

CALIFORNIA INSTITUTE OF TECHNOLOGY ARCHIVES

ORAL HISTORY PROJECT

INTERVIEW WITH MELVIN LEVET

BY HEIDI ASPATURIAN

PASADENA, CALIFORNIA

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Melvin Levet

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Pasadena, California

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SESSION 1

HEIDI ASPATURIAN: This is February 20, 2015, and we're doing an oral history interview with Melvin ["Mel"] Levet, Caltech class of '39 [BS] and '40 [MS]. Why don't we start by talking about where you grew up and your family background.

MELVIN LEVET: I was born in Los Angeles, June 27th, 1917. The family moved to Monterey Park [California] when I was about two years old, and I lived all of my school years in the old home with my parents. My dad was superintendent at the educational board for the Garvey School District.

ASPATURIAN: You were born at the very tail end of World War I.

LEVET: Right.

ASPATURIAN: Did your father or uncles—

LEVET: I didn't have any relations that participated that I'm aware of. No.

ASPATURIAN: What is your family background?

LEVET: My great-grandfather was with the Santa Fe Railroad. He was in charge of their oil interests, which became the Chanslor-Canfield Midway Oil Company, CCMO. My great-grandfather and my dad also worked for them, and I worked for them during summer vacations while I was in school here.

ASPATURIAN: Do you know where your family on both sides is from originally?

**Mel Levet's daughter, Janice Le Pouvoir, also participated in this oral history interview.*

LEVET: My son, Boyd, has done a lot of our genealogy, and it goes back to the 1400s in England and France. It's a French name. Boyd has found places where the family lived and operated in England. If he was here, he'd talk for an hour on it. Any name that is spelled similarly to ours is part of the family. Glenlivet single-malt Scotch is part of the family. Any name like that is part of the original family.

ASPATURIAN: What did Southern California look like at the time you were a child and an adolescent boy?

LEVET: The population was significantly less than it is now. Very, very few cars. Orange groves—my goodness, there were orange groves all over the place. They just don't exist anymore. Well, the Indians called it the Valley of the Smokes. That was the predecessor to smog from a different source—from all the campfires.

ASPATURIAN: You say that there were very few cars. How did people get around?

LEVET: Some of them with carriages. The cars we had were like that [shows photograph]. That was my first car—a 1927 Chevy. That was the style of the cars at the time.

ASPATURIAN: But you had one.

LEVET: When I was a college sophomore, I did.

ASPATURIAN: What kind of student were you?

LEVET: In high school, not quite scholarship society.

ASPATURIAN: Before that—elementary and secondary?

LEVET: Well, I always won the arithmetic contest in grammar school. Always. History, English—I didn't win those. But the arithmetic ones I always won.

ASPATURIAN: Did you have interests in science from an early age? Chemistry, nature?

LEVET: Not deeply. I liked rocks. But I never thought about going into geology.

ASPATURIAN: How about inspiring teachers that you remember from elementary or secondary school?

LEVET: Yes. My first-grade teacher was Miss Bailey. The high school chemistry teacher was Miss Artz; Spanish teacher was Samuel Moyer. English teacher—I'd have to think on her a while.

ASPATURIAN: So when you look back on your boyhood, do you have experiences that stand out?

LEVET: Well, I was very active in Boy Scouts. I remember that you had to be twelve years old to go to Scouts summer camp, and that first year I didn't want to go.

ASPATURIAN: This was a sleep-away camp?

LEVET: Oh, yes, for ten days, on Catalina Island in Cherry Valley. The property was donated by the Wrigley family to the council. So I went there for—oh my goodness—four regular sessions and then as part of about four advance parties where we set up the camp.

ASPATURIAN: You didn't want to go the first time? It sounds like you got over that.

LEVET: My first time I did not want to go. The second time, I couldn't wait.

ASPATURIAN: What particularly appealed to you about scouting?

LEVET: Being outside, camping.

ASPATURIAN: The nature aspect. Did you also get interested in baseball from a very early age?

LEVET: The only baseball I played before Caltech was in the backyard and out in the street. No organized baseball at all.

ASPATURIAN: Did you enjoy reading as a boy?

LEVET: Not particularly. I read if I had to; otherwise, I didn't.

ASPATURIAN: So would you say you preferred outdoor activities—riding a bike, exploring with your friends?

LEVET: Yes, very much so. We used to hike these mountains.

ASPATURIAN: Do you recall how far you ranged, hiking as a kid?

LEVET: I think the longest hike I ever took as a kid was probably two or three miles. I'd go up above Arroyo Seco, and I went clear to Mount Wilson one time. The Boy Scouts had a very nice winter camp at Wrightwood.

ASPATURIAN: How did you all get up to Wrightwood?

LEVET: We drove. Caravanned. In cars like that [indicating the Chevy photograph]. [Laughter]

ASPATURIAN: What led you to think of applying to Caltech?

LEVET: I didn't think of it. My dad—I don't like to say "forced"—but my dad encouraged me to go.

ASPATURIAN: Were your parents a strong influence on you growing up?

LEVET: Very much so. I was very much under their finger. Yeah. Very much so.

ASPATURIAN: You had two sisters, I believe? I have the names Beatrice and Marjorie here.

LEVET: I had two sisters. One of them, Marge, passed away two, three years ago. The other one is going to be here tomorrow.

ASPATURIAN: Were you the oldest?

LEVET: Yes.

ASPATURIAN: What kinds of influences do you remember from your mom and dad?

LEVET: Well, they never had a drop of liquor in the house. Not even wine. Absolutely not. I can remember—well, goodness, it was after I came back from the [wartime] service and was married—that we went out to dinner with them one night, and my mother turns to me and says, “Melvin”—it was always Melvin, never Mel—“Melvin, would you like a drink?” It absolutely floored me. The first time I had ever heard them even mention it.

ASPATURIAN: You mentioned you were very good at math. Did this come from either or both of your parents?

LEVET: My dad was not into calculus or anything like that, but beginning algebra and arithmetic, he was adept at it.

ASPATURIAN: And how about your mother? What do you remember about her?

LEVET: She was a housewife. She took care of the family, looked after the family, did the cooking, did the washing.

ASPATURIAN: Did she share your interests in nature and the outdoors?

LEVET: Only through Boy Scouts. My parents encouraged me in scouting, and I took to it very quickly. I was an Eagle Scout, and Boyd, my son, is an Eagle Scout, too. And Jan was in—

JAN LE POUVOIR: Campfire Girls, Horizon Club Girls. It was dad's interest in nature and the out- of-doors and long-distance hiking that led me to my current passion, which is long-distance hiking—Mexico to Canada, the Himalayas, northern ice fields of Chile, Patagonia, and the northern mountains of Spain. So he planted that seed in me from his love of hiking and the mountains.

LEVET: We used to, as a family, ride packhorses into the high country—the high Sierras, backcountry.

ASPATURIAN: Did you do horseback riding as a youngster, or that came later?

LEVET: Only came as we went into the Sierras, and we did that for several years and became very adept at it.

ASPATURIAN: During the time you were an older child and an adolescent, the Great Depression hit. Do you remember its impact on your family?

LEVET: Yes, I do. My dad kept his job with the Santa Fe Railroad, but it was half time. So he had to fill in with something. A very close friend of ours had a cleaning establishment, so my dad went to work with him, picking up and delivering clothes. It was supplemental income. He had to have it.

ASPATURIAN: He did whatever he could.

LEVET: I cut lawns. Every time I cut a lawn it was seventy-five cents. And then the New Deal was in effect—the CCC, and the NYA, which was the National Youth Administration.

ASPATURIAN: That I didn't know about. I know about the Civilian Conservation Corps. I should jump back now to how you decided to come to Caltech. You said your father—

LEVET: Oh, yes, we got started on that. Dad knew somebody very active in scouting, and his son, who was about two years older than I was, came to Caltech in chemistry. That's how dad found out about Caltech, and he decided that was where he wanted me to go. So I did.

ASPATURIAN: Had you applied anywhere else?

LEVET: No. Never even visited anything else.

ASPATURIAN: Were you interviewed here?

LEVET: I think I had an initial interview, but whether I had an initial admission test, I don't remember.

ASPATURIAN: Do you know what it was that impressed your father so much that he thought you should come here?

LEVET: Well, the son of the Scouter he was active with was in chemistry, and I did fine in chemistry in high school. So he kind of steered me into chemistry, so I came into chemistry for two years. Then I changed my option.

ASPATURIAN: Which house were you in?

LEVET: Throop. It was the nonresident club—Throop Club—for nonresidents.

ASPATURIAN: So you lived off-campus?

LEVET: I lived at home the whole six years.

ASPATURIAN: Considering the range of activities you got involved in, that's impressive.

LEVET: Well, I got into the Glee Club. I was very active in it.

ASPATURIAN: And baseball.

LEVET: And baseball, and that was about all. I think I was on one of the publications. But I don't remember ever doing anything for it.

ASPATURIAN: What were your first impressions of Caltech?

LEVET: My first impressions?

ASPATURIAN: As you kind of realized what you'd gotten yourself into.

LEVET: I just kind of took it ho-hum, in stride.

ASPATURIAN: What did you think about the math and physics core curriculum?

LEVET: Well, I had a terrible time. Awful time. Differential equations. I didn't understand differential equations, even taking the course twice, until I joined the Army Air Force and had their course in differential equations. Then I understood it and did fine.

ASPATURIAN: How about physics?

LEVET: Did not particularly interest me.

ASPATURIAN: You very nicely sent a list of your professors. A few of these names jumped out at me. Harvey Eagleson was a famous character on campus. Did you know him?

LEVET: Oh, yes, I had him for a course in something, I've forgotten what it was.

ASPATURIAN: I think he taught English literature.

LEVET: I think so. And [Theodore G.] Soares taught religion, I remember that name. We had to do a paper, so I did one on prophecies in the Old Testament and relating them to the carry through into the New Testament.

ASPATURIAN: I did Biblical history when I was in college. It's fascinating.

LEVET: I kind of enjoyed it.

ASPATURIAN: Are there any professors who particularly stand out in your mind as you look back?

LEVET: Ian Campbell [professor of geology, emeritus, d. 1978] for one.

ASPATURIAN: I see here that he was in petrography.

LEVET: Petrography, and he was also chief geologist for the state of California at the time. I enjoyed him very, very much. Horace Fraser was a mineralogist. I liked him very much. An interesting aside on Fraser: As I remember, they had four hundred minerals up in [Seeley W.] Mudd [Laboratory of the Geological Sciences]. They were on the second floor in cabinets like today's cabinets, but no collection like they've got today, my goodness. It could have been two hundred and not four hundred, but we were supposed to get acquainted with all of those minerals.

ASPATURIAN: Personally acquainted?

LEVET: Know them on sight. And then for the final examination, they selected twenty-five specimens, and all eight of us seniors—there were only the eight of us—had to identify, composition, type, locality, and economic value if any.

ASPATURIAN: Out of those four hundred, they picked twenty-five? That is so Caltech.

LEVET: It could have been two hundred. But it was a sizable collection, and they just took twenty-five. We could use any test that we wanted—microscope, acid test, taste test, smell test, borax bead test—any test we wanted to help identify them. One of them happened to be halite, common salt—of course, that one was easy. We had three hours. This was in the morning, and I had a ballgame in the afternoon, and during that game, my classmate Delos Flint came out on the field and said, “Hey, Mel, I got the results of the final.” “Oh?” I said, “Really? How'd we do?” “We all got A's.” So we all crashed [meaning “aced”] the course.

ASPATURIAN: That's a great story. It sums up Caltech so perfectly.

LEVET: It really does. So I remember Horace Fraser, and I remember [Willis Parkinson] Popenoe, the paleontologist, very clearly. Until my senior year, I didn't particularly care for paleo. But that year I made my mind up that I was going to really do this course up right. And I did.

ASPATURIAN: Why did you decide to go into geology?

LEVET: I'll be honest with you—maybe you shouldn't record this—but I flunked the math comprehensive.

ASPATURIAN: You have so much company, I can't tell you

LEVET: The physics comprehensive and the chemistry comprehensive. I flunked all three of them. So [J. R.] Macarthur, bless his soul—

ASPATURIAN: Macarthur?

LEVET: He was dean of freshmen and also taught English and languages. He taught French. When he found out I had a French name—oh, we became buddies. Really. I went in and talked with him, and he said, “Maybe you should change your option.”

ASPATURIAN: Which had been chemistry.

LEVET: “Get out of chemistry.” The first two years, of course, everybody took the same courses. And you really didn't home in on something until the junior year. He said, “What are you interested in?” I said, “Well, I have a flair for rocks and things like that.” He said, “Why don't you transfer into geology?” “Oh,” I said, “Sounds like a great idea.” So I did. But it took me an extra year to graduate.

ASPATURIAN: What were your feelings? Had you taken a geology course up to that time?

LEVET: They had an elementary one as one of the science courses in the freshman year.

ASPATURIAN: Had you enjoyed that?

LEVET: Oh, yeah, I enjoyed it. As much as anything. My freshman year, it was traumatic because I had such a terrible time getting here.

ASPATURIAN: How did you do it?

LEVET: I had to walk a quarter of a mile to a bus—a Pacific Electric bus—in Monterey Park. I'd take the bus up to Huntington Drive and transfer to the Pacific Electric streetcar, take the streetcar up through the hills to Lake and California, get off the streetcar, and walk a quarter of a mile to campus. So I was up early in the morning to do all this. I could have walked it faster than the commute. We only lived six miles away, in Monterey Park. Literally, Heidi, I could have walked it faster than the commute. And coming home was the same thing in reverse. Baseball season, I didn't get home until eight o'clock or after. Sophomore year I got a car.

ASPATURIAN: I'm going to ask you about baseball in a second. After switching your option, it sounds like you did well in geology.

LEVET: I did; much, much better.

ASPATURIAN: Did you have a particular area that appealed to you from the start? Or were you more of a generalist in the beginning?

LEVET: At that time, the main focus in the geology division was field geology. There were no cross disciplines, except geophysics. That was the only one.

ASPATURIAN: There was also seismology?

LEVET: Seismology, yes.

ASPATURIAN: Did you enjoy the field aspect? It sounds like you might have.

LEVET: I loved it. I loved 'em. When you get to talking about fieldwork, I'll relate three experiences to you.

ASPATURIAN: From Caltech? Go right ahead.

LEVET: One of them was a field trip to Ensenada, down on the west coast of lower [Baja] California. What we looked at and studied down there, I don't remember, but it was general geology. We call it haystack geology. Stand back, look around and try to get the big picture. That's probably what that was about. The thing I really remember is that we had a stake truck—an open-end truck, with stakes around the side. The whole class rode back there, in open air. I was the driver. The thing had a governor on it, and we couldn't go over 50 miles an hour. Well, Clay Smith, he was along with us, and he says, "I think I can take care of that."

ASPATURIAN: He was a fellow student?

LEVET: Oh, yes, he played football here and did his graduate work here and later became a geology professor at the University of New Mexico. Clay Smith was a great guy. I liked him.

So we lifted up the hood, and he tinkered with the carburetor, and we got the speed up to 60 miles an hour. That was an interesting trip. It was reinforced yesterday when we went into the gem museum. [Caltech's gem and mineral display, known as the "gem room." *-Ed.*] I didn't realize that they had such a display of tourmaline.

ASPATURIAN: Oh, yes, George Rossman [professor of mineralogy]—it's one of his specialties.

LEVET: Oh, my gosh! I had been in there before but I never realized they had so much tourmaline. We also had a field trip down to Pala [northern San Diego County], very interesting. I loved that. We went down there and did a nice field trip on the pegmatite dikes and the lepidolite and the tourmaline and kunzite. We went into the mines, into the tailslips, the piles. I've still got samples from that field trip. I've got a big piece of lepidolite, which is lithium mica. Very fine-grained pink mica. I had a piece that had pink tourmaline embedded in it. I lost it. I don't know what happened to it.

ASPATURIAN: Pala is an amazing place.

LEVET: It is. I want to go back some day. In fact, I did go back a few years later. But that was a very interesting trip.

ASPATURIAN: There was another trip that you wanted to bring up.

LEVET: Two others. There was one to the Grand Canyon to study the trilobite fossils from the Paleozoic. We hiked down the whole trail, clear down to the Phantom Ranch. Stayed overnight at Phantom Ranch, studied the Paleozoic, and found trilobites. A very nice trip. Then the next day, the arduous ten miles out, all straight up.

ASPATURIAN: Did you manage it better than some of your classmates, considering all the walking during your commute?

LEVET: No, we were all pretty much comparable. Of course we'd all done a lot of hiking on field trips. And then the real big field trip was a five-week senior project in the Inyo Mountains. We camped at Big Pine. You know the Owens Valley?

ASPATURIAN: Another beautiful area.

LEVET: Our camp site was just outside the little town of Big Pine. I think there were five or six cars and about ten or twelve of us. The campus provided a brand new station wagon. I've forgotten what make it was, but it was a big station wagon. One interesting aside—the instructor took us out for kind of an overview of the whole thing, and the objective was that each pair of us would go back in the Inyos, map a section, and come back at night. We would do the same thing the next day for five weeks.

ASPATURIAN: They really gave you a thorough exposure.

LEVET: Well, John Maxson was the overseer for this, and he was writing a treatise on the Inyo Mountains. We were providing part of the mapping details for his work. Whether it ever got

published, I don't know. I've tried to find it, and I can't. But it was very interesting. The first day, the instructor took us out in the new station wagon, and we came to this horrible, horrible wash in the canyon. I can still see it today. The most forbidding place you ever saw. This was just to give us a feel of the topography. So one of the students gave it a name, AHOC Canyon. I'll let you figure out what the acronym stands for. I don't publish it.

LE POUVOIR: A-H-O-C-K?

LEVET: A-H-O-C. Whether the title still exists, I doubt.

LE POUVOIR: A hell of a canyon?

LEVET: Well, you're close.

LE POUVOIR: A heck of a canyon?

LEVET: Worse than that.

ASPATURIAN: Well. Something to think about.

LEVET: My partner was Jack Knight. I don't recall; he may have been a master's student at the time. Eventually he went with Superior Oil in New Zealand. But he and I were assigned the farthest-out area to map, clear through the Inyos to the north end of the entrance to Death Valley.

LE POUVOIR: Eureka Valley?

LEVET: Eureka Valley. North end of Death Valley. We weren't in the valley. We were in the mountains.

ASPATURIAN: You really took to this science. I can tell, just by listening to you.

LEVET: I thoroughly enjoyed it. Every day for five weeks in his Model-A Ford.

ASPATURIAN: This was as a senior?

LEVET: This was a senior project.

ASPATURIAN: So would this have been 1939?

LEVET: This would have been '39. I did a senior's thesis: "Geology of the Sylmar and Pacoima Quadrangle." That's just north of the north part of the San Fernando Valley, in the mountains there. Dick [Richard] Jahns [See also Session 2] and Bob [Robert P.] Sharp [Robert P. Sharp Professor of Geology, Emeritus, d. 2004] both did their thesis work on adjoining quadrangles.

ASPATURIAN: That must be an area very rich in geology.

LEVET: Well, it was close in. I don't know why it was chosen.

ASPATURIAN: Was it interesting research?

LEVET: Yes, it was. It was nice fieldwork.

ASPATURIAN: I want to step back for one minute. Your other major activity at Caltech was baseball. How did you get into that?

LEVET: Well, I never played organized baseball before college. I didn't play in high school. The only baseball I played was in the backyard and on the streets with friends. When I got admitted to Caltech, I made a vow to myself: "I am going to be captain of the varsity team, and I am going to be awarded the Rawlings Trophy." And so I did. And here's the Rawlings Trophy [highest honor of the Caltech Baseball Team].

LE POUVOIR: You won that as a senior?

LEVET: I was a third year student at the time because I took five years to graduate. It was my fourth year in baseball. In '38 I was a junior. That was my last year on the varsity. After that, I became ineligible.

ASPATURIAN: The following year you were a freshman coach, I believe.

LEVET: The following two years I was freshman coach.

ASPATURIAN: So you stayed on for a fifth year, and you also got your master's degree.

LEVET: I got that in '40.

LE POUVOIR: You have your master's diploma here.

ASPATURIAN: This is the one signed by Dr. Millikan?

LEVET: Yes. And conferred by him.

LE POUVOIR: And presented physically by him.

LEVET: Yes. My bachelor's diploma is also signed by him.

ASPATURIAN: That's a wonderful thing to have. Did you know Dr. Millikan at all?

LEVET: The incoming freshmen were invited to a breakfast at his home. So I went to that. Had him, I'm sure, for a lecture or two, at least.

ASPATURIAN: Once you decided your interest was in geology, did you start to think in terms of a career while you were still a student?

LEVET: That's very interesting and a good question. When I finally left the Institute, I said, "There are three things I am not going to do. I do not want to do research; I do not want to sell; and I do not want to teach."

ASPATURIAN: So academics were out.

LEVET: As far as going back for a doctorate or something like that? No. Never. I'd had enough with six years here.

LE POUVOIR: Dad, you mentioned what your senior thesis was, and we didn't get to what your master's thesis was.

LEVET: Oh, that was research in the San Juan area, east of San Juan Capistrano on the Santa Margarita Ranch, 300,000 acres. Francis Bode [also a master's degree candidate at the time –*Ed.*] was my quote “mentor” unquote. I think he was working on it also. He went out with me the first day and showed me the area and arranged for me to get keys to the Santa Margarita Ranch so I could get up on the ranch property. It was the last time he ever went out with me, which I have regretted. So I did the geology of that region. I should have extended it across San Juan Capistrano and up into the western hills on the other side. I don't know why I didn't. I guess I just ran out of time.

ASPATURIAN: Well, there was a lot going on in that year, 1940.

LEVET: Oh, my goodness, yes.

ASPATURIAN: What were your chief takeaways from Caltech, aside from the degrees and your geology experience?

LEVET: That is a tantalizing question.

ASPATURIAN: Do you want to think about it, and we can come back to it?

LEVET: Yes, let's come back to it.

ASPATURIAN: You mentioned your wife. I wanted to go back to how the two of you met.

LEVET: Oh, it was very interesting. We were both in the Epworth League and the junior choir.

ASPATURIAN: The what league, excuse me?

LEVET: The Epworth League. It's a Methodist youth organization. And we were also in the junior choir at the Monterey Park Community Methodist Church—a very active junior choir. In fact, we used to sing on the radio. When I first went into the choir and the Epworth League, I knew Perle by name.

ASPATURIAN: How old were you?

LEVET: Oh, at that time I was probably a sophomore. But I'd had a couple of girlfriends out of the choir and Epworth League. So we were going to have a Hawaiian party, and we were at Perle's house making leis. *To this day*, I can see her sitting over in the corner, right by the piano, and all the rest of us out here trying to make these leis. And I was having a dickens of a time making this lei. All of a sudden, it just came out: "Perle, help me!" So she came over and helped me and something clicked, and we started going together from that point on.

ASPATURIAN: Oh, that's a lovely story. How long were you married?

LEVET: Sixty-seven years.

LE POUVOIR: From 1941 to 2008.

ASPATURIAN: You married right after you got out of college?

LEVET: A year after. During college, I had had five summers with old CCMO in Ventura, as a roustabout to start. Then a gas tester. Then I went with a technical oil field service company for about a year. That was in 1940 and early '41, and in May of '41, we got married.

ASPATURIAN: So in 1940 you had your BS and MS degrees. You were thinking about getting married. The world was changing very rapidly. Tell me about that time in your life.

LEVET: Well, my draft number was coming up—252.

ASPATURIAN: This was after Pearl Harbor?

LEVET: Oh, yes. Six months after.

ASPATURIAN: And by then you were married.

LEVET: We were married. And I said, “I’m not going to go to basic training; I’m going to get into some technical field.” So I tried the Navy for photogrammetry, which included meteorology. Couldn’t pass the physical.

ASPATURIAN: How come?

LEVET: I didn’t weigh enough. That was all—I didn’t weigh enough. The recruiter says, “Go out and eat a bunch of bananas, drink a lot of malted milk and I think you’ll make it.” I left there, and I said, “No thanks.” And I found out about the USAAF, the United States Army Air Force. There was no independent Air Force at the time. It was part of the Army. They had a recruiting station at UCLA for the meteorology—weather—program. The only people they would take were engineers or scientists. *That was all.* So I went down. They found out I had a master’s degree in geology—“Oh, join us.” So I got into the Army Air Force program and asked to be at Caltech because I knew there was a program here.

ASPATURIAN: Yes, there was; a very highly regarded one.

LEVET: [Irving P.] Krick was teaching it. I told them, “You know, I was at Caltech for six years; it’s where I got my degrees. I’d like the assignment at Caltech.” They said, “Oh very good, we’ll send you to UCLA.”

ASPATURIAN: [Laughter] “You’re in the Army now.”

LEVET: Which I’m glad they did. UCLA had the two finest meteorologists—Norwegian—in the world. Being Norwegian had nothing to do with it, but they were the finest two in the world. [Jørgen] Holmboe and [Jacob Aall Bonnevie] Bjerknes were their names. So I went there. No barracks. We had to find a place to live. I had a friend, Jim Maguire, who was also in scouting, and he and I found a beautiful home just off campus. So we rented it.

ASPATURIAN: In Westwood, I assume.

LEVET: Oh, absolutely. Up on the hill, overlooking the campus. Lovely. The course started in July. About three months went by, and the program took over a motel and moved us all into the motel, into a barracks, and took over a restaurant for meals. Otherwise, we were cooking our own meals, as air cadets. In January, six month after the course started, they picked up the whole class and sent us to the University of Chicago.

ASPATURIAN: Would this be January of 1943?

LEVET: Yes.

ASPATURIAN: Was this your first experience with Midwest winter?

LEVET: There wasn't a flake of snow in Chicago the whole six months we were there.

ASPATURIAN: You're kidding me.

LEVET: There was none whatsoever. Wind, yes, but snow, no.

ASPATURIAN: But it was cold?

LEVET: It was cold. And [Bruno] Rossi, who studied under Bjerknes, was in charge of the meteorology department at Chicago.

ASPATURIAN: Did your wife go with you when you went to Chicago?

LEVET: Not when I went. She came out for the commissioning, which happened to be on our anniversary, May 11, 1943. So she came back for that, and I got my first assignment, in Pennsylvania. Olmsted Field, Middletown, Pennsylvania. She stayed for that assignment; then I got reassigned as the weather officer at Reading Airfield in Pennsylvania.

ASPATURIAN: Why would a weather officer be in Pennsylvania during the war?

LEVET: Well, they had an air-training program for air flight. We had to give clearance to these guys to take off.

ASPATURIAN: I see.

LEVET: If the clearance wasn't right, we wouldn't let them take off.

ASPATURIAN: Did you enjoy the training program?

LEVET: Loved it. And it was equivalent—if I had written a thesis, I'd have gotten a master's degree. It's the only thing I didn't do. The whole thing was equivalent to a master's degree.

ASPATURIAN: What tools were used to predict the weather in those days? There were no satellites.

LEVET: Well, we had pi-balls.

ASPATURIAN: What are those?

LEVET: A pilot balloon. You fill it with helium and it ascends at a set rate, and you follow it with a theodolite, a surveyor's instrument. And you can determine its altitude and the wind direction by following it.

ASPATURIAN: How accurate were these?

LEVET: Oh, exact.

LE POUVOIR: They're still used today. My husband used them in the Air Force too.

LEVET: They use radio sounds today. And her husband is a meteorologist.

LE POUVOIR: In the Air Force.

ASPATURIAN: Certain things run in the family. Long-distance hiking, also.

LEVET: And then, in about late August or early September, I got orders for overseas.

ASPATURIAN: Very quickly.

LEVET: Very quickly.

ASPATURIAN: Did you have any inkling of where you might be going?

LEVET: Nobody did.

ASPATURIAN: Nothing? All arbitrary?

LEVET: We got sent to Kearns Field, Utah, for distributing us, and then they moved the whole group from Kearns Field to Angel Island in San Francisco Bay, and we were there for about two weeks. Still didn't know where we were going.

ASPATURIAN: Really, no clue?

LEVET: Well, it was going to be something in the Pacific.

ASPATURIAN: Because it was San Francisco.

LEVET: Yes. We knew that. But it could have been CBI, the China-Burma-Indian Theater. It could have been Alaska. It could have been the South Pacific. We had absolutely no idea.

ASPATURIAN: Do you remember what were your feelings about all this?

LEVET: We took it in stride.

LE POUVOIR: And Mom's feelings?

LEVET: She took it in stride.

LE POUVOIR: I think everybody did back then. It was the patriotic thing to do.

ASPATURIAN: It was just such a different time.

LEVET: It was part of living, so we did it. And I did it. Then we got orders to go down to Pier Something-Or-Other, board a ship—somewhere I've got the name of the ship—and then we found out we were going to New Caledonia.

ASPATURIAN: Which is Australia?

LEVET: East of Australia. East of the Barrier Reef. The same latitude south that Hawaii is north.

ASPATURIAN: Let me understand this: You got on the ship and *then* you were told where you were going?

LEVET: Yes. It was probably on the second or third day or something like that.

ASPATURIAN: What was your reaction? You were a young kid.

LEVET: Well, where in the hell is New Caledonia? [Laughter] I didn't know where New Caledonia was. It turned out that the Thirteenth Air Force headquarters had been stationed there at PDG, Plaine Des Gaiacs.

ASPATURIAN: On this boat, was it a mix of people in the Air Force?

LEVET: Mostly enlisted men down in the hold. One of the worst parts of the whole voyage was that the officers had to stand watch over the enlisted men in the hold. There were guys who were seasick. There were guys who had oranges, peeling them, and bananas. It was frightful, just frightful. But we pulled our duty.

LE POUVOIR: Well, because you were an officer.

ASPATURIAN: I was going to ask, at what rank were you commissioned?

LEVET: I was a second lieutenant. Commissioned at Rockefeller Center through the University of Chicago. It wasn't a pleasant ocean cruise.

ASPATURIAN: How long did it take?

LEVET: Seventeen days. We had one destroyer accompany us all the way.

ASPATURIAN: Have you read *The Caine Mutiny*? I'm sure you have.

LEVET: Oh, yes. And a couple of other books on the Pacific that are fascinating. So we got to New Caledonia. I was assigned to the Seventeenth Weather Squadron located at PDG, where the headquarters for the Thirteenth had been, and about two months later I got transferred as staff weather officer to the Seventeenth Weather Squadron on Espiritu Santo. Then, from Santo, I almost immediately got reassigned to Headquarters, Thirteenth Air Force Guadalcanal. As an aside, Perle and I twice went back to these places, and back to Guadalcanal [See Session Two].

ASPATURIAN: Where are we in time at this point?

LEVET: It would have been mid-1944.

ASPATURIAN: So you were in the thick of the Pacific fighting?

LEVET: The south Pacific, the southwest Pacific, and the Asiatic Pacific.

ASPATURIAN: And your role there basically was to forecast the weather for the fighter planes that were taking off?

LEVET: From the headquarters. Of course, they had their own weather officers, too—the fighter command and the bomber command each had its own weather officer. But we had to make the weather forecast for the commanding general. If we didn't like it, we could cancel the mission, abort the mission.

ASPATURIAN: Of course, meteorology still is not an exact science. It must have been kind of—

LEVET: It's much more so now.

ASPATURIAN: I found a couple of passages from a book called *Fire in the Sky* [*Fire in the Sky: Air War in the South Pacific*, Westview Press, 2000] by Eric Bergerud, where you're quoted.

LEVET: I'm quoted twice in it.

ASPATURIAN: Yes, I've got them both.

LEVET: Oh, wonderful.

LE POUVOIR: I had thought about that book. I have the copy you had given me, at home. It's about three inches thick.

ASPATURIAN: I accessed it through Google Books and through Amazon.

LE POUVOIR: I'm glad that you have it.

ASPATURIAN: In both cases you're quoted talking about the difficulty and the challenges of weathercasting.

LEVET: Well, that first quote, very interesting, comes from when we were in the Admiralty Islands, which is in the Bismarck Sea, northeast tip of New Guinea.

And where I did this interview, I cannot remember. I can't place the author at all. It's possible that he could have been one of my students when I was teaching in a graduate school, a night school, in San Francisco.

LE POUVOIR: Back in the '60s.

LEVET: Yes. It was. But in the Admiralties, the general comes in one day when the head weather officer and I were there, and he says, "Fellas, I understand the Fifth Air Force over in

New Guinea is getting eighty-five percent verification of their forecasting, and you guys are getting sixty-five percent. I want to know why.” We hitchhike over to New Guinea. I don’t know how many flights I took when I was over in the Pacific—a jillion of them. You never knew what you were going to fly on—whether it was going to go where you wanted to go, or if you’d have to do a circuitous route. So anyway, we got a flight to New Guinea as far as Finchhaven [Finschhafen]—that was as far as we could go. Then we had to go to headquarters at Nadzab [Nadzab Airport, Papua New Guinea], up in the Markham Valley. A B-25 was going up there so we hopped on it and went up to headquarters and talked with the guys, and the guys said, “It’s simple; you just forecast tomorrow what you got today.” That’s exactly what they said.

ASPATURIAN: “We look out the window.”

LEVET: “And we call it persistence forecasting.” So we took the message back to the general: “Well, we got to do persistence forecasting.”

LE POUVOIR: That particular thing has come into my brother’s and my upbringing for decades and decades with Mom and Dad. “Well, Dad, what’s the weather going to be like tomorrow? We’re hiking up into the Sierras on our pack trip.” “Well, whatever it was like today, that’s what it’s going to be like tomorrow; it’s called persistence forecasting.”

ASPATURIAN: I think I’d like to break here, and we will resume with persistence forecasting.

**Some material in this session was originally recorded during Session Two.*

SESSION 2

ASPATURIAN: This is still February 20th; we are continuing the interview with Melvin Levet. We're in the Solomon Islands or thereabouts.

LEVET: Or thereabouts.

ASPATURIAN: Did you adopt these persistence-forecasting procedures when you got back to your unit?

LEVET: Oh, yes.

ASPATURIAN: Did you improve your average at all?

LEVET: I'm sure we did. I don't know whether we actually took statistics, but yeah, we did.

ASPATURIAN: I'd like to read your other quote that I have here from the Bergerud book: "Over any island mass it was typical to have thunderstorms almost any afternoon. When the sun goes down, they clear up. It was so hot, however, that the water evaporated with tremendous speed. So it could be dusty one minute and then you'd drive down the road in a jeep and run into mud the next minute, and five minutes later it was dry and dusty again." It was really like that?

LEVET: True enough. True enough.

ASPATURIAN: You also mentioned that you flew a lot during your time in the Pacific. Did you ever come under enemy fire?

LEVET: Never did. The Thirteenth Air Force headquarters was always rear-echelon, except when we were on Morotai in the Dutch East Indies [present-day Indonesia]. During about three months there, we had about eighty-two bomb raids, and only once did a bomb ever come close to our camp area. It hit a tent right next to ours.

ASPATURIAN: Were you stationed on land or on aircraft carriers?

LEVET: Always on land, and always near the water.

ASPATURIAN: Did you experience typhoon conditions? Earthquakes? This is a very volatile part of the world.

LEVET: On New Caledonia we had one typhoon that came through. But that was all. Perle and I had more typhoons when we came back many years later than I did over there.

ASPATURIAN: How long were you stationed in the Pacific?

LEVET: Twenty-seven months.

ASPATURIAN: And were you there when the war ended, when the atomic bomb was dropped on Japan?

LEVET: I was in the Philippines.

ASPATURIAN: Ah, which had been liberated.

LEVET: We were already in the Philippines while the war was still going on.

ASPATURIAN: When did you go to the Philippines?

LEVET: The war was over in August 1945. So this must have been June or July.

ASPATURIAN: So it was after the Philippine Islands were freed?

LEVET: Not totally, but almost.

ASPATURIAN: What was it like there?

LEVET: Well, we saw some evidence of bombing, but not like in Tokyo. The headquarters was located on the same beach on Leyte that [General Douglas] MacArthur landed on. I was stationed there.

ASPATURIAN: Did you ever meet or encounter MacArthur?

LEVET: No, never did. Actually, MacArthur's Air Force was the Fifth; he always gave credit to them. As far as he was concerned, I don't think the Thirteenth even existed. We were under the Navy. The Fifth was under MacArthur. So we got short shrift.

ASPATURIAN: Do you recall where you were when you heard about the atomic bomb?

LEVET: Yes, I was in the Philippines, in the officer's club. I don't know what time of day it was, and I don't remember—I may have been having a beer, I may have been having a Coke—I don't know. I was just sitting in the officer's club looking out over the beach, and we got the word that the atomic bomb had been dropped.

ASPATURIAN: Do you recall what you thought?

LEVET: Things like that, for most of us, you know, it goes with the territory. We took it in stride. Later on, I'll tell you the story of getting lost on a B-17.

ASPATURIAN: This was during your wartime service?

LEVET: Yes.

ASPATURIAN: Let's do that now.

LEVET: About a month or two after the war was over, the general had a courier mission.

ASPATURIAN: Who was the general?

LEVET: [Paul B.] Wurtsmith. He had a courier mission to Tokyo, to MacArthur's headquarters. He was assigned a B-17, and he couldn't go, so a lieutenant colonel—Warwick was his name—was assigned to pilot us up there. There was Warwick; there was first lieutenant Kip Krepling, who had been in Europe and who was really the pilot for the general; Mayo, a second lieutenant navigator; a CID [Criminal Investigation Command, US Army, Operations Division] combat intelligence officer; and me—just the five of us. So we flew up from Leyte in the central Philippines—first to Okinawa to refuel, then on to Tokyo. We spent about three days up around Tokyo.

ASPATURIAN: What did that area look like?

LEVET: Some of it was terribly, terribly damaged, and other areas not at all. In fact, right in the middle of Tokyo, we went to lunch at a hotel designed by Frank Lloyd Wright [the Imperial Hotel, designed by Wright in 1922. *-Ed.*]. I've got pictures of that. So we spent three days up and around Tokyo. Got up on the slopes of Fujiyama [Mount Fuji], looking for a vineyard so we could buy a case of sake to take back. Then it came time to come back. When we took off from Tokyo, we knew there was a typhoon to the south. There was a Navy ship anchored south of Tokyo to monitor this typhoon. So we took off, and about an hour and a half into the flight, I got bored up on the flight deck. So I went down the bomb bay—and there was still a Norden bombsight on that airplane, that B-17. I got to tinkering with it and immediately found out we had 25 degrees of right drift. Now that ain't good.

ASPATURIAN: It would mean you've gone off course?

LEVET: Almost everything was dead reckoning at that time. Radar—well, there was radar, but it was formative, not very good. So I dashed back to the flight deck and told Warwick. I said—using whatever his first name was—“I was just looking through the Norden bombsight. We've got 25 degrees of right drift.” He said, “How long have we had that?” I said, “I don't know; I just went down there.” “Oh, my God,” he said, “Where's my navigator?” I said, “Oh, he's taking a nap back there.” He says—I'll use the vernacular, I can hear him today—“Get his ass up here now!” I went back and got him, and they came back, and they got a new heading; and we flew and we flew and we flew. Did we find Okinawa, a big island? No way. Finally, we

spotted a small island, part of the Ryukus, which is the archipelago that comes down from southwest Japan clear to Okinawa. Just like the islands up off of Alaska.

So we found this little island—“Oh, got an island!” We flew over it, and the ocean was just froth from this typhoon. We circled this island twice. We were getting ready to circle a third time, and the colonel said, “Guys, we’re going to make a decision on the third circuit. We either head for China, which we will never make”—we were low on gas—“or we’ll head to the Philippines, which we certainly will never make, or I’m going to ditch in the lee of the island.” So we go around again, and immediately somebody on an emergency radio transmission got in touch with us.

ASPATURIAN: Had you been out of contact all this time?

LEVET: All this time.

ASPATURIAN: I see, I see.

LEVET: He may have been trying before with no success, but somehow this radio contacted us, and—in the vernacular again—“What in the hell are you guys doing out there?” And our immediate response was, “Up where? We have no idea where we are.” So he gave us a heading and it’s about a thirty-minute flight to Ie Shima, which is a little island off the northwest coast of Okinawa. We were at least seventy-five miles off course.

ASPATURIAN: Imagine if you hadn’t noticed this.

LEVET: I think about that today: What if I hadn’t gone down there [to the bomb bay].

ASPATURIAN: What a hair-raising experience.

LEVET: So we landed on Ie Shima, and surprisingly—because it was a small marine base—it was still operational. The typhoon was on top of us. What had happened was that the Navy ship had weighed anchor and sailed about 500 miles west, with no change-in-location notice. We thought the typhoon was way back there. Instead, we flew right through it.

ASPATURIAN: What an adventure. And this was after the war had ended?

LEVET: About two months after the war was over. For the pilot, the co-pilot, the navigator, and me, this was another day in the park.

ASPATURIAN: Really? You were very calm?

LEVET: Really. There was no emotion whatsoever. But the poor CID guy—he was totally petrified. He grabbed a bottle of sake out of the case of sake, and he reached down, kissed the ground, and drank the bottle. He was absolutely petrified.

ASPATURIAN: He hadn't been in the trenches so to speak.

LEVET: This is as vivid today as it was then.

ASPATURIAN: The way you tell it, I can see that.

LEVET: We got to the Philippines, and that was the last flight that plane ever made. It had a broken spar in the left wing.

ASPATURIAN: What a story. So when did you go home?

LEVET: Left for home the first week of December, 1945, and sailed into San Francisco Bay Christmas Eve.

ASPATURIAN: Your wartime adventure was over?

LEVET: Not quite. The whole group of us who were supposed to be discharged had to go down to Wilmington, near Long Beach. In the meantime, we were supposed to spend overnight or two days up in Pittsburgh, on the Sacramento River. I said, "The heck with that, I'm going to grab the train; I'm going back down home." And I got down there overnight.

ASPATURIAN: Where was home?

LEVET: Still Monterey Park. So I got down there the next morning. I had a very nice day with Perle, with my folks, and that evening I got on the train back and went up to Pittsburgh. They put us on a ship, and we took it down to Wilmington. Three-day trip. [Laughter]

So that was the end of it. And as I got discharged, the discharge guy says, “Oh, I got some news for you.” “Oh, yeah, what’s that?” He says, “You’re now a major.” I got promoted to major on the spot.

ASPATURIAN: A very nice way to be discharged.

LEVET: It was. And I stayed in the active reserve for about five years. Then the Korean War came, and I didn’t know if I’d get called up. I did not get called up.

ASPATURIAN: Would you have gone to Japan during World War II if there had been an invasion?

LEVET: No. Well, in a way, as rear echelon, we might have gone to Okinawa and set up headquarters. But to go right into Japan in an invasion, I doubt it. I don’t think so.

ASPATURIAN: You mentioned earlier that years later, you actually went back to the Pacific with your wife on a couple of occasions?

LEVET: Twice—in the 1980s? [During the war, Perle enlisted in the Navy Waves. So we both served in the military in World War II.]

LE POUVOIR: It was either the ’80s or ’90s.

LEVET: When I had left Guadalcanal with the headquarters, I told myself, “Someday I’m going to bring Perle back here and I don’t know how I’m going to do it.” But I was in the Guadalcanal Veterans’ Association, and I found out that a small group of fighter pilots from the Thirteenth Air Force were going to go back with their wives. And they asked me, “Do you want to go?” So we went back with this group and their wives; delightful trip. After it was over, I told Jim Jarman, “If you ever do this again, let me know.” Three months later, he called me, and said,

“Mel, we’re going back to Guadalcanal; do you want to go?” I said, “Sign us up.” So we went two years in a row.

LE POUVOIR: So it was to Guadalcanal that you went both times with Mom.

LEVET: Both times. And to New Caledonia.

ASPATURIAN: Guadalcanal was a very important island in the war. One of the turning points.

LEVET: Oh, my gosh, yes! I should have brought the map of the Pacific where the Thirteenth was operating. It shows the whole trace of the Thirteenth. Except for Fiji, where the Thirteenth was originally organized, I served every place where headquarters were located.

ASPATURIAN: Were you generally successful in weather forecasting—at bringing planes safely up and back?

LEVET: An interesting episode there was on Morotai, the easternmost island in the Dutch East Indies, between the Philippines and New Guinea. They had P-51s stationed there to go up and drop stuff or strafe or whatever to support MacArthur. About half of the planes had received four-blade propellers, and all the rest still had three-blade. Well, we wouldn’t clear the three-blades for flight, and Operations, which could always overrule us, overruled us and sent the whole bunch up. None of the three-blade propeller planes got back.

ASPATURIAN: All those pilots were lost?

LEVET: Not lost. I think two or three may have been lost, but the rest were all rescued.

ASPATURIAN: After that, did they pay more attention to you?

LEVET: No.

ASPATURIAN: But you were right.

LEVET: On that, yes. I had to write the episode up for the general.

ASPATURIAN: And explain what had happened?

LEVET: Yes, and why all the four-blades got back.

ASPATURIAN: So after the war you went to work for Chevron [then Standard Oil of California], I believe.

LEVET: February 1, 1947. As a research geologist.

ASPATURIAN: How did that come about?

LEVET: During college, as I mentioned before, I had worked for the oil company CCMO in summer times, and after graduating I spent a year with a technical service company. I went into the service, and then came back with them for a year. Then one day Walter Duffy, who was head of the gas-testing lab for oil field research in Santa Fe Springs, which was a division of Standard Oil California [which later became Chevron], called me up and offered me a job at the new lab that was being built. A beautiful lab.

ASPATURIAN: Right out of the blue?

LEVET: Completely out of the blue. He prefaced it. He said, "I've been talking with Floyd Bradley, whom you worked for [at CCMO] for several summers. He's in CNGA, and I'm in the CNGA—California Natural Gasoline Association—and I called him and told him we were looking for somebody in petroleum engineering, petroleum geology," something like that. And Bradley told him, "I've got just the guy for you," and he gave him my name. This was five years after I'd originally worked for them. So he called me and offered me a job, and I turned it down. About a week later, he called me again and increased the price. And again I turned it down. The third time he called, he said, "I'd like to have you and your wife come over to my home in Whittier, and I'd like to talk with you about this." He was kind of a namby-pamby sort of individual. But I liked him, and he was good to work for. So he entertained Perle and me at his

home and again made the offer—at a steeper price. So I finally accepted it and left the oil field service company and went with oil field research. The first day on the job, he gave me a ticket for a month in New Orleans. I was like “What am I going to do in New Orleans?” They had an analog oil field computer simulator there to simulate the Rangely Field in Colorado, which at the time was half Standard California’s—which later became Chevron—and half Stanolind’s. Stanolind’s portion was a very, very tight formation, with very, very low permeability, so we were there to analyze it—to determine the appropriate split of profits from the field, recognizing these differences. So we had this petroleum reservoir analyzer built to do that—strictly analog, not digital at all, nothing like today’s computers. That was my first job, working on that. Then when the new lab opened up, they sent Walter Duffy to Saudi Arabia and I got his job. I became a research geologist, which was one of the things I didn’t want to do. [Laughter] But it was fascinating.

ASPATURIAN: I’m sure your Caltech training stood you in very good stead.

LEVET: Absolutely.

ASPATURIAN: Had Duffy ever talked to people at Caltech about you?

LEVET: No. I don’t think he talked with anybody. He talked with Floyd Bradley, and that was enough for him.

ASPATURIAN: What did this new job entail? Was it mostly oil and gas exploration?

LEVET: It was trace elements and that sort of thing to use as marker bids for correlation. Heinz Lowenstam [professor of paleoecology, emeritus, d. 1993]—

ASPATURIAN: I did his oral history. That name popped into my head thirty seconds ago! You knew him?

LEVET: Yes. The lab retained him for a year as a consultant.

ASPATURIAN: I remember he talked about this in his oral history. He was a wonderful man.

LEVET: He and the director of the lab, [Allen] Riley, were both from the University of Chicago, and that's why Riley latched onto him. We also retained Dick Jahns [See also Session 1]. He was a fantastic guy. Absolutely fantastic. If something went right, he'd say, "Oh, isn't that scintillating!"

ASPATURIAN: That was his reaction?

LEVET: Almost everything that went right: "Scintillating!" I can hear him today.

ASPATURIAN: Did you work with either of these people?

LEVET: Indirectly. When I was a Caltech student, Dick was an instructor doing his PhD, and he had been an ardent baseball player, so we had a very common interest. I've brought along a pebble that I found back then in Newport Beach. I thought, "Now that's interesting. I'm going to cut and polish two faces on that and see what it is." It turns out that it's fossiliferous—totally cemented. All fossils. I knew Dick was interested in things like this, so I took it down to him, and I said, "Dick I found this down in Newport, and I thought I'd cut and polish a couple of faces." "Oh, my God," he says, "that is gorgeous! What are you going to do with it?" I said, "I'm going to give it to my girlfriend." [He said] "Marry her!" Which I did.

ASPATURIAN: This was when you were still in college?

LEVET: Yes, in graduate school. Real story there.

ASPATURIAN: That's a pretty piece of stone, too.

LEVET: When you cut and polish it. Otherwise, it's nondescript. So that was my first job. After about three years I got transferred to San Francisco.

ASPATURIAN: Did you have children by this time?

LEVET: Yeah, I had Janice.

LE POUVOIR: Boyd came first.

LEVET: And Boyd.

LE POUVOIR: Boyd was born in 1947 and I was '51.

LEVET: This was in 1952 that we got transferred to San Francisco. I was on the president's staff. He was Howard Vesper, who was a Rhodes Scholar from Caltech.

ASPATURIAN: Where did you live during most of your time with Chevron?

LEVET: Most of the time was in San Mateo.

ASPATURIAN: And during your career, what were the parameters of your job?

Levet: Most of the time I was in the computer services department. I was manager of administration and finance in the computer services department. Which later became a subsidiary company. Chevron Information Technology Company, after I left, also became a subsidiary company.

ASPATURIAN: You must have experienced a lot of the evolution of computer technology in your career.

LEVET: Oh, my gosh, yes!

LE POUVOIR: I can remember—I'll insert this here—visiting his office in San Francisco when I was in grade school, and each one of the computers was probably the size of two of those eight-foot, nine-foot tall bookshelves [indicating the bookshelves in the Caltech Archives Rare Book Room].

LEVET: The 7094 was what IBM called it. It was huge—took up the whole twenty-second floor. It was the first digital computer that we had in the company, and then we supplemented it with a lot of the smaller business-type ones. This was a strictly scientific computer. So I saw the whole evolution in the company almost up to the present time.

ASPATURIAN: When did things really begin to change in the computing environment?

LEVET: Probably 1950—early 1950s. Univac was one of the very first, and the early 1950s is when Chevron itself got involved. Yeah, I was in the computer services department right up to my retirement.

ASPATURIAN: How many years were you with Chevron altogether?

LEVET: Thirty-five.

ASPATURIAN: So you retired in the 1980s?

LEVET: 1982.

ASPATURIAN: One of the things I noticed in a write up that Caltech did of your career was that you traveled a great deal as part of your job.

LEVET: Yes, I did. In the computer services department, we installed what were called [IBM] 1401 computers in each of the corporate locations. That was Western operations in San Francisco, California Company in New Orleans, Standard Oil Company of Texas in Houston, another one in Denver, another one in Calgary, and another one in Seattle.

ASPATURIAN: Did you go overseas much?

LEVET: No. Never got overseas with the company.

ASPATURIAN: I see. So that came after retirement?

LEVET: Oh, yes!

ASPATURIAN: You mentioned horseback riding in the High Sierra earlier. With your family, was there a lot of this interaction with the outdoors and hiking and camping?

LEVET: Oh, yes. All of us fly-fished.

ASPATURIAN: Where?

LEVET: Well, Humphrey's Basin, Piute Creek, various others. And then we did the same thing with the Boy Scouts. The families were invited to go with the Boy Scouts on their one-week sojourn. We went into the Sierras with the Scouts.

ASPATURIAN: In your job is there anything that stands out as particularly memorable that you'd like to talk about?

LEVET: That I did not stay beyond the age of sixty-five. I regret that I did not stay 'til seventy because that's when Chevron took Gulf over [1984] and merged Gulf into their company. And then later, they merged with Texaco and with Union Oil. I would have been involved in all that one way or another, administratively. I used to have contact with every department in the company, almost without exception. Treasurers, comptrollers, department management, personnel—you name it—I had contact regularly with every department and with the legal firm.

LE POUVOIR: Following your retirement, you were still hanging on as a consultant.

LEVET: I stayed on for two years.

ASPATURIAN: Were you still in San Mateo at that time?

LEVET: Yes. We moved to Portland, Oregon, in 1987.

ASPATURIAN: Do you like it up there?

LEVET: We love it.

ASPATURIAN: What have you been doing since retirement? Again, I understand you've traveled a lot.

LEVET: Perle and I did. I don't know how many cruises we took.

LE POUVOIR: Talk about the trips with Bob Sharp.

LEVET: We took, I think, three trips with Bob Sharp.

ASPATURIAN: This was through the Caltech Associates I would imagine.

LEVET: Yes, they were. On one trip we went to see Mount Saint Helens after it had blown, and coming back we stopped at a little wayside rest spot. The old pavement and everything had been dug out and piled on the side of the road. You could see the layers: asphalt, the underlying ballast, and then the underlying real stuff. The only geologists on the trip were Bob and myself. So he posed a question to the folks; he said, "You ought to be able to tell from this road cut here what the most recent deposit was." Well, of course, everybody said, "It's obvious, it's the asphalt." I interrupted Bob. I said, "Bob, those could be overturned beds." It broke him up. Then we took a trip with him to Yellowstone. And we were going to go with him to the observatory in Hawaii.

ASPATURIAN: Mauna Kea?

LEVET: Mauna Kea. We're all signed up, paid our deposit and everything, and they couldn't get enough people to go, so they had to cancel that.

ASPATURIAN: That's too bad. It would have been a fantastic trip. Was there a third trip you did take with him, though?

LEVET: I'm trying to think if there was a third one, and I don't remember what the third one was.

ASPATURIAN: Speaking of the Associates, you've kept up close connections with Caltech over the years.

LEVET: Well, this goes back to the Mauna Kea trip, when they said, "We'll send you your deposit back." The deposit was the price of the whole trip. I said, "No, deposit it with the Associates." I had joined the Associates before that.

ASPATURIAN: Do you remember roughly when you joined?

LEVET: Well, the first approach happened, I think, when I was a sophomore or a junior. Don Cleveland, who was studying chemistry here at Caltech, whom my dad knew and was the reason I came here, invited me to join the Associates. I didn't have the money to do it.

LE POUVOIR: You can join as a student?

ASPATURIAN: I don't know. I don't think you can do it now, but in those days things might have been a little more flexible.

LEVET: Yes, right. But anyway, I didn't have the money to join. So I let it go for about two years. Finally, I guess I was a senior, and another student approached me, and tried to encourage me, so we joined the Associates.

ASPATURIAN: You and Perle?

LEVET: Yes.

LE POUVOIR: Well, as a senior in college, you weren't married yet. You didn't get married for another two years.

LEVET: Oh, that's right. It could have been that he called me after I left.

ASPATURIAN: Maybe he was persistent and kept at it?

LEVET: I'm a little fuzzy on the timeline. But it was about that time that we joined.

ASPATURIAN: So you've been members for a very long time. And you became a member of the President's Circle at some point?

LEVET: Yes, and I don't know what I did to become a member. I thought it was because I established a \$100,000 charitable gift annuity, but Boyd tells me that no, things like an annuity do not count. I'm not sure. Something triggered it, so we've been in the President's Circle ever since.

ASPATURIAN: You've taken other trips with the President's Circle, I believe. Where have you gone?

LEVET: We took a Greenland cruise. That was not President's Circle. That was either for all the Associates or with the Alumni Association.

LE POUVOIR: You went to the Middle East, Syria.

LEVET: That with the American Museum of Natural History. Five-week cruise around the world. But we've mostly taken trips, not cruises, with the Associates or the Alumni Association.

LE POUVOIR: You went on a Caribbean cruise as well.

LEVET: That was with the Portland opera.

ASPATURIAN: I have a partial list here. I don't know if any of these involve the Associates. Egypt—

LEVET: No, we did that with the church.

ASPATURIAN: You and Perle obviously liked to travel.

LEVET: Yes, yes, we did.

ASPATURIAN: Do any stand out as particularly memorable for any particular reason?

LEVET: Yeah, the five-week one to Asia. We flew to Singapore and boarded the ship in Singapore and then went to Thailand, Burma, India, and Oman, up the Red Sea to Jordan and then to Petra.

ASPATURIAN: Yes, I've heard of Petra.

LEVET: Have you been there? Oh, you want to go!

ASPATURIAN: Isn't that a red rock city of some sort?

LEVET: Yep. All carved.

LE POUVOIR: They rode camels into the red rocks.

LEVET: No, not camels. We rode horses.

LE POUVOIR: But lucky you, to have done that then while it was still safe to do so.

LEVET: Well, we did it twice, once with the church and once with the American Museum. And then up to Cairo—our second time to Cairo—and then to Athens and then home.

ASPATURIAN: That sounds like it must have been fantastic.

LEVET: When we first got to Singapore and saw this little ship, for sixty-three passengers, oh! And a sixty-three-member crew. As many crew as passengers. No Hollywood business, none of that stuff. It was absolutely a fantastic trip.

LE POUVOIR: I think the thing that stands out of all the trips you've taken is the fact that they are research/study/lecture trips.

ASPATURIAN: Educational enrichment.

LEVET: Most of them were.

LE POUVOIR: Seminar trips rather than entertainment type things.

LEVET: And to this day—and I know he denies it—I swear that the host on the Greenland cruise was Ed [Edward M.] Stolper [Leonhard Professor of Geology and Caltech provost]. When I first met him on my last trip up here, I said, “You were director on the Greenland cruise.” And he said, “I’ve never been to Greenland.” To this day, I swear it was Ed, and I haven’t been able to find out who it was.

LE POUVOIR: Well, if it was a President’s Circle or an Associates’ trip, then perhaps it would be in their records somewhere.

LEVET: I would like to refresh my memory on who it really was. Until the other day when we were up here, I’d never met Ed Stolper before, except in my memory on Greenland. The name just absolutely clicked with me.

ASPATURIAN: Well, he’s a fellow geologist.

LEVET: Oh, yeah, and it was a geologist leading the cruise, absolutely. Now, a clue might be—and I could be wrong—I thought afterward that the director’s wife was Linus Pauling’s daughter.

ASPATURIAN: Oh, Barclay Kamb [Rawn Professor of Geology and Geophysics, emeritus, d. 2011]?

LEVET: No, not Barclay Kamb.

ASPATURIAN: Because he was married to Linus Pauling’s daughter, Linda.

LEVET: Well, it was not Barclay Kamb. When he was chairman of the [geological and planetary sciences] division, he offered me a job back in the 1980s. It was as an administrative assistant to

the chairman, as I recall. So I came down and interviewed with him. I would have loved to have taken it. But at that point, I could not leave Chevron. Too many benefits would have been lost.

ASPATURIAN: I see. But it must have been hard to pass up a job with Caltech.

LEVET: Yes. That one I would have dearly loved. But that was Barclay Kamb who interviewed me, and it was not Barclay Kamb on this trip.

ASPATURIAN: I did want to ask about your ongoing relationship with Caltech.

LEVET: Until a year ago or a little longer, I hadn't been on campus since graduation, I think but once. I kept saying I wish we lived closer—every week there was something going on. Other than membership in the Associates, really, nothing. When we were in San Mateo, we did go to a reception for Willy [William A.], Fowler [Institute Professor of Physics, emeritus; 1983 Nobel laureate in physics, d. 1993]; he'd just gotten the Nobel Prize.

ASPATURIAN: That would have been late 1983 or '84.

LEVET: He gave a reception down in Atherton, just south of San Francisco. We went to that, and Perle was enthralled, absolutely enthralled. There were a couple of little things like that, but really until a year and a half ago, nothing.

LE POUVOIR: I think what prompted our visit a year and a half or so ago was that Edith, mom's sister, was having some health issues and succumbed to those health issues. She lived right over in Alhambra, so it necessitated the family traveling down to take care of that.

LEVET: That's right. So then we came to the campus.

ASPATURIAN: Well, you certainly have some vivid memories of your time as a student here.

LEVET: I do. And two regrets. One is that I did not live in a student house the first year. That would have made a lot of difference. The second was that I was a year younger than all of my

peers here. I skipped a year in grammar school, so I was a year younger, and I was naive. I was just not up to things like the rest of the student body was. Those are two regrets that I had.

ASPATURIAN: I asked you this earlier; I'll revisit it now: What you thought your chief takeaways from Caltech were. What did Caltech do for you?

LEVET: Well, it made me a professional in the eyes of business. People recognized the name and associated it with me. It—I'm sure—had its effect.

LE POUVOIR: Just from my observation, listening, Dad, to what you're saying is that compared to your upbringing where you were somewhat naive and not very independent—I mean your parents had pretty much guided you—is that Caltech or the university experience—maybe it's just not Caltech—opened up your eyes to being a more independent person, more assertive than you had been as a young person.

LEVET: The first sign of what she just said came right when I got on campus. That's when I said, "I'm going to be captain of the baseball team, and I'm going to get the Rawlings Trophy."

ASPATURIAN: And both of those came true.

LEVET: I did both of them.

ASPATURIAN: Another thing, I imagine, is that being a student here must have given you a new degree of confidence. If you can get through Caltech—

LEVET: Oh, by all means.

ASPATURIAN: It sounds like once you found your niche as a student in the geological sciences, you were very successful.

LEVET: At least a year in the student houses would have even enhanced that.

ASPATURIAN: Something I've always thought about a degree and a career in geology is that it's a science that is accessible to everybody. You can use it in your life.

LEVET: Well, people can visualize it—feel it.

ASPATURIAN: And when you visit a new place, you can look around and see it in a certain way. Have you found that to be true?

LEVET: Oh, absolutely. Absolutely. Flying down, we were over the Carrizo Plain, and I turned to Boyd, and I said, "Hey, we're over the Carrizo Plain out there." He said, "How do you spell that?" [Laughter]

ASPATURIAN: It's like you have an extra set of eyes for seeing the world.

LEVET: Oh, absolutely. Absolutely

ASPATURIAN: When you were in the Pacific during the Second World War, there must have been some instances of this?

LEVET: I tried to interpret, but everything was most of the time so covered with trees, you couldn't see the ground—except the coral roads. All the airstrips were ground, packed coral. All of them.

LE POUVOIR: One thing my sister-in-law, Boyd's wife—Dad's daughter-in-law—had mentioned is that as far as brain acuity and mental acuity to keep yourself going for so many decades goes, Dad—and I've noticed this as well in my adult life—is always asking questions. Always asking, Why? And I think that's what Caltech taught him.

LEVET: Good point, Jan.

LE POUVOIR: He's always questioning, asking why is it this way. It keeps your brain synapses plastic.

LEVET: I think so.

ASPATURIAN: You learned never to take anything for granted, to always ask. Is there anything else you'd like to put into the record?

LEVET: Well, Perle and I were in Portland for eleven years. We had a beautiful place in Lake Oswego. Then health-wise, we had to move into a care facility, CCRC [Continuing Care Retirement Communities], which is very nice. I'm still there. She had to go directly into health care—ten years she was there. I've been there, in Holladay Park Plaza, for the last seventeen years now.

ASPATURIAN: You have grandchildren, I believe?

LEVET: I have one grandchild who's with us today, and I have a step-granddaughter and two step-great-grandkids. And one sister, still. Marge is the one who passed away a couple years ago.

LE POUVOIR: Beatrice has probably arrived on campus.

ASPATURIAN: Does your sister share your interests in the outdoors and so forth?

LEVET: They do a lot of traveling. They've got their own venues. Oh, yes, there's common interests.

LE POUVOIR: Bea is twelve years younger than Dad. These activities that we've been talking about during the '30s and '40s, she wasn't really a part of because when Dad was in college, she was—what?—seven years old, and you don't pay attention to what your older brother is doing.

ASPATURIAN: I'd like to have you add anything that you'd like. This is your chance.

LEVET: Well, this has been a pleasure.

ASPATURIAN: I'm glad you've enjoyed it. I have, too.

LEVET: I'm glad to be a part of it, and I don't know what I've done to be a part of it.

LE POUVOIR: Everything you've shared in the past two hours shows that you're deserving.

LEVET: You might like to know that Boyd has opened up a sizable Unitrust for Jan and John, here at the Institute. So he's now a member of Torchbearers [Caltech Torchbearer Legacy Society].

ASPATURIAN: That's very nice, too. What I wanted to say is that memories like yours are increasingly rare and very valuable.

LEVET: Really?

ASPATURIAN: Sure. Caltech in the 1930s, the Second World War era—you describe it very vividly. It's been a pleasure to talk to you.

LEVET: It was a real credit that I was able to be here when the triumvirate were here, [Robert Andrews] Millikan, [Arthur Amos] Noyes and [George Ellery] Hale. Of course, I knew of them, their reputation, but not to the extent that I do today. And I read *Millikan's School*.

ASPATURIAN: Oh, I edited that. I know Judy [Judith Goodstein, Caltech archivist, emeritus, and the author of *Millikan's School*].

LEVET: I enjoyed that very much.

ASPATURIAN: It's a wonderful book.

LE POUVOIR: Based upon the last few visits you've made here to tour campus, speaking with John Grotzinger [Jones Professor of Geology and chair, Division of Geological and Planetary Sciences] and Ed Stolper, and visiting the old geology labs, which are now new labs, maybe you can speak briefly to how you see being Caltech different now. Comparing the physical and research aspects that you used to know back in the 1930s to what it is now.

LEVET: Enhanced technology. I mean technology has just run away with itself, and the Institute has taken advantage of it. Some of the equipment they've got now—my gosh, all we had was microscopes.

LE POUVOIR: And what did we see yesterday afternoon down in the sub-sub-basement, those two huge machines?

LEVET: I can't even remember the names of them.

LE POUVOIR: Spectrometry. You had said something briefly to me before we came in from our break: "Oh, man, I would love to come back and get another degree in"—what would that be?

LEVET: I'd go for a doctorate.

LE POUVOIR: In what?

LEVET: Geology. Some phase of it. Something cross-disciplinary; it wouldn't be pure geology. That and coeducation and the technology are the big changes that I've seen.

ASPATURIAN: But in many respects, it's still the same campus, I imagine. It's incredible how it's preserved its character.

LEVET: Absolutely. Especially walking down the Olive Walk.

LE POUVOIR: He said, "I would love to be a student here right now."

ASPATURIAN: Coming back for a visit with your family is a close second, I think.

LEVET: Well, it's nice to come down.

LE POUVOIR: It's opening up our eyes to what our dad was like—and from Hillary's standpoint, what her grandfather was like, seventy-five, eighty years ago. It gives us all a good perspective

from where it is we have come, because we are now what we were in the past, and Dad has infused all of his memories and experiences for us.

ASPATURIAN: I hope this history will help contribute to that.

LE POUVOIR: Very much so.

ASPATURIAN: Thank you very much.

LEVET: Well, thank you, Heidi. It's been a fun time.

**Some material in this session was originally recorded during Session One.*