

NASA SANTA SUSANA FIELD LABORATORY ORAL HISTORY PROJECT

EDITED ORAL HISTORY TRANSCRIPT

ALELI KELTON
INTERVIEWED BY JOY D. FERRY
LOS ANGELES, CALIFORNIA – 7 MAY 2015

FERRY: Okay. So, for the purpose of the audio recording today is May 7th, 2015. It is – what time is it?

MANES: 2:46 p.m.

FERRY: 2:46 p.m. and I'm Joy Ferry with Lori Manes interviewing Aleli Kelton. I pronounced that right, okay.

KELTON: Yes.

FERRY: So we do have your permission to do this interview, you do consent?

KELTON: Yes, I consent

FERRY: Okay, great. So, we were discussing earlier. Can you just maybe start at the beginning, and give us a little breakdown in how you became involved in this?

KELTON: Sure. I was lucky to be hired with Rockwell International back in 1982. And my original position there was I worked as a classified printer in part of the photography department in a dark room, printing basically work that could not be sent out to the vendor, to be printed

because of the nature of the classified work. And so that was my first job and I did that for about four years – three or four years - working in a dark room.

I was - in high school photography was my major, and I went to school in Burbank where they had an outstanding program in photography. So I had a very good portfolio put together from high school. And so, when a job opened up for a photographer I jumped on it, and I told my boss "Hey, I'd like to apply for that position." He was kind of surprised because he didn't know I was actually a photographer, and I said "Yes, I'll bring my portfolio tomorrow." And of course I did that, showed him my portfolio, he was very impressed for high school work. It was on the level of being college work really. So, I was given the opportunity to interview with several other people - they were interested. And then to make a long story short I ended up getting the position. It was one that required a lot of physical activity. It was going to be at a different location from where I were used to working, which was the main facility where they did all the manufacturing of the engine and all of the engineering work, and of course all of the executives were located in that building. This is was at Santa Susana Field Laboratories, which was maybe 20 minutes from the site, up on a hill. And they were real nervous about whether or not I would actually be able to handle that environment, working long hours, doing a lot of physical activity, setting up cameras remotely, up and down a lot of stairs. And I said, "You know, give me a shot." The other challenge was that it was a position for an instrumentation high-speed motion picture photographer, which of course I had no experience in. And so what they ended up doing was bringing an old timer in who had retired who had about 40 years experience. His name was Ernie Ernhart - wonderful man. And the first day I showed up at work I walked into the studio up on the hill, and I said "Hello, my name's Aleli, I'm your student."

And Ernie Ernhart, and who would be my supervisor Rolly Hall. He was my supervisor and he there. And they both turned around looked at me and said, "You're joking." And I said "No, I'm not joking, I'm really am – I'm the new photographer." And they just looked at me for a second and said, "Oh, come on, you're kidding," Because my name, Aleli. They really didn't know it was a male or female, they really didn't understand. And I said, "No, I really am the new photographer." And so then Ernie replied, "I have died and gone to heaven." And he works in the time up there at the hill, where women weren't even allowed on test stands. So, here I show up, young lady, and got my hard hat that they had assigned me. I had my steel-toed boots on, a pair of jeans - I was ready to go and work. And so, once they got over the shock, of course, it worked out. He was a wonderful teacher, he was a master. And so, he basically worked with me for a solid month and showed me the ropes, you know, everything from loading the high-speed cameras to setting up for different assignments that we would get from time to time.

And then as well as doing the high-speed photography we were also challenged with covering all the still photography. And that meant for the entire facility. So, we had - I had a company station wagon assigned to me. And the phone would ring, and they would need pictures over in building 24, and that's where we would head off and take our gear, and you never really new when the phone rang what that next assignment were going to be. And then to challenge it even more, at that time the hill had two shifts: first shift and second shift. And we were of team of three photographers and we had to cover both shifts. So, that meant putting in lots of long hours, mostly and support of test. When we would work that second shift it was because one of the test areas, like Alpha Area, the Delta Area, Bravo, or Coca, would be testing an engine that night or a turbo pump. And so, of course, we had to be there. We were actually

part of the countdown in the control center. So, we would be part of turning the cameras on and off, getting the lights on and off, and responding along with anybody else that was involved in that test. All right, so in covering these shifts, first and second shift...

FERRY: Yes. The day shift and the night shift.

KELTON: And the night shift. It required putting in a lot of long hours. And so, the upside of that was I got to meet a lot of interesting people. Because I basically interacted with everybody that worked on the hill, from the engineering, to the test personnel, to the facilities people that helped support it, to the environmental people that worked up there. And it was pretty much like a family atmosphere up there. You never drove by anybody and didn't wave at each other. We had our own fire department. And so it was a pretty close community up there, and exciting. I mean, we were testing rocket engines and I took – in my case, it didn't get any better. I just loved it, and I ate it up. We have a lot of accomplishments that we made on testing the SSME. We were doing the research and the development at the time, so they were pushing the envelope. And a lot of it was just very exciting and, you know, this – now, we're going to have, you know, I think our longest test if I recall, gosh, maybe 200 seconds, which was a long, long test, and very exciting. I also was very interested in giving my photography an artistic approach. And so, not only was I documenting, which was really the main purpose of our photography up there, but I would also go out to do artistic photography. And so, I would bring in different angles, I would bring in different framing that was, you know, pretty, artistic, and I sort of developed a really, really nice portfolio out of it. And then of course, word got around, and people would see the photographs in the upper management - and at the time Jeff Monihan was our director. He was the director of tests up on the entire Hill. And one day, I was summoned in his office, and I was

flattered to see that he had four of my photograph, printed up in big poster size, up on the walls and he said, "You know this work is fabulous. We're really glad to have you up here. We've never seen photography like this, and, you know, basically keep up the good work." And so that really set me free. And I decided that - one day I wanted to take a picture of the shuttle engine being - while it was being tested. We had an area that they called the bucket, which is where the engine would sit in testing, and it would shoot down this bucket where all this water would be sprayed on it, so it wouldn't melt the bucket. And we had never obtained a still photograph of the engine while it was testing. And so, I decided one day that I wanted to try that. And I went to my boss and he said, "You're crazy. Your camera - the camera will melt, that will never work." And I said, "Well, let me give a shot," and I had plan, I said, "You know, what if we - you know, all of our cameras were in protective houses so that they wouldn't get damaged, or that they could withstand temperatures." And so, I said, "If I can get engineering test to give me some power down there, and I get - I go and locate a protective housing box for it off of another test stand, and we hook up a nitrogen purge to the inside of the box to keep it cool. And then one on the outside of the glass to keep it from fogging up." I said, "I don't see why it wouldn't work." And so, make a long story short, I did all that. And now - I'd never forget, it was a night test. We had 22 other cameras to unload after the test, and this was late. This is after, you know, probably putting in a 15, 16 hour day. And I couldn't wait to get down to that bucket which - climbing down this ladder, walking across this beam, to see if the camera had ran. And it did, and all I remember noticing was it was set on 36. I had used a motorized Cannon camera, 35 millimeter, and the camera was on 36, and I was like, "Woohoo, we got it, you know, great."

So then all of our film was sent down below for processing at the main facility. They had a full photographic lab there. So I had to send it down that night with the carrier, and the next

day I called my boss, Buzz Brown was his name. And I said to Buzz, "Hey, you know, get that film developed immediately and let me know, did we get that shot?" And he said, "Alright, all right." So he called several hours later, and he said to me, "That's an amazing photograph you got." He said, "We've sent it UPI. It went to the communications department immediately, everybody loved it. It went UPI, and we've already heard from Aviation Week and Technology. They want to feature it on the cover of one of the next editions coming up. " So I was just thrilled to death. And much to the chagrin of my boss up at the hill, my supervisor, I said "Hey Rob, we've got a great shot," and I told him, you know, what had happened and he said, "Good for you." About a week later, I had to use that same camera. And I had gone to get it out my cabinet, and as I was walking up to the studio I looked at it, and I was like "What in the world happened here." And I just assumed that for some reason the cabinet in the back had gotten really hot, because the whole front of the camera was melted. And I took a few steps and then I realized, "Oh, this was the camera I had in the bucket." And I went, "Wow, well it's good thing that shot came out," because now I've got to call my boss and tell him, you know, this very expensive top-of-the-line camera had - needed to go out for repair, and I didn't know whether or not and they'd actually be able to repair it. They did, and it was just really cosmetic. The housing of the camera had melted. It was not that big of a deal, so that was kind of worth it.

FERRY: You got the shot.

KELTON: And I got the shot – so, and it was fabulous accomplishment. Not just for me, but for everybody to be able to pass that photograph out, which we did, to everybody on test. It just really put my name on the map. And so I had a lot of cooperation from my coworkers from that moment on. That was kind of what really put me on the map up there. And I loved it, it was

great. I think once I proved that I just wasn't some young girl up there to fool around and have fun - I was actually serious about my job - people would bend over backwards to help me. And so, my next major accomplishment up there...

FERRY: So just, real quick-

KELTON: Yes.

FERRY: Just real quick, when we start filming again, what stand was that at when you put the camera in the bucket.

KELTON: In the bucket? Okay.

FERRY: Yes, what test stand was that?

KELTON: Okay, alright. So, the bucket shot was on the Coca Test Stand. Okay, so the bucket shot that I got of the SSME, the space shuttle main engine testing, was actually on the Coca. That's where we did all the testing of the space shuttle main engine. And after I accomplished that, I got the crazy idea that I wanted to get a photograph of the entire test stand, from the backside, which of course nobody had ever photographed. We had photographs from the front of the test stand, and of course on the test stand itself, but not from behind. So, I hiked up Skyline Drive and I took a little deer trail down to where - just a beautiful site to photograph the shuttle engine. And I thought "I'm going to try and see if I can't get a shot from here." And of course that meant getting Health and Safety to sign off on it, because they had to make sure it would be safe to be roughly 600 yards away from an engine testing. And so, I found this giant

boulder that I would be able to stand behind and, you know, I explained to the – it was a friend of mine who I worked closely with up there in Health and Safety - that I would, you know, have all the protective hearing on. I would, you know, have my hard hat on, I would stand behind this giant boulder, and I would control my cameras with cable release, and be able to get a shot that way. And so once Health and Safety signed off on it, then I had to get Engineering and Test to sign off on it. And of course once I said, “Health and safety signed off on it already.” They said, “Fine, but you're crazy. Do you realized that's super dangerous, and if something goes wrong...” and I said, “No, no. I'm going to be behind this big boulder. I'll be safe.” And so, I did just that. And that very first test, that was outside on, it was a tested at dawn. And the very first thing you see during a test is the hypergolic ignition, it's a green flash that tells you that it's been lit, it's about to go. And so I remember kind of peeking around the rock, and I saw that green flash, and then a few seconds later I got hit with this just, whomp-whomp-whomp-whomp-whomp – all this energy coming from the engine. So, the engine – I see the hypergolic ignition take off, I peeked around the rock, I see the engine, and then I just get hit with this concussion wave of power that I have never in my life experienced before. The ground is trembling, the hair on my head under my hard hat is dancing. I could scream at the top of my lungs and not hear myself. It was so loud, with double protection – I had earmuffs, and then I had ear - inside the little earplugs in. I was not prepared for that. And it took me a few seconds to even realize: start taking pictures. Because I was so shocked. It was just like, I had no idea that kind of power was going to come off that one engine. And so, I finally did take a few photographs, and then I just stood behind the rock, really just scared to death. Did not see – I was just like “Wow.” I had no idea. And then I understood why everybody said, “You're crazy. Are you sure you really want to do that?” Yes, so after I did that – I got a nice photograph. I-

FERRY: What test stand was that?

KELTON: That was also Coca. That was where they were testing the shuttle engine. And so, I didn't...

FERRY: And so how long had you been working there when that happened, when you got that shot?

KELTON: Probably, five or six years, something like that.

FERRY: So-

KELTON: Six years.

FERRY: So, about six years out of high school?

KELTON: Actually, no. I had worked at a professional lab.

FERRY: Oh that's right. And then you got the job at Santa Susana?

KELTON: The reason I got the job was because one of the photographers that worked at Rocketdyne. He would do weddings on the side, and he would bring all of his work to this professional lab in Van Nuys that I worked at. And I would handle his account. And so, one day he called me up and – every week, when he shot a wedding he'd call and want to know how it looked, and of course it always looked beautiful. And I was busy that day and I didn't want to take the phone. And I said just tell him “Everything looks great. You can come and pick it up, it

will be ready Friday.” And he insisted on talking to me. So, I finally took the phone with a little bit of an attitude, and I said, "Hey Ed, what do you want? Everything looks great, it'll be ready Friday." He said, "No, no. There's a job opening at Rockwell. And I want you to come to apply for it because you'd perfect for it. They want a professional color printer, and do classified work. And that's what you do all day, you know that stuff.” And so, I said, "Great." So I went and applied, and that's how I actually started at Rocketdyne.

FERRY: Oh, okay.

KELTON: So that was in '82. And then I worked in the dark room roughly, for about three or four years, when that opportunity opened up at the hill. And I applied for that, and got promoted.

FERRY: So about 1986, was when you started working at Santa Susana?

KELTON: Yes, yes. That would have been about 1986. And we were in full swing of the shuttle program. Very busy with the research and development. And concurrently on that, we were also testing up there the Atlas engines. We were doing all of the acceptance testing for the Atlas engines, with Delta engines, the Thor engines, the turbo pumps. So there was Alpha 1, Alpha 2, the Bravo area. We also did a lot of work at the Advanced Propellant Test Facility, APTF, where they were testing different mixtures of propellants. They also – we also supported the Peacekeeper Program. They had the loading facility for the fifth stage, where they would load the nuclear warheads up there. And that required extensive photography. There was - every single step of the way was photographed. They assembled the fifth stage down below, at the Canoga facility. But then they would ship it - truck it up to the hill, where they would load – I

believe it was the warheads. And then, from there that was all photographed and documented. And then, from there, they would load it on the truck, and truck it out of there, and they would end up in different silos. So that was another area that was quite busy for us. And then, there was also a code generation facility that was part of E-tech, up there, that we supported. And then, also a space station - the electronics of the space station program toward the very end. We were busy with that, and a lot of testing was going on with that. All kinds of different programs, seismic programs where they were testing metal beams. Basically, I think that was a materials group, and we would have high speed cameras on that, so that if something – so they could record basically what was happening, and then play it back. So, after – back to the shuttle engine - after every test, the next day, all of our film would come back. And we would – we had a projection room, and the engineering staff would come in, and we would project these 22 rolls of 16-millimeter film at the time. So, they could watch to basically compare it to that data that they had, and to see if there were any anomalies - anything that had gone wrong that wasn't caught. Of course when you're shooting 1200 frames a second you'll catch everything. So, that was a big part of our job as well. And then, of course, all the still photography.

So, very exciting, we were busy. I never knew, when the phone rang, what it was going to be. And we worked in all conditions: beautiful days, full sunshine, and then days where it was bitterly cold. I mean, really cold. And when you're standing on a test stand, with a bucket, the wind just comes shooting up, and it's all open grade, and it's cold. And so we would wear coveralls, and then we would tape our ankles to keep the wind from shooting up your pant leg. And then, one of the very first things I did when I have transferred up there, was they said, "You need to run over and get your rain gear." "My rain gear?" And they said, "Yes. Go get your rain

gear." And it was rain gear. It was boots, the whole nine yards. Coveralls, a coat, and we were expected to work in the rain, and we did. We had a very tight test schedule, and rain wasn't going to stop anything. So, we worked in all kinds of weather, on many holidays. I remember spending several Christmases up there. And so, we became very tight family, and like I said never knew when the phone rang, what it was going to be.

One of the most exciting things I covered while working at that facility, because we were one of the few divisions at the time that was still doing the high speed motion picture, and there was a team of three or four of us that were a team doing that type of work. There was the Star Wars program - STI initiative - came into play, and we were challenged with supporting that program as well. So, that was out at Edwards Air Force Base. And so my boss and I got sent to Edwards Air Force Base to cover the very first kinetic hover interceptor test. So, it was going to take place.

FERRY: And when was this?

KELTON: This was in – I can tell you, I can look it up, it's right here. '88 - 1988.

FERRY: Okay, right. So you'd been working at Santa Susana Field Laboratory for a couple years by then.

KELTON: Right. Yes, right. And so, that was a very challenging project. We were under a very tight schedule to get the little – we had a little tiny rocket engine that was basically one of the

engines that was going to be on this vehicle, to help propel it and maneuver it. And we were under a tight schedule and get that tested and accepted, which we did. And then, from there, we basically got sent out to Edwards Air Force Base. It was a very classified program. There was a consortium of our company, Rockwell that was – Boeing was involved, McDonnell Douglas was there, Wiley Laboratories was there, the Air Force of course was involved, and it was a very exciting project. My boss got kicked off that project the second day we were there, over an argument with the electricians about the kind of power that we required to set up the kind of – the amount of cameras that they were requesting. And so, he basically got sent home. And I got a phone call from my boss down below, at the main facility, telling me “You are now in-charge of that project.” And I said, “Wait a minute. No, no.” I said, “You know, this is way over my head.” I said, “They can’t send Rolly home. You know, can’t they just work this out, talk to the guys, let him know he’s just...” You know, he was right. He was just having a bad day, but he didn’t understand that there’s just so much power, and you’re going to have to make it work with this amount of power. Even though you really need this amount of power, you’re going to have to make it work this way. And so that never happened, and I ended up being put in-charge of this project. And it was very challenging. It was a huge hangar, and you walked inside and there was this long tube about five feet long, about two and a half feet wide, up on this cradle that had little rocket engines strategically placed around it. And then it was inside of a huge square net where supposedly this thing was going to fly around inside. And the net was there just in case it got away. And it was being controlled via telemetry, so there was all this was all this very – everything was painted black inside, including this vehicle, with the exception of a very thin strip, and a little antenna on it. And there was all this anechoic material on the walls, and it was very - kind of eerie, spooky looking - and then this big giant net - square net. It was a little bit

intimidating, and then of course you're working with all of these different companies, and again we're under the gun to get this thing to work. And so, suddenly I find myself in charge of this project, and really in over my head. But somehow, with the grace of God, I really don't know – we - I ended up getting some amazing footage. And one of the very first things I did was the very test we were going to do; this engine was going to stay in its place. It just going to seat in the cradle, and they were going to cycle through all the different engines on it. And so, one night - I was staying in Lancaster, in a hotel – I'm sitting in the jacuzzi. I got this brilliant idea that if I could double expose the film, that I would be able to get amazing footage, because it wasn't going to move, it was just going to sit there. So, I decided after – actually I called Kodak, one of the very first things was I called Kodak – my rep with Kodak. And I said, “This is my challenge. I can't put any lights on anything because it will interfere with the test. And I need to shoot 400 frames a second, which is almost impossible.” Anytime you're shooting that kind of film through a camera, you need lots and lots of light, to get it to enough light to hit that film running to the cameras so fast. So I said, “What do you suggest?” And they basically suggested that I shoot negative film, that we could push - which meant over-develop - to bring the image up a little better. And so I said “Fine, sounds good to me. Let's try that.” And then, of course, my brilliant idea to double expose the film, because you're shooting 16 millimeter, it has all these little sprockets along the edges. So, as long as I taped my cameras in place, during the day with the big hangar door open, the vehicle was lit up beautifully with the sunshine coming through. And I think I may have actually put lights up, because it - during the test it didn't matter. During the day, it didn't matter. During the test, I couldn't have lights. And I exposed – four rolls of film basically, four different shots I had. And then I went to the dark room every round of film, and reloaded the cameras. And then for the actual test, basically double exposing that same

film, but it's just registering the engines that're testing, which are super bright, they're like a little rocket engines. And so, when I got that footage back, it was beautiful. And so, I have this part of a big conference room where I had to project the film. And they're all looking at me like, "This stuff is outstanding. We don't understand why you're all so worried about the lights and all that." And I said "Wait, hold it, hold it, hold it." I said, "I need to clarify something here." I said, "When this things starts flying, and moving around, it's not going to look like this." Because you can't double expose film of something that's moving, obviously. And so I said, "This looks beautiful, because this is what I did." And they, you know, they all thought that was brilliant thinking, and great, and I said "So just be forewarned, from here on out, when this thing starts flying around, it's not going to look as pretty as this. We'll get something, but it's not going to be as pretty as this." And so, that's what we did, and we ended up - our very first flight failed. It was during the day, we had all the top brass from the military – I believe at that time it was the Secretary Defense – oh, who was it that at that time? Oh, I can't - generally Abrahamson, I think? He was there for the test, and it failed. And of course it was a big let down for everybody. We'd worked really hard, long, long hours. I mean, I member working a 27 hour shift one day out there.

FERRY: Preparing for it?

KELTON: Preparing for that test. And so, it failed. And nobody really knew why immediately, but several hours later the engineers figured out that it was a little tiny strip of light, that was coming through the hanger door during the day when this test took place. Most of our testing had been at nighttime. But because all the military was going to be there, all the top brass, this was going to be during the day. And what happened was the telemetry homed in on that little

strip of light, instead of the antenna on the vehicle, and it shut down immediately because that didn't – it didn't match the parameters. So, once that was figured out, then the next test was very successful and very exciting. I had never really been in a control center where all -just everybody jumped up, and there was hooting and hollering, and it was just - mostly I think just relieved, and a sense of just such accomplishment. And so, the first test basically, it just kind of flew up, and then dropped back down into the net. And then from there, we were out there for months at a time. We actually ended up maneuvering the vehicle, and then ultimately shooting a target out the hangar door a mile away. Very successful, and challenging, and probably the most exciting project I worked on. It kept things very interesting.

FERRY: So how long were you a photographer at NASA SSFL?

KELTON: So, at Rocketdyne, I was there from – I was there as a photographer from '84 to 1991.

FERRY: Okay.

KELTON: And then in 1991 things were starting to slow down. All the testing of the shuttle engine had now been moved, because of mostly the environmental restrictions that we were under, to Stennis or Stenson, something like that?

MANES: Stennis

KELTON: Stennis. It was moved to Stennis. And so, that program kind of slowed down. We were still very busy with the other areas that we were supporting: the Atlas engines, the Delta engines, the Thor engines. And so most of my work – most of my time was now spent over there.

But I can see the writing on the wall. Things were slowing down. And they were having lay offs of the photography department down below. I was pretty safe, because I was one of a few people that did that high-speed motion picture. But again, another fabulous opportunity opened up, and this was working at the Science Center, which was the primary research center for the corporation, all of Rockwell International, where all the scientists worked. And they basically supported all the different divisions in the areas of the critical technologies - scientists from all over the world - and that had photographer, it was a one-man show, basically. And you did the photography, you were in-charge of the conference rooms, and basically the videography – you wore a lot of hats – the auditorium – lot of hats. And I applied for that along with a lot of other people that wanted that. It was a like basically going to the country club. It was thus the most coveted position in the whole corporation as a photographer. And by that time I had a very good portfolio put together from working at the hill, and just as luck would have it, the director that interviewed me at the science center was golf buddies with Jack Monihan, who was the director of the hill. Now of course Jack loved my work, he was very fond of me, and basically at my interview with Jim [Wettleson], he asked me about “What would Jack Monihan say about you?” And I said, "Oh, he would have great things to say about me. He's a big fan of my work. He's got my pictures hanging in his office. And I'm sure if you asked him he would tell you that, you know, I've been a real asset up there.”

FERRY: So, they used all of the high-speed motion photography for analysis, and diagnostics, and documenting things?

KELTON: Yes. And it was basically mandated by NASA.

FERRY: Okay.

KELTON: I mean they basically told us where the cameras were going to be. They set the parameters, and then we just basically had to come fulfill that request. If we were going to change anything, or wanted to move a camera, we had to get permission from them.

FERRY: Okay.

KELTON: And after every test, once all that film was projected for engineering staff to look at, then of course it was all labeled and sent to NASA for archiving.

FERRY: So, for instance when you put the camera in the bucket, or when you went up and hid behind the boulder, that was way out of the norm?

KELTON: Absolutely, yes, yes. They didn't actually get permission for that, because I was not moving any of their cameras, I was just adding to. And so, they – I didn't get permission from them.

FERRY: What you don't know can't hurt you.

KELTON: Yes exactly. Oh my goodness, yes. No I - one of the things I did up there, was I learned to – well, how could I say it. I learned to get things accomplished, and then beg for forgiveness later, if I needed to.

FERRY: Yes.

KELTON: Because a lot of the times if you start asking, people just didn't understand, and they would put up brick walls. And so after a while - I mean, I would make sure it was safe, and I would get the right people to sign off on it. But I basically bent a lot of the rules by just pushing the envelope, and wanting to try something different.

FERRY: So – And you were the first and only female photographer up there, right?

KELTON: Yes. Yes. It was actually in the late – I graduated high school in 1977 and I believe it was in 1974 that they actually allowed women on the test stands.

FERRY: Okay. Wow.

KELTON: Because they felt they were too distracting.

FERRY: Oh, okay

KELTON: How bigoted is that? But yes. That was the situation there.

FERRY: Wow.

KELTON: And so when I showed up that day, and Ernie Earnhart who'd worked there in the '50s, found out basically that I was his student. That's what he said to me “You know, when I worked here, women were not allowed on the test stands.” And I said, "Well, we've come along way, Baby."

FERRY: Yes.

KELTON: But basically, I believe it was in the early '70s where they basically said, "Yes, women would be allowed to work on the test stands. And so, of all the test crew that was working out there, there was three women. And so, one of them was Maureen, she was a mechanic, one of the test mechanics. Another one was an inspector, her name escapes me, I want to say Elaine, she was an inspector. And then there was myself, which was the only photographer - female photographer - that had ever work at the hill. And one of two female photographers that had ever worked for Rockwell International. So, paving the way, but it worked out. One of the challenges was there was no female restroom in the Coca test area, which we spent lots of time at. And so, we would help each other out by guarding the door and saying "Okay, all guys out. You know, go in, use the restroom." And finally, toward the very, very end, we actually got a room bathroom.

FERRY: When was that?

KELTON: Several years later. They installed a restroom. And it was mostly just out of so many complaints. You know, it wasn't a nice place to have to go in and use and they had the ability to build another bathroom, and so they finally did. So we had our own restroom at Coca, which was where we spent a lot of our time. And then over in the other test areas, they had restrooms that were close by in the engineering building and things like that that we could drive over to use. But in the Coca area, where we spent so much on time on the shuttle program, we didn't have a bathroom for a several years. And finally, the three of us just said, "Enough is enough. We need our own bathroom." And we finally got one, and we celebrated.

FERRY: So it hadn't been built-

KELTON: No.

FERRY: -with the idea-

KELTON: That women – no.

FERRY: -of women?

KELTON: No. No. Because...

FERRY: No female bathrooms, nothing?

KELTON: No. That was in the – you know, in the time where all the women that did work up there were basically secretaries, and that type of personnel that supported but were not out on the test stands. And it was very physically demanding. I'm not going to say that it wasn't. The cameras that I used a Millican camera. And it weighted roughly 40 pounds, one camera. And it wasn't bad enough that it weighed that much, but you had to climb up flights of stairs to get them up to the different levels where they were located. And so, I discovered right away that you can't just carry one camera up there. You have to carry two to balance yourself. So, you're carrying 80 pounds, and you're walking up these stairs, and it wasn't easy. Toward the end, I have to say that I was so well liked that the guys, they would literally see me pull up in my station wagon, and they would come and open my door. It made the other guys that I worked with very jealous, and they said, "That's not fair." And I say "Hey," you know. But I would make sure they all got pictures of themselves, because in those days nobody was allowed to have cameras except us. And so, they had very few photographs of themselves working, and any opportunity that I had to

photograph the guys working or, celebrations that we would have for birthdays, anniversaries, or a milestones, I would make sure that we did beautiful group shots of everybody in front of the engines, and that everybody would get print. And so, that really opened a lot of doors, and they were very helpful, but no, I mean I worked hard, I earned that. And I did - they weren't always around to help, so I had to do the work. And it wasn't easy. It was physically demanding, but I was able to do it.

FERRY: So, due to the nature of the work being classified, you became not just the photographer for documenting the tests, but also kinds of photographer for the Santa Susan Field Laboratory Family.

KELTON: Absolutely, yes. That included retirement parties, and luncheons that they would have at lunch hour. People getting different awards that they would receive for the accomplishments and milestones. Baby showers, all of that. And yes, and it was –I think in our heyday there was probably – I'm going to say 600 to 800 people maybe working there, and then toward end it was maybe just 500. And so you get to know everybody. Especially in my position, because I supported all of that facility. So I worked in every building, and you get to know everybody, everybody gets to know you. And it was very much - I mean that's what was so neat about working there was a family environment. And you got invited to weddings. In fact there was a wedding that took place there on one of the test stands, and the media came out to cover it.

FERRY: What test stand?

KELTON: It was on Alpha 2 – no, Alpha 3, I take it back. It was Alpha 3 Test Stand. And I'm actually friends with both of them on Facebook. Koncel, K-O-N-C-E-L was the last name, and Debbie. Her name was Debbie Peterson, married Joe Koncel on the test stand, because that's where they met. So, I mean, that was just a fun thing that happened. But yes. So, weddings and, you know, all kinds of babies, and you just keep track of everybody, and lots of fun times. Some not so fun times. I'm going to get to where we blew the engine off to the test stand. It wasn't a good day. I'll tell you, it was awful, it was a night - It was – actually that test began – I was covering second shift. And (Jack Monihan, the director of the hill would come to every test, no matter what time. And at that time now as well, the neighbors, Bell Canyon, was pretty much – a lot of people had moved in, and they were all millionaires. Multimillionaires, they had beautiful homes, they were right across canyon from us. And they were complaining because sometimes we would test at eleven o'clock at night, and of course it's loud. And so, that was at a time when we had curfew now. We weren't allowed the test any time after eight o'clock at night, which I liked because it made me get home earlier.

FERRY: Yes.

KELTON: But – and sometimes if we were close, real close, we were allowed to test. And so, sometimes it would go as late as nine o'clock. And that was a night test, that was late test. And Jack Monihan, the director was there, and then as well as Hiratsu? I can't remember his name. So, among the many accomplishments that we had, and all the fun times up there, we had some tragedies. One of them was the day we actually blew the space shuttle engine right out of the test stand. Down through the bucket, and down at the bottom of the ravine. And I was working that night in the Control Center and I'll just – part of our job as the photographer, was we would be in

the Control Center, which was about a mile away underground, behind concrete walls this thick. And part of the countdown was for us to respond with "Lights on, lights off, cameras on, cameras off." And then we had certain cameras that would come on at different times during the test, because they were running so fast that they would only run maybe the first 15 seconds of the test, and the last 15 seconds of that test. So, that day, I was responding to my commands, and all of a sudden – it didn't take long, it was the very beginning of that test - kaboom, and all the lights went out on the test stand. And we had video cameras that would monitor, so we could see. And the minute that happened, everything went dark. And then on the opposite side of the test stand we had what they called a pillbox. And we had three observers up there with binoculars that would basically be watching the front side of the test stand, to see if they saw anything that they would be able relay, and say "Shut it down," if they saw a flame or whatever. Something go wrong, some kind of anomaly. And so, all the lights went out, and I immediately just started hitting my switches to see if I could get another light to come on. While I'm hearing Jack Monihan say to the guys at the pillbox, "What does the engine look like?" To which they respond, "Well, sir, that doesn't appear to be engine in the test stand." To which Jack Monihan curses up a storm and says "Don't tell me there isn't any engine in the test stand." And they said "Well, sir, there is no engine in the test stand." And by now in flicking all my light switches I got one light to come on. And you could very clearly see, there was no engine in the test stand. And, of course, it got very quiet. Nobody knew what to say next. And Jack was a beet red, and you know, this was not a good thing. And so, basically everything was shut down that night, because it was pitch-black dark out there. And then we all report back the next morning. And we basically had a grid that they had established, and we worked our way from the control center forward, photographing and documenting every little piece of debris, that would be used to

figure out what went wrong. And it didn't take long. They basically, it was – one of the wells had failed in the inlet manifold. And so, that cause a major explosion, and that's why it blew right off the test stand. So that was not a fun day, but when you're pushing the envelope things like that happen. And fortunately nobody got hurt, and lessons were learned.

FERRY: When was that?

KELTON: That was in 1987.

FERRY: Okay.

KELTON: Yes. I believe '87 - March of '87. I have - the date's on the photograph. I can share that picture with you.

FERRY: So, you mentioned they had a nickname for you?

KELTON: Photographeress, yes.

FERRY: Photographeress?

KELTON: Photographeress. Not photographer, because that was because they felt photographer was a male guy. So photographeress was the female photographer. So that's what they started. They would say "Oh the photographeress is here." And I'd say, "Oh guys, come on. I'm a photographer." And they say, "No, you're the photographeress." They were all in jest. They were great guys to work with. I – you know, sometimes things were physically demanding, especially when we did get direction from NASA to move a camera. We did different studies,

for instance on the Alpha Test Stand, and we had a blanket study that they did, where they wrapped the engine with some special blanket. And so that required us to move cameras that basically had been solid for maybe five, 10 years, rusted into place. And, you know, as much as I wanted to, I could not maneuver those things off of there. And so, they were very helpful in helping - come over and show me how to figure out how to get those moved, and very, very helpful, very helpful.

We had celebrations where it would be Hawaii Shirt Day. And everybody on test, everybody in the engineering facility, would have on Hawaiian shirts. And it was usually during a major accomplishment when we were going to test something, and so we would get these really amazing group shots. And they ate it up, and they'd loved it. And I did the same thing in the Alpha area, where I got permission to be outside, across the canyon up on the hilltop. Photographing the engine test, from an angle that had never been photographed before. I got great photographs during the day and at nighttime. And again we made sure that everybody got a copy that was involved in that test, and it got forwarded on up through the communication channel to everybody that would be interested in something like that. And it really I think put our name on the map up there. People start to take notice, that we were doing some pretty neat stuff up there.

Another tragedy that occurred while I was working there was - one day I was with my boss, Rolly Hall, who had lots of experience. He was 63 years old, and he had worked in that industry for many, many years. Different - he had worked at Pratt & Whitney, and then now he was with Rockwell. And one day as we're both together in the same vehicle, we're driving by the advanced propellant test facility, and he notices a little wisp of smoke coming up from the

building. And he says, "Wow, stop, stop, stop. Turn around. Let's go back." I said, "All right." So, we turned around and we went back, and he positioned us behind a giant trash - one of those huge trash bins and he said, "Something's not right here." And at that same time that he was saying that to me, we noticed one of the engineers was outside of the telephone pole, because we had emergency phones on all the telephone poles out there. And he was on the phone calling - I'm not sure who, but notifying that something is not right here, there was a fire basically, in a very hazardous area. And so Rolly, with all his experience, had us standing behind this trash can, which was so smart, because a few second later the whole thing blew.

FERRY: Wow.

KELTON: And it was a major explosion. And the whole top of the building went up in flames, and the guy, Jin Lang, who was on the phone – Rolly was taking photograph of all of this. I was just standing there in shock. I didn't actually shoot that, Rolly did - he photographed it. And photographed - it was on 35 millimeter with the motor drive, so he got the whole thing. Which proved to be helpful in the investigation actually. But so he has a picture of Jim Lang on that phone, where he's literally blown away from that telephone pole with the phone still in his hand, completely off the pole. And fortunately again, nobody died. There was an engineer that was working in there, Kincaid was his last name - we used to call him Captain Kincaid when he came back, because he lost an arm.

FERRY: Oh no.

KELTON: And so, but he survived it, and he went through a lot of rehabilitation, and came back to work with a hook on his arm, and that's how he got the name Captain Kincaid. So he was very inspirational to a lot of people, and we were just glad that nobody really got hurt. But that was one of the jobs I didn't want to cover. We basically had to go into the area to document everything. We didn't know what we're going to find. We didn't know if somebody had died, and it wasn't something that was really emotionally prepared for, but it is my job. And so, I did, I went in with Rolly, and I didn't – I wasn't the one that found him. He'd already actually made his way out the building, and we basically just covered the explosion inside the building. And so, things like that weren't so fun, but it was all part of the job. Unfortunately, like I said he really – he lost an arm, but he was all right, he was okay.

FERRY: Wow. Yes, thankfully.

KELTON: Yes, yes. We also worked with the community up there. We had our own fire department. And so, every year they would have these big drills with the fire departments for Ventura County. And they would come up because we had a helicopter pad, and they would work with their helicopters, and their fire trucks, and our fire trucks. And they would have these emergency drills. And so, they would be able to practice dipping into the ponds that we had up there, to take water out. And I think it was like in training of new personnel that had not participated in that kind of an exercise. And that was a lot of fun. I mean basically they get all these different fire departments up there, and of course we were always in charge of photographing it. And got some great photographs, got some helicopter ride out of it. Once went up with them and ended up on a call.

FERRY: Wow.

KELTON: And I disappeared for a couple of hours, and they're all like wondering, "What happened to her?" And I was just - they got a call, and they had to go, and I happened to be there. And so, that was kind of exciting - fun. Another time I knocked myself out on a test stand.

FERRY: Oh, let's hear about that.

KELTON: I had been laying down, and they had different times where they would cycle through different - they would purge different lines and such. And so they would clear the entire test stand, because it was considered a hazardous situation for anybody to be up there. And one day I was up - I was on Alpha 2 working, and I happened to be laying on my side. I was trying to hook at J-Bolt underneath the grid - underneath - it was like a metal grid - to the camera test - to the camera housing - used these J-Bolts. And so, in laying on my side, my hard hat had fallen off. And I was so focused on what I was doing, that all of a sudden I realized there's nobody up here but me. And then I looked down on the street level and I see all - everybody is on - they've been cleared off the test stand, and I'm still up there. Now I'm hearing all these lines start to hiss, so I'm thinking, "Oh crap, I need to get out of here." And in doing so, I went to grab my hard hat, and I jumped up at the same time. And before I had that on - my hard hat on my head, I hit a main beam. And it knocked me out, knocked me silly. I saw stars. And the next thing I remember - it was actually Pam, that was her name, who was the woman that was the engineer in charge of - she was an inspector. And I remember hearing her say, "No, put a clean rag on it." So woman-like, right? And so, I remembered - and I get - all this blood is going everywhere, head wounds

seem to bleed a lot. And they took really good care of me, I remember they helped down all the stairs, down the street level, and I ended up in - one of the guys had his truck there, and they rushed me to emergency, which is very nearby, not far there. I again lucked out, there happened to be a plastic surgeon who was working in the E.R. that day, and so he gave me these beautiful stitches. I had - my insurance was with Kaiser, and when I went to have the stitches pulled out they were bringing in people to look at them. They were going "Who did your stitches?" And I said, "Oh, it was a plastic surgeon. He was on call that day." Down - it was West Hills E.R. Center, where they had taken me. And I said, "Yes, he said that I would have no scar." And they were just so surprised at how beautiful the stitches were. So yes, I lucked out there. And it was lessons learned. But again, just typical accident that can happen. It was hazardous area.

FERRY: Yes. Which test stand?

KELTON: That was on Alpha 2.

FERRY: Okay.

KELTON: It was on Alpha 2. Yes. I had - I became slightly famous for that. Being the girl that knocked herself out. Exciting times.

FERRY: So, it sounds like you were mostly involved with Alpha and Coca.

KELTON: Well, no. I worked at APTF, which was the Advanced Propellant - I hated that area. That area required - every time, you had to tear down your set up and set it up. And we had

these really heavy tripods. And then worse than that, we had just all this cable, coaxial cables. That was really heavy and dirty. That we would have to basically plug in and then run, hundreds of feet to the camera. And it was – there was no shade, and it was hot. And I really hated that area. So, I tried to avoid having a work there, but I got stuck there working a lot. And that was again, they were testing propellants, nasty stuff. I really didn't want to be there. Another job I covered extensively was they were decommissioning and decontaminating a radioactive area. And so I did a lot of work there, photographing the decontamination and decommission of the building. Where I had to wear a badge for exposure.

FERRY: What area was that?

KELTON: That was on the E-Tech side of the hill. I'd have to look up the building. I worked with Dan [Trapeda]. He was the engineer in charge of that, and one of the things I was very good at – became very good at - and mostly just out of necessity, was I was fast. So I would get in, I would get the job done, and I would move on. Because I had a list usually. In those days we had beepers that would go off constantly. And one of the codes that we had was 999. That meant you have another job, they need you right now. And generally I was in the middle of the job when that would come in. I'd say, "I have this I'm doing. I have this lined up right after that, I can only do so much." And so, I was fast, and so that made me very popular with my requesters, because they would want somebody that could get in there, get the job done and, you know, so they could finish their job. So, I was – my phone rang off the hook. I was always busy. And it was great; it made my days fly by. But yes – no, I supported also the Peacekeeper, when that would come in. That was like a full day of shooting, where you had a notebook, several inches thick, that basically outlined every single photograph that had to be taken. Every single tie down,

every step, very detailed procedures that had to be followed for that. So, we were busy there, and then when space stations started to take off, all the electronic testing was done up there. And so, we did a lot of work in – I forget what that building was, but we supported that program quite a bit. We had a lot of cameras that were – they had some shaker tables, that they were basically shaking, I believe it was the solar panels, to see what kind of turbulence they could take. And so we had cameras set up on, that we – when we-

FERRY: When was that?

KELTON: That was right before I left. So, I would say that was probably in 1990, when we were working on space station up there. And then the Bravo area was where they tested all the turbo pumps for – I'm not even sure where those turbo pumps – whether it was part of the space shuttle program, or maybe the shuttle and the Atlas and Delta and Thor engines? I really – I don't know. I never asked, and I don't know. But we did a lot of work at Bravo.

FERRY: But you got pictures.

KELTON: Yes, we had cameras set up there. It was a test stand. Not as an exciting as the engines, because there it was just a big plume of smoke that would shoot up out of the top of the test stand. And the pump would sit there just doing its thing that would basically test it to make sure it was okay before it got mounted on an engine. One morning there I almost got blown off the test stand with a big Firex hose. That was no fun. That happened occasionally. We had Firex hoses that were - where the water would just come on, because when you have things that are hot, the way you get things not to melt it to just pour on thousands of gallons of water. And

sometimes it would go off accidentally. And that morning it went off accidentally, and I was up there with another guy name Bear. And I was more concerned about not dropping the camera that I almost literally got blown off the test stand. And I just decided the hell with the camera, I'm holding on. And the camera survived, it didn't fall that far. But off course now, it's 7:30 in the morning and I have wet jeans on, and it's cold. So the rest of the day I lived in my overalls, because my jeans were very uncomfortable. But that was - everyday, you never knew what was going to happen. One of the other things that they use tease me about, that would actually get my temper going, especially on the shuttle, on the Coca- we had 22 cameras. And we would load them all. We would take the camera, put the film in it, load it, set it up in a protective housing, and we'd be ready to go. And sometimes there would be a lot of delays, for whatever reason. Things would not work right; something came up, whatever, so we would be waiting. It was hurry-up-and-wait situation, where now we have maybe a couple of hours to kill, but we have to be right there, because the minute it's solved then we're on our way through the test cycle. And what would happen a lot - not a lot, but periodically - was they would accidentally hit the cameras, and they would all run. Which meant now that I had to go and reload 22 cameras. And I was constantly saying, "I need a key. I want a key that I can lock that part of the panel in the control room so you can't accidentally run my cameras." Because after it happened like four or fives times, and you're tired and, the last thing - and it was expensive, that's a lot of film. A lot of film to run through. And they would tease me, and of course I never got the key. But at my going away party they presented me with the huge key. Saying, "here is your key, we've got your key", kind of as joke, but yes.

The other issue we – the other challenge we had at on that test stand was that when the cameras would sit for hours like that, with the film loaded in them, we were getting a lot of cameras that would jam. And when a camera jammed, it was a big deal. You had to basically write a report to NASA as why that camera jammed, why it failed. Because they have these cameras, they wanted them to run. And we were having a lot of cameras that would fail, they would just jam at the very beginning, and we'd get no footage. And what we decided was causing the problem was that after you load the camera and it's fits in the box for so many hours, the film would get like a little set. Like a curl would set in. And so then when we would hit the switch in the control center, and the camera would take off which - super fast, but it sounded like basically a sewing machine, like zzz. The film was zipping through there, it would jam. So, we got permission to be able to go - when that was the situation where the cameras had been loaded for hours and had been sitting, ready to go. That right before test, in other words when they had drop locks, and the engine sitting there like a bomb to go off. We would have permission to be the last ones allowed in the area, to go to every single camera, advance it manually 32 times, to take the set out, so that you'd get past that little curl in film, and then the camera wouldn't jam. And so, I did that many, many times. And now thinking back, and of course when the engine blew, I've realized really how hazardous that situation was. But that was just part of what we did to get the job done, and it worked, I mean it solved the problem. From that time on, we rarely had a camera that would jam. So one of the things that we figured out the hard way, but it worked. And, of course, they appreciated that the fact that a lot of the cameras weren't jamming anymore. But it was the scary situation and, we were – I have a photograph of myself, in front on – we had a camera on the road level. And I look back at that photograph now and I think, “What in the world was I thinking?” I was brave. I was naïve I think more than anything. But it was

fun. It was exciting. So, that kind of covers a lot of the highlights of what we did up there. It was mostly tests though. The high-speed instrumentation photography was our main role, that probably kept us busy 75 percent of the time. And then, of course, we would go off - when we were doing the Edwards support, that was also an area that required the high speed, which is why we were there. And we would cover some of the other divisions when they had needs, where they had cameras that needed to run super fast. We were one of the few units still doing the 16-millimeter, because it was right there at the beginning of becoming obsolete, because the video was going to be taking over. But there was an interim there, where there wasn't any - the high-speed video wasn't up to speed, it wasn't up to par. It had a lot of problems with interference, so the 16-millimeter was still your best shot. And then toward the end, sometimes we would run a high-speed video camera alongside a 16-millimeter camera. So we supported some of the other divisions. I remember going to G.E. and doing some studies on light bulbs that they were testing. And on another occasion I went to some factory where things were jamming up in their assembly line. And we ended up setting cameras up, and being able to identify exactly where that was happening, by viewing the high-speed footage. So it was a lot of fun. And the main - one of the - probably the most exciting highlight was they had a program at the time called The Man - what was it, The Manned - what was it, my gosh - people would be given Snoopy Awards by NASA. And it was for the Manned Space Flight Award, I guess is what it was. And they would get sent with a group of maybe 20 to 25 people who worked on the shuttle program. And they would get to go and see a launch. And, of course, on those trips they would send a photographer to photograph - they would get wined and dined by all the vendors that - was it Morton [Thical] who did the - they did the boosters on the side, and Lockheed, and all the different vendors that contributed to the shuttle program, would basically put on a banquet. And so, they would go and

they would be recognized for their dedication. These were people that were putting in tremendous amount of hours that were a vital important part of the shuttle program, especially after challenger. That was a wonderful recognition program that NASA came up with for people that were very instrumentally supporting the program. And I was selected as one of the photographers to go on one of those trips. Very exciting. And that launched – I believe it was STS26 was when they were going to launch the Magellan telescope. Very exciting. And so, we went down there, and I photographed the week of activities, being wined and dined. And the highlight would be that we would see that launch. And so, we got to tour all of the facility. We've got to see the shuttle as it was being taken down the ramp to the test stand where it was going to launch. We got to meet the astronauts, very exciting. And then we were actually at the media site for the test, and that's probably the closest spot you can be to witness a launch go up. And sadly, unfortunately, I think it was something 15 seconds before launch, they cancelled.

FERRY: Oh no.

KELTON: Very disappointing. And of course I had my cameras all lined up. I had my three cable releases, and I had my group. The group was standing in front, and so I was going to get the shuttle going up right above the group, and they were all going to point up, number one, and then they cancelled. And it was big disappointment. And it turned out that it was going to be a cancellation of several days, and so we would have to go home and not get to see a launch. So, I actually never saw a launch. I came real close. But it was still exciting to see the test facilities, and meet the astronauts, and all the people that were there from all over the world really at the media site. There were people from all over the world. And it was very exciting, very exciting. I think that covers it. I don't know what else I can talk about.

FERRY: Yeah, let's go over some of your favorite photos next. But real quick, looking back on your work at the Santa Susana Field Laboratory, what's your biggest take away?

KELTON: My biggest takeaway is has to be this shot.

FERRY: That one. Is that the bucket one?

KELTON: This is the bucket shot. Yes.

FERRY: Okay.

MANES: Oh, that's it.

KELTON: That's it. So, and what I really wanted to get there was the Mach diamond, this thing.

MANES: Wow.

KELTON: Whenever you see a launch go up, you'll see like the engines have a Mach diamond that comes out, that's produced - in my layman terms – I am not engineer, but from the velocity, the power coming out of that engine, creates this Mach diamond. And there were no photographs that had that Mach diamond.

FERRY: So you were the first.

KELTON: I was the first, yes. And I knew that if I could get a camera down in that bucket, that I would be able to get the Mach diamond. And that was really why I wanted to get the camera down there. And so, I had seen when the launches would go up – I had seen those Mach diamonds coming out, and I had said to my boss at the hill, I said, "Rolly, what are those little – there's like these white-?" And he goes "Oh yeah, those are Mach diamonds." I go "Does that happen on our engine up here, when we test?" And he goes, "Yes." And I said, "Well, how come it doesn't show up on our pictures?" He goes "Oh you have to shoot it down from below," and that's what gave me - I said, "Oh, well I want to put a camera-" and he said, "Oh, it'll melt." And so yes, that's probably my favorite shot. That and the stuff I did at Edwards. That's pretty incredible footage as well. There were a couple, but probably my most exciting photograph was the one with the shuttle engine testing, where I was actually able to pick up the Mach diamond. And basically by installing a camera down in the bucket, and shooting at low angle up at the engine, we were able to get the Mach diamond, which we didn't have any photographs thus far that kind of illustrated that. And everybody told me that was impossible, and you're going to melt the camera, and you'll never get a shot. And yes, we did melt the camera a little bit, but we've got the shot, and so it was worth it. And it went UPI, and it was on - published all over the place. Aviation Week and Technology picked it up right way, so it was pretty exciting. And then

FERRY: So do you know what the Mach diamond is?

KELTON: It is - I don't know, and I can't really describe it from an engineering standpoint, because I'm not.

FERRY: Yeah.

KELTON: But it's basically created when there's so much velocity, I understand, coming out of the engine that it creates that Mach diamond. And if you ever notice when a shuttle would launch, you would see that coming out of the engines. And that's what prompted me. I remember asking my boss one day, "What are those white things coming out of the engines when they launch?" And he said, "Oh those are Mach diamonds," and I said, "Well, does that come out of our one engine up here?" and he said, "Of course." I said, "Why don't we have any pictures of it?" And that's kind of what prompted me to get that camera down there, and rest is history. This was very typical of some of the assignments we would get, this here (pointing to photograph) is a picture of a roller bearing for the shuttle that was - they got a patent for it basically. So, I remember the day. I had somebody walk in to the studio, and they had this greasy, dirty bearing. And it was a new design - a redesign that they had just received a pattern for. And now they wanted to really pretty picture of it. And it's filthy dirty, with grease all over it. And he comes in and he goes, "I need a really good picture of this." I said, "Well, can you clean it up?" I go "This is pretty ugly right now." So he said, "Yes, we can - I can clean it up," I said, "Go clean it up, and then bring it back." And so he did, and of course with the lighting, again the creativity. It's stainless steel. The main component was these roller bearings, which were a big deal. And that shot got a lot of recognitions as well. And then probably from there, it would have to be the work I did on - out at Edwards Air Force Base, on the kinetic hover testing. I don't know if I actually have... Okay. Yeah it's right here, actually. Let me see if I have a better...

FERRY: And this was the - when you were telling us about that everything has to be black, and you had to do the double exposure.

KELTON: Yes. Oh my, gosh. I was in such a panic. You have no idea. I mean I had – because really the challenge was impossible, and my boss had been right. And he'd had this argument, and now I'm going to have to do this. And I was just sitting there in the Jacuzzi, and I don't even know why, it just popped in my head like "I can double-." Just for that test though, the static test. I do have pictures of that; they're not in here. Here we go. Yes. No, I mean. I just wanted to be sure that they understood that when that thing started flying, it wasn't going to look that good. But you know, actually it did. By pushing the film - by shooting negative film, and then pushing it, and then having it transferred, we got some incredible... I can show you. So this gives you an idea. That's the facility as you can see.

FERRY: Okay.

MANES: Oh wow, is that it?

KELTON: Yeah. That's the engine sitting in the cradle. And then this is - gives you - that big square net. I mean it's very foreboding to walk in there.

MANES: Yes.

KELTON: And I remember when I walked in, I remember walking up to it and saying, "That thing is going to fly?" And the engineer said to me, "It does on paper." And I said, "Well that doesn't look like it's going to fly to me. It doesn't have wings on it." And he says, "No, the little engines are going to take it up and propel it," so it did. So that's the one engine - the test that I was talking about where I double exposed... This was the first test of that vehicle, and you can see this is a double exposed still, where I have exposed the cradle and everything. I think with flash or

daylight coming in, reloaded the film, and then when they actually tested it, you can see like where the plume is coming out of the engine, and the engine is going up here and up here. Beautiful, but again, not really reproducible for the test where it was going to fly around. And that would be this footage here. Where it's inside of that net, and it's flying basically.

FERRY: Wow.

KELTON: And so, it - we had – oh, gosh 1, 2, 3, 4, 6 different views that covered it from the minute it took up off the cradle. This is a later test when we actually had the big bay window open, which helped with getting a little more light in there. But the initial tests were all done where everything was blacked out. So, real challenge.

FERRY: You were kind of a pioneer in many ways.

KELTON: Oh, absolutely.

FERRY: Yes.

KELTON: Absolutely. Pushing the envelope. Trying things basically – well, actually I had a lot of help. And when I called Kodak, and I said this is my challenge, to project 16-millimeter film, you want a positive image, right? And that's normally what we always shot. We shot positive film. And I said to him – my rep - I said this is my challenge. I can't put light on it. I have to shoot 400 frames a second. I'm never going to get anything. I knew, I mean I knew I would get nothing if I shot traditionally. And he was the one that said - he recommended a special film.

It's a negative film, he said so, we can – it has more latitude to push, to overdevelop it, to bring an image up. And then, of course, once they did that then they had to re-expose it onto positive film. So you can project it, so you can see, in a positive image. And so, I had to get all that signed off from engineering, knowing that we're not looking at the original footage, but we're looking at the next best thing. But it'll give us footage. Because if I shoot traditionally, we won't have any footage. It's going to be just pitch black. Or you might have seen just the engines, but you would see nothing else.

FERRY: Yes.

KELTON: And so, it worked out. I mean - amazing. This is some of the top brass that came in to look at the - one of the main components that was controlling the vehicle. Okay. And so, that's the top brass. We had a lot of very important people that came. We called them the dog and pony shows. But they were very interested. I mean that's who we were – this was our customer, the Air Force is who we were working for. And again, I find myself one of the few women-

MANES: Yes.

KELTON: -on this project. This is a group shot, where there is basically three women on this, as well. And this was a team that was from McDonnell Douglas - Boeing was there, Rockwell, Wiley Laboratories, the Air Force. And out of all that group, there was three women.

FERRY: So, which one is you? Is that you on the left?

KELTON: I am right down here in the lab coat. We all had to wear to lab coats.

FERRY: Did you have-

KELTON: And there was actually four points of the security you had to go through get the hanger. It's pretty serious. And they basically had warned us all: if you car breaks down between point A and point B, do not get out of your car. Because you will be shot. It was that serious. I mean basically they said, they will come get you, but do not exit your vehicle.

FERRY: Wow.

KELTON: And we listened. I mean this was pretty classified at the time. And then this is a – to give you an idea, this i-

FERRY: Were things that seriously classified at the Santa Susana Field Laboratory when you were working there?

KELTON: Yes, oh yes. Yes. They built a SCIF facility while I was there for the laser – for the Sigmund – Sigma [TAL] Laser Program. Which I received an award for coverage on that as well. And you were basically cleared for that project, and you were briefed on it, and debriefed on it. And you just don't talk about those things. But - and really is a photographer, as - and I think it works that way for anybody working on these projects. You know basically what you need to know to get your job done. I was very inquisitive, and I would ask a lot of questions. But you can tell right away by the way they're answering them, that they were only going to say

so much. In reality they probably just know their portion of that project. So, and you see things, you photograph things. Obviously you get a bigger picture because a visual thing, but...

FERRY: Yes.

KELTON: This was, you know, this is before the Cold War ended, so. And I really do believe that the Strategic Defense Initiative program, the SDI, is what helped that - bring that iron curtain down. Because we had this capability, and the Russians didn't. And so, in a way I felt that we - it was an important contribution to the safety of the United States. I mean quite frankly. And our allies as well, so very important. Much more than the shuttle. I mean the shuttle was an important program because of the research and development, and the things that they were going to be able to discover by working in an atmosphere that was gravity free, and all of that. But this was the safety of our nation. And so it was - I took a very serious - everybody took it very seriously. And we were working under some absolutely ridiculous deadlines. I mean, I cannot tell you. Long, long hours. I remember before we went to that facility, we had to get acceptance testing of one of the engines that was actually going to be on that vehicle. And so this was my set up. I had one shot. They were going to test this engine one time, because the time constraints that we had. It had to get up to Edwards, installed in the vehicle. And so, just to give you an idea how seriously I took that request, 1, 2, 3...

MANES: Oh, wow. Those are cameras.

KELTON: 1, 2, 3, 4, 5, 6, 7, 8 cameras. I had eight-

MANES: Wow.

KELTON: -cameras on one test. And again, so that if anything failed I had a backup, to the backup, to the backup. And then of course different - I had some that were really tight on the engine, and then we also had them paint - the little black plume, so you could see the engines coming out. And you look at it, it's nothing glamorous. But the importance of it was phenomenal. And again, I believe this is actually published in Aviation Week. I have a copy of that here. So, super important, I mean that was – yes, here it is, right here in Aviation Week and Technology.

FERRY: Wow.

KELTON: This was back in 1989.

FERRY: So, you were talking being a part of national security though. How did that feel?

KELTON: I always took my job very seriously. I felt so privileged to have that job. You have to understand, I had high school education. I was an outstanding student at my high school. We had an amazing program. I had an amazing instructor who was a graduate of Art Center College of Design, which a world-renowned school. Burbank, where I grew up, had an independent school system. So, we had a lot more money then like say, L.A. Unified. And the studio that we had, and the equipment that we had to work with, was a college level. I mean it was amazing. And I had never picked up a camera until I started 10th grade, and it was my third choice as an elective. But because I was a sophomore we got last choice. So, I find myself in this class that I'm thinking, "I wanted ceramics. I wanted basket weaving. What am I doing in this photo class?" But it turned out that the language that this instructor spoke, I understood it. And I didn't

realize at the time, I was - I am dyslexic, and I struggled at school. And I mean I struggled. And my sister, who's 15 months older than me, a year ahead of me, she was straight A student. So it was really tough, because I knew I wasn't dumb. But I just had a difficulty memorizing things. Remembering things like spelling words, things like that. And suddenly, this language that he's talking about, I absolutely get. I understand when he's talking about repetition of form, design, why things work visually for the eye, why things don't. I was just eating it up. I didn't care for him too much, because he was very strict. And so, at the end of that class - and I got As in all my assignments - which unusual. At the end of that first class you had to have a permission slip to go into the next class. And I remember he walked up, and handed me a permission to take a Photo Two. And I look at it, and as soon as he turned around, I wrinkled it up, and I threw it in the trash. And he had this T.A. that was doing his student teaching to become a teacher. His name was Oka; he was Japanese gentleman, very talented photographer himself. Ran across the room, pulled it out of the trash, says "No, no, no! You need to take this class." He says, "You're really good." He says, "You have a natural eye." He says, "You need to take this class," he says. And I said, "I don't think Tim likes me very well." And he says - well actually it was Mr. [Brehm] in those days - he said, "No, no. I'll be here, and I'll teach that class. I'll be the go-between, and you'll be in my class." And I said, "Oh, great, I'll take it." And so, that was the beginning of no return. Basically I became very good friends with the instructor Tim Brehm. And ironically-

FERRY: The instructor that you didn't like previously?

KELTON: Yes. He was very strict, I was very immature. I had his class the very first thing in the morning. And I'm Miss Late, and I would be late in the morning. It was first class. And what he

would do is the minute you walked in late, he would stop talking, and he would stare at you until you sat down.

MANES: Wow.

KELTON: And I just thought, "What is his problem?" And I actually had the nerve to go up to him, and say, "You know when I come in late, you don't have to stop talking." And he said, "Yes, I do." And I said, "No, you don't." And he said, "No, the minute you walk in late, everybody stops listening to me. And they pay attention to you. So, that's why I wait for you to get to your seat." But, the arrogance. I mean, how arrogant was I? What a little brat. And so now I grew up a lot obviously, and we became very good friends. I was one of his star students, and we had many, I mean it wasn't just me. He put out of that program, oh, dozens of top-notch, professional photographers, that are still working in the industry today. I was just one of the few that didn't go on to Art Center College. My family didn't have that - the socioeconomic background to put me through college. My father didn't believe I would ever make a living in photography. Basically he told me I'll send you to school to be a secretary, but not a photographer. I was like, "Well, I going to be a photographer." And I'll never forget, when I did get my job at Rockwell in the photo departments, before I was a photographer, but I had my badge, and I was - couldn't wait to go show my dad. "Look dad." And he says, "What are you doing there?" And I said, "What else would I would be doing there?" And he said, "You're working in photo?" And I said, "Yes, I'm working in the photo department." And he didn't even - he couldn't even fathom the idea that they would, A: have a photo department, with 16 fulltime photographers, at the time. And then in complete darkroom, with all of facilities to print stuff that we couldn't send out. And so, it was exciting. And you know what he said to me? He said,

"You know why you made it? Because I told you, you couldn't." That was my dad's personality. But he is very proud. And to this day - I put together that presentation that I gave for that committee, trying to save the facility, and I showed it to him, and he was very, very proud. He said, "You know, you really did accomplish quite a bit." He says, "I never dreamed, you know, my little girl that went to kindergarten - didn't speak a word of English - to do as well as you've done, and the accomplishments that you've had, in an area that was, basically you were a pio-." And I was. I mean there were very few women, in those days. I mean now it's a whole different story. There are a lot more women. But in those days, there just - they're really wasn't. So, I kind of didn't know any better. I just was doing what I had a passion for. And what I loved. I never dreamed I would get a job that would pay you, weekly. You wouldn't have to go out and hustle your work. You would have full benefits. You know, in those days, 401k, the whole nine yards, paid holidays. And they gave you the camera to shoot with. I was, I remember when I was 20 - what was I? Twenty-three years old, I got hired there. And all of my money - I didn't - I had my own apartment, I moved out right when I was 18. And all of my money went to buying cameras, in those days. I was making not much money working at photo labs. And I didn't own a couch, but I owned a Hasselblad, which was a professional format my camera, that I would use to shoot. I started shooting weddings, and anything. Catalogues, you name it, whatever they needed, I could shoot it. And so I didn't own a couch, but I had all these cameras. And then I end up at Rockwell, where they hand you all the equipment. You don't - you're not allowed to bring in your own equipment. And it was just so far from my reality, and you know you - I couldn't have gotten any luckier than I did. And then to end up at the Science Center, and end up my last 10 years of my career there. Really unbelievable. And that was a very exciting place to work. Just the technologies that we were working on were all cutting edge. Again, from many different

areas. And now I'm working with world-renowned scientists, and I'm supporting them, whatever their needs are. Which was, again, I never knew when the phone rang what it was going to be. Whether it was going to some little tiny multimillion dollar prototype, that they would come in with in a petri dish and say, "Now I need a really good picture, but don't put too much light on it." "What?" Or, "It's worth five million dollars, so don't drop it." Oh my god. I'd say, "Why did you tell me that? You know, don't tell me that. This puts the pressure on." And a lot of electronic stuff, so I would have to be grounded. So I had to learn how to use a wrist strap to ground myself, and make sure I wasn't going to statically destroy something. Very exciting, very exciting, there as well. So yes, I mean, I was very fortunate. Very, very fortunate. And then I gave it all up to be a stay at home mom. So I worked for 20 years, and I went to put myself through school for 10 years. In the area of - actually in those days, when I went to the Science Center - you have to understand, during this time we went from film technology to the emergence of all the electronics. It took hold of and changed, revolutionized, the entire field of photography. So it used to be, you would take a photograph, and then you would hand it over to the graphics department. And they would decide where the logo went, where the title went, they would put together the briefing charts, they would do all that work. All of a sudden, now with the technology, now you're expected to do that. You're expected to know about typography. You're expected to know about computer graphics. And so, I saw that right away, that that's where everything was going. And so I ended up majoring in computer graphics over at UCLA. Actually, I started at Art Center at night, and then I transferred to the UCLA Extension Program. And I majored in the computer graphics certificate program for that.

FERRY: Was that after you left Santa Susana?

KELTON: Yes, that was after I left Santa Susana.

FERRY: And you were starting to see that change taking place while you were working there?

KELTON: Absolutely. Even at Santa Su, I could see the high-speed video was replacing the 16-millimeter film. And then there at Rocketdyne, at Rockwell, we had a full-up photo department of maybe 26 people or so. And then we had a full video department where they just did strictly video. We did photography, they did video. Well all of a sudden the cameras are getting smaller, now we're getting camcorders to help document some of the stuff we were doing at the hill. And I could see that those areas were going to merge into one. And basically that's what happened. And that's why they ended up laying off a lot people, because it became one department in the end. And not only were you expected to do the photography, but now you're expected to be a videographer. And there are two completely different languages, it's a whole different art. Pictures that move are very different than pictures that are still. And I really, even to this day, I prefer stills. I became very, very good at video, because I had to. And I - that was at the end at the Science Center, that was a bulk of my work. I was doing video, everything now was multimedia, so now the presentations not only include still photography, but now they have a little clips of video in them. And of course, if a picture is worth of thousand words, can you imagine what a short video clip is worth? So, I mean I saw that need, and I had to embrace it. And I did. It's just a lot more work. And it's hard when you really need a team of three or four people to do it, and you're expected to do it with one.

FERRY: Yeah.

KELTON: But it kept things exciting. But yeah. I could see at Rocketdyne at the end, that's kind of where it was all headed. And it did, I mean look at today, it's all digital. I knew very few people who shoot film. Everything is digital, and that's kind of like what's taken over.

FERRY: Yes. Did you see Santa Susana Field Laboratory start to change in other ways while you were there?

KELTON: I did, environmentally.

FERRY: Okay.

KELTON: When I first worked at Rocketdyne, I would hear the little grumbings, and I would see the pictures in - when I was printing in the photo lab. When they would do the testing, all of the water that would shoot down out of the buckets would be collected in these ponds. Very pretty ponds by the way, I have gorgeous pictures of those. And they were not cement lined. And so what ended up happening was, of course, contamination of the ground water. Major contamination. And so, one of the things that Rocketdyne took upon itself was to clean that up. And so, environmental - I mean the Environmental Department became very big. We were mandated to pull out every single underground tank that we had that had been abandoned over the years, and they were many. That was another job I had, was to photograph all these tanks that they pulled up. And we also - all the ponds had to become cement lined. Just to complete the testing that we were doing. But, I think everybody was already talking about the fact that they were going to take a lot of that testing away. Just because of the environmental restrictions that California had now mandated. For the safety of the community, because when the hill first

started – when they were first established there was nobody around it. It was just the middle of nowhere. And then as the years went on, everybody moved in closer, and closer, until one day we find that Simi Valley is right up against us, Bell Canyon. And, of course, the water runs down, and there was no berms or anything to collect the water. So that became a big push in the end. Here's a shot to kind of show and how close the communities are around this. This is Simi Valley, down below.

FERRY: And is that a test?

KELTON: This is a test of an Alpha engine, at Alpha. I believe that's Alpha – that's Alpha 3.

Alpha-3 test stand. And you can see the community is right up there. So that became a big issue. And Rockwell spent millions of dollars putting in stripping towers to clean up the groundwater. And, of course, we were challenged with using chemicals and procedures that everybody had taken for granted. All of the sudden, I remember one of the very first thing they took away was the trichloroethylene from us. No more triche, because it was very hazardous, especially if it ended up in the ground. Which it had in the days when they weren't aware of the dangers of all of that. So things changed and very quickly, the environmental end. And we worked very closely with them, because of course, they had discovered all this contamination. And so, it did impact us quite a bit.

One of the other things that I haven't talked about, that was another huge privilege when I worked up there, was one day my phone rang, and my boss said "Hey, I have a team from the

Paul Getty Museum coming, and they're going to spend a week up there at the hill photographing and documenting the Chumash Cave - painted cave that's up there." And I said, "What cave?"

FERRY: Oh, really?

KELTON: And he said, "Well, there's one up there, and it's in a restricted area, and it's protected. And basically the Indians still use it from time to time for their ceremonies. But it's basically off limits to us. We protect it for them. They hold their ceremonies there I think winter and spring solstice. But the Paul Getty wants to come up, and they're going to document it and videotape it, photograph it. And they're going to build I believe a replica at the Gene Autry Museum." And he says, "I'd like you to accompany them." I was like, "Wow, okay". So I did, I spent a week with the Paul Getty team. And this is a picture of the pictographs in the cave. And they are some of the most preserved pictographs because they were in a remote area, the public is never allowed there. They were basically – a lot of people weren't even aware that they were there. And it's in a beautiful, beautiful area. Santa Susana Field Laboratory is gorgeous. The property is just beautiful. I would – in between waiting for a test, I would always go - I'd like to hang around the ponds and look at all the wildlife. We had like egrets, and just a beautiful area to work, and this area was so pretty. So I spent a week with them. These are the grinding holes from the Chumash Indians.

FERRY: Did you take those photographs?

KELTON: I took these photographs, yes, of course I did, yes. I had my camera. And I mean, I documented them documenting the whole thing, and then of course I wouldn't pass up that

opportunity. And then I actually tried to sneak back there, after the fact. Because again, killing time. And I said, "Oh, I'm just going to go." It was really pretty area of the hill. And I decided I'm going to sneak back there while I have this time to kill. And I didn't very far. There was – I didn't realize there was alarms. And maybe video cameras that you couldn't see. And so, as soon as I started to hike in there – it was also an area where they stored the explosives. And so it was kind of hazard-danger thing. And before I know it I hear security - because we had our own security department - over a speaker, and they knew who I was. "Aleli, you need to get out of there." And I was like, "Oh my gosh, how'd they know I was even here," because it's in the middle of nowhere. And then I found out yes, they had alarms and cameras. And they said, "What are you doing?" I said, "Just killing time." They said, "No, you're not." And I said, "I know, I was trying to go to the cave." And they said, "You can't get back there." I said, "Alright, I get it"

FERRY: When was that?

KELTON: That was, oh gosh. That was probably, let see, that would have been – I left there in '91. Probably like 1989, when they did that, yes. And I've never actually seen the cave that they – this replica, but I do believe it exists at that museum. That was another highlight, very – that was fun that I got - and I'm not even sure why I got assigned to that. Probably, I was in probably the best shape, because it was a hike. You had to hike down there everyday, and take all the equipment down, and all of that. Pretty exciting. That pretty much covers some of the highlights. This is a great photograph of the support that we had on the space station, where they were working on the solar panels.

MANES: Oh, wow.

KELTON: So that was a big solar panel that was up at the hill.

MANES: Wow.

KELTON: Kind of a neat shot.

MANES: Yes.

KELTON: And then we were actually – so Rocketdyne. The support on that was the electronic power systems for the shuttle program. So we covered a lot of areas at the hill, that's why there's so much history there. It's not just the shuttle program. A lot of people think it was just the shuttle that we supported, but really when you think about it, it was SDI, the Strategic Defense Initiative, it was the Peacekeeper Program, space station, the Alpha, the Delta, the Bravo engines, the turbo pumps, then the E-Tech side where did code. They were doing a lot of studies in the code generation aspects of it. A lot of history took place up there. Of course, that's where they developed the J2s and the F1s. I don't know if they tested the F1s there, I think those were tested at Edwards. But the development took place there, and that's what put man on the moon. So a lot of history, a lot of history.

FERRY: Well, how does it feel to have been part of that history?

KELTON: Oh, privileged. This is some of those drills that we would have with the fire department, they were exciting.

MANES: Oh, this is the communities – the fire-

KELTON: Yeah. They would come up the first, and do these drills. A lot of fun, pretty exciting.

MANES: Wow.

KELTON: That's another shot, actually a great shot.

MANES: That's a really great shot.

KELTON: I had them bring – again I was – had them bring in a cherry picker.

MANES: Oh, wow.

KELTON: To lift me up-

MANES: Because I was going to say-

KELTON: -so I could shoot down, because I thought – that other shot I showed you was good, but I knew-

MANES: That's the perspective.

KELTON: And so again, I was always artistic stuff. And what is the angle? What is the best way to get that?

FERRY: Yes.

KELTON: Beautiful stuff. And like I said, I never knew when the phone rang what the assignment was going to be. But I always try to say, "What's the best way to get the neatest shot of that?" And we did, we were busy.

FERRY: Well...

KELTON: We had a hot lab up there too, Building 20, where they did a lot of the radioactive work, and that was a major clean up that took place. And I was really kind of happy to see that when they decommissioned that building because it was very hot. Everybody worked in the gloves, kind of deal. From what I understand they have obviously took all the building, everything away, but they actually dug down and took many, many feet of dirt out of there. Which is wonderful. It's wonderful, make it safe. That's the Science Center there.

FERRY: Lori, did you have anything wanted to add?

MANES: No, I don't think so. I think you did a great job.

KELTON: I think we kind of covered it.

MANES: Yes.

KELTON: A lot of photographs. And here's the thing, I realized what a unique job I had, and what an amazing part of history we were covering there. And I made a point to get these photographs and to keep them. Of course, I don't have anything that I shouldn't have. But I'm so glad I did. And especially now, where they're trying to save that facility, and I was able to put together - and it was a good exercise, because these were spread out amongst many boxes. And when I actually

put this together, I thought, "Wow, I did some amaze-." Again, getting up on the hillside at nighttime to get shots like this, never been done before. Or sitting there for hours waiting, and seeing an amazing sunset.

MANES: Yes.

KELTON: And say, "Wow, I want to get that."

FERRY: That's great.

KELTON: And there's the pretest building, where everything takes place, and ends up here. So, just loving my job. I just – loving photography, really. And we were part of some wonderful studies like where they did this. This was on Alpha-3, where they did three engines at once. That was something we'd never did before, and it was a special study that we had to support. And again, I set up a wide – I rented a wide angle ends to get – a Hasselblad, to be able to get the entire test stand, and the three engines sitting there. Exciting. And everybody appreciated it, everybody appreciated it. Of course, along with the required footage that we had to get. I was always trying to find artistic stuff to do. And it proved to be a great portfolio in the end.

MANES: Absolutely.

KELTON: Anyway, I think that's about it.

FERRY: Well great.

MANES: Yes. Well, thank you so much for...

KELTON: Yes, you're welcome. Oh, this is the ponds I was talking about.

MANES: -coming out and-

KELTON: You need to see these. This is how pretty that place is. This is one of the ponds, and it's just a gorgeous area.

MANES: Wow, that's a great shot.

KELTON: That's one of the ponds, it's just a beautiful area. There was Silver Spur Nail Pond. There were several of them, quite a few ponds, and we spent a lot of time there. A lot of the wildlife was there. And then, there was a lot of abandoned buildings from the old days. This is one of my favorite shots, it got a lot of laughs.

MANES: Wow.

KELTON: Zero [inaudible]. And the building is falling apart.

MANES: Right.

KELTON: I was just like, "I have to get that." And then to- you're different seasons up there, just beautiful. And of course deer, we have deer, and owls, and raccoons. Here's a beautiful deer, it came strolling by one day. There was actually herds of deer up there. And then several awards, of course.

MANES: Yes, I bet.

KELTON: Advanced Programs. That was the energy chemical laser program. That was a big, big deal, and very classified. But on the cutting edge, and Rockwell was up on the forefront of that technology, which I'm sure is still somewhere today. Exciting.

MANES: Great.

KELTON: Yes.

MANES: Well if you have of those digitally that you might be willing to share for, you know, for - as we put some stills...

KELTON: Sure.

MANES: After this video?

KELTON Yes, I have...

(End of audio)