Interviewee: Estevens, Bill

Interview Date: August 6,2002

HHA # 00160

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Interviewer: Steven Wiltz and David DiTucci

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Interview Site: Lafayette, LA

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Transcriber: Lauren Penney

[Transcriber's note: The majority of the interviewer's backchanneling has not been transcribed for the purposes of readability. Repeated words have not been transcribed. The quality of the audio is low, so audibility is difficult in some places.]

Ethnographic preface:

One of three boys, Mr. Estevens was born in New Orleans in 1948. His father was a salesman from Avondale, Louisiana and his mother was from Thibodaux, Louisiana. He spent his childhood and youth moving around with his family in Florida and later southern Louisiana; he graduated from Thibodaux Central Catholic High School in 1966. He spent a year up at Michigan State, but didn't like it, so came back to LSU for a year. In the face of war, assassinations, and no money, he left school and went to work for Hycatector, a mud logging company. After that he worked for year for Magcobar as a drilling fluid sales representative; after finding himself unsuited for the life of a salesman, he went to work for Hycalog. After he left Hycalog in about 1973, he got a job with Nitrogen Oil Well Service Company (Nowsco). In 1974-75, he decided he had enough of that work and enrolled at the University of New Orleans (UNO), where he spent two years in the Communications Department and worked on and edited the school newspaper. After he left school, he went to work for IMCO (part of Halliburton) as a mud logger. He was laid off from IMCO in 1980 and got a job with Exlog (Exploration Logging Company); a year later he received an associates degree in petroleum engineering technology at Nicholls State. During the interview he provides detailed descriptions of the mud loggers jobs and how they evolved over time with increasing technology.

TRANSCRIPTION

Interviewer initials: [SW] and [DD]

Interviewee initials: [BE]

SW: Estevans?

BE: Estevens, yeah.

SW: Estevens. And today's August sixth, 2002, and we are at Barnes and Noble. Basically if we could just get maybe a little bit of background from you, I sort of asked you a few questions on the phone already about uh, where you're from and uh, your educational background, and how you kind of got into the oilfield in the first place.

BE: Um… my father is from a little town outside of Houma called Avondale, which is now a [glorified?] subdivision. And uh, my grandfather, who I never met, he died in 1935, was an overseer of a plantation there. My father grew up there, went in the Navy in World War Two. My mother her name is [Jazie Radvich?] and she came from Thibodaux basically. It's about 15 miles from there. And uh, I was born in New Orleans in Novem-, November twenty-fourth, 1948. My father had been in the Navy in World War Two, he was uh, something of a Willy Loman character, always wanted to be a salesman and he was never particularly successful at it, but he was hard of hearing somewhat.

SW: It's kind of rough for a salesman. [Chuckles]

BE: Yeah. It was [all very strange?] at times. Anyway, I was born in 1948 and uh, in New Orleans, [Inaudible] Hospital. Uh-

SW: [Introducing DD who just arrived] My associate David DiTucci.

DD: Hi.

BE: Hi, how you do, Bill Estevens. Uh, stayed in New Orleans until I think 1953, my father was selling packaged meat for [Swift and Company?]. We moved to Pensacola, Florida, and subsequently Panama City, Florida. And we moved back to Louisiana in 1958. We moved around awhile. Uh, lived in Thibodaux with my mother's people. Spent a year in Franklin in 1961 or thereabouts to 1966 when I graduated from high school in

Thibodaux, uh, what was at the time Thibodaux College in the year I graduated was Thibodaux Central Catholic High School. And they made it [after that?]-

DD: E.D. White.

BE: E.D. White.

SW: Yeah, David's from Thibodaux. [Chuckles]

BE: Uh, yeah.

SW: Your neck of the woods.

BE: Yeah. Um, my, I was one of three brothers. Uh, one of 'em died two years ago. Both my parents are now dead. My younger brother, [Inaudible], had died. My uh, well both my brothers, the younger. The elder of the two uh, that was Keith, he was the police chief in Thibodaux for some years. No longer is-

SW: He passed away?

BE: Yeah.

DD: I've heard that name before.

BE: Yeah. And uh, [Inaudible] turned a million dollar judgment against [him/them?]. [All chuckle] And uh, but damn sure he's happy about that. But anyway. Uh, I don't know what you do if you have a million dollar judgment against you, I think the least likely thing is paying it. I have no idea.

SW: If you don't have the [Inaudible, overlapping speech].

DD: [Inaudible, overlapping speech]. That's a ridiculous [judgment].

BE: He was suing the city of Thibodaux and they wanted nine million dollars out of 'em, neither one of 'em had nine million dollars, but that [Inaudible] overturned it. Yeah. Anyway-

SW: Your dad was a salesman and your mom, so you had no-

BE: Actually she had an insurance [debit?] and she went to work for the state. I think, she worked for [E.J. Wilson?]. The name of the business [Inaudible].

SW: They were not involved in the industry?

BE: No.

SW: [That wasn't?] how you got involved in it?

BE: No. Uh, I got involved in the oil business, uh, I had graduated from high school, I had a merit scholarship. And I was recruited by Michigan State. Did not like it up there, came back that was '66, '67, came back did a year at LSU, '67, '68. I was dirt poor. Uh, the Vietnam War was going on. They shot uh, Bobby Kennedy and they shot Martin Luther King. And I had no money. And had a friend whose father owned a small mud logging operation. He was actually an attorney named Hycatector, H-Y-C-A-T-E-C-T-O-R, which is no longer in business. I didn't have a car so I [bugged?] the job off of them and got, started basic training. I was then maybe 20 years old at the time, 19 or 20. [Pause] I, no, I was 20, almost 21 when this was going on. I remember because I had to be emancipated. I eventually decided I had to have a car to work, I got into an argument with my father. You had to be 21 to sign a car note in those days. And I said, "Will you sign for the permit?" He said, "No." And I said, "Well, will you sign for me to be emancipated?" He said, "No." I said, "Well look, you know, I'm gonna be 21 and I need a car. And uh, I'm gonna be 21 in six months, I need the car now, what I'm gonna do?" He said, "[Figure it out?]." Well I went to see a lawyer, he says, "Tell him you'll take him to court." [I went back home?]. [Inaudible] 'til he signed. Um, my father was a uh, difficult to get to along with on occasion. Anyway, I worked for a couple of years for them, Hycatector, uh-

SW: They, you didn't need any experience? They kind of took you on-

BE: Yeah.

SW: OJT kind of thing?

BE: On the job training. Uh, they were impressed, they claimed, because I had some college, but then when I got out there, I found they were was largely drunks. [SW and DD laugh] And people, you know, who had no particular high school, college credentials whatsoever. Uh, mud logging was one of these arcane little uh… skills that took approximately forever to teach somebody to do it well. Uh, it was like, conceptually it was being a geological assistant, a geological technician. And it took about two years really to teach somebody. It didn't matter if you had geological training, it's, it involved looking at rocks and maintaining equipment and things like that. And I blundered through that for a couple of years and then I went to work as a mud engineer, a drilling fluid sales engineer, but now you can't say that anymore because of the licensing and all this. It was a drilling fluid sales representative or technician or something. Uh, at the time we'd call 'em mud engineers. Uh, for Magcobar, which was then part of Dresser Industries. And I stayed with them for about a year. And I decided I wasn't really suited to the sales life. Uh, I liked the technical end of thing, but it always seemed to be that you were running around trying to do this sales [trip, I think that?] uh… anyway, I worked for Magcobar, [what I do?], then I went to work, I was living by that time in New Orleans and I'd gotten married.

SW: You're about in your early 20s at this-

BE: Yeah, I'm in my early 20s. I had gotten married and I after I left Magcobar was wanderin' around for about three months lookin' for a job and somebody said, "Go look in Lafayette." I went to work for an offshore, it was at that time called Hycalog.

SW: Yeah I know.

BE: And Hycalog actually had started out as a mud logging operation in the late '40s. And Hyca-, the name Hycatector, which was this other even smaller company, was sort of, was close as they could get to Hycalog without-

SW: Using their name.

BE: Using the name. But Hycalog, as, the guy that owned it had gotten into the diamond bit business. And he got out of the mud logging business, Hycalog was an acronym for hy-, hydrocarbon logging. And as he got in the mud logging business people had been working for him [Inaudible] these licenses. And there was this character in Lafayette named Francis [Carlton/Cofton?], who uh, to, to know Francis Carlton was to have social problems. [SW laughs] He was a very strange individual. I don't even know if he's still alive, I haven't seen him if. He sold the company, uh, he sold, after I went to work for him he sold the company to uh, an out-, or he, no, he sold the company to [Inaudible] Analysts. And then they sold that to Schlumberger and Schlumberger saw it, sold it back to him for less than he had gotten. So he made money coming and going. And then he sold it back to Schlumberger a couple more times. It went back and forth and he made money every time. And it was uh, it was uh, at strange thing, but it was still, they had gotten into uh, this is very early [Inaudible], and when I first went to work for Hycatector you went out there and they had what they called a dog house, which is the logging unit. And we had this contraption on the back with a counter weight. And invariably they would hang, if it was an inland barge, they would pull the sling and put you out over the water, 'cause there wasn't any room on the pipe deck. And you had this counter weight arrangement with the [Inaudible] cable, one at the top of the drilling rig. And you had to climb up there and rig this contraption. As the [Kelly?] went down in the ground, it would, it was [detonator?] basically. And uh, I didn't mind that until one day and [I?] fell out, and I've always been just terribly afraid of heights and [Inaudible]. You [know?] that long bridge in New Orleans, they have this old bridge that we have just drives me to distraction drivin' over it. Uh, but anyway, this counter weight thing. You would be, somebody would cut the wire in the derrick, and it was always all kind of things going on in the derrick. And they would cut the line and [ferry it open?]. The counter weight would keep on going and very often if it was hanging out on the side, it would keep on going through the floor of the thing and it would end up somewhere in the [scrump?]. And you had to call for technicians to come and rig that up. A lot of things were very strange. It was all mechanical stuff. When I was first started they used [barite panels?] and they open like a cupboard door. And all of the electrical instruments had things that looked

like tube sockets if you've ever seen the back of an old TV set. They had a lot of relays that plugged in like vacuum tubes. And the new guy, I always got to go back there and polish between the wires, because all the wires made perfect right angles as they went along the barite. I remember doing that. And everything was basically done mechanically. About 1972, '73, they started getting into computer logging, which was… a Chinese fire drill for the longest time [SW chuckles] because they couldn't get the things to work right. It worked perfectly well in a warehouse or a lab somewhere back in Lafayette or Houston; never would work on [Inaudible]. And it was very sensitive to that. And I, they had this huge teletype machine, [above?] the teletype machine we had a punched paper reader. You would run this punched paper through it. And that would program the thing, the computer, I was told at the time was 20,000 dollars [add that to?] [Inaudible] and they got 'em for 300 dollars. And they just wouldn't keep on running, but when they worked, they were extremely good. And the really strange thing was I knew, I liked the technical end of these things, but I was never good at [Inaudible]. [All chuckle] And so there was-

SW: You, so at Hycalog you were in sales again?

BE: Well, no, the only time I was in sales was when I was wor-, mud engineer.

SW: So with Hycalog you were actually going offshore?

BE: Yeah, I was back mud logging. And then got into computer logging and then before I went back to UNO, I said, "The hell with this." I didn't have long hair. But I was seen as a budding hippie because I had mustache. [All chuckle] And this was uh, subversive in 1973, '74, something like this. And uh, they had uh, I remember the first time I got, I was drilling in, I was picked up at the [Sub Kerr?] 135, which is, was subsequently sunk if I remember correctly. Well they would, 135H think it was. But anyway, it was somewhere drilling off the mouth of the Mississippi River. It'd leave six o'clock in the morning at, on this crew boat. Get in the basket, which is scary enough, I'd never been in one of them. Get on the rig and I had a mustache, it wasn't really a very big mustache 'cause I was like 20 years old. [SW and DD chuckle] And it was kind of spindly and I'd go out and, "Get that god damn hippie off of this rig." "What's goin' on?" [So you'd got run off?]. Yeah, 'cause you got a mustache. So I shaved the mustache off. I've never shaved it off again. I've had a mustache at least since then. Um, and eventually it came around. I mean, it was really bizarre. It was very strange some of it. It was all very, very Republican in politics. And, oh, it wasn't Republic-, this is sort of pre-Republican. Uh, they were Wallace people, good guys people.

DD: So was conservative Democrats? [All chuckle] Or Southern Democrat.

BE: Or something like that. I mean, they just, they didn't think of themselves as Democrats too much.

SW: Oh, the labels don't really do justice, huh?

BE: No. They had, I remember they used to have, I was on one rig uh… [let me/this is back it up?], and it was for [Inaudible] was when Wallace got shot. Which I want to say to say what was like 1968, 1972, something like that. I remember I was offshore, it must've been '72, because I'd been working [awhile longer?]. We had a mud engineer, I was working with mud logger and the mud engineer brought foreign movies, [he reminded me of porn?] movies. A projector he was running them had a TV room. And there was this big consul TV sitting there, this is before they had videocassettes. And then up on the wall he had this eight millimeter movie [Inaudible] movies, but the TV was going the whole time. And I got kind of used to it and this is very popular with the [drill crew?], you know, and things like that. So one day I walk in there and everybody is sitting down watching this thing. And I had seen this movie 75 times before, because every time I walk through the TV room it was on. And I got, and they talking about George Wallace got shot. And I said, "Well what, how'd that happen?" "Well, he was in Maryland somewhere and somebody shot him." And they just, "George, I don't know what the country's gonna do without George," not taking their eyes off of the dirty movie that's goin' on.

SW: While they're discussing-

BE: Yeah. Um. I don't know if I'm telling you what you need to know.

DD: Yeah, this great. [All talking at once]

SW: We like to hear the uh-

BE: [Chuckling] Little anecdotes.

SW: When did you work for Hycalog exactly? In the '60s to when?

BE: [Sighing] Oh god. Uh… maybe 1971 to nineteen… seventy-three.

SW: Couple of years.

BE: Yeah. And then I did a year with uh… it was Big Three Oil Company that had, NASCO, Nitrogen Oil Well Service Company. Which uh… there's no longer, none of these companies are in existence-

SW: Yeah.

DD: Probably bought out and-

BE: Uh, well Nowsco, they just, they still got Big Three Gases. Uh, which was, I remember the guy that ran Big Three. Uh… was some kind of [H.L. pump?], they all had

these colorful, very conservative political backgrounds. And he had this air reduction pump. He just put atmospheric air in. And you liquefied I guess, you don't freeze it per such. And uh, then you let it boil off and, I don't remember which one comes off first, but you take the various [fractions?] and you, when you finish the process you have this humongous amount of nitrogen. Which-

DD: Yeah. You need something-

BE: Seventy percent, which is inert, but it's not as inert as a true inert gas. But [once it combustion?]. And somebody had said back in the '50s, "Well what we gonna do with all this, I mean, we froze it and it's expensive as hell. And, you know, what are we gonna do?" "Well, maybe you could pump it in the ground and use it to treat oil wells with." Well they did that. And they had, I forget if they borrowed somebody's patents, all these things are largely patented back then. But basically they figured out that if you to-, Halliburton had been pumping high pressure fluid liquid into producing formations ac-, to acidize 'em and then clean out the perforations and things. "So what'll happen if we pump just gas into the thing, right down the formation and pump gas in it? Would that make it flow more freely and that, would that be an easier way to get the oil well to start flowing?" Because they had this uh, [wood?] [Inaudible] contraption that they used to get oil wells flowing. You had basically a tube of drilling mud. You laid tubing down and set what they call a "packer," which is like the tubing would like going through um, a stopper in type of bottle. And the hole itself was full of mud and they had the packer just above where the [frame was?] and you had tubing coming up. And that was for the mud, too, because it flowing. Now how you get, they had this [Inaudible] thing at the end of wireline form you had 2,000 feet of, it was metallic [Chuckling] clothesline basically. And something like a suction cup. And you pulled the fluid up and if you pulled it up often enough maybe the well would start flowing, then again maybe it wouldn't. And they said, "Well, okay, what do you do?" And I said, "Well if we pumped nitrogen down there and it pumps everything into the formation, maybe [it doesn't split the formation?] the oil start flowing out, because there's no fluid holding it down." And they made a lot of money with that.

DD: So it did work?

BE: It did work. It, well sometimes it worked. Nothing ever works 100 percent of time. Uh, and there were variations on that. Uh, they, I mean there's a lot more to it. Like you had those aerosol-like fluids uh, Halliburton had been pumping uh, what amounted to hydrochloric acid to dissolve limestone and the [in between sand grains?] and let the oil flow. And then somebody said, "Well what would happen if we put like a soap in there? And that would break down the surface tension." And they did that and they just all sorts of variations on it. Had a, this huge contraption called [coil tubing?], which I still see them goin' down the road. It's like 10,000 feet.

SW: Oh yeah, I know what you're-

BE: Yeah. And they can, and I can remember running one of those. I don't know how, this was 30 years ago. Just the thought of it makes me tired. [SW and DD chuckle] Uh, I was apparently much more athletic in those days. We do some [Inaudible] the pay was really very good. What I was making when I started out was like 700 dollars a month, which was in 1968 [Inaudible].

SW: Nineteen sixty-eight?

BE: Yeah. Uh, but to do that I had to stay offshore for three weeks out of the month minimum.

SW: So you worked a 21 and seven?

BE: Well, uh, 14 and seven nominally.

SW: Oh that's right. You come back-

BE: I'd come back and I'd, you, and the real, the drill crews when they, oh, none of the drill crews work like that. Service companies very often work like that. Either that or 24-hour call. Uh, as I said from [Inaudible]. And I spent, oh god, I, how my marriage has lasted this long, I haven't the vaguest idea.

SW: That was my next question. I mean, you were married at the time, so how was that between out on the rigs all the time, it must've not been too easy.

BE: My wife comes, well she was born in New York. Her mother was New York Irish and my father comes from Fredericksbur-, her father, my father-in-law. Man I'm real close to. He's now retired in Arkansas. He comes from Fredericksburg, Texas, of which Luckenbach is this little uh, suburb. And he's uh, he was, he went, he came out of the Navy in World War Two in 1946. Worked in New York for seven years and then moved back to Texas, 'cause [Inaudible, father-in-law's name] mother uh, had diabetes and she died like in 1960. I never met her. And, but anyway, I married her. She had graduated from University of Houston and somehow ended up working for [Chancy?] Life Insurance Company as a sort of a claims adjuster in nineteen… sixty-nine, seventy. I met her at a Mensa meeting. Mensa meeting was at her house. And uh, I have been trying to drop out of that organization ever since. [DD chuckles] She's still involved with it and it tends to uh… if you don't have an office, they will find one for you. And it's one of these that can get [Inaudible]. I showed up at her house and she was there, and she was brilliant and charming and witty and all these things. And I married her the next year. And then uh, we've been married ever since basically. Really she had by that time gone to work for Liberty Mutual Insurance Company, left them because she was making 550 dollars a month with a mas-, a bachelor's degree. And they did not want to promote her. [Only one got promoted?] and there was this class action suit that came out of this like 10 years [later?]. And she fought for 3,800 dollars [off of it?], it was amazing.

SW: [Chuckles] And the lawyers got the rest.

BE: I'm sure. I don't know, it was really quite bizarre. But anyway, um, and she went to work for the state. And what was supposed to be a 10, 10 or 20 dollar month increase turned out to be actually a 15 dollar a month decrease, because they calculated the taxes different here. [SW chuckles] We found out about, but she was, she's been with the state ever since. I, and she was in child welfare [Inaudible] was going uh, they had given her education leave, she went to Tulane got a master's in social work. And I was [waltzing?] in and out with my hardhat and my jumpsuit and all this. And uh, actually I think there was a certain amount of status in the circles that we traveled than in New Orleans with this, because it was rather uh, daring and macho and uh, we, at point we were living in the French Quarter. And it was Halloween. And I was in. And I hate costume parties, I have always hated those things. And we were invited to one and she went uh… [Chuckles] she was [Inaudible], she's always been. She went as Miss Piggy. And she put on, I don't know, whiskers or something, whatever, I remember she made her face funny. And whatever Miss Piggy dresses like, she dressed up like that. And I was working at that time for IMCO, which was a drilling mud company. And she says, "Well wear what you wear offshore." It's a green jumpsuit. And I was kind of the roughneck. [SW and DD chuckle] And um, so I had the green hardhat, green jumpsuit, and steel-toed boots on. I went wadnerin' around the French Quarter in this getup. And the, I wanted a Coke and we stopped in the convenience store [Inaudible]. And there was this guy, and this was, oh god, this was the late '70s. There was this guy who was behind the counter, checking people [Inaudible]. And he was rather swishy is what he was, but he was wearing a motorcycle jacket and then, you know, just the whole nine yards. And he had finger polish, finger nail polish, bright red finger nail polish. And he looks at me, he says, "And you've got the boots and the hat and everything, oh, it's just wonderful." And… it, invariably I had two lives. I would be in for a week or, you know, depending on who I was working for less. And when I was in, I was hanging out with people who were rather liberal in outlook. I guess they were, [Chuckles] you could characterize 'em as Democrats, we still had some in the state at that point. Um, they were uh, well-educated and uh, you know, we living in New Orleans, we ate like pigs. This is what you do in New Orleans, in those days especially.

SW: They still do that. [Laughs]

BE: They still do that. No, it was a trip. And then I would go back offshore-

SW: [Inaudible]

BE: But I was, I, I managed never to be in, I remember when they landed on the moon, I was listening to WWR radio on, I was driving a hotshot run, I think from Thibodaux to… what was it, Cameron? Cameron or Intercoastal City. But, I was driving in the middle of my, uh, or maybe that was Democratic Convention in 1968, well either one of 'em. The cars did not have radios. They was, the company I was working for [Inaudible] no air

conditioning, no radios, uh, and I had something in the back that I was hauling to Cameron, it was the middle of the night, I was, wanted to listen, I had all these little transistor radios. I had three windows down, I had rolled up the window by the driver's side and I had, there was a little strap coming off the radio that dangled the radio so I could listen to it. But all the other windows were open, with the air condition, that's, I remember doing that for the 1968 Democratic Convention and the uh, the moon landing. To this day other than [Inaudible] commercials, I have never seen Neil Armstrong, well, the whole thing, walking the moon, other than what they show on [Inaudible]. [SW and DD chuckle] And, I don't even think they do that anymore.

DD: I don't, probably not.

SW: [Tell me about?] when you were offshore, was there a-, uh, did, was there any communication with home, did you ever get to call home or anything or was that [Inaudible, overlapping speech]-

BE: Yeah, it was [Inaudible]. It got to be a lot better. Initially, in the early '60s, oh no, I wasn't around there, it was the very late '60s and early '70s it u-, you pretty much had to have an emergency, because you would back up for hours and there was a very limited number of operators, and they were all channeled through like three shore stations. And I don't, at this [point?], I can't remember where they were. But everybody in the Gulf was listening. And it was uh, it was two-way radio thing and we wrote a lot of letters basically. And if it was a catastrophe then, you know, they would call you and you would call them. Or they would call the dispatcher and he'd h-, he would have a separate link and, you know, so call, "You gotta go in, we're sending out relief. Your dog is dead," or whatever, you know. Uh, and that really never happened to me. As time went on you would, in some areas you had subsea cables, depending on how much of a thing there was, how much development, if it was a developed field or it was next to a developed field, they'd run the line. Then they started with the microwaves.

SW: Yeah, that came in uh…

BE: W-

SW: Late '60s, early '70s?

BE: Maybe it started in the '60s, I didn't notice it until… at least the mid '70s and probably later than that. But the thing about the microwave, they had these things that look like what we got, these little sat-, satellite antennas, you know [Break in recording for about five seconds] out of the drilling, uh, the living quarters. And there would be this antenna that was mounted, pointed at some thing that you couldn't see. The only thing with microwaves is they don't go through water. They're very high frequency, very short and if it rains or god forbid if there was fog, they don't work very well. And our, if memory serves, cell phones, I'm thinking work at comparable frequencies and I haven't,

I've been trying to figure out lately if the cell phone goes out. When it, mine, spends more time where I couldn't get it to work anyway, so it was difficult to tell.

SW: So then you were offshore all this time? I mean, like you were office for 14 days at a stretch, your wife was back here.

BE: Yeah.

SW: And that was were the strain was, y'all couldn't converse with each other too much.

BE: Yeah. And it wasn't always offshore, occasionally it was inland barges and lakes someplace, and that was a little bit better, because you could very often hop a boat ride and ride for 45 minutes and get back to the dock somewhere where there would be a phone. Uh-

SW: Did you have kids at the time?

BE: Didn't ha-, never have had kids.

SW: Oh, okay, so that was not an aspect you guys-

BE: That wasn't an aspect of it. I, when I was working for small companies, it was nominally 14 and seven, but, I mean, analyst, I had to threaten to quit to come in to get married. [DD chuckles] And uh… they were notorious for that, these other small operations. I, the longest I've ever been offshore is like a 125, 130 days. And uh, which is good if you're, you know, saving up for a down payment on a house or something like that. Even so, it's not worth it. Um, I [quit?] in '74, '75 or something, I said, "To hell with this work. I'm going to, back to college." And I was, we were living in New Orleans, so I said, "I'm gonna go to UNO." "What are you going to major in?" And I, at one time I said I was goin' for, into pre-med and go to medical school. And I think Ellen sort of [Chuckles] thought that for awhile when she, when we were getting married. And this was around the Watergate thing. I said, "Well I'm gonna journalism." Well turns out there was no journalism school at UNO. There was a Communications Department. And, actually it's Drama and Communications, and the accent there is rather more on the drama than on the communications. [SW chuckles] You had two journalism undergraduate courses, but you could get uh, you could get a doctorate I'm gonna say in tap dancing. [SW and DD laugh] And I'm not making this up, there was this one who was nationally known as a tap dancer and they would, they had for the longest time uh, summer musical at UNO. And it didn't matter what it was, they would interpolate this tap dancing, so she could do her thing for five minutes in the middle of the thing. They did one uh… I forget what it was, it was, I always thought it was like Oklahoma, but the hero's name was Starbuck and it was some, something or other uh, musical.

DD: [Ziggy Star Hawkers?]?

BE: No, no no no. This was a western.

DD: A western? Okay.

BE: It was a western. And it had absolutely nothing to do uh, it was based on a, I wanna say on William [Ins?] play, like "Pick me up," or something like that. It was set in the west and it was cowboy and all of this. And here she comes just tap dancing, you know, just like Ruby Q or something. There was another guy there who was uh, had, his claim to fame, he had devised a pattern that you could use that would fit any human being and could be modified to make any conceivable costume. And this had gotten this man a Ph.D. So I was there and d-, you know, newspapers had choose to be relevant at that point in the eyes of the Drama Department. Uh, and we had to understand that uh… radio was just like TV, except it didn't have a picture and TV was just like the stage, except at a distance, and you had to decide if you wanted to be talent or production, basically. And after about a year the newspaper [Chuckles] was sort of shriveling on the vine. I wanted to go into newspapers and the second year I was there, I actually was the editor of the thing. And I said, "This is absurd. You now, I don't know if I'm learning anything, maybe some other courses, but I'm not learning anything. And I have no idea what you could do with a degree in this." So I went back to work offshore and I got involved, I went to work for IMCO at that point, uh, just called 'em up and said, "You looking for mud loggers?" 'Cause I figured I knew that. "Well, yeah, we got these operation." So they hired me and they had this specialty operation, some drilling mud at that point, IMCO was part of Halliburton at that point.

SW: What year was this?

BE: Nineteen seventy-six or seventy-seven. I'd been two years at UNO. Uh, Halliburton had bought IMCO Drilling Mud in the mid '60s from International Minerals Corporation. And drilling mud is a very strange thing. It really has nothing to do with the oil business. It's a mining operation. It's always a mining operation. You dig all these things up and then you have to figure out where [Chuckles] how do you [Inaudible] them. Yeah. And uh-

DD: So you were in the business of making mud in other words?

BE: Well [Sighs] uh, and actually they, the thing that I enjoyed doing most was drilling engineering as [Inaudible], I never was a professional engineer. Uh, but a large part of drilling engineering, which is something that they basically, at least in my day, didn't teach in petroleum engineering schools and they probably don't teach it even now. 'Cause everything has to do with the production end of things and there's a lot of labor and uh… craft-based approach. You know, almost an apprenticeship thing. Have all of those, they were and they continue to be, I'm quite, though I haven't paid any attention to it in 15 years, uh, they continue to be a lot of quantitative things that you have to know um, like hydraulics and non-Newtonian hydraulics can be particularly hairy, it was to do

with liquids that gel when you don't, when they're standing still. So they had a different viscosity depending on-

DD: On what [Inaudible].

BE: Yeah, yeah. And they do all sorts of strange things and you have to be able to account for that and some of the mathematics is hairy. However, uh, the more I learned just by hanging around drilling rigs, the more that I knew. And I got to a point after roughly 10 years of just standing around and with mud logger, all the data on the rig is coming through here, through you, and you can see exactly what's going on, while it's happening. And you get to a point where you really understand the process and, you know, [Inaudible] there's not too much, there's not really that much of a way for somebody to go to a college and study this.

DD: It's something you have to learn by doing it?

BE: It's something you have to learn how to do by doing it. And I got to the point where actually I created a rather nice salary. Now, there were people that did far better than I did and I always worked for service companies. And service companies are uh, [you could probably?] say service companies are [Inaudible], which uh, makes you wonder what the hell they were selling there. Uh, I mean, there was more marketing involved in all of this. You know, they was, you were selling things and they were so arcane. And it's like drilling, you know, nobody, even the people who were experts and they understood what was going on two miles down in the ground. And there were a lot of people that had theories and, you know, this, that, and the other thing, but basically it was, it always reminded me of these movies where Walter Brennan and somebody, he would be running his horse farm or something, and uh, the dude comes out, he gets on the horse, the gets thrown by the horse, and Walter Brennan comes, "It's always been my experience when you get throwed by a horse to get back on it." Nobody really knew what was going on. If you had experience and, you know, you could turn out decent work. Um, that was the thing. One of the things that they always were trying to do was what they call "real time data gathering and monitoring." Which is a fancy word [Sighs] for basically what the Chinese were doing back when they had cable tool wells. And the bale would come up and it would be full of little rocks and they looked at these, "Oh, we drill through coal now," or, "We drill through," you know, whatever. Uh, and if you kept track of this, you would have what they call geological columns, strata. Yeah. And we got to the point where you could have all these data sheets in front of you and you're, "Ah, I can tell what's going on here." And you would draw a series of graphs. And it was a [creative/created?] thing that you did, although there was some mathematical parameters which [you track?]. But you had to see what the [lithology?] was, what, break it down, what percent sand and what percent shale, and occasionally what percent limestone or what have you, what you were drilling through. And that was all inferential work. You also had to uh, that was the geological end of the thing. The engineering end of the thing, we had to keep track of… basically the hydraulics. You had on drill bits, on diamond bits

you had one hole, on uh, cone bits, the Howard Hughes kind, they have three holes, they have nozzles. And by varying the size of nozzles and uh, changing the output of the pump or how fast you pump those different size pump, [Inaudible] and liners and things, you could maximize the drill rate. And the drill rate is the key to keeping costs down from an engineering standpoint. And uh… you had, it's almost like playing Monopoly or something, you have to max-, you have to minimize the costs, or maximize the drill rate, but you have to keep yourself out of trouble too.

DD: You don't wanna over-

SW: Yeah.

DD: Maximize.

BE: Well, well there are a whole bunch of conditional sort of things that can happen. If you drill too far without setting pipe or casing, you will end up in a high pressure zone, but if you set pipe too fast because you can on-, it's like a telescope, you get smaller every time you set casing. [Chuckling] You'll end, you'll wind up with a hole that big and you can't do anything in it.

DD: Yeah. It'll bottleneck.

BE: Uh, yeah, well, you run out of hole. Uh, and there are things like that. I mean, it has to, a large part of what um, the mud loggers did was pick casing points. You had to be able to stare at this thing and monitor uh, a dozen or maybe even in some places more than that arcane quantities as they changed in real time. So, "Ah, the pressure in this zone is going up. Now you must set pipe."

DD: So if you had a definition for a mud logger, what would it be? [Slight pause]

BE: Uh, a pure mud logger, which it evolved into much more than that, but a pure mud logger from the '40s and the '50s and into the '60s was somebody who kept track of the drill rate, which was very important quantity. It's measured in feet per hour like a speedometer's in miles per hour, and you would plot that against depth on a log. Keep track of the dissolved gases in the drill mud as it comes up and there's an appliance that leaks 'em out and measures that. And that tells you when you're into a hydrocarbon zone basically. And goes out uh, with uh, a soup spoon [Chuckling] and a cup. The, a one-fourth cup and fill it up with this glop that comes across the shaker.

DD: The mud.

BE: And the, well no, the mud goes through the shaker.

DD: The mud goes down [to what you're drilling up?].

BE: Yeah the rock cuttings, yeah. And you rinse those off and you look at them and you occasionally do tests on them, very basic sort of tests. And you look at this and you say, "Aha, this is the rock that we're going through at such and such a depth." And does not have oil or gas in it.

DD: In other words he, the original job was to keep track of what they were going through.

BE: Yeah, basically. Now that changed over time when they came in with uh, computers, which began in the early '70s, '72, '73. Which was supposed to be completely automated. You booted the computer, it had its sensors and it measured things like um… drill rate. And how hard they were pressing down on the bit. And how fast that the rotary table was turning. And basically from those criteria through some mathematical magic it could tell uh, what you were drilling in, at least in this province. And uh, tell whether it was under pressure or not.

DD: So basically it took the job of the mud logger and doin' on a computer. [Slight pause] Most of the job.

BE: Yeah, but it never really. It nev-, one never replaced the other. Every time they came out with these things, they were added on to the jobs that the mud logger did. So what started out, when I started out, I was, you know, I was green and I was 19 or 20 years old and there were all these 30, 40, 50, and some cases 60 year old alcoholics who did not get along with their wives. They went offshore and, 'cause they didn't have access to alcohol while they were out there, stayed as long they could, came in, checked into the [Sugar Bar?] Motel in Houma or there was one in Lafayette, I can't remember the name of it, it was right at the four corners.

SW: Alamo. The Alamo.

BE: Yeah, it was, and you know, you were going there, you would see the most incredible collection of uh, mud loggers and galley hands. And they come in, buy three or four bottles of bourbon, and get drunk out of their minds for three or four days, and go back offshore. Uh, some of them had wives that they basically didn't get along with. I knew a whole bunch of 'em that, you know, they were married and they never did get divorced, but they never really saw their wives, occasionally they'd call her on the phone. Um… but every, uh, well, in the '60s all of this started. There was a company called Magcobar, which was Dresser Industries drilling mud division. They had, in the '40s, bought [Magnaco Barium?] Company, which was Magnaco was just outside of Hot Springs, Arkansas. It's a charming little town. Barium Sulfate is barite. All, the trade name for that was baroid originally. And barite, you see most walk, I mean, you go out and stick a shovel in the ground, most, the specific gravity of most rock is two point five. Uh, a few rocks that are heavier. Two point five times the density of [water?]. Baroid, uh, barite is, got a specific gravity of four point five, nominally. It's barium sulfate. And uh,

they would grind it up. You would find it in um, BaSO4 is chemical for that. You find it at, near the surface in places like Arizona. They have what they call barite roses. And [Chuckles] I've also heard 'em called barite turds. Some of them not very rose like. But they're heavy. And that will, that, they figured out a way of suspending in the drilling mud the barite. And this would increase density of drilling mud, allow 'em to uh, to control blowouts and that was a great technical advance, that happened in the '40s. In the '60s, we had a whole bunch of things that came out of the post World War Two era that really were heavy, they, what we think of as the great technical revolution, which is computers basically. But the things that came out of that originally the space program for example if you remember, did not have onboard computers. They had computers on the ground with telemetry up to there. Those computers were too big. Some of the things they came out with in the '60s, particularly the early '60s that revolutionized the drilling end of things were things that they had a cyclical life of their own. They would be tried, they would be abandoned, because they never really worked, and 20 years later somebody else comes down the pike and says, "I have this-"

SW: Do it a little different.

BE: Yeah. I was there. The two that came along in the early '60s that really changed things, one of them was shale density. And you have this cylinder, it's a column and you have two dense liquids. I think one of 'em is [glormaform?] on the bottom and the other one is carbon [technafluoride?], there was some substitute for that, because that stuff'll kill you. And you would pour the heavy one on the bottom, the light one on the top, and you would over, theoretically you were supposed to let it sit for a couple days, and you would end up with a nice gradation and you had calibrated [Inaudible] beads that you would drop. Like these Galileo thermometers basically. And they would come, they would stair step, and you would plot that on a graph and it would be a straight line, two point one, two point two. You drill deeper the density gets heavier because when-

DD: More pressure.

BE: More pressure. The pressure squeezes the water out, the water is relatively light, and you have rock, 'cause it's liquefied, it doesn't [more?] space in it. So the rock becomes dense. And all of a sudden you have pressure and the pressure is supporting the weight of the rock above it. That's why it's under pressure. Just like a piston. And when that happens, the density starts becoming lighter; instead of getting heavier, it [breaks up?]. It does this just above where you drill into the high pressure. So the trick, if you're drilling a well and you don't know what the heck this is, you want to set casing as heavy, as far into this as you can so you can weight up the mud without having what they call a loss of circulation, which is, if there's anything that's worse than a blowout, uh, an underground blowout is worse. And without getting into drilling, it's difficult to explain, but it's a [Inaudible] as bad. Uh, at any rate, you would loosen these pieces of rock so they'd come out of the ground, an you would blot them dry, and you drop 'em in here and plot what the density was. And they were paying people uh, mud logging was roughly a hundred

and, when I started out, a plain vanilla mud logging unit was 170 dollars a day. And they would pay somebody 110 dollars a day just to come out and, you know, keep track of the uh, shale density. Then they, so, you know, really for, and there were safety advantages to having the gas monitored and everything, so they would get mud logger. Then somebody came out uh… with DX [minus?], which is a calculated value. And Magcobar said, "Aha, the D exponent is a," that's exactly how they pronou-, how they wrote it, too. D-X-C-X. D sub X and D sub X-C, to explain it correctly. Um… the D exponent, if you had, if you study mechanical engineering, which I have not, there is uh, an equation that describes the behavior of a drill bit and it doesn't matter if it's [Inaudible] or have pistol grip on and you drill a hole and a plank or something like that. Any kind of a rotary bit, a base the same equation. It escapes me, just can't remember what it is. But if you solve, now, I'm getting ahead of myself. You have to [Inaudible] how fast it's turning, you have to take into account how hard you're bearing down on it, you have to take into account various other things like that cutting efficiency of the blades.

DD: [Inaudible].

BE: Well that's the odd man out. Okay. And once you've done all this and that equals the speed that it's going forward, the, you put parenthesis around that whole equation and you say to the x degree. And the x, the x exponent, or the DX to the D degree actually it is, uh, the D exponent is how drillable or potential [strength/strain?] of whatever you're drilling through. And again they figure out, somebod-, people always notice, "Hey, it gets quicker." Well you're drilling now, just before we had the blowout, it sure was going real fast. And after awhile it was [Inaudible] and somebody said, "Oh well, you, whenever you have a drill break you check to see if the well is flowing." [Chuckles] Um, and they said, "Well maybe we can quantify this." So they said, "Well what is the quantity to discus how drillable the rock is?" And that was your D exponent. Well you solved for the D exponent, which involves taking logarithms or something, or the logarithms and something. And they had a nomagraph. You know what a nomagraph is?

SW: I've heard of 'em.

DD: It's the graph of just-

BE: Yeah, it's a calculational graph. Yeah. And I, at one time I was a whiz with a slide rule, which people-

DD: It's similar isn't' it?

BE: Well, slide rules are mechanical things.

SW: Some of this stuff sounds really dangerous, too. Did you ever get hurt or you ever see anybody get hurt? I mean, all kind of mechanical things going and wells blowing out.

BE: I've seen people get hurt. What I did was always kind of [Inaudible]. I was always

sitting around in a corner. At one point, uh, I walked out, I had been working all night. Uh, walked out of the logging unit to go down to the living quarters, this was a on jackup rig offshore, to get breakfast. And uh, I left somebody, it was a two or three man crew. I left somebody. And I thought I would go and look down, there's this area at the end of the pipe rack where they, you had the drilling, uh, the derrick and the [Inaudible]. Look down the well is going [into the sea?] with bubbles coming up around, it's outside it, the casing. "This is really strange, it's not supposed to be doing that." So um, I went and I got the toolpusher, says, "No, it's not sup-, this thing is uh, is blown." And uh, I was rather proud at the time of having been the one that noticed that. And they took, they evacuated the rig and everybody except 12 or 15 people were trying to deal with this thing. [Brought this ship/Got to shift?] for like two days on crew boats that were circling the rig. Um, I've seen peop-, I've never seen anybody killed. I've seen people uh, have industrial accidents. And typically the brains oddly enough. I've seen people chop their fingers off. It's very easy to chop your fingers off when you're tripping pipe out of the hole, because you have to stab the, one end of the drill pipe into the female parts of the one that's coming up. And the normal thing is you hold like, they never hold it like that, hold it like this. Well this, put your fingers under it, you will chop your fingers off. And the number of roughnecks with missing fingers is amazing. But anyway, they, the technology that came, they had the shale density and that told the [tale?] some of the time. They had D exponents, that tell you the tale some of the time. And then they started saying, "Well, you know, if we can monitor all of these mechanical parameters and have a computer monitoring them, and the hydraulics and the [Inaudible] nozzles," on the drilling mud on the, where you're drilling on the thing, you know. Uh, "We can do all sorts of things." And then, they were, at that point they were working way over my head, because they were, you know, high-end engineers. At one point I went to, I decided I was gonna figure out where they were getting some of this math from, because I was working, after I got, well I got laid off from IMCO in 1980, when the bottom fell out of the whole thing. And I went to work… for Exlog, Exploration Logging, which was this outfit out of Sacramento, California. Those people… were nuts. [DD chuckles] They, in the first place, they were 14 and seven. And in the second place, they only wanted, I had, you see, I had moved to [Chuckles] my wife [left?]. After I left UNO and I went to work for IMCO, I, on my days off I would go to Nicholls. I was seven and seven [thing with Nicholls?]. And eventually in 1981, I got an associate degree, but I had, I kept on getting, well first thing my wife said, "We're moving to Thibodaux." I said, "I came from Thibodaux, I don't want to move to Thibodaux. Thibodaux is not the place for me." She says, well, she got a job down there. She was the… first I want to say um… director of the social work department at what was South Louisiana Medical Center, what is now Chabert Medical Center, down-

DD: Houma.

BE: In Houma. And that was '78, '76, '78, something like that they opened that up. [Inaudible, DD and BE talking] Yeah. Anyway, uh, so we moved to Houma. I was commuting on my days off from Algiers where we lived to uh… Thibodaux.

SW: To go to school.

BE: To go to school.

SW: How was that? [Chuckles]

BE: I enjoyed it. She thinks she was seeing enough of me, so we're gonna move to Thibodaux [which was fine?]. Um, I eventually completed by 1981 uh, enough to get an associate degree in petroleum, I want to say engineering technology. And uh, I had been taking courses on and off, I don't know how long. And I had like about 1979 and 1980 I had a report card that would come to my house every semester and it said, "You have 140 hours," "You have 156 hours," and, "You have-"

DD: Wow.

BE: You know, bizarre amounts of hours. And I said to myself, uh, "This is like Michelangelo and David. There is in there somewhere a bachelor's degree it's just a question of cutting away-"

DD: Yeah, exactly.

BE: [Chuckling] It's not the bachelor's degree. And I went to uh, the uh… I went to the head of the program and I said, "You know, what can I do with this?" And he says, "Go see the people in the counseling center." I went to see the people in the counseling center. Said, "Oh, this is very impressive. Uh, yes, you need to have like," I forget there was two courses, two real courses, I had four semesters-

[END OF RECORDING]