arrival back at the site, Johnson was applying first aid to the three passengers together. Pilot was separated due to immobile with leg injury. Survivors didn't know what happened, just in shock and kept asking what happened. It took a long time for EMS to arrive, felt like an hour. The group was split with Ellie and Jon going toward the river. Gave clothes to victims to cover burns. Wind direction at the LZ was variable. Wouldn't say strong but windy. Before the flight all pilots said it was going to be sporty because of the wind. On way to canyon, pilot noted turbulence in normal places. Has photos of LZ (one with helicopter in it but not the incident helicopter at 1616 Arizona time, attached).

CAMBRIA HILGERS

First responder.

Ms. Hilgers stated that she arrived at Quartermaster about 1730, where it was not quite dark. She stated that the pilot's leg had already been put in a turnick and the Grand Canyon medic, Vick, had been to the accident site, but aside from him, she was one of the first people on site. She stayed beside the pilot from her arrival to the time he left which was approximately 0100 February 11. He was speaking most of the time aside from drifting off to sleep where she would have to wake him up. He asked where he was numerous times and did not seem cognizant of what had happened. When she made him aware that he had been through a helicopter accident, he asked if there was anybody else that was alive. When she first arrived she asked the pilot what happened and he responded by asking her where he was. His legs were so badly damaged that she estimated he would've not been able to walk out of the wreckage. She said he was burned mostly in the leg area all the way up to where his chest was. Aside from him talking about the pain he was feeling, their conversation was more idle chitchat.

FRANCIS BERGERON

I did talk to the pilot who kept blaming himself saying "It's my fault, I could not control it, I lost it." The medical supplies at first were inadequate. The 1st aid kits aboard the birds were for minor cuts and bruises stuffed with all sorts of band aids mostly. It goes without saying that all helos should have a standard medical bag because if someone needs medical supplies while on a helo, most likely it will not be for a paper cut! I understand that most helos fly solo and hence, the med kit would be damaged upon impact but still...

Lionell Daniels

Photographer at QM. scared to death during the flight due to turbulence. About 30 minutes before the accident finished wedding and walked to side and looked at the helicopter while on edge. Closest to wedding point, witnessed the crash and saw a lady running out. Upkeep of helicopters poor at Papillon.

Bobby Javadier

2006 been flying, 2011 from Papillon

Helicopter came in low and then was spinning like tail rotor was gone. We were crabbing through the canyon. Left McCarran dropped 200-300 feet from turbulence. Came in normal route. Climbed out before the mushroom cloud.

Does not like Papillon because of helicopters condition (doors rattle). Had an emergency landing prior when the transmission went out (with papillon).

Cynthia Adams

We write in relation to the trip to the west rim of the Grand Canyon on February 10 2018. We were in Las Vegas to celebrate my 50th which was on February 6th. There was Cynthia Adams, Dave Coombes, Connie Coombes and Jack Coombes.

As part of the celebration we decided to book a helicopter trip with papillon. We duly checked in and in the booking ID was requested. No ID was ever requested. We could have been anyone. Two English lads were on our flight. They had backpacks. My daughter had a bag. At no time were the bags checked or that we went through security checks. We now know it wasn't but the tragic event could have been a terrorist attack.

Jack Coombes saw the helicopter spiralling out of control. He thought it was show boating. He then lost sight of it before we all heard an explosion. He then shouted dad. I, Dave ran over to try and help. The helicopter was on fire and billowing smoke. I then heard at least 3 more explosions before my daughter, Connie called me back. There then seemed to be a standstill of time. There seemed to be no plan of action. The other pilots

didn't seem to know what to do. Personally we think that the thoughts were that no one would survive. Once it was realised that there was a survivor there was then a disorganised attempt to get water and medical supplies to the scene of the crash.

I Cynthia Adams was appalled at the lack of protocol and plan of action in the event of an accident and medical emergency. It was terrifying to see people search for proper medical equipment and supplies. There seemed to complete panic and confusion by all of the papillon staff. Even trying to get back to the Papillon terminal was chaos and the lack of order and concern on all staff members parts was disturbing.

There seemed to be no communication between what was happening at the crash site and the Papillon terminal/office. I am still reeling from the stress and trauma of what I witnessed. Even trying to return to our hotel was delayed and there was no urgency to get us back to Las Vegas. We were eventually flown out of the west rim. We would estimate we were at the scene for at least 60 minutes. We were flown 3 minutes to a location. Not sure why we wasn't flown out sooner. We were then flown back to Boulder City.

No communication with papillon till 12 days after the crash. We have all suffered psychological trauma following this incident.

Hanna Webb

Ms. Webb stated that she was taking a holiday with her partner in Vegas for her 30th birthday. They had planned on doing helicopter tour over the Grand Canyon because it was advertised everywhere. While eating breakfast on February 10, they saw an advertisement of the tour company and spoke with the tour guide who is arranging flights with Papillon for the following day. They had a choice of three flights and opted to do the lunch time flight. The next day a bus picked them up from their hotel and they went to the airport. When arriving at the airport, the Papillon personnel had all the passengers wait in a line. They eventually arrived at the desk where they confirmed their down payment amount and settled the rest of the bill. Thereafter, they were told to stand on scales and were weighed (with the baggage attached). They were told that the flight would be in 15 minutes and they could/should watch a safety video that was in a booth near the waiting room. They went into the video area, but did not sit down. She recalled seeing the end of the video but could not recall anything that was on the video (it was in English).

Ms. Webb further recalled that all the groups seemed to have been arranged by the country of origin of the passengers. The Papillon personnel would call out a country (such as "Australia") and passengers were grouped together, followed by the pilot entering and introducing himself. All of the people had been called out and it became apparent that her and her partner as well as 4 other people were the remaining people left. She felt like they were waiting in the waiting room for quite a while. Finally, "England" was called in the six of them grouped together. She recalls seeing the pilot walk in and she reached to her partner and said something along the lines of "I can't believe that the pilot." She could not pinpoint what precisely seemed different from him than the other pilots, but he had a very relaxed and "casual...scruffy...stoned...dude" air about him. He did not seem as presentable or professional as the other pilots.

The pilot walked the passengers out to the helicopter and they were shown how to put on their inflatable belts. She recalled it being windy. A photographer was going around to all the other helicopters and taking pictures of the groups and passengers with their pilot in front of their respective helicopters. They were the last and when the photographer came by to take pictures the pilot said that he did not want to be in the pictures, which she thought was odd. The pilot then said that he didn't need to go into any more safety information because they had watched the safety video. They all were put in assigned seating and she was positioned next to the empty seat, one away from the pilot [seat 2]. He did not need to assist them with the seatbelts but did show her where the headsets were located. She recalled the pilot talking to the person fueling the helicopter and asking him "where's Luke?" When the pilot got in the helicopter he mentioned that of fuel or had been fired the day prior because he was over-fueling the helicopters. She had her purse on the floor by her feet.

The flight departed and they noted that it was very rattling and loud (sounding like the engines were at their maximum power the entire time akin to a car engine before it shifts to the next gear). She could barely hear the pilot but he did not speak frequently. He pointed out two or three landmarks that she could recall but there definitely was not an environment where she felt free to have conversation. There was a music CD that was playing through their headsets the entire flight and it was about 6 to 8 songs that were on repeat over and over; the music would stop and anyone would talk. At one point during the flight he tipped the helicopter over where she experienced a light-in-the-seat feeling and grabbed her seat. The pilot asked "do you not like that?" to which she replied "no." He did not make a maneuver like that again. She qualified his mannerisms

as relaxed and that he was very much enjoying flying. He wore sunglasses and would drink from a water bottle that was clipped near the left part of his window. On the way back she asked if he was a full-time pilot and he said that he did not fly often and it was more of a hobby. He mentioned that this was his second flight of the year. There was nothing different or unusual about the landing and the pilot at no point told them not to speak during the flight.

After landing she could not recall anything about unbuckling her seatbelt, which she said was not abnormal, but more robust than a car seatbelt.. Neither her or her partner gave him a tip but it didn't cross their minds, she wouldn't have thought to tip. They purchase pictures at the end of the flight.

OTHER

Bill Orvis

Sundance Helicopters:

Mr. Orvis was the pilot's flight instructor while he was receiving his commercial instrument rating and helicopters. Both him and Papillion pilot, Rob Downey, were roommates with the pilot where they all had a temporary room in Las Vegas. He stated that the pilot had good solid piloting skills and was cautious to the point of timid at times. He enjoyed flying and would like to look around and take in the flights.

The Sundance operations are similar to that of Papillion's. They land at Quartermaster Bluff which is near Papillion's quartermaster landing area. He stated that the pilots will report landing conditions to the pilots following behind them if there is something of concern. This would typically be done on the company frequency but if the pilot hadn't switched over frequencies they might transmit that call on the general Grand Canyon frequency. He stated that after landing, the pilot generally would know where the other pilot behind him is located because all the pilots call out their location at Bat Towers. Pilots will call out that location at different times (either before or after) depending on where they interpret that Towers to actually be.

The Sundance reporting system is similar to Air Methods in that they use in ETQ and Haydmore reporting system as a safety measure for irregularity reports.

Erik Folgedalen

Erik stated that he worked at Papillion from February 2014 through May 2017 at which point he was forced to resign due to an accident.

He stated that as people begin to check in, the tower will compile manifests based on previous reported weights and then have to scramble and reorganize based on actual weights. Once the manifest is completed, the pilot is given the information and cleared to go. By this time, the passengers have theoretically watched a briefing video and have had a sticker to designate that they have seen the video. After meeting with the passengers, the pilot will give an additional briefing on the way to the helicopter and while at the helicopter. The briefing will include how the seatbelt works, but he would usually have to put everybody in their seatbelts especially for the non-English-speaking passengers, because they are unusual to operate. The pilot would then start the helicopter and make a "lift call" to the tower who would clear the helicopter to depart. The tower would clear people usually based on seniority (can depart faster) and placement of their pad (close to one another). Often there would be delays for up to 30 minutes to an hour where either passengers would be late or the tower would have to split people up on different helicopters to make the weight and balance remain in compliance.

He stated that there is a formal agreement between the Indian tribe and Papillion as to what the appropriate landing zones at quartermaster are. In the indoctrination training, they learned that if the wind is blowing from a certain direction than they land in a certain direction, however in reality, when all the helicopters are stacked on site, they have to be creative. Since there is not a designated landing zone, they will just know how many helicopters can fit on a certain strip and where certain obvious pads are (e.g. wedding point). The senior pilots would normally try to give the newer pilots easier spots. At times he seen 14 helicopters all piled on quartermaster in various spots. He said the major concerns when approaching quartermaster in deciding where to land are: you don't want to overfly other helicopters, you don't want to brown out passengers, and you need to avoid the random passengers that are walking around taking pictures (especially of helicopters coming into land). As for picking the spot you consider: the wind, available locations, avoiding the aforementioned concerns, if Sundance is taking off (which precludes a notch approach), if a new pilot had just landed (usually takes them longer to shut down).

The winds in the Grand Canyon are unpredictable, especially quartermaster where you have the collision of two winds, one coming down quartermaster Canyon and the other along the Colorado River. This creates a swirl effect and even if the windsock gives a good idea of the wind on the ground, it can be much different 25 to 30 feet above ground level. He has done the same approach as the accident pilot and felt as if “the rug was pulled from under him,” with a significant when shift that was unexpected. He recalled one instance where he was making an approach to the west pads and everything appeared normal where he was approaching with a 500 ft./m descent rate and suddenly the wind shifted. It felt as though the helicopter was falling and the only thing that saved him was coming into ground effect where he got a cushion to land. There are numerous times that he is been at full pedal deflection while approaching the quartermaster, which he has always managed to compensate with collective. It is more of a power management scenario.

The pilots don’t normally report weather conditions to one another over the company frequency unless it is significant. After a group pilots have been flying together for a while they will start to get a dialogue going but because of the turnover, there is less communication flow when people don’t really know each other. If anything, the senior pilots will report weather conditions but it would be unusual for junior pilots report something because they’re not sure if it’s normal or not.

There is definitely an omnipresent new pilot and senior pilot mentality. If a new pilot lands at quartermaster there would definitely be a question that a senior pilot chose not to make a landing. The repercussions of making such a decision would mainly be being berated, scolded, yelled at, public shaming, badgering, sarcasm. The more serious repercussion would be suspension of three days or being fired. The threat would be that Simon would add something to a pilots PRIA, making it hard to get a job in industry. If you chose not to do something (launch, land, etc), there had to be a reason as to why you didn’t do it when others did. There was less pressure to change from the land to an air tour, but there was a great deal pressure when the leads would tell you to depart. Very much a “they went, why didn’t you go?” mentality.

He stated that depending on if the avionics are operational, which they frequently were not, the pilot would just hit the isolation switch to not hear the passengers. They normally would not expect a tip and he would never consider a deviation from a landing tour to an air tour to affect anything. A few pilots did not like taking pictures with passengers because they felt that Papillion was exploiting them and getting money for the pilot to be presenting themselves in a picture but not giving any money to the pilot if they make that sale.

Pilots would write an the irregularity report whenever there was a deviation of the flight. When asked about the 09/22/16 irregularity report that he wrote, Eric stated that immediately after filing the report he was approached by Tyler Carver, the lead pilot, who would question his comments. In response Eric would say that he was stating his opinion, but there would be an assault from management if they questioned any actions or decisions made by management. For example, Papillion would routinely send pilots out to fly tours in moderate turbulence even though passengers would be sick. The Papillion management will tell the pilots that the weather limits in the GOM are high because they don’t want the pilots to violate regulations just in case they are out on a tour and need to come back. However, Simon and Tyler would routinely tell pilots that they should fly because the weather did not exceed GOM limits. He was instructed on what not to write in irregularity reports on several occasions where management did not want him to say “servo transparency” or smoking cockpit.” He did not question this because they would be too much backlash.

From his observations, the Papillion business model was to recruit 1000 hour pilots from flight schools and offer them turbine transition training as incentive to stay and fly for such low pay. They would continually cycle pilots through until they reached the 3000 hour mark at which point they would move on to industry and a fresh class of recruits would arrive each year. At one point Eric applied for the lead pilot position and was rejected in favor of Oest, who is currently the lead pilot. Eric had been working there for an extended period of time where Oest had only been with Papillion for less than six months. In the post interview the explanation that was given to him, was that Oest had a longer career trajectory (meaning, they thought Eric was closer to hitting his 3000 hour mark and would likely quit, where lower hour pilot would stay much longer and take quite a bit longer to obtain 3000 hours).

The lead pilots were all hired in such manner, where they didn’t have much helicopter time and were therefore beholden to Papillion management. Eric thought this was problematic because the lead pilots make the go-no-go decisions but did not have much experience. The lead pilot will basically be in the office looking

at a computer determining if the pilots will launch or not even though the senior pilots will have a better understanding if the flight should occur or not. If a pilot chooses not to go that does not necessitate everybody else from not going which creates a group pressure situation. Specifically, the newer pilots are pressured to go and feel like they will face repercussions if they do not conform.

The repercussion previously had come in the form of pilots getting punished by a getting undesirable schedules. Burl Boyd ended that type of punishment and dissuade "barrel schedules," which is when a pilot is scheduled for the first flight of the day and last flight of the day (where they wait around idle without pay for 10 hours). Burl insisted that they should have a fair and even rotation.

The pilots are responsible for their own weather information and are only provided a morning brief which most people don't show up to. Passenger comfort is not addressed and even if passengers are getting sick Papillion will still hold to a revenue model. The potential refund form that a passenger fills out is given by the customer service representative and is called a "weather brief." There would be a great deal of pushback if he chose not to depart and therefore had flown numerous occasions in moderate turbulence with altitude changes of plus/minus 300 feet or more. Around 2016 they took out survival gear from the helicopters to reduce the weight with the claim that if an emergency happened they would have a helicopter available at any time to fly out and bring all the equipment making it unnecessary for survival gear to be on board.