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LEROY L. "ROY" PRESLEY
INTERVIEWED BY REBECCA WRIGHT
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WRIGHT: Today is July 16, 2014. This oral history session is being conducted with Leroy "Roy" Presley at his home in Los Altos, California, as part of the NACA [National Advisory Committee for Aeronautics] Oral History Project, sponsored by the NASA Headquarters History Office. Interviewer is Rebecca Wright, assisted by Sandra Johnson. We want to thank you for letting us come to your home today and spending the afternoon with you.

PRESLEY: Yes, it's a little more pleasant here than Ames [Research Center, Moffett Field, California].

WRIGHT: Very relaxing, sitting out in your side yard. If you would start today by sharing with us a little bit about your background and how that led to you becoming a member of NACA?

PRESLEY: I was going to school at Oregon State [University, Corvallis]. I got a bachelor's degree in mechanical engineering with, at that time, what was called an aeronautical option. Every year, we were always very fortunate to have a visit from a man from NACA. He would come up and talk to us. That guy's name was Vic [Victor C.] Stevens. I think at that time, he was the Assistant Division Chief at Ames. We always enjoyed them, and then the whole group of us would take tours every year, and go down to Los Angeles [California] to a student convention. Vic would always invite us to come out to Ames and see what was going on, and

usually go up to his house at the same time. That was just very familiar. After I finished my bachelor's degree, I came down to Ames and worked one summer, and actually worked in what was then called the 6 x 6 [Foot Supersonic Wind Tunnel] Branch.

WRIGHT: What year was that?

PRESLEY: That would have been 1955. At that time, the Korean War was going hot and heavy, so Ames volunteered to not let me quit. I got a 10-month leave of absence, which was sort of unique, and I went back to Oregon State and picked up a master's degree. Then, I came back in 1956, full-time. It was convenient because Ames was, at that time, classified as an essential industry, so I could evade the draft by not quitting and coming back, which was very fortunate. I was an aeronautical engineer, so I was very interested in that kind of work.

I started out then in the 6 x 6 Branch in '56, and I think that lasted until about 1958, in that timeframe. At that time, NACA became NASA, I think. My dates may be a little off. They abolished the 6-Foot Branch, and they wanted to show more interest in space-type activities. All of us in the 6-Foot, my group leader—I was at that time working in what was called internal aerodynamics, primarily writing computer codes to try to solve for the flow in the jet engine inlets—and we all went over to various places. I had become interested in high-temperature gas dynamics associated with hypersonic or Mach 3, 3.5, 5 flight. They figured out that I could go into the Physics Branch.

I went in at that time to what was called the Physics Branch, and there was a division, I think it was called the Vehicle Environment Division. Worked in the Vehicle Environment Division, I worked in that branch until about 1972-3-4. I can't remember the exact date in that

timeframe, in the fairly early ‘70s. Did work on high-temperature gas dynamics and developed some facilities. At that time, I was leading a small group that worked in the gas dynamics area. The Branch Chief was a man named Morrie [Morris W.] Rubesin, who was a really outstanding, outstanding individual. Sometime during that timeframe, we had a change of Center Directors. Harvey [Harry Julian] Allen, at that time, was a Center Director.

He retired—after driving his old Duesenberg around Ames. He had this fantastic old Duesenberg car that he used to commute to Ames with, once in a while. Harvey lived in Palo Alto, would drive this thing down Bay Shore, top down, hair flowing back. Harvey was a real character. He retired, and then Hans Mark came in. Hans’ background was from the Lawrence Livermore [National] Lab [Laboratory, Livermore, California], University of California, so he was really a true physicist in his background, and moved Ames more into some aspects of space research.

Sometime around 1980 or late ‘70s, Hans and, at that time, Al [Alvin] Seiff, who was the Division Chief of that division, locked horns. Hans RIFed [Reduction in Force] the whole division, and as you can see in my write-up there, that was my first RIF notice. We were all fired, RIFed, told we wouldn’t lose our jobs, but we had to go find a job at Ames. You take 100 engineers and say, “Go find a job at Ames,” and that just gets to be sort of a chaotic mess, high-stress mess, for a while. I ended up back in what then was called the Aerodynamics Division, and working back in internal aerodynamics, and again, doing more computational work with the newer, more advanced techniques in computer flows.

I kept working in that area, with a couple of different branch chiefs. Vic [Victor L.] Peterson was the Branch Chief there for a while. He was a classmate of mine at Oregon State. He was promoted to a division chief, went up, left the division, another guy, Gary [T.] Chapman,

came on board. Sometime around that time in the late ‘70s, I believe it was, there was sort of some kind of deal cut between Ames and NASA Headquarters [Washington, DC], that Ames, in fact, we had the helicopter research with the Army at Ames, is that Ames would become the Center for helicopter research in NASA, and again, I don’t know exactly how all that took place. The work that we were doing in internal aerodynamics was now considered to be secondary, so I got a second RIF letter and was able then to refocus on other work in the helicopter research.

I did that, not really terribly actively, for a year or so. Then, sometime around early ‘80s, I think, sometime around in there, or late ‘70s/early ‘80s, Gary Chapman left and I was fortunate enough to get the Branch Chief job at then what was called the Aerodynamic Research Branch. It was still in the Aerodynamics Division, and I held that position for a couple, three years. At that time, Dick [Richard H.] Petersen, who was the Division Chief at that time, he left and went to be Assistant Director of Langley [Research Center, Hampton, Virginia], and then ultimately became the Director of Langley Research Center.

I was fortunate enough to get his job, and that’s when I became a division chief of then what was called the Aerodynamics Division. We had four branches in the division. A couple of them dealt with aerodynamic research, one for more fundamental aspects, one for more systems, whole airplane concepts. There was a Wind Tunnel Branch because we ran several of the wind tunnel programs at the same time, and several of the wind tunnels—mainly the higher speed wind tunnels at Ames. At that time, it was the 12-Foot [Pressure Wind Tunnel], 14-Foot [Transonic Wind Tunnel], and Unitary [Plan Wind Tunnel] complex that we were in. Held that position for quite a few years, in there 13 years as the Aerodynamics Division.

Then, there was another reorganization at Ames. I became then—still as a division chief, but they took all of the research capability out of the division—we became just a Wind Tunnel

Operations Division, and I became Division Chief for the wind tunnel operations, all wind tunnels at Ames, that included the 40 x 80 [Foot Wind Tunnel], as well as the simulator, of which I knew nothing about simulators. Could barely spell the word. Held that position till I retired in, I think it was 1997, I retired, in that range. That's about the thumbnail sketch of the whole, and it was a very, very enjoyable job. In the early years, more enjoyable than in the later years. The accountants were starting to get a hold of Ames, and of NASA in general, and then Ames, and changed the way we did business.

WRIGHT: Let's go back to those first years, and actually, when you were still in school, in Oregon, what did you hope to do with your degree? Did you want to work in industry or research?

PRESLEY: We took tours, so we had seen industry, and we took tours at Ames. We saw the working environment at Ames, which was really not far from a college environment. You had three or four people in an office, you were doing hands-on research on something that you thought was really important. It was a nice environment and I loved airplanes, I loved the aspects of airplanes, so I wanted to continue. Some of my classmates also went to work in industry, and you would tour industry and you would go into these almost football-size buildings with row upon row upon row of desks, and the people would be working on one small aspect of airplane design or something. That just didn't appeal to me. I was more interested in research and understanding the broader theme. That's what really attracted me to NACA, as opposed to going to work in industry. Salary structure would have been better right off the bat, although I can't complain at all. It would have been better going into industry, but it had its ups and downs.

There were famines and there were feasts, and if you were in a famine, you could really be in a famine for a long time.

I did interview with a couple of different people after being at Ames for a while, to think about going someplace else. The first summer I was at Ames, in that first summer period, the group leader was a guy named Emmet [A.] Mossman who, by the time I came back after going back to get a master's, he had gone to work for at that time, what was called the Martin Company, in Denver, Colorado. I could have gone, and he wanted me to come and work there with him. At that time, I was also interested in graduate study, and driving from Ames to Stanford [University, California] was easy, and the weather was good. Had I gone to Martin and they said, "Well, you can do the same thing here, but you drive from South Denver to Boulder."

JOHNSON: That's a little longer in the snow.

PRESLEY: Yes, right. That was all factors. Main thing was the work environment. I was also a child of the [Great] Depression, so job security, working with the government, always factoring into that. By that time, we were married, and had to start worrying about things like that. Appealing, and then after you were at Ames for a few years, you just stopped contemplating leaving, and really concentrated on doing the best job you possibly could, there.

WRIGHT: Did you work on a number of projects when you came back after getting your master's degree? Or were you just assigned to the one?

PRESLEY: I went back almost to the same office, and basically picked up where I had stopped the following fall. I did some related work for my master's thesis, more of an experimental project, and then came back and worked on—at that time, the supersonic transports were foremost in everybody's mind. We were going to just dispense with subsonic transports and go into supersonic transports, so we were working very hard to try to figure out how to make good inlets to get the air into the engines in a very efficient way.

We did both experimental work and then one of the first computational aerodynamics type programs at Ames is what I was working on, to analyze the flow that went into the inventory. A way you could solve supersonic flows as a method of characteristics, which works out, and that was what we were trying to develop—computer programs to solve that flow. It's a totally impossible job, to solve that by hand, although the first summer I was there, we were trying to solve flows by hand. At that time, we had computers, but they were ladies, most of them, up in an office, that computed on spreadsheets that we had devised for them to do the calculations for us. It was a continuation of the work, and I worked in that area and then became interested in a higher-temperature inlet operation, in a couple, three years. We tried to do some high-temperature testing.

It was all of a sudden a shock, when we were used to doing testing and looking through the window and seeing our models there, and then we went to this device called a pebble-bed heater, which blew hot air past the model. You looked in through the window and the model was glowing red-hot. Then, you start saying, "How do I make that thing work in that environment?" That was a challenge, and we tried, got a little data, but not much. By about that time, they decided that they were going to reorganize Ames, and we reorganized there.

WRIGHT: That's one thing continual, wasn't it, just wait for the next re-org?

PRESLEY: It's the only thing constant, is change.

WRIGHT: That's what I hear. Speaking of such, it wasn't too long after you came back on a full-time position that the move was to have the NACA absorbed by the new organization of NASA. How was your job impacted at the beginning, or was it?

PRESLEY: It wasn't an impact until that was, I think, the motivation of why they wanted to realign Ames more along the line to emphasize that we were really getting into space research. I think it would have been the death knell, to try to stay as a sole aeronautics center. Ames was a little bit in a precarious position all along, anyhow. There were several attempts to close it. We always suspected it was the folks at Langley who were closer to the congressmen, who were saying, "You ought to close that place out there." Things change very quickly after we became NASA. As far as our working environment, you changed offices, you changed things you were supposed to work on, but you didn't change what you were supposed to be doing.

WRIGHT: Did you find it still to be somewhat collegiate through your whole career?

PRESLEY: Right, yes. It's always been that way. The only aspect that started to become non-collegiate was Ames was always core-funded, and all of NASA was always core-funded. Then, the move to go to a full-cost accounting system affected us for what we saw, really, in the wind

tunnels because then we had to start being conscious of the operation in the wind tunnels. That has kept on going, until they essentially run as private businesses.

During the time I was there, it did not affect the research too much, although the research now is more competitive. Space guys have always had the problems, pretty much always had the problems, that even though they were NASA employees and they're working on a project, if they wanted a new project, they went and competed for that new project, and they competed against university groups and industry groups at the same time, to finally win that. That is coming into aeronautics more, and aeronautics is really a small chunk of the operations, now.

Right off the bat, it didn't change—it just evolved fairly slowly. The first thing was we got the full-cost accounting systems for the wind tunnels. I've always thought that was a mistake, to go in that direction. You got to understand it, with budget pressures and everything, but I think you do better work when you're core-funded and you're not out there competing.

WRIGHT: Right, you actually get more done, in a sense.

PRESLEY: That's right. That was sort of the motivation, there.

WRIGHT: Were you still able to get your research published?

PRESLEY: Once I became a branch chief, I did not do any more research or publications. I think I finished up some work that I had started and was in the pipeline, but the tasks of running it—you could make up your mind, I always thought, as a manager, you could keep on doing your research, your management will suffer. But if you say, "Well, I'm going to pay attention to

manage it," and do everything you can to be a good leader, there's just not enough time to do research. Then, the problem of it is if your goal is to be a manager and then go back and do research at some time after you retire or something, you're pretty much out of it, so it's hard to do. You sort of have to make a binary decision. Am I going to be a good manager or am I not? I guess I was really focusing on trying to be a good manager.

You got the care and feeding of, as a branch chief, 15, 20 people to worry about, the care and feeding of 100 or so, plus contractors at the division level. You just didn't have time to do that. Particularly when you started getting into the fact you spent a lot of time when you're in NASA Headquarters on your knees, begging for money, there just wasn't enough time to keep on doing that. In some cases, you can lead conceptually and then try to get what you would like to see done through others, and I tried to do that quite a bit.

WRIGHT: You mentioned that when you started, your computations were done by computers, but at some point, technology changed and your computations were done by other types of computers. Talk to us about how technology impacted your line of work, and then what also that you saw at Ames, the changes that were caused by the evolution of different types of technology. Whether it was in the wind tunnels or whether it was in your division research.

PRESLEY: Technology had a profound impact. Sort of the same impact that we see today, even, at an accelerated pace. One hobby I have now is studying cosmology, and trying to understand the universe. There—and I was talking to another fellow just yesterday about something—the great advances there have been made in the last 50 years. There's a whole business now of trying to understand the brain, and there's a new book out, I read parts of it, and the author states

that we've made in the last 15-20 years, as much progress as we have made in all of humanity up to this point, in understanding how the brain works. I think it was interesting, and I was sort of in on the ground floor of that, to see how that technology, which was just starting to evolve, it started becoming more and more a thing.

First off, we were writing computer programs to calculate the flow around the outside of a jet engine itself. One of the first computer programs, again, using a method of characteristics, was written to do that. At that time, we were using what was called an IBM 650 computer machine, which you could do then in a few hours what you could do in a long, long hand-calculation, a weeks-long hand calculation. That same technology now is succeeded by the standard iPhone as far as computational power. All of that has had a big impact.

One humorous thing is that IBM machines, we would get the answer and look at them and say, "That's not right," so the standard thing was, "Let's run it again," because the machines made mistakes, in those days. Then, we saw that progress. We started seeing where we could do much more complicated problems, more complex problems, in less and less time. I remember once I was writing a paper and I had to try to get some work done over the weekend, so I was out at Ames, working with a young guy that did the programming for me, we would get complicated internal flows calculated almost as fast as you could turn around. You would submit the job—and these were calculations that would have taken weeks by hand—at that time with a deck of cards, how you communicated with the system, and almost immediately, you'd hear the printer start going to print out all of your information.

We were able to see all of that grow and manifest itself in both the ability to handle more and more complex problems and the ability to do it faster. Then, you started seeing computer graphics coming in, so instead of trying to stare—and these listings of answers would often be a

stack of, you've seen the old computer pages, they were almost 18-inches wide and 12 inches, and fold upon fold upon fold—a stack of those that high, you would just be able to put on a graphic display system and see that right up in the wind tunnel, there. That was all a gift to see all of that. In the wind tunnels, we sort of started seeing the same thing.

When I first went to work at Ames, we took photographs of manometer boards to measure the pressures. You saw that and you would take a photograph, and then you would, again, get that developed, hand it over to a computer or somebody who would go into a dark room and read those levels by hand, and record them all by hand, and do all the calculations of the pressures that you were measuring by hand. We started then seeing more and more work coming along with the pressure cells, and smaller and smaller pressure cells, become very miniaturized. Your ability to sense what was going on was much increased. We started seeing lasers come along and being used.

To see that end capability to improve to do our sensing of what was going on, then that was sensing and it was, again, computers would help us reduce that data very, very much faster and get that going on. That became manifest in the wind tunnels, too. We were able to record the data from the wind tunnels, do that very fast, and see that get, as the wind tunnel tests were being run, you would see in the control rooms, the output and the answers being printed. They were large computer codes, then, to just analyze that data. This sort of became manifest in something I was very proud, many of us had a role in that, is we were very fortunate and through lots of pleading with Headquarters, to get big chunks of what was called their Wind Tunnel Revitalization Program at Ames.

With that, we were able to modernize some of our facilities. Again, what we were able to do, then, is to get the facilities to modernize because they were old and we were really worried

about staying competitive enough, and particularly in a full-cost accounting atmosphere, to get the wind tunnel, to get business. If we couldn't produce the data fast enough, somebody else, the users would want to go someplace else. We were worried about that NASA-wide as falling out of the capability to remain competitive in a testing environment. We were able to get funding and we modernized the wind tunnels, we modernized the data systems, we started encouraging the employees to be conscious of something called Total Quality Management, and to really focus on customer relations.

The net result is, I was just talking to a friend who I know who still works at Ames, who's been doing a lot of testing on the Orion capsule, all across many different facilities, and has come back and said, "The Unitary facility," the 11-Foot [Transonic Wind Tunnel] and the 9 x 7 [Foot Supersonic Wind Tunnel], "are the most productive, best wind tunnels in the country to us." I think we saw that as the evolution and the coalescing of better sensing and better computing at the same time to increase the ability to obtain and analyze data.

On this Astrogram [newsletter], there's a picture in front of it of [David] Korsmeyer, I think it was, who was doing work with trying to integrate computer results with wind tunnel results, and ship that data up to industry at the same time, in real time, so they would be able to understand what was going on in a wind tunnel and during testing. We had a large role in getting that work going on.

WRIGHT: Your customers changed quite a bit from the day that you walked in to the Center regarding the wind tunnel uses. Is that correct?

PRESLEY: We used to have a lot of internal NASA customers. Unitary, when I was in the 6-Foot, it was a lot of internal NASA customers. There was quite a bit of support for military programs. The 6-Foot, where I was to start with, had no commercial aircraft testing at all. Military wanted to use the wind tunnels, they came in, the wind tunnels were used. Someplace in the great accounting system, that was all washed hands, but the military was never charged for—at the same time, Unitary Wind Tunnel was set up to provide testing for external users, mainly. They did some work, but the priority was always for external users. When I went over and became that, we were still on core-funding when I started there, so industry would come in, military would come in, wanting to do testing. We'd say fine, get enough hours for it, your program is high enough, so we could do it in.

If industry wanted to do testing, that was always on a contractual basis because NASA tried to bend over backwards not to give any particular company a favored status. In both the 12-Foot and the 11-Foot, and the 9 x 7, I think primarily that was hooked up with if industry was testing in those, they paid upfront for the cost of the wind tunnel testing. That has changed over the years. Now, if the military wants to come in, they have to bring their money in, so there's an accounting there. Even for the NASA research programs, they have to go and get money from one of the program offices, more than likely at Langley, and then buy the wind tunnel time for doing the testing. I think it's all basically, it's the same cost for industry as is for internal customers.

The enhancements that we made in the NASA wind tunnels as a function of that meant that industry could get their data faster and quicker with better service, and so, their total cost was less. That's where you get into the ability to get data as fast as you possibly can, and make it work. That's where technology really came in and increased the competitive position of Ames

to stay in the testing business. Is that important? They're good facilities. It's important from a personal standpoint because the care and livelihood of a lot of people is locked up there. That's people's jobs and their careers, and if you close that facility and go someplace else, they might not be as lucky as I was, to land on their feet again after another RIF.

WRIGHT: The data that came from the test, if it was industry-purchased, did it stay with the industry or did NASA, was it able to use the test results and test data to benefit research in other areas that NASA was working on?

PRESLEY: We had two kinds of programs with industry. We had the straight fee testing, is what we called it, that's where industry would pay for, for instance, a prime example is Boeing was developing a 777 and we did a lot of testing for the 777 aircraft in Ames wind tunnels. If that data was a part of their competitive position and they wanted to prevent most characteristically, at that time, Airbus—although when I first went to work there, they wanted to prevent Lockheed and Douglas and Airbus wasn't even on the face of it—if they wanted to make sure that those data were held privately and not getting into the hands of a competitor, that stuff was just put in a box and industry took it away. There was no residue at Ames whatsoever. They took the tapes and everything with them.

The other thing we often did was do cooperative tests. A cooperative test would be where industry has an idea, they say, "Let's test this idea," and it's not part of an airplane program, very early on, we had a cooperative program on airfoils with Boeing. What they were after was to try to make a thick, transonic airfoil. The reason they wanted a thick transonic airfoil, and you can start to imagine, if you get a big, long wing, like a 777 wing, if the airfoil is

not thick, by the time you get out to there, that thing is so thin that you can't get enough structure in it to hold it together. We would give them wind tunnel time to do it. They would make the models, bring it in, and do the stuff.

We kept the data and quite often, there would be an agreement to publish the data after a certain time period, and so, that was the core part of our cooperative testing. We liked to, whenever we could, encourage that because it was helping our industry out. That program, those thick airfoils did end up on the 777 wing, so they were able to make a more advanced-structure wing and still get the same transonic flow around it. We did it both ways, but again, sometimes there would be joint papers between industry and Ames written, sometimes industry would publish the paper in a conference, various ways of doing it.

WRIGHT: The people who came to work for you, once you became a branch chief and division chief, were their interest in their desires to use their educational training much like yours when you first started NACA? Or did you see a change, a different aspect, when people, 20, 30 years later, came through? It was a different type of working environment.

PRESLEY: I think you could say that people that came into the research areas were pretty much always motivated to do research. That was a very common denominator in their preference. Their attitudes weren't a heck of a lot different than ours, I don't think, but I think the key thing is, is the person interested in research and understanding, or not? You always have and had individuals that came in that were self-promoters and wouldn't necessarily have exactly the same motivation. When it came down to making a hard decision, do I help that customer or do I help myself, it would be help the customer. We really, really—and particularly late in the time of the

Aerodynamics Division and then before we became the Operations Division—focused on meeting the customer's needs. We had a lot of people who had many contacts with industry and worked across those lines. Later on, we did not have too many young people coming in because staffing limitations were such that we didn't get too many. In general, if a person in their genes have the desire to do research, they sort of have the same inquisitive, curious nature that characterizes many of us who wanted to work there early on.

WRIGHT: What do you feel is, for yourself, your most significant accomplishment, looking back on when you were able to be out there for those years?

PRESLEY: I was trying to think about that last night, or the last couple of weeks. It's sort of a dual duality. Personally, I think I have a fairly significant role in developing the internal computational capabilities because the same computer programs that we developed were ultimately picked up by Boeing and some of the other companies to use in their analysis. You probably can't find a paper trail that says that, but I think that was important. I think getting some of the research programs initiated and started, which then blossomed into other work at Ames, and ultimately, in industry, was a contribution. We ended up doing a fair amount of classified work, which led to some of the—one of, I think, fairly directly—current airplane programs that are flying. I think that was something that I felt and had a role in getting that established at Ames. I think the way that the wind tunnels ended up, I don't like to be boastful, but I feel good about that. It for sure left the wind tunnels in much better shape than when I came in and found them. I think that was a significant thing to do out there because for a while, we were not competitive.

The environment has changed so much. We sold the Wind Tunnel Revitalization Program largely on the argument that the ATF, that was the Advanced Technology Fighter, which ended up as the F-22, I think it is, the latest. That was a huge program that the Air Force initiated, and there were competitors all over the place in there, and requests to do testing in our facilities. We convinced Washington, "Look, we're just barely able right now to meet this demand. The next program that comes along," which worked out there was one more, would justify, "unless we do something, we will not be able to meet that demand." That convinced them, yes, NASA's facilities were getting old.

I first went to work there in '55, the first summer. I roomed, three of us—at that time, you could rent an apartment cheaply in Palo Alto—we roomed together, and two of the guys were in the Unitary Division, doing the calibration of the unit. That tunnel was just coming online in '55. The basic facility had not been modified much, and the data systems had evolved and become better and better. We needed to make some major leaps on three sides: on the analysis, on the sensing, and on the attitudes of the people doing the work. That's what we tried to do. I think we put that together and it still is applicable today.

WRIGHT: The fact that Orion's using it is pretty amazing because that's an up-and-coming program and it's still using that technology.

PRESLEY: Those are, I think, interesting things. I really enjoyed it.

WRIGHT: I was going to ask Sandra if she had some questions or some thoughts to share?

JOHNSON: You mentioned when you first started that one of the things you were doing, you were actually programming, early programming. We've talked about the difference in computers, but you were writing computer code.

PRESLEY: I should correct that—actually sitting down and writing the code lines, I didn't do that. What I did is I wrote down and told the programmers what equations to use and the steps to us, and then they translated those instructions.

JOHNSON: Okay, so you were writing the instructions, and then the women, or the human computers, would take it?

PRESLEY: And program the machines.

JOHNSON: Okay, and they would take it and put it on the machines?

PRESLEY: Yes, right.

JOHNSON: That's pretty interesting. I was wondering exactly what you were doing to do that.

PRESLEY: I never really learned in my whole career how to write a computer code. I tried to worry more about the physics of what was going on and how to do that, it was interesting.

WRIGHT: You mentioned a couple of people as you were going through—is there one or two people you feel had a significant impact on your career, or served as a mentor to teach you the insights of succeeding at the Center?

PRESLEY: I think one of the first people that really had an impact on me was Frank [A.] Pfyl. His name was mentioned in there. When I came back from getting a master's degree, Emmet Mossman had left, Frank Pfyl was the group leader, and he mentored me for many years there, and then when I came back in the Aerodynamics Division, he was an assistant branch chief at that time, and provided a lot of mentoring to me. He was always a person that I had a great, profound respect for.

The problem that you get into, most of these people have now passed away, but Morrie Rubesin was a big influence on my life, also. It's a gift, I think, to work at someplace like Ames, where you work with some of the smartest people that you ever come across. Morrie Rubesin was one of the smartest guys I've ever, ever known, and just a great human being at the same time. He had a big influence on my life and what I did.

I enjoyed working with Leonard Roberts. It was a funny situation because when I was being promoted to Division Chief, I went through one set of interviews with Len Roberts, and the rumor mill came back that yes, Len recommended me for the job. Then, he quit before I was anointed, and he went to Stanford and Tom [C. Thomas] Snyder took over. I went through another set of interviews with Tom Snyder, and then finally, got the job. Another individual that affected me a lot in my career was Clarence [A.] Syvertson. I had a personal relationship with him, or knew him very well. He was an outstanding guy.

WRIGHT: Do you feel like you learned management lessons or styles from any of these that you used in your tenure?

PRESLEY: Yes. To a certain extent, yes, right. Frank Pfyl was, again, the strong mentor. Roberts was a strong mentor, helped me, and my relationship with him continued after he quit. He was teaching at Stanford. Vic Stevens had a big impact on my getting there. There used to be a guy named Tom [Thomas] Kenny who worked at Ames, and I knew him fairly well. He always told me, "Roy, it's not what you know that matters, it's who you know that matters." I think Vic was always helping out on attitudes because a lot of the attitudes were you all had to go through promotions and promotion boards as you were coming up, so who would put in a good word for you at the promotion board quite often made a big impact on whether you got the promotion or not.

WRIGHT: It helped for someone to understand what you were doing.

PRESLEY: Understand what you were doing and had respect for what you were doing, and didn't denigrate your activities; was supportive. Tom Kenny, I think, was supportive of a lot of my activities. You meet lots of people as you go through that, or you met lots of people as you went through your career, who had big impacts on your life, really. Work career is unfortunately part of our life—it's a big part of our life.

WRIGHT: You were close to Stanford—were you able to continue studies? You had mentioned that that was one of the things you had wanted to do.

PRESLEY: Yes, I did. Actually, I passed the orals to get a Ph.D. and sort of got bogged down in writing a thesis, and then about that time, I got promoted to a branch chief, so that sort of went by the wayside. Sometimes, I wish I'd have finished that off. Not sure it would have made much difference. In your life, you've met a lot of Ph.D.s who are really smart, and you've met a lot of Ph.D.s who are really dumb, so a Ph.D. doesn't open your doors, many. Depends what you're after, and if you wanted to go into academics, you had to have a Ph.D. If you were not inclined to become a teacher or you were down a different path. I know many, in fact, some of the smartest people—smarter people—at Ames I ever met didn't have Ph.D.s. Morrie Rubesin didn't have a Ph.D.

WRIGHT: You chose to stay in the area all these years, so did your family participate at some of the activities at Ames?

PRESLEY: Some, yes. Some, not too many, but some.

WRIGHT: Enough?

PRESLEY: Yes. I wish I had probably had my wife more involved, but a lot of demands for time.

WRIGHT: Sure. We all have lives full of wants more than we have time to do them, that's for sure. Is there anything else that you could think of that you want to talk about, or any other projects, or anything that we might have missed over?

PRESLEY: No. I can't think of anything else.

WRIGHT: We thank you for your hospitality.

PRESLEY: You're welcome.

[End of interview]