

**Oral History Interview of  
J. Fred Bucy**

**Interviewed by: Andy Wilkinson  
November 15, 2012**

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## Transcript Overview:

This interview features J. Fred Bucy as he discusses growing up in Tahoka, Texas, his interest in pharmaceuticals, and later geology and physics, Working for Texas Instruments, and being an instrumental part of the Texas Tech Board of Regents.

**Length of Interview:** 01:20:50

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### Keywords

Texas Tech University, Tahoka, Texas, Physics

**Andy Wilkinson (AW):**

Let me say, this is the fifteenth November 2012, and I'm at Dr. J. Fred Bucy's home; Andy Wilkinson. All right.

**J. Fred Bucy (JFB):**

Okay, well I'll just tell you—just give you a brief overview of the whole deal. [clears throat] I was born under a gasoline—kerosene lamp out on a farm that my dad had moved to West Texas to farm that my great uncle, Dr. C.B. Townes who was the pioneer doctor out in the High Plains. And his office was in the big city of Tahoka, T-a-h-o-k-a. Anyhow, the schools weren't that difficult so I never had to study, but the teacher always made you take your books home. I found a place on the way going out of the school I could hide my books. And when I came back, I'd take them to the classroom. I had a job. I went to work when I was thirteen. I was hired by—this was during World War II—the guys that should've been holding these jobs had been off to the war, eighteen years old, seventeen or older. So, at age thirteen I went to work for the drug store. I was—within three or four months I was fourteen. I worked there until I started college at Texas Tech. Even then, after I was working at the—going to Tech, I'd come home on some of the heavy days, and help them out and work in the drug store. So, as a result of this, there were only two drug stores down there: Tahoka Drug owned by the Haynie's [?] and Wynne Collier Drug which is on the corner—caddy-corner across from the city hall—not city hall but the county—

AW:

The courthouse there?

JFB:

The courthouse, yeah.

AW:

Right on the square?

JFB:

Yes. I went to work there, and as a result of that, working there from when I was thirteen until I was eighteen, and worked after I entered Tech, I would go back and help on the weekends, holidays, and so forth. So, I knew just about everybody in the county. They probably—my ups and downs; tricks. I was a pretty mischievous kid. That was—you know, I haven't been back out there to see my friends for ten years or so now. They're all getting dispersed. But it was a fine little town. It's a good experience. Grow up in small town, you know everybody, and everybody knows you. You're going to have to bear with me here just a second. [sighs] Stop to take a minute. What was I going to tell you?

AW:

Okay. Let me just pause it here.

[pause in recording]

JFB:

—teen and I went off to Texas Tech. I had come back on the holidays and helped them out.

[clears throat] Turn it off. I lost my point.

[pause in recording]

AW:

We don't edit to change things but the pauses we can ignore those. If I might interject, what did you start to study at Texas Tech? What did you begin your education in?

JFB:

[clears throat] Well, to be a pharmacist.

AW:

Since you had been working at the grocery—the drug store.

JFB:

Well, it preceded that. My uncle, my mother's brother, owned a small drugstore in the Black Stone Hotel in Fort Worth. He was a pharmacist. So, he had this little place that wasn't as big as this room right here right on the ground floor, Northwest corner of the Black Stone Hotel. I don't know if that's still standing in Fort Worth.

AW:

I don't either.

JFB:

It was on Main Street down from the courthouse about two blocks. [clears throat] He did very well at that, and that's because he sold more bootleg whiskey to the out-of-towners out of his drug store and anything else. [laughs] I used to—my dad would get furious about that, absolutely furious. He did very well. He had a nice home out there across from TCU [**Texas Christian University**] in that area. I don't know why he'd been out there. He was right across the street where he could look out over the campus. It was a very nice place. Mother was from Mississippi, up around Tupelo. My dad's family came in from—oh my goodness—from the South, of course. They came out and settled up on the Red River. The Townes' was his name T-o-w-n-e-s. All of his heirs, the last one died about a month ago. Lottie Joe Towne married to Clint Walker.



[doorbell rings and dog barks] I think that's a workman—I better sign—well, Deborah will take care of it.

AW:

So they settled on the Red River on the Texas side?

JFB:

Yup. It was on—and my grandfather, he was not a trained doctor. He was a—he had a knack at it, so he was sort of delegated as being the doctor of that little settlement up there directly North of up here on the Red River. The family moved to [clears throat] Cleburne, Texas. And so they moved there and he decided he wanted to be a doctor so he went back to—who do we have, Deborah?

**Deborah Bucy (DB):**

Excuse me. I'm sorry. Would you like anything to drink, either of you?

JFB:

I'd like coffee.

DB:

Okay

AW:

I'm still good, thank you.

DB:

What's his name? He said he'll see you tomorrow afternoon.

JFB:

Okay. The light guy, okay. Thank you. What was I saying?

AW:

Talking about they had moved to Cleburne from up on the Red River.

JFB:

So, they moved to Cleburne because that was just a very primitive settlement, it was just a few families. They went to Cleburne and it wound up then that my uncle, who is still sort of practicing law, went back to Alabama to medical school. He was one of the graduates of the first graduating class out of the medical school in Alabama. So, then he returned to Texas, and he was the doctor for all around, and also for the Indians.

AW:

Really? And what was his name?

JFB:

Charles Bibb Townes.

AW:

Charles Bibb Townes.

JFB:

T-o-w-n-e-s. [clears throat] Here comes the coffee. Thank you, Deborah.

DB:

You're welcome, sir. There you go.

JFB:

That's good.

AW:

That's interesting. So he would've been in Cleburne—

JFB:

He went to Cleburne off on his own but he was—he came to Cleburne and he was practicing medicine, so he decided he'd go back to Alabama and get his—officially go to—and he did. He graduated from either the first or the second graduating class of the medical school at Alabama. Then he returned to Cleburne. At that time, the Indians were still coming through there, the Comanches. He would treat anybody that needed help, and the Comanches would come into where he lived there out on that whatever little settlement there was. They'd make some sort of strange whistling noise, he'd come out, he would saddle up his horse, and these Indians would lead him out to his camp for him to treat the Indians. As a result of that, these were mean Comanches. they were the worst in Texas in those years. They and Apaches, but mainly the Comanches. But they gave him protection. They protected. They never bothered anybody from Cleburne because of him taking care of these Indians. Because there was lots of that stuff.

AW:

Roughly what years would that have been?

JFB:

[sighs] I think I can nail it down, but let me-- it was before the Civil War. The early sixties.



AW:

That would've been a time when the Comanches were very active in Texas.

JFB:

Yes. They finally got driven out but it wasn't easy. But anyhow, that gave them protection so that's the first—where all this happened—is the first county seat south of Fort Worth in Cleburne, a little town just North of Cleburne. So that's where we—that's how we got to Texas.

AW:

And so you had, in your family, a lot of interest in medicine, and pharmacy and so forth.

JFB:

Yes. The leap forward—one of the memories of that family is C.B. Townes was a pioneer doctor. He got his doctor's degree from Alabama. He went to the High Plains to practice, and he had an office down in the big city of Tahoka. In that, he bought a half-section on land not seven miles southwest of Tahoka out near the little town of Draw. I don't know where—

AW:

Yeah.

JFB:

So, they're all excited about finding around down there right now. The other thing about is, they're fixing, right by Draw—you're one of the very few people that I ever met that knew where Draw was. They're fixing to put up the world's biggest windmill right down there.

AW:

Really?

JFB:

Yes. Generating all this power like they do out—

AW:

I've been doing some work interviewing people about those wind turbines. I didn't know they were getting ready to do that down in Draw.

JFB:

Yes. So, that's interesting and brings about—but that's where I was born, was in that—under a kerosene lamp in that little two-bedroom house—I mean two-room house. You remember the house—they have a name for those where you got a room on one side. and then you got a wind windway where—

AW:

Dogtrot sometimes they were—

JFB:

Yeah, dogtrot. Exactly. Where they sit, the wind could blow through it and it had shade on both sides. This was the bedroom and the other was where they lived.

AW:

Where was that house?

JFB:

Where is that town?

AW:

No, where was that house. Was it in Tahoka or was it near—

JFB:

No, it was out there on the farm.

AW:

Out what direction? Towards Draw?

JFB:

Southwest, right next to Draw. Right next to the city of Draw within a couple of miles.

AW:

The reason I know about Draw is that there's a fellow whose papers we have at the University and who's a friend of mine, Nolan Porterfield. Nolan grew up in Draw.

JFB:

Really?

AW:

Yeah and became a writer and a professor of English literature. But he wrote a biography of John Lomax, the folklorist, and then he also wrote of biography of Jimmy Rodgers.

JFB:

Oh really?

AW:

Yeah. So he's—

JFB:

I know a fellow by the name of Porterfield but he hung around Houston mainly.

AW:

Yeah. It must be a different group because I don't think Nolan had any brothers or sisters. His father may have had the—there was a little service station there for a while in Draw, and I think he may have operated that. Then Nolan became a newspaper man in Tahoka then in Lamesa before he went to Texas Tech.

JFB:

I used to work for Lynn County News.

AW:

Really?

JFB:

Had a real important job. I folded the papers after they were printed. [laughter]

AW:

What is your date of birth? I forgot to ask you that.

JFB:

July 29, 1928. That was a big responsible job. My first job was delivering the Circular. I don't know if you remember that or not but they'd print them up—

AW:

And hang them on doors.

JFB:

Yeah, hang on all the doors. I knew just about where everybody lived in Tahoka. That was a difficult choice. Then working in that drug store for—went to work there when I was thirteen and then—within a month of being fourteen. Then the last time I was working there was eighteen when I was working at Tech at that time and I'd come down for the holidays and so forth and help them out. I got to know just—probably more people knew me than I knew them. The worst thing that ever happened—but it was an education—is that I knew who was doing what to who, anybody, because I sold them the condoms. [laughter]

AW:

So they had to be nice to you, didn't they? [laughter]

JFB:

It was awful. I was thirteen, fourteen, fifteen, and I just knew that the boxes were there. I didn't know what they—I remember it. There was one fellow—I got to be careful, I don't want to get anybody in trouble—but there was a fellow there back in those days that owned the service station. I won't tell you what it was. [Andy laughs], Gulf Texaco or whatever. But he would go down and he had one of those tank trucks, carried quite a bit. Anyhow, the train would come out of East Texas—I don't know whether it was Dallas, Fort Worth, or wherever—and delivered the gasoline for the South Plains and on to Lubbock. But they had to offload a bunch down at Post, Texas, and Tahoka, and all Lamesa, and all these other towns. They'd send their gas trucks down, fill them up, take them back and get them. It didn't make any difference whether you were using Texaco or Gulf, so forth, it all came out of the same tank in Post, Texas. [Andy laughs] But this ole boy was a devout member—this is what made me such a—I don't know—skeptic, I guess. He was a big member of the church, and he would come in there on Friday evening, buy him a dozen condoms, go down, get a load of gasoline, spend the night and then come back the next morning. That was a terrible story.

AW:

I'm pretty impressed that he bought a whole box. [laughter]

JFB:

Yeah, I don't know what he was doing with them. Some of them to his friends probably.

AW:

Yeah.

JFB:

Oh boy.

AW:

That's interesting.

JFB:

But anyhow, I've seen both sides of the world. [laughs] That was my first job, and then I wound up being the CEO [**Chief Executive Officer**] and Chief Executive of TI [**Texas Instruments**]. The worst job I ever had out there was when I had to—we had a big turndown—I think it was about '74—big economic turndown. We were just heading straight off a cliff. We lost a hundred—we lost fifty million dollars one year due to that rapid falling down. Then my boss had

to have—he was the chairman, and I was the president at that time—he had to have a heart operation so he went into the hospital to have a heart—it wasn't a transplant, but an open surgery of the heart. So, I went down and saw him into the operating back—before he went he said, "Fred, it's your responsibility now. You do whatever it takes to do it." So, I took him at his word. The first thing I had to convince the Board of is we had to lay off a whole bunch of people because, I could see we're going to run off this cliff. So, as a result of that, the company laid off twenty-eight thousand people.

AW:

Whoa, that's a lot of people.

JFB:

Yes. We, at that time, were a little above eighty-thousand.

AW:

So that's—gosh—forty percent better.

JFB:

It was—that's one of the most drastic fall-offs in the economy that you can go back and look at that time period. It was drastic and I saw it coming. I knew it was going to be that so he said, "Do whatever needed to be done." So, I figured it out, and it was worldwide. It wasn't just the U.S., it was worldwide. I figured out what percent we needed to reduce our labor cost so I was very arbitrary in this. I assigned Japan, Europe. We had plants in England, France, Italy, small one down in Spain, and Germany. So I said, "Well, we're going to make this equal. Every plant's got to lay off 'X' percent." Of course, the first thing I got back was the people from Germany, and France, and Japan said, "We don't fire people. We don't lay off people." [laughs] So, I made it very simple. I said, "Well, if you don't fire them, I will get somebody that will." That cleared their thinking. So, we laid off that twenty-eight thousand. I have—of course, that made—that endeared me to a lot of people. During that time, I came home from work, I turned off this street right up here that you had to come down either one end or the other street lane. I always was conscious of looking behind me, if I was being followed and so forth. So, I turned off up here coming down this street, there wasn't any cars behind me. When I turned off up here and looked back both ways, there wasn't any cars coming but by the time I turned into that fireplug down there, there was a car turning off of that street that materialized from I don't know where, coming down. I just kept my eye on them. I turned in here and by the time that I got from the fireplug out there on the street to entering back to where I make a U-turn and drive into the back of my garage, I looked back and there was a car turning in up by the fireplug. I could see it was loaded with four men. I got a good look at them. They were coming down on me hard. I, thank goodness, had that roller gate so I rolled under it and the roller gate came down. I thought for a while they were going to try to get there but they got right up against it, the roller gate was right



in front of their bumper and they came to a stop, well they slammed it into reverse. By the time I could get out of that car into the house back out here, they were gone. I don't know whoever they were.

AW:

Or what they were doing.

JFB:

They were irate employees for getting fired. I don't know who they were, didn't get—all of this was going like this.

AW:

How did you come to be at TI to start with?

JFB:

[laughs] I think this might be a little bit interesting. Well, [clears throat] when I graduated, finished my degree in physics at the University—at Texas Tech then I went to the University of Texas to get my master's. We had our second child while we were down at Austin. When I graduated with my master's degree in physics down there, I started looking for a job. Finding a job as a physicist in the state of Texas is not easy, in those days, of course. So, I was invited to come up for an interview by RCA [**Radio Corporation of America**] in Philadelphia, right across the river from Philadelphia and lower New Jersey. The other was from Hughes Aircraft out in California. [clears throat] There was another company in California. I've forgotten now. But anyhow, I went up there, and they told me they had—I was leaving and coming up Austin—that they'd fly me up for an interview. I flew non-stop to Dallas, then I flew non-stop from Dallas to Tulsa then from Tulsa to the capital of Kansas then from there—[laughs] anyhow, all the way up to Minnesota where I had to change planes, and then back down to Chicago where I changed planes again, and then we flew over to Philadelphia. That was the early fifties, very early fifties, very early fifties, '51, '52, I'd have to look that up to be precise. But anyhow, here I was going all the way up there. As we were coming in and landing, it looked like a pretty nice town. So, I checked into my hotel then I went out, started just walking the streets to see what kind of city it looked like. Then the next morning, I was becoming—I was getting a very poor impression. So, then I went over to visit RCA, and their plant was right on the river. By the time I got there, seeing the city what it was driving over there, I had decided that I wasn't going to take my family back up there. So, I was very casual about that interview. They offered me a job, but I got back on the plane, came back to Texas and told Odette, I said, "If that's where I have to work as a physicist, we're going back to farming." [Andy laughs] "I'm not going to do that." I had a—you know like you can do where you're going to school, you can get a job working for some prof helping him with his research. I had a deal like that down at—and he told me, he said he knew a fellow that went up and just gotten a job with a little company in Dallas, they were



hiring. Said, "Maybe you ought to go up there," so I arranged to do that. I came to Dallas and was interviewed by Mark Shepherd who was then head of the semiconductor business. He had helped—he was—I should give him credit—he was the head of the team that invented the silicon transistor, not the germanium. You may know the difference on that but—

AW:

No. I mean, I know there's a difference but I don't know what the difference is.

JFB:

The very important difference is that a germanium, it would change characteristics from being a very powerful amplifier to none, as the temperature changes.

AW:

But silicon is more stable?

JFB:

Absolutely stable.

AW:

Now, does it make any difference that silicon is cheaper?

JFB:

Well, not at that time. It cost a lot more to refine—to make an electrical component out of silicon than germanium. So, [clears throats] TI, under the direction of my later boss, Mark Shepherd—he was chairman and so forth, preceded me—he invented the silicon transistor. That was really—that revolutionized the electronics industry. It turned it upside down.

AW:

What did you study in physics at Tech and at UT?

JFB:

What did I study in physics?

AW:

Yeah. Did you have a specialty, optics?

JFB:

No. I did not specialize in optics, more electronics.

AW:

More electronics.

JFB:

Yeah, solid state. Of course, Mark, my boss, is the guy that led the—to the development—you should call him the inventor of the silicon transistor, because the rest of the world had germanium. TI was working on germanium but as I mentioned, it was super sensitive, so you had to put in a lot of electronics to counteract that so you didn't the benefits of miniaturization that you'd like to have. But all that stood on it's head when TI invented the silicon transistor. Mark was the man that led that effort, and that's what made TI. [clears throat] TI at that time was about fifteen, sixteen million. That number's important. I can get the exact number. Now—let's see—TI has a couple of billion or so. It's been a real success story. Got to fine a group of people out there that still. Really did well.

AW:

Just as an aside, when I graduated from Texas Tech my mother wanted to give me a graduation present. What I got, at my request, was a TI calculator. It cost her—she was working at Sears and Roebuck in Lubbock—it cost her a hundred and something dollars which in those—at that time was a lot of money. It would add, subtract, multiply, divide and that was about it. It was so impressive.

JFB:

Yeah. I'll show you one right up here. If I can find it. What did I do with it? Here's the first calculator that I built.

AW:

Oh yeah. That looks just like it.

JFB:

The Datamath. Here we go—what I was looking for. That's what the first integrated circuits looked like. That was—when we first started making them, that was—you see all those squares on that—that didn't change. But that was the largest size piece of silicon that was processed. Then when it was—we got through—

AW:

There's—something fell down here. Let me pick it up.

JFB:

Thank you. [pause] But anyhow, that's what the first one looked like. Then now, let's see—I had it both sides, [?] [0:32:21] one here somewhere. But anyhow, they're doing them like that. That's

the biggest. There it is. Staring me right in the face. If you took all of the devices that's on there that you can see, and spread them out, you'd just about fill this room if they were back on the conventional size where they were vacuum tubes about the size of your thumb. That was some interesting time.

AW:

Oh yeah.

JFB:

There's my little microscope I was looking for. I'll get it so you can look at it. Look at that. That's a geologist—

AW:

Oh, I see. Yeah.

JFB:

You know how to work it?

AW:

I've seen them, yeah.

JFB:

You have to hold them, you know, real close. Take that then I'll get you one to look at here. There we go.

AW:

Whoops.

JFB:

Whoops. Hold it under the light. You can get it really close.

AW:

I'm not very good at—oh, I see. Yeah, wow.

JFB:

If you can get a \_\_\_\_ [0:34:13] on it, it'll be helpful. That's where you need to get it, is get it really close to your eyes. Did you see it?

AW:

Yeah, I saw a little bit of it. I wasn't doing a very good job.

JFB:

Let me hold it so you can get real close.

AW:

Yeah. Oh goodness. Just amazing.

JFB:

Isn't it?

AW:

Yeah. It really is amazing.

JFB:

It changed the world.

AW:

It did.

JFB:

That was the first calculator.

AW:

I think that's the kind that my mother bought me.

JFB:

The Datamath.

AW:

Yeah. No exponents, no roots, just add, subtract.

JFB:

That was the first one. That really put us into—just the very basics. We sold a lot of those then the later ones just do unlimited stuff.

AW:

That was—right—but it was so impressive. Really came out at that time.

JFB:

So you won't think I was born with a silver spoon in my mouth, I'll go over here and I'll show you something else. That was the house Odette and I lived in the first year we were married.

AW:

Really?

JFB:

Yes.

AW:

Now is that out at by Draw?

JFB:

No, that was over in Brownfield, Texas.

AW:

Brownfield?

JFB:

That's what I lived in when I was a tractor driver. My first year of marriage I was a tractor driver.

AW:

Were you still in college when you married?

JFB:

Yes. I dropped out of college and got married after my first semester. Had an uncle in Fort Worth who was the pharmacist. My mother always wanted me to be a pharmacist. I started out at that, and I soon discovered I didn't want to be a pharmacist, so I dropped out of school, got married, started farming, and then later went back to school. Here's some of your Tech—this was my time period back out at Tech. Yeah they were directors—

AW:

Oh, of the Board?

JFB:

Yes, and the president.

AW:

Nineteen-ninety.

JFB:

That was a very productive group.

AW:

I see this Shelby Cobra.

JFB:

Yes.

AW:

Did you own one of those?

JFB:

My son's got one.

AW:

Really?

JFB:

Yes. He was teasing me when I told him—I forgot what the deal was—and he got it done that I'd buy him one of those. So, when he got through I gave him—[Andy laughs] he didn't see that it [?] [0:37:30]. Yes indeed.

AW:

I was admiring it but I never could afford one of those either. It's probably a good thing. I don't think I'd have lived through it if I'd one.

JFB:

And I say in adolescents and adults hands.

AW:

So, did you go to work for TI before you got your doctorate?

JFB:

[clears throat] Yes. I finished up my bachelor's degree—master's degree at the University of Texas, then went to work for them. That was the best thing I ever did. I guess the reason that—how do you get from here to up there? Fundamentally, I'm a problem solver. You give me any



kind of problem, I can figure out—I'm patting myself on the back a little bit here—you give me a problem, I'll figure out how to solve it. That doesn't mean that I did it, but I'd get the problem solved. I'd get the team together. I'd get the right things together. We'd get the problem solved. This is—I'll tell you where I made the breakthrough. The real hero of TI was Mark Shepherd, my boss. He was the head of the team that invented the silicon transistor. He was one of the fellows that I interviewed when I came up to see if I could get a job in Dallas. First criteria was Dallas, second was salary. [clears throat] I determined, at that time, that I didn't want to go work for him.

AW:  
Really?

JFB:  
Yes.

AW:  
Why?

JFB:  
[laughs] I just detected that he was—and he was, he lived up to it—could be a real mean S.O.B. I felt like I could handle that, if that was my only choice. That's not what I wanted to do. Instead of coming to work for him to help invent the silicon transistor, I went to work over in the geophysical business. TI's original company was finding oil for geophysics, the doodlebuggers. They invented—matter of fact—invented the seismic exploration.

AW:  
Really? I didn't know that about TI. That's interesting.

JFB:  
One of the founders of GSI-- as it was called then, Geophysical Service Incorporated—one of the inventors of that was a guy that starts with a 'P'. I'll think of it later. But he was in World War I. His job was in the artillery, fighting in France. His batteries that he was working with were intended to keep the Germans—suppress the German artillery. So, what they'd do, they'd triangulate, and they could figure out from the time that the explosion to the time that they heard the echo, they could figure out how far they was, they'd triangulate, they could determine where the German guns, then they'd counter fire. So, that's what they were doing was fighting the Germans in France with that technique. While he was sitting out there in the dark, he was a geologist I believe. He said, "You know, what if we took that, turned it over and we fired off this—these things that measured the time it took to go down and—because when sound changes

velocity by going through different hardness of rock, it sends an echo to the surface every time there's a change in that velocity."

AW:

So you get a series of echoes back.

JFB:

Yes. And if you record that series of echo—he said, "If we recorded that, then we could make a profile, a vertical profile, of their—and from that we could help find oil, refined oil" When he got back from France, he and the couple founders of TI got together somehow—predecessors, they founded GSI, Geophysical Service Incorporated. So, they formed the company. It was getting to be very successful. Mr. Eugene McDermott was one of the founders of TI. His wife is still alive. She's given lots of money away, lots of money to TMIT [**Texas Medical Institute of Technology**]. One of the cohorts of that, one of his buddies that helped found TI, was Cecil Green. If you go up to the campus of MIT you'll see the big Green building. The color's green, but it's also named Cecil Green. He gave them the money for that big engineering building up there. I think it's ten or twelve stories. Well, I could write a long prayer [?] [0:43:27].

AW:

That's interesting stuff. I assume they were MIT grads?

JFB:

Yes. They were graduates of MIT. They were very bright, hardworking people. Highly ethical. But anyhow, this guy came back and it worked. They started discovering oil. They were doing very well finding oil for the oil companies. Then when they didn't have a job, they'd go out and find oil for themselves. So, the oil companies called them in—I don't know which one, Texaco, Gulf or somebody—called them in and said, "You're either going to be in the geophysical business or you're going to be in the oil business. You're not going to be in both." So, they decided they'd go in the geophysical business. Mr. McDermott kept his oil. By that time they had discovered a few little oil fields out in New Mexico, West Texas. So, he kept those. He didn't sell them off. His widow is still alive. She's a very nice lady. She's a big money donator. She's about number one in society in Dallas. He gave lots of money to the Universities around the world. Ole Cecil, he loved to talk. Mr. Mac's [McDermott] job—Mr. Mac was a little guy, smaller than me—his job was to stop Mr. Green from talking. [Andy laughs] They'd travel together, Cecil would get up there and he'd forget to hush. Mr. Mac would get a hold of his coattail and said, "Okay Cecil, that's enough." [laughter] They did a lot. They built—they gave a lot of money. One time Cecil was—gave a bunch of money to Oxford. So, he went over there and they gave him an honorary degree at Oxford. He was making this speech and the problem was to get him to hush. He was making this speech and they had a tent—you know, the people were setting up there. It was the money that funded the building at Oxford. So, Mr. Green, ole

Cecil, was doing all the talking but Mr. Mac was there too and Mr. Mac started taking naps. [laughs] He'd get \_\_\_\_\_ [0:46:20] then he'd wake up. I have a copy of that. They were recording it.

AW:

Video or a film?

JFB:

Yes. [laughter]

AW:

So, you started working the geologic side.

JFB:

Yes. I had a minor in geology from Tech. I took some more down at the University of Texas. My major was in—because I was intrigued with that. That goes back to Tahoka. I was working as a soda skeet, some people call it 'soda jerks'. So, these geophysical companies would come in and they—upper-stories around the county square of Tahoka were mainly empty. They were built back before the crash of '29. They were just warehouses. The first floor had the bank, nice bank on the corner, had the insurance companies and so forth. So, [clears throat] that's where you had to store all of this stuff. My job was hauling all of that up—one part of my job. I got to know just about everybody in that county because there was only two drug stores there. Sooner or later, everybody in the county would come in to both of them. That was a good experience.

AW:

What did you call the soda jerk? What was that other term you used?

JFB:

Skeet, s-k-double e-t.

AW:

Oh really, a soda skeet? I've never heard that term. That's great.

JFB:

Yes, that's what they were called. Worked behind the counter, makes the Cokes. [laughs] The front of the store was open. We had these big fans about like that. That supposedly—right over the opening to the store was—about as far as from that wall to where that bull's sitting over right there—the doors would fold open. To keep the flies out they had big fans up under there. That wouldn't keep all the flies out. [laughter] There was this one fellow that was a bachelor—I don't know where he lived—he had come in almost every day right at sundown, and order an ice

cream sundae. It was just a big chunk of ice cream with chocolate on it, or whatever. He also liked malts. Malts is when you just put all of that mess together and stir it. So, he came in one day, and he was working on his malt. Before he came in—a big problem was keeping flies off the counter, off of there, because you had all this milk and so forth you were mixing—the fans were supposed to keep the flies out, but it didn't keep every one out. They'd get in, and then they were—I had to keep the flies out and killed to keep the customers coming in. He came in one evening. There was a fly that was up around the machines and I scooted it off and so forth. I served him his malt, and that fly disappeared. Most of the time when they disappear, they been sucked into the drink. [laughter] When you see that, you have to throw everything out and start over. But anyhow, this fly just flat disappeared. So, I served him his malt then I—wasn't anybody else in the store except the pharmacist, so I was standing up by the cash registers. He caught me looking at him several times. He said, "What are you staring at?" Being honest I said, "Well, when I was mixing that malt there was a fly around here and it disappeared. I thought it might be in your drink." [Andy laughs] He almost threw that malt, and he didn't pay for it.

AW:

How did you—working there, how did that get you interested in the geology? Were there people coming through all the time working in the—

JFB:

That's the point of the story. The upstairs over the drugstore were vacant—and that's the warehouse—except when the geophysical crews would come through, they needed offices so they'd rent one of the suites upstairs where they could open shop, and that would be the office of these oil companies' geophysical business. So, mid-afternoon every day they'd either come down and have a drink at the soda fountain, then they found out that I would deliver. They found that out because the girls and the banker mid-afternoon usually would call and I'd take three or four malts down to them—Cokes and so forth like a real butler; take them down. They came down, and were buying malts and so forth—in the geophysical business. Those were interesting days. I lost my point.

AW:

You were just talking about they would get you to deliver them up to their offices.

JFB:

Yes.

AW:

So that gave you the chance to see what it was they were doing for work.

JFB:

Yes, that's it. I'd go in, watch and see what they had to work with. They'd explain some of the maps that they were making. As soon as one geophysical company would come through, get all that data and leave town, there'd be another one. So, I got interested in that so I started at Tech to be a pharmacist because that's where—and my mother's brother had a pharmacy store in Fort Worth in the Black Stone Hotel. I thought that's what I wanted to do, but then this fascinated me. So, when I dropped out of school to get married, I sat under a kerosene lamp out there in that—picture of that house around here somewhere.

AW:

Yeah, that you showed me, out by Brownfield.

JFB:

Studied that catalogue in the evenings to—I decided that I'd like to study physics. Then I convinced my dad to finance me to go back to school to get my degree in physics, then I went I went to the University of Texas and got my master's down there in physics, then came to work at TI.

AW:

Where did you do your doctorate?

JFB:

I don't have an official doctorate, I have an honorary doctorate. That's why I don't use the title.

AW:

Who gave you the honorary?

JFB:

Tech.

AW:

Tech? That's great.

JFB:

They were very nice, very nice. But I served on the Tech board longer than anybody on any University in Texas.

AW:

When did you start on the Tech board?



JFB:

When Dolph Briscoe was elected governor. Dolph Briscoe, I helped gather money for him. The reason I did that is that he was from Uvalde, Texas, and his wife was the biggest land owner in Texas. They were neighbors to my mother and dad down in Uvalde. So, she was—he made a run at it. [laughs] He lost on the first time around to be governor. She was real proud to be his neighbor. He was a good neighbor and so forth. He was very naïve. He was very naïve when he first got into this. So, I went down to—he had a meeting at the motel downtown, and I went down and I thought, I'll meet him. I came in, there was three or four people in there, and I didn't see any Dolph Briscoe. I said, "Where's Dolph? He going to be here?" He said, "He's right over there." He was standing behind the door. The door opened like this, they're coming in, and he was standing behind the door talking to somebody. The whole group, the whole turnout that evening, was less than ten that came in. I decided to leave. This lady was outside and she said, "May I have your name?" I said, "Sure." I said, "Well, how's he doing?" He said, "Well, he needs money. He needs money, that's why he's here." So I got to thinking about that. I thought I'd try to raise some money for him, and so I did. I wound up being the biggest money raiser for him in Dallas. That was before he got in the runoff. Once he got in the runoff, everybody loaded on, so he got elected. Not the runoff but the primary.

AW:

Primary.

JFB:

Yeah.

AW:

So once he survived the primary then he got a lot of support.

JFB:

Yes. And he was a good governor. He did a good job.

AW:

And so he appointed you to the board?

JFB:

Yes.

AW:

And then how long were you on the board?



JFB:

Three terms. How long is each term?

AW:

I'm not sure. Is it four?

JFB:

Six. It's either four or six. I think it's four.

AW:

So twelve years. That's a long time.

JFB:

Yes and I was reappointed then I figured that—at that time something else came up so I resigned off the board. That was—they appointed to go—if I'd have done it, I'd have been another four years. So, I got to know Tech pretty well.

AW:

Yeah and you were there at a time that Tech was undergoing some big changes.

JFB:

When I became chairman out there, the number one thing that I did to Tech was make them start doing research. When I was appointed chairman, the total research budget—that's not all that was being spent on that but—the management had the president to fund things—was one million dollars. That was the total budget.

AW:

For research.

JFB:

And that money was never spent. So, that's what I changed. When I left there, I think the budget was running about sixty-million a year.

AW:

Were they spending it?

JFB:

Yeah. They really got with it. You can go back and track it. That was the big change in Tech. It was for education. I don't claim the responsibility—somebody would've come along and done it sooner or later but I was the one that made it happen.

AW:

Who was president when you made that change?

JFB:

How in the world could I forget his name? He was my number one obstacle. I was his downfall.

AW:

It wasn't Cavazos was it?

JFB:

Yes. No, it was before Cavazos. He was—let's see if he's—I'm sure it's up here. For Pete's sake, how would I ever forget his name?

AW:

I'm trying to think of who was before him. Grover Murray?

JFB:

Yeah. That's the man I'm trying to remember. [pause] That was a real good board. That was during my second or third term.

AW:

I see Cavazos in that picture. So, you would've been on the board when Texas Tech was involved in the Crosbyton Solar Project.

JFB:

Yes. I was responsible for keeping that alive.

AW:

Were you?

JFB:

Yes.

AW:

I did some oral history interviews with a number of the people from the EE [Electrical Engineering] department about that. That's a very interesting story.

JFB:

Yes. The Secretary of Energy came to Tech to see this because it was kind of unique in the country at that time. So, he came and we were—I was in the car—a van with him, and of course,

some other board members. He was the Secretary of Energy and we were driving him out to see this installation of this great, big disk out there. We drove by an oil well, one of these rocker arms—this was the Secretary and they were on both sides of the road as we got out there near Crosbyton. He said, “What are those?”

AW:

And he’s the Secretary of Department of—[laughs] That doesn’t inspire confidence.

JFB:

That car just went silent. He said, “What do we tell him?” [laughter] I said, “That’s a rocker arm.” That ended his credit. The Secretary of Energy came to Texas and didn’t know what a—that was—who was the president then?

AW:

Cavazos.

JFB:

I mean the U.S.

AW:

Oh, U.S. president. Let’s see. Was Jimmy Carter still president?

JFB:

Yes. Our genius. I sat in the office with Jimmy Carter when he was president. I went up to see him. He had a real impression—a good impression. I’d forgotten what I was doing in there. The fellows with me, we were waiting for him to get back to his office. We were in the regular office, you know, you always see it’s got a desk and chairs on each end. We were sitting on here and waiting on him. I said, “Well, this is too good an opportunity. I can talk my way out of that if I get caught at it.” So, I got up and I walked around and sat down in the president’s chair, leaned on the desk. [Andy laughs] That’s just too good an opportunity. [laughs]

AW:

Did you get caught?

JFB:

Nope.

AW:

Well, you should’ve had a lot in common to talk to Jimmy Carter about physics and farming, but to no avail.

JFB:

And the Super Collider was really something. That was the biggest loss that this state suffered. The city of Dallas was completely ignorant of what that potential was.

AW:

Because the—missing that chance came from within the state, did it not?

JFB:

Yes.

AW:

I mean, that's what I took from it watching the news but I wasn't in on the—

JFB:

Total uneducated ignorance that they could've—had no concept. That was one of the stories I like to tell about during that era. We had people from the head Universities—what got it canceled; our enemies were the big Universities: MIT, University of Chicago, Universities out around San Francisco. I was on the team that helped win it, to get it down here. They were furious that Texas won the Super Collider. They were really—so, I haven't proven this, but this is what I think happened. They decided that if they could get the Super Collider cancelled then they could get it started up again, and they could get it awarded to New York University. That's not the school but one of them in New York, or Chicago or out there at San Francisco. They figured they could win it and take it away from Texas. So, they went to work to get it cancelled. It was cancelled, and that was—we never got it back.

AW:

Yeah but those places weren't geologically suitable, were they, to put it? I mean, that's one of the great things that we had here in Texas was—

JFB:

But they figured that if they could win it back, either they'd get it in upper-state New York or they'd get it there East—I mean, West of Chicago—University of Chicago would have it or it'd be San Francisco. So, that ended that. That really did upset me.

AW:

Back to when you were on the Tech board and the Crosbyton Project. One of the things—the distinct impressions I got in doing interviews with these retired EE profs who were involved in that was that they didn't feel like—I think I'm correct in saying, that they weren't so sure that there was that much support from Cavazos, per say, for the project. Is that a misapprehension?

JFB:

I don't know factually if that—but I would think that's right. He had no enthus—he didn't understand the potential. [sighs] He was—that was too bad.

AW:

What was the most difficult issue you had to deal with as a board during your various terms? What gave you the most trouble?

JFB:

Well, I think the most enduring that I left—and it was difficult getting it started—was that the total research budget—when I got out there, and for most of the time was out there, was one-million dollars a year, which was at the discretion that the president could put around wherever—they came to him to fund things, and that money went unspent. They had no research programs. That was what I hammered on, was getting some getting some good research in there. Eventually they did.

AW:

Yeah and you mentioned that by the time that you left, it was sixty-million.

JFB:

Yes.

AW:

Now, here's another thing that I heard from these folks doing these interviews on the Super Collider, was that they thought the friction was between an administration, not a Board of Regents but an administration, that looked at a top-down allocation of funding, whereas these professors in electrical engineering were going out and raising the money themselves, and felt like they should be able to direct the research dollars. So, when you were dealing with the issue of building up the research spending, was that money—how was—how did you approach the universities bringing in more dollars to be able to spend on research?

JFB:

By requiring the professors do research, and they found the money. When it came, they understood that the administration was interested in them doing research and putting—throwing the weight around against them. That's what happened. They went out and found the money and decided, "Maybe we ought to do some research." Every professor had some fiddling in something but nothing significant. They just—it was a not a research—they're doing pretty well out there now.

AW:

Yeah. Certainly the emphasis on campus today is on research. I mean, there's no question about that.

JFB:

Not then. [laughs] I tell you. I couldn't believe it.

AW:

Very interesting. Well, I would like to—if I can—get you to send me that information on TI, the history, so that I could read that, and then we can get back together and do a little more work on your story. Would that be a good idea?

JFB:

I'll see if I can't do that.

AW:

It's not published, is that correct?

JFB:

No.

AW:

Okay. And I would promise just to read it, and I'll give it back, but I would just like to make notes so that I could have some questions.

JFB:

Well, why don't we just expedite some. I'll go in there, get it and you can promise to get it back to me.

AW:

Perfect. That'd be great.

JFB:

Why don't you walk back here with me.

AW:

I will. I'm going to stop this tape for a minute.

[pause in recording]



AW:

What is there left to do beyond what he had gotten accomplished? Was it not enough, you didn't like the way it was done or it wasn't accurate?

JFB:

He's a confident writer and so forth. It was just that he got some—I was going back through and editing, catching errors, which he had misunderstood, or miswritten or so forth. But right now, it's just on the shelf. I haven't made up my mind what I want to do about that. I'll think about that some more and see.

AW:

Well, if there's anything that I could do, that we could do—Southwest Collection—we'd love to help you in whatever way.

JFB:

I'll keep that in mind.

AW:

I don't know—just off of my head, looks like that you've already done a lot of interviews with him. Is that correct?

JFB:

Well, I've done—yes. I got to the point on it where I said, “Well, is this the story that really needs to be told?” So, I put it more or less on the shelf—shelves.

AW:

All the shelves. There's a value in the story. As I said earlier today, you were in an important place at an important time, and that is worth documenting. And something like the failed Super Collider project for Texas is as important a document as something that's successful because you hope that people would learn from it and carry away a lesson.

JFB:

For some reason—if I had to do it over, the thing that I really didn't get done and I didn't think it was my job to—the reason it was—was to convince the establishment in Dallas that this was something that was important. That's what was missed because they had no concept whatsoever, what it was and what they were letting go of with causality. Couldn't believe it.

AW:

One would almost think that those would be the last people you'd have to convince.

JFB:

Yeah. I thought that the downtown guys would—I didn't know that I had to go down and convince the city council that I—[laughs] That was my mistake. That would've made a big impact on the state of Texas because you'd have the leading physicist from the world coming here to run experiments. But now we go to—people of the world go to CERN [*Conseil Européen pour la Recherche Nucléaire* (European Council for Nuclear Research)], the south of France, and put it in that thing.

AW:

Exactly. And we'd see those headlines, and the work, and the money all here.

JFB:

I went down to the one in CERN. That's something to see. It's just a peanut compared to what we were going to put in down here.

AW:

Yeah. There's never been a machine put together of the size that this one was going to be? Is that correct?

JFB:

That's true. It was going to have a circumference of about fifty-two miles.

AW:

That's enormous.

JFB:

The next one is over in CERN. It was not much over a mile, I don't think.

AW:

Yeah it wasn't anywhere near—and if—and I'm just a lay person—but if—my understanding is that that larger circumference would allow higher energy so that you could do more and different kinds of experiments.

JFB:

Force is equal to mass times acceleration. The point is that you need a big circle to get the acceleration. If you got a very small mass you keep pumping it, pumping it, pumping it until you got it very near the—the big one down there would be at very near the speed of light. Then you can start splitting up the atom and doing all sorts of stuff. It's so obvious to me, that I figured the other fellows on the committee were taking care of downtown. They thought they were but they didn't. My job was out here at TI. I didn't spend a lot of time downtown.

AW:

When did you retire from TI?

JFB:

About four years ago. No, it's been longer than that. [pause] I think that it's been about ten years, yes.

AW:

Wow. That's still a long career.

JFB:

Yes. That was the only place I ever worked outside of a soda skeet.

AW:

I love that word 'soda skeet'. I've never—

JFB:

Not 'soda jerk' but 'soda skeet'.

AW:

I've never heard that word before. That's a great word. I want to leave a card with you. Do you want more than one? Do you need one to give to anybody else?

JFB:

No, just one will be fine. Thank you.

AW:

Then I've got one more thing I would like to get done today if I can, and that is—

JFB:

I got an interesting, definitely interesting—maybe just play catch for me some time if something comes to your attention. Those African things that we have out at Tech, all of that stuff—

AW:

In the museum?

JFB:

Yes. My sister collected that for a large part of that for Texas Tech.

AW:

Really? I didn't know that.

JFB:

Most people don't. But she knew where the stuff was, I was on the board and the people at Tech would go out and get it, negotiated and so forth.

AW:

And what would you like for me to do for you on that?

JFB:

I think it's in sort of a stable condition right now. I have lost touch as to what they're doing a day-to-day basis up there.

AW:

Okay. What's your sister's name?

JFB:

She's dead now but her—Ethelene, E-t-h-e-l-e-n-e.

AW:

Okay. And what was her last name when she was doing all that collecting?

JFB:

Same as mine. She never married. She was also a dog trainer.

AW:

Really?

JFB:

She lived in Houston and she was the dog trainer for the rich people of Houston. She was just excellent at that.

AW:

Let me—when I get back, I will check and see kind of what the status of that is. I'm sure it's in good shape, but I'll find out the curator that handles that. I know the art curator for the museum is a fellow named Peter Briggs.

JFB:

I don't know him.

AW:

But I don't know whether he has someone that works for him that is in particular charge of that but I know that that's one of the—the people at the museum consider that African art to be a very important part of their collection.

JFB:

My sister's the one that started that out—that started for them out there. There was people that she knew in Houston that she was able to get them come loose with it, and give it to the university.

AW:

Well, let me check on that and I'll get you some information back on that.

JFB:

All right.

AW:

I'll do that. And then what I would like to do—if I can get you to have a look at this permissions form, which all this does is allow us to let researchers come listen to the interview that we did this morning. I brought two copies so that I can leave one with you. If you'd rather keep it for a while, look at it, then mail it back to me, that's fine too.

JFB:

I'll do that.

AW:

I'm happy either way.

JFB:

You got the address and so forth?

AW:

It's on my card but I can add that. Would you like me to add that to it?

JFB:

Yup, in case they got separated. Please.

AW:

And that is our address up at the top but just make it to my attention.

JFB:

Okay, yeah, all right.

AW:

Just keep those. There's two copies there so you can keep a copy just so you know what it is that—

JFB:

You want a copy.

AW:

We want a copy. If you'll sign it and mail it back to us. If you'd like to read first, that'd be terrific. I don't have to have it today.

JFB:

Well, if I don't like something in it I'll call you.

AW:

Okay. We can work on that basis too. [laughter]

JFB:

Expedite things here a little bit. Thank you

AW:

I'm going to go ahead and stop this recorder. Really appreciate you taking the time today.

JFB:

Well, I'm glad we got together.

*[End of Recording]*