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Interviewee: Scott Fairchild
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Charlie Bragdon: —what kind of a plane is that lead plane?

Scott Fairchild: Well, we have two here at Redmond this year, Charlie. This one, the primary one, is a Beech Baron 58P [Beechcraft Baron]—that's our primary one—and then we have a Cessna 310, too, that's a backup lead plane. The one I fly primarily is 5177 Mike (?)—it's a 58P Baron we use. We have two retardant aircraft that are contracted here at the Redmond Air Center this summer—two DC 7s. They hold 3,000 gallons apiece of retardant. They have Aerounion retardant tanks that consist of eight doors, and the contract load this year is 3,000 gallons so each aircraft will haul 3,000 gallons and it leaves the retardant tank and one of the eight doors or any combination of the eight doors.

CB: Does that lead plane have a lot of power? You don't have any trouble staying ahead of the DC 7 or 6?

SF: Well, the aircraft I fly has two Continental 310-horse power engines, and as far as staying ahead of the DC 7s, we really can't. Those aircraft cruise about 250 knots to a fire. We're dispatched, oh, five to ten minutes prior to their departure and that's the only way we stay ahead of them. Over the fire, we're usually slowed down to the range of 120 to 140 knots working together. So, really speed isn't a factor. There you're more or less matched up…excuse me, than who's faster than the other guy. That really doesn't take into account, except going to a fire or returning home from one. But over the fire, we usually…our retardant runs average around 130 to 140 knots.

CB: When you go into size a fire up, once the retardant has been dispatched, it'll be dropped, would there be a reason why you would call it off?

SF: Yeah, Charlie, there's all kinds of reasons, and that's one of the main concerns for a lead plane pilot and that's the environment that the air tankers pilots will be working in. There's quite a few things to take into account. One is the turbulence…can the convection and stuff in canyons, that's the main concern. If it's too rough, you know, big airplanes like that, down low level in a hazardous environment like that, sometimes it's just not even worth it now. This is my second year flying lead plane here at Redmond, and as luck would have it, we haven't run into any severe situations where we've had to call drops off from turbulence or high winds—shear factor type stuff that can occur—but stuff that we've been exposed to, we've had to call drops off were primarily a wrong alignment for the head or the flank of the fire. Rather than waste the retardant, we've called the drop off and made a different angle approach at the fire to where we would try to have a better shot of hitting a spot and not waste the retardant and do a

better job for the people on the ground. That's the primary thing that we've had to turn retardant pilots the turn around to come into a different shot at it.

CB: What height do you aim for above the ground? Is there a special height that you try to get and you get the retardant pilot to?

SF: Yeah, really that's one of the most important functions nowadays in retardant dropping, and that's the proper height because if you come in too low you get all the mass momentum of the retardant load itself will break the tops out of the trees and endanger the people on the ground. So one of the biggest things that we do nowadays is try to educate our people on the ground, on the different districts and forests throughout the country so they can understand, that 200 feet is just about optimum. If you can drop your retardant load 200 feet, the mass at momentum of the retardant load itself is just about stopped the forward momentum, and it drops vertically down through the canopy. That's the most important thing because then you don't get any of these swept areas, blanketed areas, behind the trees. People, for years and years and years, and the Forest Service and the other firefighting agencies have seen retardant dropped at very low level, while it's very impressive because it tears the tops out of trees and it dislodges rocks and logs, and it's a real hazard to people on the ground. Well, through education and practical purposes, we've shown where 200 feet—at a minimum of 200 feet—if we'll, drop the retardant at that elevation, it'll stop its forward movement and we'll lose very little through drift and evaporation. It will drop vertically through the canopy and will almost get about 80 percent penetration on the ground, where a lower level, heck, you have whole swept areas behind trees that isn't even covered because one side of the tree is completely coated and then the height of the tree all the way back behind it almost has nothing.

So, through educations, we've really tried to show people that, and it's coming out more and more all the time and it's a much safer operation too. Besides being more effective on the ground, it's a much safer operation. That's what we're after.

CB: Is that plane that you fly—the Baron or the Cessna—is that typical…I guess, not typical but is there any danger in flying that low in that plane in that kind of country—the steep canyons and rock bluffs and all? Is that rated for that kind of climb?

SF: Normally, light- to medium-sized planes are personal transport, higher elevation type of aircraft from point A to point B type flying. But these aircraft in this situation are probably the only ones in the country that are operated in that environment. To answer your question, anything that's low level, let it be from helicopter operations to smokejumper-cargo type operations to retardant—the retardant environment—is all a danger type thing. That's why jumpers receive hazard pay on cargo drops. Now, pilots don't receive any hazard pay of any type. But anything low level just increases the possibilities that things can happen, and it decreases the amount of time that you have to react. That's the most critical thing, where if something happened at altitude, you'd have thousands of feet below you to have a controlled rate of descent while you were taking care of your problem or your emergency situation that

you were in. As far as low level, if something happens down there, reaction is almost instantaneous, and you have to be correct so the environment that anybody operating low level, let it be retardant or smokejumpers or helicopters or whatever, is more dangerous just from the aspect, relation from the ground.

CB: What is the thing, the factor, that is…I guess they all would be. I was just thinking of a worst possible situation you could see for dropping retardant, where…Well, I guess I could put it this way. Is there any specific way you aim to drop retardant? I noticed the other day you guys flew…you guys seemed to be flying down the ridge there. That'd be the usual way to do it? Or is there…down the ridge, down the valley—

SF: Normally, everything that you try to do, you do while thinking about the safety of your airtanker crew and aircraft. Everything—you try to put yourself in their situation. You know they have an awful big wingspan, awful heavy aircraft requires a bigger radius turn. So, everything you do, you try to give them the room that they can operate that big DC 6 or 7 or whatever airtanker they're flying in. So basically, you try to do everything down canyon where after they drop they have—everything's downhill—falls away from them, they can take their time to climb back up…excuse me, to get the altitude to climb back up to you and then go back in for another run.

The big thing is just as far as giving them the room enough to operate. There are pilots that have more experience in retardant operations that don't require the room, and you get to know them through the course of work. But as far as, airtanker pilots in general, it's much safer and much better to give them as much room as they need rather than tighten the pattern up so much for them that they're really having to work and can't look outside and watch the train as much as they need to do because they are really operating in the low-level environment also.

CB: And you're in constant communication with the retardant pilot, is that true?

SF: You bet. We work a VHF frequency usually in constant communication with those folks, and then on our Forest Service 9,600-channel radio, we're usually in constant communication with either the fire boss on the ground or the airtanker boss in the air, figuring out strategic locations for the retardant or areas of reinforcement where we're going to try to stop the fire on one side or the other and then just start containing it from there.

CB: I see. Well, I'd like to ask you a couple questions about being a jumper pilot, too, since you did that for a number of years. What kind of special qualifications did you need for that in order to get checked out to do that?

SF: Well, each year most all the pilots that we have here, Charlie, work year-round for the Forest Service. This is the first year for a while that we've had a contract aircraft and pilot in—Empire Airways with their Beech 99, they supplied the pilot. But for the last, oh, it's been five or six years, we've had Forest Service pilots flying primarily—contract aircraft and Forest Service

pilots—and we've worked year-round. The prerequisite that we have is at least 100 hours a year is the very minimum. Of course, we're all more than that, but usually between 200 and 400 hours a year. As far as minimum requirements, five hours in type, or five hours in the jumper aircraft, prior to individual dispatches or going out to drop a fire—an actual fire or something like that. So, you got to have five hours each spring in the aircraft before you can go on actual fire missions.

CB: Could you describe—I'm really interested in this part of it—the actual procedures when a spotter says, "Okay, we're over the spot. I'm going to drop streamers," and then when you're actually dropping the jumpers. What do you do to slow the plane down?

SF: Sure. Oh geez, for the last four years here, Charlie, we've had the Twin Otters—they have a Twin Otter-300 series—and it's very, very good airplane—stall type, short takeoff and landing aircraft. For a jumper operation, it's probably the safest platform available for jumping. As far as a pilot's point of view, there is nothing that flies any better, any more stable at a slower air speed where we operate our jumping environment at. As far as the normal fire dispatch, we'll get the dispatch, and throw our flight suit on, and jump in an airplane, and crank number 2, or the right engine, up while the jumpers are suiting out and being checked out and get inside the aircraft. Once everybody's in there, when we can start the left engine and take it out of feather and start taxing toward the active runway, upon departure, of course, we head out on a predetermined heading to the fire. As we're coming up on the fire, the spotters in the right seat, the pilot is the left seat, and they're talking together about the jump spot. The spotter and the pilot work together on the jump spot. The communication is very important as far as they're looking at the same piece of terrain. At that point, the spotter will go back to the back of the plane and put his headset on so he can have communications over the intercom system with the pilot. All the pilot is doing is lining up with the spot. Direction is not important at that point. He'll go right over the spot and drop his first set of streamers, and the spotter will say, "Streamers away." The pilot will start a standard rate turn to the left so that both the spotter and the pilot can see the streamers as they descend toward the ground and a timed descent to see if we're at the proper elevation. We want at least 60 seconds, which is generally around 1,000, 1,200 feet AGL, or above ground level.

At that point, when the streamers impact the ground and you note their location from the drop spot and the time, if the time's correct, the next pass you'll do you'll be from streamers to the spot, or more or less into the wind. That gives the jumpers and the spotters a good shot at the spot. We can carry them over a predetermined spot over the ground, and that way through the normal speed of the wind, they'll have a good shot at making the opening that we had seen first and that's the jump spot. So then, the pilot will make the alignment from the streamers to the spot, and the spotter will then count after, as he goes over this spot on the upwind side and then release the streamers at what he feels they'll drift back over the spot. Then we'll make another left turn and follow those down, and if those went into the spot and he's got his carryover, or his lead distance to give the jumpers before he hits them on the back and they take out of the airplane, then the spotter and the pilot will have good alignment and the correct

timing for the jump. Then we'll come around and we'll hook two guys up, usually normal two-man stick out of a Twin Otter. Then the same alignment, the same flight path, and after they cross the jump spot and the spotter counts that many seconds, then he hits the folks on the back, and the two jumpers exit the aircraft and then they have a good shot at the place. If they come close to it, that's the same alignment we use.

We will extend it, depending on how the jumpers are doing. We'll change the pattern in flight like that. But normally if we can get the streamers in the spot, and the spotter and the pilot are looking at the same area for release, then everybody will go out and have the same chance at the spot. That's about the best way we can do it, and it's about the quickest way.

CB: When you are about ready to let jumpers out, you slow the engine down on the side the jumpers are going out?

SF: Charlie, that's one really nice thing about this Twin Otter, and that's that it's got a 65-foot wingspan and the engine—it's a high-wing aircraft. Big, big aircraft. Grosses at 12,500 pounds, and it allows our jumpers to be completely out of the prop blast of the left engine. Like on the Beech 99 we have here, the engine, it's a low-wing aircraft with the engine directly upstream from the exit door. So, you have a lot of prop blast. You know, you and I are both familiar with that as far as trying to blow your legs out of position for a good exit. That's one nice thing about having the high-wing aircraft and having the prop being able to not affect the jumper on his exit. At that point, we use about ten degrees of flaps and will be indicating 90 knots…90 knots indicated airspeed, which will be a reduced power setting, but since the propeller isn't…you aren't in the exact prop blast of the engine, then it's not that big a factor.

So, 90 knots, yeah, we don't really reduce power on that engine. Now, on an aircraft like the 99 or old DC-3, you would You'd bring back the propeller on the left engine and give the jumpers a good position for exit, and then you could even have a controlled rate of descent over the jump spot so you could really have power back. You know, have a controlled rate of descent over the jump spot, then let the gentlemen out, and then start a climb like that.

CB: Do you feel any difference when the jumpers got out or any effect on the plane.

SF: You can feel it. You can feel them exit. You can feel those guys go out and exit, but as far as any performance or any dipping of the wings or anything like that, you wouldn't notice it, Charlie.

CB: So, you don't have to make any corrections for that immediately when they go out?

SF: No. You can feel them and you can hear them exit the airplane, and you know two jumpers have exited the aircraft. Then a spotter says, "Jumpers away!" and you initiate your left turn for your down-wing leg for another pass to come back around for two more jumpers. It works really, really good. The nice thing about the Twin Otter is the short radius of turn, good wing

loading on the wing—long ways from the stall. In other words, you're operating in a very comfortable area of flying environment. You're not operating right on the edge of the buffet or a stall like some of the higher wing-loading airplanes like a Beech 200, the Beech 99 that we use at different jump bases. That's why the Twin Otter is just a pilot's airplane. It's not just a jumper's airplane; it's a pilot's airplane too, for our job.

Not only the altitude, see, we're operating 1,000, 1,200 feet AGL, or above ground level, for this drop, but then as we both know, we need to give them the cargo too, which is definitely a low-level operation. Then you're operating right on the ridge tops and the tops of the hills and down in the valleys and stuff as far as the jump spot can be anywhere. That's always the…the spotter determines the jumper's jump spot. The pilot determines the cargo drop area, okay? Because it's low-level operation, and whatever he feels he can get in there and do safely, that's where he'll put the…Course, we always try to put the stuff right next to the fire for the guys, but it's wherever he can turn to get down in there, then that's kind of the pilot's responsibility to determine that area. So, it's a team effort all the way around, but primarily the spotter determines the jumper's jump area and the pilot determines the cargo drop area.

CB: How high off the ground do you do cargo drops?

SF: Well, it all depends. It depends on the terrain and the wind and how easy you can get down on stuff like that. But if everything's optimum, we can drop, oh, 100 to 200 feet right in there somewhere. That way the cargo package will exit door and open up completely, make a couple oscillation swings, and land because there is no control on those chutes, as you're well aware of, and the more time that they spend in the air, the more effect they have the wind and drift. If you drop them too high, those babies will go for a while it seems like, and you've chased them just like I have. As far as accuracy, 150 feet is just about right, Charlie. If you can.

Unknown Speaker: Hi, Nick.

SF: Thanks, Mr. Corbett. Bless your little heart.

[general conversation]

CB: Scott, I guess that's all. Was there anything that surprised you being a jumper and then going on to be a jumper pilot that you thought would be different about the whole procedure, moving from the back door to the front?

SF: Yeah, as far as I was concerned, that was my goal in life. Of course, most everybody seems to have a bachelor's degree, and we've all accomplished that. But as far as what I wanted to do for a living, I wanted to be a jumper pilot. I couldn't jump all my life. That's one group that I hoped to be affiliated with until I don't breathe anymore. As far as fitting into the program and being accepted and stuff like that, it's a whole different ball game. As far as a jumper's concerned if you get out there and do your PT and pack your weight and not do a lot of

bitching, you seem to fit right in and work hard and have a lot to camaraderie and respect for your fellow man. Nobody works as hard as a jumper crew, and that's just a fact. That's all we need to do is get out there and work hard and everybody's respected. But when you move from the jumper to a pilot position, in my case, it took me a number of years to come back to a jump program and be a jumper pilot. I spent my time in infrared and Alaska and Idaho and all over the place before I could come back to a group like this. Then you almost need to prove yourself all over again. Not only can you fly and do a good job—you spent years getting the experience necessary just to get a job like this—then you got to prove to your jumpers all over again that you're part of the team and that you can hit the spot and you can pack your weight for your age. To be accepted, you got to do as good as you can as good as you possibly can and with a good positive attitude, and that's the way that I came back with the understanding to try to be very open-minded and accept constructive criticism. Through a lot of hard work and dedication, things have worked out very well. Just a matter of not walking around your chest all poke out and thinking that you're something you're not. Because everybody requires to spend a certain amount of time in the trenches to learn any job, and I've sure spent my time in a lot of trenches. [laughs] I do the best I can, but as far as learning, I hope to learn something every day of my life.

CB: Let's see…Oh, how many years did you spend…Did you have to put in so that you had the qualifications for this job?

SF: Charlie, I started flying in 1970. I got my first job with the government in 1976 and got my first job flying smokejumpers in '79. So as far as amount of time spent, it took me six years to get my…well, it took me two years to get all my ratings and licenses and stuff. And it took me four years of instructing, teaching people how to fly, for various licenses and certificates to build my time up enough to where I could even compete for a civil service flying job. Then it took me three years of flying infrared out of Boise, Idaho, before I had my turbine experience high enough to where I even had a chance at a smokejumper job, and everything finally fell together in the spring of '79. So really, it took me nine years from the time I started with my goal to fulfill it and come back to Redmond and fly smokejumpers. Which is my first love. Lead plane is a very exciting, thrilling thing, but one saying that I really like is: you can take the man out of smokejumping, but you can never take the smokejumping out of the man. I'll do whatever is required for the group I work for—the regional aviation group in Redmond—so we can fulfill our mission no matter what it is. But as far as my personal preference, I'll be a smokejumper until the day I die, and I enjoy that type of flying. I enjoy the camaraderie. I enjoy the group. Yeah. That's just a personal preference. I try to do as good a job lead planning as I do flying jumper. Right now, we have a lot of jumper pilots, and I'm the only lead plane pilot besides my boss. We're very short-strung, short-fisted right now, and we just try to pull together and do whatever we can to do the job. As far as we're concerned, we're hoping to get another guy trained and might give me a little more time next year in the saddle with the smokejumpers.

CB: All right, sound good. Thanks a lot, Scott.

SF: You bet. You take care, Nick, and good luck.

[End of Interview]