PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Spike Brown

INTERVIEWER: Betty Cooper

DATE: July 1982

BC: This is Betty Cooper, it's July 22nd, 1982 and I am in the home of Mr. R. S. Spike Brown of R. S. Spike Brown Consultants Ltd. at 240 - 8 Ave. N.W. What I'd like to do first, Mr. Brown is to get a little of your background, where you were born, where you grew up and how you got into the oil business. First I thought perhaps we should get your full name, R. S., what does it stand for please?

SB: Robert Scott.

BC: And where did the name Spike come from?

SB: When I grew up here in Calgary, in this house actually, I was of very small stature and I had a paper route and all the different paper boys with the Calgary Herald, they called me Spike because they thought it was humorous for a small statured person to have a name like Spike and I've had it ever since, so all my life.

BC: And what year were you born?

SB: I was born October 10th, 1923.

BC: And you've lived in Calgary all your life?

SB: Yes. I was born in Sunnyside, just down below the hill here and I moved into this house that we're in now when I was six years old and I bought this house from my father's estate about ten years ago. So my family has been in this house all our lives.

#014 BC: You lived somewhere else and then moved back in when you bought from the estate? What schools did you go to then?

SB: I went to Balmoral public school and then Crescent Heights High School and then I joined the Navy when I was 17 ½ in 1941.

BC: And where did you serve in the Navy?

SB: I was on a Corbet??? doing combat duty from Newfoundland to Ireland for about 2 ½ or 3 years and then I was on a minesweeper at D-day. And then I was discharged on the 21st day of October 1945 and went immediately into the oil business the same day as a driller's helper working for Imperial Oil.

BC: As a driller's helper?

SB: On a geophysical crew, yes.

BC: How did you manage to get a job so quickly?

SB: My father had been in the car business all his life but during the war he sold his business and went to work for the government in the employment section and this job came up, so he gave it to me. And I was discharged in the morning and in the afternoon at 4:00, a taxi picked me up here at the house and I went out to Cochrane in the wildcat hills, working,

the 4-12 shift that afternoon. And I've been in the business ever since.

#027 BC: Before we get into that I'd like to step back just a bit because I would like to get a little background on your family. You mentioned your father was in the car business, what was his name?

SB: His name was Joseph Brown, J. M. Brown and his and his brother David were two of the original employees at Maclin Motors years ago. My Uncle Dave worked for Maclin Motors for over 50 years until he died. And my father had been in the car business all his life. His business was down on 5th Avenue and 1st Street West, where Imperial Oil's new building is now. And he sold the business to Universal and then he worked for the government during the war and after the war he went into the investment business with Investors Syndicate and was there for probably 15 years.

#035 BC: And were you the only one in the family?

SB: No, I have a twin brother named William, my brother Bill, he's in Edmonton now and I have an older brother named Don. He and I went to University of Toronto together. He was killed flying a jet, doing aerobatics at the Exhibition in Toronto on his 31st birthday. So when Donald was killed I left university and came home here. I didn't think that I could keep going after the tragic thing that happened to him, so I came home here and went to work for Chevron.

BC: So this would be after the war of course? Had your brother been a flyer during the war?

SB: Yes, he flew Mosquito bombers overseas for about 2 years overseas, went through it all and then lost his life after the war. It was a tragic thing, he had a wife and a little baby and at the Mess in Toronto, the 400 Squadron, they had a big party there for him on his birthday and he had a flame out on a ??? jet and was killed right there in front of us all.

BC: Very sad.

SB: It was a very sad thing, yes it was.

#046 BC: So you had, this is jumping ahead of course, because you had obviously left Imperial to go to university.

SB: Yes, I worked for them in the summertime and when my university terms were over I'd go right back to work for them, whenever I was free I went to work for them.

BC: So let's go back then into Imperial, in 1945 you started and you were very fortunate, because coming right out and being rehabilitated so quickly.

SB: Yes, it was strange. I remember, they offered me $1 an hour. . .it worked out to $12 a day, it was 8 hours straight time and 4 hours with double time. . .no it worked out to more than that. Anyway it was $8 plus. . . we worked 12 hour shifts.

BC: Should be $16.

SB: $16 a day and the money, after being in the Navy, I thought this was terrific you know.

BC: What rank did you have in the Navy?

SB: I was a Petty Officer.

BC: So you would be getting a little more that $1.05 a day but not that much more.

SB: well, when I joined the Navy, I was getting $20 a month until I was 18 and then I think $2

a day and as a Petty Officer I believe I was getting $2.60 or something like that a day. So to come out of the Navy and go into a job making $16 a day . . . . and the strange thing is, they picked you up right at the house, drove you to work in a taxi, all the way out northwest of Cochrane and then they would pick the shift up there in the taxis and bring them back to Calgary and I thought boy, I've really got it made now.

#064 BC: What was your job?

SB: Actually, they were old, conventional drills and they have what they called a slush pit now, it's a metal device with two pits side by side. But in those days they didn't have any such pits so we had to dig these pits by hand with a shovel, so you would dig these pits and the drilling mud went down the hole and back into these pits and ??? the cuttings in them. And I changed the pipe on the rig, changed the bit, and I just helped the driller was all I did really.

BC: Was this in the seismic work or was this in a well?

SB: No, this was seismic work, geophysical. And the rigs in those days were a lot different than they are today. They were what we call a conventional rig, they were very slow drilling and there wasn't that much work involved because you might only drill 10 feet an hour so that you only change the stem every hour. It was a real easy job really. And from there I went into other branches of the geophysical. . . . .

BC: You didn't know anything about geophysics at that point?

SB: I had never seen a rig or crew in my life before, no.

#076 BC: Do you remember who worked with you in that first job?

SB: They were all Americans, the company I worked for had a contract with Imperial, it was called Max Drilling Contractors from Lubbock, Texas. They were all American boys every one of them. I think I was probably the only Canadian on the whole crew.

BC: Did you work all through the winter then, at that time would they drill in the cold?

SB: Yes, we started out at Cochrane and that winter we moved up south of Peace River, a little town called Fahler and we worked there all winter.

BC: So your taxi rides didn't last to long?

SB: No. Then they paid. . .I think they paid us $1 a day living allowance and we would find a room in a local house or a boarding house or something.

BC: Did you live well on the $1 a day?

SB: Oh in those days you did, oh yes, you sure did. And then I think they raised it to $2 a day and now it's $30 a day, so you can see the difference. You lived quite well, you could get room and board for $5 a week in those days. I remember we stayed in Olds for awhile and this lady had about 40 people all there and I think it was $5 a week and she was doing really well and she fed us really well.

#090 BC: When you were out here, outside of Cochrane, where you were doing the geophysical work, did they eventually find a field there or . . .?

SB: That turned out to be the old Jumping Pound gas field, where Shell built their plant and everything but Imperial was the only people operating in those days. It was more of a

reconnaissance seismograph you know, but it turned out to be the Jumping Pound gas fields eventually.

BC: Because that was prior to Leduc and really seismic was not nearly as popular until after the Leduc find, when seismic really proved it's worth, could you just take a minute to describe the operation of that. You say that the drill was a conventional drill and it was pretty slow. How many people would be on the crew and what kind of geophones did you have?

SB: In those days, the geo-physical crew was vastly different than it is today. There was no play back system or no electronics or anything. They were all what they call string galvanometers in the recording truck and the geophones were huge, they were about the size of a large can of juice. They were huge where now they are very tiny little things. What we did in those days, we drilled a hole every quarter of a mile and you laid the cable out from the hole a quarter of a mile each side and then you shot the hole, probably drilled sixty feet deep and probably twenty pounds of dynamite, and you would shoot the hole and then you would move to the next one. So your sub-surface coverage of the area, which today you have totally sub-surface coverage. . . the sub-surface coverage was only 50% of the surface coverage because there was no continuous roll along shooting like they do today. It was reconnaissance more than. . . and we had no playback system in the recording truck. You had, where the paper now is dry write paper, it automatically prints the seismagram as it's shot, in those days you had three tubs of water. And when the observer shot the record, it was on phonographic paper, so you took that piece of paper and you dumped it into a tank full of developer, then a tank full of fixer, then you left it in another tank full of water all day and at night when you came back to the office, which would be a hotel room, or whatever, you hung all these wet pieces of paper up on a clothesline and let them dry and then we used to roll them up on a broomstick to take the wrinkles out of them. Today, when I say that to people today, they don't believe me, that's inconceivable because today you press a button and it comes out, all printed for you and everything because the system's changed so much. The actual geophysical business from when I was in the old days, to what it is today is just the same a model T Ford along a Cadillac is, it's unbelievable.

#127 BC: Do you feel the geophysics is one of the greatest changes in the oil. . .the advancement of the geophysical side of it.

SB: Well the whole oil business, the advances in technology over the years have been unbelievable but the geophysical branch has certainly kept pace with the others. Today geophysics is a highly, highly developed art and the acceptance of geophysics today is total, where in my day, I think a lot of professional people had the idea that geophysics was maybe a little hit or miss or not really as accurate as it is.

BC: What did they call you on the crew, you first job?

SB: I was a drillers helper.

BC: You stayed for how many moths at Cochrane before you went up to Peace River?

SB: We were in Cochrane October, November, December, then we moved down to Turner Valley, then we moved up to Fahler in January.

BC: In Turner Valley, what part of Turner Valley were you working in?
SB: We were south of Longview, up in the eastern slope of the foothills and it was really hard work because it was all rock and hard drilling, so the crew probably only shot a mile or so a day, where today they shoot ten, twelve miles a day. We probably only shot a mile a day or two miles at the most. But it was hard work because the cables were different, the geophones were different and everything was. . . it was a lot harder work. And in the steep hills, to carry the cables up those hills and with the heavy, big geophones they had, it was extremely hard work for the geophysical crew itself, for the recording crew.

#151 BC: But you weren't involved with that part at all?
SB: No, I hadn't got to that stage, I was just like an apprentice, just finding out if . . . and from the first day I really enjoyed it. I knew that I had found something that I would . . .
BC: What did you enjoy about it?
SB: Well, being out in the open. You were out in the foothills and in the fall the trees were turning and that beautiful country out there, Cochrane and south of Turner Valley. It was just lovely and to get paid for it, to be outside, I enjoy the outdoors anyway and to make that kind of money, in those days, I thought it was terrific.
BC: When you went up to Peace River, did the Texas crew go up to Peace River too?
SB: Yes, and it was strange, the weather. . . I remember some of the boys were part Indian boys and right from Texas and in the fall, we got a few little blustery days and they said, oh, this is pretty tough and we said, you wait, we've got news for you. And it was, for them, really, some of them were just petrified of the cold. And it got down to 40 below and I felt really sorry for them because they didn't know how to dress properly and it was really tough for them. But most of them stuck it out, some of them didn't, some of them quit and went home and then when they did, they replaced those people with Canadian boys who had been helpers. I finally got to be a driller myself. The American boys in those days, in the winter time, they weren't very much interested in staying and you couldn't blame them either.

#170 BC: What was it like that first winter, you say it was forty below, what did you wear?
SB: You can always dress for the cold. We wore heavy parkas and boots with felt liners in them and two or three pairs of trousers and long underwear and you can dress for the cold. The thing about being around Folair, it's open prairie there and the wind was several dn some days you couldn't work because of the wind. Now as the years went on, we moved up into the bush around Peace River, into forestry areas and there was very little wind in there so it didn't matter, even on the coldest days you could work. And heavy mitts with wool liners you know, so the cold wasn't that bad and if you're active the cold doesn't really bother you. If you have a job where you're standing around, that's when the cold really gets to you.
BC: What about the instruments, the geophones and the drill, did it suffer from the cold at all?
SB: Yes, drills used to freeze up and the water pumps would freeze. If you didn't drain them properly, it was imperative you drained the pump on the drill every night or they would freeze up and then you really had a problem. And with the instruments too, you had to

have heat in the, we called it, the doghouse, where the recording instruments were. You had to have heat in there all the time because the instruments would pick up moisture, condensation and when you . . . from day to day, if you shot a record one day and compared it the next day, there would be a difference in time on the records because of what we called lag from moisture in the instruments. So there was heat in the doghouse.

#192 BC: How did you heat the doghouse?

SB: In those days we just heated them with propane heaters. In fact we had a recording crew in the northwest, the propane tank was hitched to the wall with a metal bracket, the bracket broke and the tank fell over and the observer was driving the truck, he wasn't in the doghouse. And when the tank fell over, evidently the valve came on full blast and it burned up the complete set of recording instruments and the only reason he knew something happened was it blew the back door of the recorder so he realized that something was wrong.

BC: Was this when you were up in Peace River?

SB: This was the second year I was up in Peace River, yes.

BC: Who was the driver, do you remember?

SB: I don't remember, he was a farm boy from Saskatchewan. He got quite a shock anyway. But I think the observer on the crew at that time was a fellow named Andy Anderson from Denver, who worked with us for many years and he was quite irate that the fellow didn't make sure the bracket was tight before he moved the truck. It was a case of inexperience really.

#207 BC: When you went up to Peace River, you were still a drillers helper.

SB: A drillers helper the first year.

BC: When did you come back out of the bush and it would be the bush at that time wouldn't it?

SB: Well no, Folair was just south of Peace River about 35 miles and they were all homesteads, they were all French people, very friendly, very nice people and very interesting. I went back there about a year ago and it was just amazing to see how these farms had developed over the years because in the years I first went in there, they were homesteading and if there was bush on the land they were clearing it by hand. And when you go back after all those years and see the lovely homes and how they've progressed, it was really a tribute to them. But it was prairie with some bush on it. We really enjoyed it, it was very nice.

BC: Do you feel that is one of the offshoots of the oil exploration is because you would come in and roads would come in and you'd open up, did this help there?

SB: Yes, absolutely and the municipalities developed and then the government paved all the roads. I can remember going form here to Peace River where there wasn't a paved road after you left Edmonton and very poor roads. But yet, then when the oil business started to grow, all of these boys, I have hired hundreds of boys from the Peace River area who came to work on the crews and I know the big rigs did the same so a lot of them when they were younger, in their early twenties till they were married, they worked on the

crews and then when they got a few dollars they went back to their farms and took their fathers farm over or bought one of their own. You go in the Peace River country today and you get talking to them and practically every one of those people who are middle aged now got their start in the oil business.

#235 BC: On that first crew, they were still all Americans except for you.

SB: Every one was Americans yes, even the supervisors from Imperial Oil were all American people. Imperial's subsidiary in the States in those days was Collier??? oil and all those people worked for Collier in the States and they would transfer them up here. It seemed like they had to do a little stint in Canada before they could be promoted in the States. In fact, in 1974, when I worked in California, the Western Exploration Supervisor out of Denver came out to California and he and I had worked together on that first crew in 1945.

BC: Who was that?

SB: A chap named Harry Imel??? who had been with Imperial in 1974, I think he'd been there about 4 years then, he's now retired. But he had spent a lot of time in Calgary.

BC: And he was your supervisor in that first crew up in Peace River?

SB: Yes. And then 35 years later we met again in California.

BC: Isn't that interesting. When did you come out of the Peace River?

SB: We came out at the end of March. You can always count, any day after the first day of spring, the 21st day of March, give or take a week. It's very rarely you can work on into April around Peace River. Now as you go farther north, you can work on into April, but around Peace river, from St. Patrick's Day, from then on and then the first day of spring, the 21st of March, after that you give or take about a week.

#261 BC: Could you just for the record, explain why that is, or why it was and still is?

SB: Well, it's because it's spring break-up, because the weather radically changes and with your equipment, the ground thaws, muskeg starts to thaw and everything becomes impassable and strangely it will become impassable in a matter of 48 hours. You can work and all of a sudden, the frost starts to come out of the ground and warm weather and then you just simply can't move your vehicles so. . .You do so much damage if you're on private property or even forestry, you do so much damage. . .nowadays the forestry will tell you when you have to cease operations but in those days the forestry wasn't near as big as it is today. It was just a matter of you couldn't possibly move your equipment so you took them home.

BC: Was this a surprise to you that first spring?

SB: Yes, the first year it was. I thought spring would never come because it was cold and windy, then all of a sudden spring came and we were on our way home. And then you would get a month off, the month of April. In fact, I have taken the month of April off every years since, because there is absolutely nothing doing because you can't move.

#281 BC: The vehicles that you had, that you mentioned had to come out, now this would be 1945-46, right after the war, when you still had problems in getting cars and

trucks and this sort of thing, would you not, or was there a priority for your oil people?

SB: These vehicles were all brought in from the United States. Every one of them was brought in from the United States. Now how they acquired them. . . I know in this country. . . I remember the first cats we ever saw, had worked for the Americans on the Alaska Highway. And these people purchased them from the American government and that's where the cats came from but all. . . .

BC: Were they in the Peace River?

SB: Yes. And old friend of mine named Osborne Lawrence???, who there is a book about his father. His father was called the emperor of the Peace, who had trading posts and sawmills and lumber mills and flour mills all along the Peace in the Fort Vermillion area. Osborne Lawrence had the first cat that ever came to work on our crew. And he had worked for the Americans on the Alaska Highway.

#300 BC: Was that in 1945?

SB: I think 1946. But how Osborne acquired the cat is another story in itself and I wouldn't like to say because Osborne used to tell us how he got it but. . . .

BC: You don't think you'd like to record it, if he was telling everybody?

SB: Well, I don't think he'd object to this. Anyway, this cat, Osborne says that he found it in the bush, somewhere off the Alaska Highway and he painted it all up and brought it home. Then one night he told us, Jack Williamson, who. . . Osborne Lawrence, at one time offered Jack Williamson, a friend of mine from Calgary and me, offered to set us up in business. So we got to be very friendly and he told me later on that he took that cat from the American government and drove it in the bush and covered it all up, knew where it was and when the Alaska Highway he went back and retrieved it and he wasn't the only one, from what I understand. There were others that did the same thing but we always laughed about that because we'd ask him, how could you get a brand new cat this early after the war ended because you couldn't buy one. But it's rumoured that's how Osborne got his and I believe it too you know.

#323 BC: And I think that was probably from that ill-fated Canol project, that they were going to do so much and then as soon as the war was over, the Americans just left everything anyway so they would have. . . .or was it before that?

SB: No, not as far as Osborne was concerned, this was the actual construction of the Alaska Highway. And I know a lot of that equipment, they buried it and they never did bring it out because it cost more to bring it out than what it was worth. He wasn't the only one. There were several around there that got there start, but those people all now today, names that I can remember, lots of those people made a lot of money after the war because they had a couple of machines or a machine and the need for them was great. So they have all done extremely well.

BC: Can you think of anyone. . . .you didn't have any cats the first year then, in 1945, would you have a cat that year?

SB: No, we didn't have a cat because we were down around Folair, we used to use the farmers tractors to plow the roads. We would rent a tractor from the farmer and plow the ditch. So

the first year we didn't use any cats at all.

BC: Now when you came out in April, you had just been hired as temporary crew, I presume, had you? So when you came out and there was no work, did you get a pain holiday or a forced holiday.

SB: No, they paid me, they gave us all a month off. And they paid us right through and we went back to work again about the second week in May in Wetaskiwin.

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Tape 1 Side 2

SB: So we went to work in Wetaskiwin, I think the second week in May and then United Geophysical came up from somewhere around Oklahoma and they were doing the shooting and Max Drilling Contractor were doing the drilling for United, who were contracted to Imperial Oil.

BC: I see. Now whom did you work for then. Did you work for Imperial or did you work for the drilling company?

SB: I actually worked for the drilling company, I never have worked for Imperial, that's right.

BC: So you stayed with this same drilling company the second year.

SB: Yes, I stayed the second year.

BC: And you were working east of Wetaskiwin?

SB: No we were west of Wetaskiwin and north, up around the Leduc area.

BC: Oh, that was interesting.

SB: Yes, and then United Geophysical offered me a job on their crew.

BC: That was the same winter was it?

SB: In the spring of 1946 United Geophysical offered me a job as computer on the geophysical crew itself. So I left . . . I wasn't really happy as a driller, I realize there were limitation as far as your career could go, so I went into United Geophysical as a computer.

#015 BC: Could we just step back a bit. In the work that you did with Max Drilling in the Leduc area, how successful were your records, were any of them in retrospect, were you close to where the Leduc discovery came in?

SB: Yes, we seismagraphed the whole Leduc field. And the actual seismagrams, the Leduc field is a classic reef structure. Even with the old string galvanometers you could delineate that reef absolutely perfectly. It stood out so you couldn't miss it. And the

record quality, I have never seen records to this day, no matter with all the improvements and all the . . . . but the records from Leduc are classics. Anybody in the business will tell you that. Leduc and Redwater too, those two reefs stood out unbelievably, they were so. . . even nowadays, they were so accurate. You could tell within an LSD??? where the reef edge was.

BC: Did you see these records? This was Imperial records prior to the. . . this was what they based the Leduc drilling on.

SB: Yes. Actually when I was a drillers helper I didn't see the records that much, I was interested so I used to look at them. But to look at a raw seismagram won't show you any. . . even to this day, you might see anomalies or structure on the record as such but until it's completely mapped it doesn't really tell you anything. Nobody could drill a well on glancing at a few seismagrams, you have to map it properly.

#030 BC: Were you in the Leduc field doing seismic work when the first discovery well came in?

SB: Yes, I was. You see in those days, on a geophysical crew, you would have a project chief who was a geophysicist and a chief computer and probably two or three computers. And you actually took the seismographs, you computed them and you did all the computations and corrections, everything and the you actually mapped the structures in the field. The Party Chief was responsible and after the end of each prospect he wrote a letter to the client and did a report on the feasibility of these fields. So in those days you did a complete interpretation on the crew itself which isn't done anymore.

BC: So you were actually working with Max Drilling at the time the Leduc discovery came in?

SB: No I had gone to United Geophysical.

BC: You had gone to United by that time?

SB: Yes. I had gone to United Geophysical as a computer, computing the records and mapping and doing the cross-sections and thing like that.

BC: They were also contracted to Imperial?

SB: They were contracted to Imperial that's right. In fact Jack Armstrong, who got to be Chairman of the Board of Imperial used to come and visit the crew.

#043 BC: What was his position at that time?

SB: Jack was a Petroleum Engineer in the Calgary office and he used to come out and visit the crews and just . . . I wouldn't say he was the geophysical supervisor but he used to come and visit the crews and look at the records and things like that. I think he was more just a general field superintendent in those days.

BC: Do you remember any incidents involving him during those early days?

SB: No, he was a very, very big man, Jack and very friendly and very down to earth. He was really a nice man. You could tell that Jack was going to go a long way in those days. In fact, when we all went into Northwest Seismic, called the Poor Boy Enterprise, one ex-employee of Imperial's, a fellow named Jack McMillan, who was also a Petroleum Engineer, he and a chap named Jack Timmins started Northwest Seismic and on our logo

on the trucks was a picture of a lad with a cap on and a cigarette butt and it was called Poor Boy Enterprises. Well I'm sure because of Jack McMillan's association with Jack Armstrong, that was the reason he started Northwest Seismic, because our crews all worked for Imperial Oil.

#057 BC: Let's go back to the United Geophysical which you went to in the spring of '46 then. And where did you go to with them?

SB: We were right around the Wetaskiwin area and the boss there, the supervisor was a fellow named Norman J. Christie???, who is still in Calgary, who is the Dean of the geophysical business in Canada. And Norman plays golf with us at the Doodlebug??? Golf Tournament every September and he's retired now as chairman of the Board of Teledyne???, he was my immediate supervisor then.

BC: Can you tell me about Mr. Christie?

SB: Mr. Christie was born I believe, in Regina, and a very fine man and I'm not sure what Norm's education background but he ended up as mid-continent supervisor for United Geophysical out of Oklahoma. And when they sent their first crew to Canada, Norman naturally. . .he took this area into his other area. He was the supervisor of all their geophysical operation for United in the Rocky Mountain area plus Canada. And the first crew of United I was on were all veterans, every one of them had been in the service during the war.

BC: Were they Canadians?

SB: All Canadians yes. Well not all, the observer was an American, until we could train a Canadian. And the office staff, the Party Chief was a school teacher named Hubert John Mace, who we called Mr. Mace, a very shy reticent American who had taught school all his life and became a Party Chief when he was probably 60 years of age. And we couldn't understand in those days, because we were all in our early 20's. Mr. Mace used to work all day in the office and his office was neat and clean and the chambermaids used to ask me if anybody lived in his room because he made the bed every morning and cleaned everything up and he never mixed with the crew. He had nothing to do with them socially and his wife and children were in Oklahoma dn he was up here for several years and it was a very strange way to live we thought. He was an American and then the Chief Computer was an American and a fellow named Walter Sholquist???, whose family was in the construction business here in Calgary, he was one computer and I was the other one.

#084 BC: And where was Mr. Christie?

SB: Mr. Christie was still working out of, I believe Tulsa, Oklahoma. He didn't move to Canada for several years. He used to come up here and visit the crew and then keep his headquarters down there.

BC: Did you have much close association with Norm Christie?

SB: Oh yes. I've known Norm all my life, he's a fine, fine person. And after I left United and went to Northwest and then I ended up at California Standard, I kept in touch with Norm all my years. And last years, we were in New Orleans at a convention, he was staying in

the next room to me. So it's been nice to keep my connection with Norman all those years.

BC: Can you remember any particular incidents in the early days, like when he was in the '40's, any particular incidents of him being there with the crew or. . .?

SB: Yes, I can recall several. We had a boy on the crew who was a very odd person, we called him Doc, his name was Bruce Street??? from Wetaskiwin and he used to eat light bulbs and razor blades and beer glasses. So Norm Christie had come to visit the crew and the crew were all veterans and they were inclined to be wild, in fact, they were extremely wild and so Norman used to say. . . and the Party Manager was a chap named Kurt Parnell???, who was a little wild himself. Anyway, one night we were all in the bar, raising heck and Mr. Christie said to me, he knocked on my door, Robert, he said, that is the wildest bunch of people I have ever had on any crew I have ever seen. He said, this is unbelievable, but the boys were inclined to be a little wild, being all in the service but they did their work extremely well and they worked really hard and he said, it was the best crew he had but they were really hard to handle. So he had an assistant of his, who was a rather domineering American chap, whose name I shall not mention because he's still in the business, but he had ulcers very, very bad. But he used to patronize us and come and sit in the bar just to show what a good fellow he was so one night we said to him, well we'll just see how good a fellow you are. So I said to Doc, now when that chap comes in at the table you just wait a few minutes , then you take a bite right out of that beer glass and chew it all up and swallow it and then I'll go up and get you a couple of light bulbs and a razor blade and you can eat those too. So we were all sitting there and all of a sudden Doc took a bite out of this beer glass, well the fellow with ulcers, this American, you could tell, he was in absolute agony immediately. So then we got him a light bulb and a couple of razor blades and he ate those too and the chap never came in the bar with us again.

#116 BC: So he wasn't always a good watchdog for Mr. Christie then if he. . .?

SB: He wasn't well liked at all, but Norman was extremely well liked. When Norman said something we did it you know. He still lives in Calgary. He left United and went with Teledyne and Norm and his wife still live here in Calgary.

BC: Yes, I have spoken with Mr. Christie.

SB: Fine man, fine person. But he had his troubles with all us old veterans, now I know that, he really did.

BC: Now all these people, they were all veterans and what kind of training had you had, other than just on the job?

SB: Actually none of us had any training at all. They would hire boys on the recording crew on the jug line which lays out the cable and hooks up the geophones and from there, if you were intelligent, you got to be a junior observer and then you got to be an observer. And then drillers helpers went to be drillers and the survey crew were all Americans so you started out as a ???, a trainman??? and then you went up and learned assistant surveyor and pretty soon a surveyor. And soon all the Americans were displaced by Canadian boys who learned up through the hard way and the core of all the geophysical

industry today are boys that started out the hard way and did it all. Some of us went on to university, others didn't, but even so, the ones that didn't now own their own drilling companies or own their own survey companies or whatever.

#134 BC: Now you went into United Geophysical as a computer. When we talk about computers today, we talk about machines, so perhaps could you , for the record describe your job as a geophysical computer?

SB: Yes. A geophysical computer, you took the raw record and actually all you did was, you removed the surface burden of the ground and you computed off all, what we call the weathering layer and everything was worked to a datum??? and you computed it and removed all the surface burden and everything and then you actually picked the records from zero time, the Party Chief would pick the records. Computers were never allowed to pick a record, no way, he picked the reflections, so the computers timed the records and actually wrote the time of the reflection down on the record and then you took all those times and you mapped them on cross-sections and then you took all these values and put them on maps and you mapped the sub-surface. You mapped the Cretaceous or the Devonian, separate maps, you did isochrones??? or isopacs??? or whatever. But the Party Chief was the lord and master. He did . . . .everything was under his name, you did the menial chores of computation and plotting and things like that and the drafting. In those days, it took you ten years to get to be a Party Chief, whereas now with the change and everything, young university people come out of university with a degree in math or physics or whatever and they go in, they're playback systems or programmers, they move from there, where all our work was done in the field. Where nowadays a university student, he'll come out and visit the crew but most companies have a trainee on the crew but there is not the field work involved that there used to be, no way.

#160 BC: When you started work as a computer, how did you manage to get the job when you had been doing drill work? Had you sort of taken time out to learn the computers job?

SB: Yes, I was very interested in moving ahead because I liked the geophysical business and I used to go in the office and when the Imperial people came out I used to sit and look at the records. And I don't know who it was, it might have been Mr. Armstrong, but somebody said, well you should get out of the drilling business and so when United came up, somehow, I don't recall now how, but Mr. Christie phoned me and his assistant was a chap named Kenny Robertson, and they hired me as a computer right away because I had a couple of years field experience.

BC: And it was Mr. Christie who hired you then?

SB: Yes right. Canadians in those days, there was no one with experience of any kind, so they had to start from nothing anyway so they gave me a chance as a computer. I had my grade 12 and so they hired me as a computer. It was a very, very advantageous thing for me. But I knew I didn't want to be a driller. To stand out beside one of those machines all winter is not very funny.

#176 BC: Where did the computers work, in the doghouse?

SB: No, the computers. . . if we moved into say, Wetaskiwin, we would rent an office, the first office we ever had was in the basement of the Drury Hotel, close to the beer parlor. So they would rent an office in the hotel, usually a hotel, even if it was a hotel room or two and they would set up tables and we all came to work at 8:00 in the morning and the records form the day before. We worked them all up and we would process them and every day we would do the work from the day before that was shot. And the Party Chief would put it on the map and he would contour the maps and everything.

BC: So this was a much more pleasant job then?

SB: Oh yes. It really was. And the money was a little better too so it was a step up. So it was very interesting, always was interesting.

BC: The winter of the Leduc discovery, you were with United Geophysical and what part of that area were you working?

SB: We were stationed in Wetaskiwin but we worked as far up as Leduc and all through there. I think Leduc was 1948, in fact I'm sure it was. We worked 1947, 1948, when the Leduc discovery and I think we were there a year after. And then from there we moved up to Fairview, west of Peace River, we were there for about a year.

#194 BC: Were any of the records that you worked on, were they over the area that subsequently. . .?

SB: Oh yes, we mapped the Leduc field. At that time we were working for British American Oil that year, 1948, when Leduc came in, we weren't working for Imperial, we were working for B.A. that year.

BC: With the computer work, how long did you stay as a computer out in the field?

SB: Well, I worked for United 1946, 47 and 1948 I left United and went to work for Northwest Seismic in Calgary down on 10th Street N.W. because I was being married and George Blunden???, who eventually was Vice-President for Home Oil had left Gulf Oil and he became involved with Mr. Timmins and Jack McMillan and George put an ad in the paper I believe. Anyway he hired me as his assistant and George and I were doing interpretation, just the two of us in his house on 12th Ave. S.W.

#213 BC: Can you explain, this was the beginnings of Northwest, wasn't it?

SB: Yes, this was the beginnings of Northwest.

BC: And tell me about how your work. . . where you did your work and what it was like? It wasn't in the posh offices of downtown Calgary.

SB: Oh no. The first office we ever had was on the corner of 8th Avenue and 1st Street W. diagonally across from the Bay in the old Alberta block and there was George Blunden and I, just the two of us. And the field crews had another office over on 10th Street in an old building over there, by Riley Park.

BC: But prior to that you worked out of his house. Could you describe that.

SB: That's right we worked out of his house on 12th Ave. W. that's right.

BC: Where did you work, in the living room?

SB: In the basement.

BC: Describe it to me, describe the basement office.

SB: Well, it was just a couple of tables and we had a light box there where we could reproduce the records ourselves, the actual seismagram that we got, we would put them on the light table, put a piece of photographic paper over it, turn the switch on, with a thermostat. George built this machine and it would copy the record, so that he had a copy and I had it, so that we could both work independently. But George did all the interpreting. George Blunden was responsible for the finding of Gulf Oil's big field at Pincher Creek. A wing commander in the Air Force, who to this day is a personal friend of mine, and one of the finest people I've ever met, he was directly responsible for Gulf's find at Pincher Creek and he left there and went to Northwest Seismic. And I stayed in Northwest Seismic for I think, probably 2 years and then I . . .

#238 BC: Who was in Northwest Seismic with Mr. Blunden?

SB: When it started out, it was George and I. And then Jack Way???, I think Jack was the third one, then Freddie McConnell, who eventually owned Velocity Surveys, Bob Greer who was a partner in Velocity Surveys, Frank Hickie??? was a geophysicist in Mobil, came with us. Jack Jones, who eventually went to Amoco came with us. Allan Campbell, was right out of university, who came with us and has been in Mobil Oil ever since. Jack Williamson was our Survey Supervisor and Party Manager who ended up owning Flight Drilling, Al Anderson, who owns Aquarius Drilling today, he was one of our drillers.

BC: Were they all at this time?

SB: At Northwest Seismic, all of us and Bob Rintul???, who now owns Ace Explosives was on the crew in the survey department and originally as a jug husker??? I believe. The people from Northwest are spread out throughout the industry now and most of them have since gone on their own and bought their own businesses within the industry. It was a training ground for this industry really.

#263 BC: Tell me about Mr. Blunden as a manager and as a trainer?

SB: George Blunden taught school in Saskatchewan during the Depression and then joined the Air Force and the George, a highly intelligent person, was responsible for writing the navigation manual for the RCAF and subsequently became a wing commander. He taught school in Saskatchewan during the Depression for no money. He used to tell us that farmers whose children went to school used to bring him eggs and ham and bacon but no money changed hands at all. So George had been brought up in Saskatchewan during the Depression and after the war went to work for Gulf. George has a degree from the University of Saskatchewan in math I believe, now I wouldn't be sure about that. Anyway he went to work for Gulf as a computer on one of their geophysical crews, got to be a Party Chief and then left there and came with us at Northwest and left there and went to Home Oil as Chief Geophysicist and retired as Exploration Vice-President.

#283 BC: When you were working with him, tell me what it was like to work with him, ho did you learn from him?

SB: George was a very patient person. George Blunden was responsible for putting more

people into the geophysical business and helping more people than anyone that I know of. And George being intelligent like he was, yet he would take time, he didn't ask you to do something unless he knew that you understood what you were doing. He would take the time to show you what you were doing. Working with him that couple of years as I worked with him it was just marvelous as far as my career went because to work with George. . . any place you went to work, if you mentioned George Blunden's name, he was very highly regarded, so it was really a boon to your career to have worked with him. And George was the type of person too, that he wouldn't recommend anyone unless he knew you were qualified. Very outspoken about it. And being in the Air force during the war and me in the Navy, George knew a little thing about discipline. George was the boss, there was no mistake about it but yet he was your friend, which was really great. George has helped me immensely, in fact, Jack Way's retirement party several months ago, George and I together were there with Freddie McCall and all these old people that had spent out lives . . . and it was really nice to see them. George hadn't been at Gulf for 35 years but yet the people from Gulf that were talking about Jack Way, George's name was interjected in the conversation several times and all these old boys would yell, hello George, after all those years. And people that George hadn't seen for 35 years would walk up and say, do you remember me George, you hired me in Fort Saskatchewan or some little place and there they were, still with Gulf or had moved to other companies.

#318 BC: So he was a great teacher then, he continued to teach.

SB: Oh yes.

BC: I understand that was really part of his philosophy, when he learned anything, did he not have sort of classes for you?

SB: Yes he did. He used to hold classes. If we would catch up on the work. If the crews, say because of weather, would have two or three days they couldn't shoot, we were in the office with nothing to do. George would say, okay boys, we're going to go into mapping anc contouring and things of interest and George having been a teacher himself, he could put it across. It was really an experience and the people that he had in the office. We probably had ten interpreters in there before Northwest. . . . and every one of those persons moved from there on their careers, moved ahead, every one of them did extremely well, because of George. He is a fine person really.

#337 BC: so you really got some of your post secondary education from George?

SB: It was equivalent of a university education really because he was such an expert in his field. And you could ask him anything at any time and he would come right over it was just marvelous. And the reason I got hired at California Standard subsequently was because of George. The Chief Geophysicist was a fellow named Phil Gabey??? who left California Standard and started Delta Exploration, who are one of the biggest in the world today. He hired me because of my association. . . they put an ad in every paper in Canada for a geophysicist and at that time I had no degree, and he said to me, I'll never forget it, he said, you make me a deal, he said, I'm sorry I can't use you at this time. So I was just going to leave his office, I got to the door and Phil Gabey said, make me deal, he was a

character in his own right and I said. . . .

End of tape.

Tape 2 Side 1

BC: Mr. Brown, I wonder if you could just relate the whole story of your entrance into Cal Standard again so that we are sure we have it on the tape?

SB: Yes, California Standard put an ad in every paper in Canada and at the time, I was working with Northwest Seismic and I didn't have a degree in those days but I thought I'd answer the ad anyway. I had no hope whatsoever really, of getting the job, as a geophysicist.

BC: What year would this be?

SB: This would be about 1948 or 47, I think '48. Anyway they called me for an interview and the Chief Geophysicist was an American fellow named Phil Gabey, who was subsequently the owner of Delta, which is now ???, one of the biggest seismic companies in the world. Anyway, he interviewed me and he was a very outspoken, very brash type of a person but really a good guy. He said to me, I'm sorry Mr. Brown, I don't believe I can hire you, your academic qualifications aren't adequate. I said thank you very much and I was just leaving his office, and when I got to the door, he said, to hell with this, he said, make me a deal, Spike. So I said, I'll tell you something, Mr. Gabey, if I can't do it properly, in 30 days you can let me go, how's that, and he said, you're on. And after that, I was his fair haired boy and he gave me a $25 raise every month for about two years. And after that, he and I were just old friends and when he left California Standard to start Delta Exploration in Jackson, Mississippi, he wanted me to go with hi. Being born here and being away in the Navy, I had just kind of got home again, so I said no I wouldn't go. So I stayed here and worked with them. He left the company a couple of years later.

#018 BC: Tell me about Mr. Gabey.

SB: Him and his brother, his brother was a world renowned geophysicist named Ewing Gabey and Ewing had a . . . they were a strange combination. Ewing was a very academic person, where Phil was very outgoing and more of a field person, well educated but not as highly technical as his brother. So it made a good combination, his brother did all the technical work and was extremely well known in university circles, things like that and Phil did the actual operation of the crews in the field. So they started out on a very small scale and got very big, very quickly and both made a lot of money and I believe Phil Gabey is now retired in Phoenix, Arizona.

#025 BC: When you went to Northwest Seismic in '48, you then didn't really stay there very long, did you?

SB: It must have been '49 then, when Gabey hired me because I was there pretty near the two

years. I was the first person that George Blunden hired and we worked out of his house in the basement and then we had a little office down across from the Bay, and then we moved over onto 10th Street near Riley Park and by that time, we had about a dozen boys in the office, in the computing staff.

BC: Yes, you mentioned some of them, but we just sort of very quickly went through the names. I wondered if maybe, we could look at those again before we move into Cal Standard. The first name I have here, I jotted some down, Jack Way.

SB: Jack Way was working for Nielson's Furniture in Calgary and I believe George Blunden put an ad in the paper and Jack came over to work for us. And he'd never worked in the oil business before and had never been out in the field but Jack was a very intelligent young fellow, just newly married and very eager and a fine, fine young man. So jack came over with us, there was just George and Jack and I.

#037 BC: This was quite a thing for Mr. Blunden to take someone who was a furniture salesman.

SB: Yes, George liked. . . .and Jack too was quite an academic type, he wanted to learn and he had the intelligence to absorb it and George Blunden liked to give young people like that a chance. And he, being so technically expert himself, would take a lot of time to help you, you know. I think that was the reason George hired me too, I had field experience but he realized I wanted to get out of the field work and get into the interpretation end of it and I think that's why George hired me too and I always appreciated it.

BC: How long had you been working there when Jack Way came along?

SB: Just 3 or 4 months, then Jack came along and then after Jack was hired, then George needed to acquire people that had experience as interpreters. And example was Freddie McConnell, who had been a Party Chief with Geophysical Services Inc. out of Dallas, Texas. They hired him and they hired Jack Jones who subsequently went to Amoco, had been I believe with a major oil company as a geophysicist. Allan Campbell. . . .

#049 BC: Before we go through, could we just talk about Mr. McConnell, what do you remember about him?

SB: Freddie McConnell is a very interesting person. Freddie has done really well in his life. After he left Northwest, he started up a company called Velocity Surveys, him and another chap named Bob Greer, who had been an observer for Imperial Oil. They did extremely well with Velocity Surveys to a point and they subsequently sold it to a mining concern from Ottawa, who funneled all the money out of Velocity Surveys into the mining division and subsequently Velocity Surveys went broke, here about 1968, somewhere in there. And Freddie felt very badly about that, because he was so well known and yet he had no control over it. He was still active in the company but the people that owned it had bought his company, Velocity Surveys, took the money and spent it in Ottawa or on their mining ventures. And Freddie knew so many people in Calgary, it hurt his feelings that people that he knew lost money because of Velocity Surveys bankruptcy. But he subsequently went from there and he bought a helicopter company called Lift Air and he operated it for probably six or seven years and he sold it

out and at Jack Way's retirement party, I was chatting with Freddie and he said, well, he was going back in the helicopter business in a very small way, he only bought ten and we all laughed. We were talking about the old days, where we couldn't afford to buy anything, let alone 10 helicopters. And his partner Bob Greer is now retired, very well to do in Vancouver, has property and.. . . Neither one, Freddie or Bob, were financially hurt when Velocity Surveys went into bankruptcy because they had sold the company, but Freddie wasn't very happy.

#069 BC: Can you remember any incidents with Mr. McConnell while you were working together?

SB: We used to have a lot of fun in the office. There was quite an esprit de corps there and George being the boss and an ex wing commander, we used to tease him a little. But Freddie I believe, had been in the Air Force as a flying officer. And Gene Cook, who came later on, who ended up as Vice-President and Exploration Manager of Home Oil, in fact, Gene relieved Mr. Blunden at Home Oil. Eugene G. Cook was his name. We, all being veterans. . . in fact pretty well all those chaps were veterans, had either gone to school before the war or had some university training and then gone in the oil business. . . .

BC: A lot of them would just be coming out of university in '48-'49.

SB: Well, Allan Campbell had just come out of university and Jack Jones both. And then we had a fellow named Jack Williamson, who is to this day, a personal friend of me. He was a city salesman for Nutty Club peanuts and he had done a little surveying somewhere before, but one day a friend of mine and I went to lunch together and I met Jack. I had known him from before but. . . .I remember he was driving a little orange Volkswagen with Nutty Club signs all over it and Jack was about 6'2" and it was quite an experience to watch Williamson getting in and out of that Volkswagen but anyway. I said to George, I know a fellow, a surveyor that's really a good man and we should pick him up. So we picked Jack Williamson up and he came to work for Northwest and his wife subsequently came and ran the office for us. But Jack and I were working the Peace River in the early years and we met a chap named Osborne Lawrence, whose father had been what they called, the Emperor of the Peace.

#089 BC: I remember you mentioning that.

SB: Yes. And Osborne, who was running the cats on the crew, Osborne sent Jack Williamson in business. He bought a bunch of drills, he wanted me to go in with him but I had just gone to California Standard and I didn't have any money. Jack didn't either but Osborne gave him all the money to get started, an outfit called Flight Drilling and Jack did extremely well with Flight Drilling and is still in business to this day as Flight Drilling but I can call Williamson's house right now and say to his wife. Let me speak to the peanut salesman and she'll laugh and say Spike Brown's on the other end. But we have been friends to this day. And then there was another man came with Jack at the same time named Al Anderson, who had been a driller with some other company and he came with us and he started an outfit of his own called Aquarius Drilling. And he is still in business

to this day too so he's done quite well too.

#100 BC: When you were all together there, are there any particular times that you can recall or stories that you can recall or work that you were doing together that should be recorded.

SB: In those days a field crew would shoot the records for us and bring them the office in Calgary. Now today big companies, well all companies as a matter of fact, would have a huge interpretation staff. Where in those days our field crew shot the records and we did a complete interpretation in our little office and gave it to our client, Imperial Oil or Mobil or whoever. In the early days of Northwest Seismic we worked strictly for Imperial Oil. And Jack Armstrong, who became Chairman of the Board was at one time, a field representative from Imperial Oil on our crews.

BC: He just observed that you were doing what they wanted doing?

SB: He was what the called a Client Representative. He observed what we were doing. He was a personal friend of Jack McMillan's, who was a co-owner of Northwest Seismic, which we called the poor boy enterprise. And the reason we called it the poor boy enterprise was we all had such little money, they thought it was hilarious and the logo on the side of the truck was a young man with a cap on with a cigarette butt hanging out his lips and underneath it said, a poor boy enterprise and we all thought that was very humorous. But there was a great spirit of camaraderie there. Everybody got a long and George being the boss of the interpretation staff and Jack McMillan and Jack Timmins, the two owners, they ran the field operation, along with a fellow, who is now deceased named Andy Anderson. Ollie, we called him, from just outside Denver Colorado, a fine, fine person. He was their technical man and Jack Williamson was their survey man. So they were a young company but highly experienced in relation to the number of years the geophysical business had been in Canada. And since that time, all those fellows have done extremely well, every one of them the George Blunden was associated with, or Jack McMillan or Timmins, have all done really well. And we're all friends, in fact, we've been talking about having a reunion but we've never had one since but it would be quite something.

#127 BC: As some of them retire you probably call that your reunion because you go to each other's retirement party.

SB: Jack Way is the first one that has actually retired I believe. And I think Jack is younger than I am, well maybe he isn't, he's probably the same age. But Jack is the first one that I know of that's retired. Jack Jones is deceased and as far as I know, he's the only one too. The others are still active in the business, all of them.

BC: Then you decided you were going to go to Cal Standard but why did you decide to leave this company, it was obviously a happy time?

SB: Well, financially, the money wasn't really good at Northwest Seismic but I had always aspired to get to work with a major oil company.

BC: Why?

SB: There was a lot more scope with a major oil company. I subsequently went to Mount

royal College and got a diploma in geology and a diploma in business administration but at that time I didn't have them, either one of them. With a major oil company I could go into the land department, I could have gone into. . . not environment in those days, but subsequently you could have gone into environment. There were so many different facets in a major oil company that you could get into, rather than being a junior interpreter with Northwest. The scope was very limited, George Blunden and I, to this day are very good friends and I would have always had a job there but I felt restricted.

#147 BC: Was that because it was strictly seismic, nothing else.

SB: That's right, it was strictly seismic and in George's office, George was the boss, senior interpreter, while Freddie McConnell and Allan Campbell, Jack Jones, Frank Hickey, all of these boys had degrees at the time and had a little experience and were gaining more all the time so you knew that the chances of you displacing a man and getting the adequate wage as a senior interpreter really weren't there.

BC: It's interesting that you should say this because I would have thought going into a major company, not having a degree would be more of a stumbling block for you.

SB: Yes, it was but I was very fortunate as Mr. Gabey, when he hired me, I don't know why but him and I were extremely good friends and he treated me more like a father and son. And he gave me opportunities that he didn't give to other people and it turned out really good for me, it was the best move I ever made really.

#160 BC: Let's move into Cal Standard then and this would be about 1949. You made the offer, try me for a month, you didn't say you'd work free for a month but. . . and then, what job had been advertised and what was it you actually became?

SB: I went to work for California Standard as a geophysicist doing interpretation. So they started me out doing minor little jobs and then, I was a qualified geophysicist, I used to have my own prospect, I would shoot it and develop it and drill the well on it, the whole bit, right through.

BC: When you say, you did the whole thing, people don't do that today, so perhaps you should just explain what being an interpreter for Cal standard in 1949 meant as far as the job was concerned.

SB: You see, in those days, those were old analogue records, there was none of the sophistication in the geophysical instruments they have today. So what they would do, there was only probably four or five geophysicists at California Standard, which is now Chevron, there was only 4 or 5 of us, so under the direction of the Chief Geophysicist, he would give you an area and you would completely work that area only.

#176 BC: Now can you remember what area you had?

SB: Yes, I had an area around Gull Lake, north of Red Deer. He would say, now there are possibilities and in conjunction with some of the geologists, they would say what geological play they had going and they would say, okay, we'll integrate the geophysical work with the geological work. Then they would hire a crew to shoot a certain area and you would interpret the records and you would finally end up giving them a

recommendation for a well.

BC: They would do the hiring of the crew though, that was not your. . .it was the geologist who decided where they were going to do it.

SB: No, Mr. Gabey would hire the geophysical crew or the Chief Geophysicist. They would hire the geophysical crew and under your direction they would do the field work and then they would drill the well. Now there's probably 2,000 employees at Chevron today. I think there was probably 25 or 30 in those days. Very small and we watched it grow. Our office was in the mezzanine floor of the old Greyhound building and then we moved from there to the Medical Arts and in 3 or 4 years they had 1,500 people working there. So it was the very first start and John O. Galloway, a very prominent consultant geologist now was President of the old California Standard.

BC: Can you remember anything about him, did you anything to do with him.

SB: Not really, John was rather aloof. But I do know, we did a lot of seismograph work in Taber and the Leduc field was just in it's infancy and Mr. Galloway had an idea that Taber and that area was going to be the biggest oil field in Canada and I remember one time he insisted at a meeting that we were all wasting our efforts at Leduc and Redwater and he didn't want any more of it. He wanted us to concentrate on the Taber area which subsequently turned out to be really nothing. And Mr. Galloway left the company over this eventually. People from San Francisco didn't agree and none of Mr. Galloway's technical staff agreed with him either. They knew that we should be moving up the Redwater, Leduc area and even farther north than that but Mr. Galloway didn't agree so Mr. Galloway left the company. And a man named George Knox, a life time geologist with Standard Oil Co. California, he came to Calgary as President.

#213 BC: Why would Mr Galloway . . . what field, did he have any records to show you as to why . . .

SB: No he had geological information and everything but I don't know why to this day. None of us could understand it because even wells that were drilled were very marginal, it didn't have the potential in any way that any of the others, like the Leduc wells when they. . . and the Leduc reef was huge structure and down in the Brooks, Taber area there was nothing like that. It was shallow production and very marginal and yet he had the idea that, that was the place to be.

BC: When would he have left the company?

SB: I think he left the company in 1949.

BC: Oh, very shortly after you came then.

SB: Oh yes and Mr. Knox came in and Mr. Knox was a very austere Californian, a very fine old gentleman but very aloof. Underneath him, his Vice-President was Dr. Don Greer??? who had been a professional geologist at the University of Saskatchewan. Don was a very capable man. George Fernival??? was there, another very capable person and Howard Nicholson was Vice-President of Finance, they were all Canadians. And Mr. Knox ran from a very remote position. In fact, Mr. Knox used to come around at Christmas time to visit the staff and it was said, that somebody would provide him with a bunch of pictures of people and he would look at the pictures and then he would try to go in your office and

identify you with the picture but he very rarely called you by your real name because he didn't remember who you were. But he would get a picture in his mind and then a name in there and it would be the wrong one but he was a fine man George.

BC: He was trying to be close once a year.

SB: Yes, he was trying to be close but he was a very shy man so it bothered him.

#241 BC: Well, with him coming in, did you then move your operations up into Leduc, Redwater?

SB: Yes, immediately. Joffre???, Redwater, Leduc, Cabob??? I worked for Chevron back in '74 again and they were doing seismograph work in the Cabob field which is around Edson, which we seismagraphed in the old days, but later wells drilled at a deeper depth and found tremendous oil play and it was a very big thing in '73, '74, '75. But that's where all our activities were in the '40's. We completely ignored Taber and the south country and we moved in where all the activity was, where everybody else was which was only logical.

BC: You mentioned that the Chief Geophysicist would be working very closely. Who was you Chief Geophysicist?

SB: After Mr. Gabey left, the Chief Geophysicist was a man named Francis A. Hale???, a long time employee of Standard Oil California. Him and his wife Lois were very, very fine people. He is now retired. He came up and took Phil Gabey's job and was there for many years, in fact, Francis Hale was there practically all of my career at California Standard which subsequently became Chevron.

BC: How long were you with Cal Standard?

SB: 15 years. Francis went down to the States about a year before I left. It was 20 years ago last week that I left California Standard. In fact, I phoned over there and said, how can you guys run that big company without me after all these years and Dave Miles who was Chief Geophysicist, who is now a Vice-President, he laughed and said, we've had a hard time running it without you Spike. I don't think he meant it though.

#273 BC: All right, now let's look at your career with Cal Standard. Obviously you found something there that you enjoyed or you wouldn't have stayed for 15 years. You were there till about 1965.

SB: '62. 14 years then, '48-'62. What happened there was, I was doing interpretation for a couple of years and finally Mr. Gabey. . . we had 14 or 15 geophysical crews running and rather than have each individual geophysicist supervise the field operation, he felt it would be better if one person supervised the field operation on a permanent basis. Now the geophysicists would tell the field supervisor exactly how he wanted it shot, what the parameters were and how to do it technically. And the field supervisor went out and made sure the people did it. So that's what I ended up doing. And I really enjoyed it, I went into the field and I've been in the field every since. And that's the way I like it, I enjoy field work. I don't do any interpretation at all any more. I haven't since 1962. I've had my own company since 1962 but I haven't done actually any interpretation since about 1950. Because I always felt I wasn't technically oriented, my education, math and physics

wasn't good enough and I always felt that someone could have done a better job than me anyway. And I really enjoyed field work so that's where I ended up.

#299 BC: Interesting that you should go into field work when you moved into Cal Standard so that you could be an interpreter.

SB: Yes, but I found I didn't like it. I found I was extremely bored with it.

BC: Would you feel slightly frustrated too, at times, because you needed the mathematics that you did not have.

SB: Right and then as they increased their staff they became very technically oriented and for awhile there, they were hiring nothing but Ph.D.'s, which subsequently didn't turn out very well. A couple of them are still there, in fact, the President of Chevron today, was one of a few Ph.D.'s that lasted because they were. . . we called them academic eggheads, because they were so well educated that the flexibility was not there. But extremely well educated but they had no field work and weren't interested in field work. With doctors degrees, to be a practicing geophysicist. . .some of them felt it was beneath their dignity, really they did. We had a Jewish chap that had a doctors degree in nuclear physics from Oxford and he was 37 years old, it was the first job he'd ever had. And he came to work with us and it was very demeaning to him to lower himself even to our academic levels. So he didn't last very long.

#326 BC: This would perhaps cause tension in the office.

SB: A lot of tension. In fact, it was a strange thing, an old friend of mine came from UBC with a Masters degree in Applied Mathematics and he came out of the army with a grade four education, so they sent him to what we called. . . .

BC: Surepass???

SB: Yes, the veterans could go to a pre-prep school . . .

BC: I think it was called Surepass in B.C.

SB: Yes, here in Alberta it was a crash course and in about 3 months you could get your equivalent of a grade 12 education. So Vern had a grade four education, went to tech??? over here, got his crash senior metric. Actually I think it was a gift from all the years of service in the army, I think that if you gave a little effort they didn't turn you down. But anyway Vern ended up at UBC with a Master degree in Applied Mathematics and an absolute mathematical genius. It was unbelievable. So the engineering department from our research lab in ??? California, they got a huge volume on how to pre-rate production in the Joffre oil fields, which California Standard practically owned the whole field. So they took this volume and tried to apply this volume of mathematics to actual field procedures, to maximum production of wells, and depletion and the whole bit. . ..

End of

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Tape 2 Side 2

SB: [in mid-sentence]. . . .but Lionel Goldfard??? ended up back as an assistant reader at Manchester University. He tried to get into ??? with this friend, I can't recall his name, but everyone knows it, but anyway the man wouldn't have him, but he left a very good job here to go over as an assistant reader which is about three steps below a professor in England. And I imagine he's still there.

BC: Did you find that there was a lot of that flying of degrees and . . . ?

SB: Yes, there was. Not in my case because there were very few that got into geophysics but I never really felt any animosity towards anyone because I didn't have a degree. When I came out of the Navy I had 54 months university and I could have taken it all, I could have taken anything I wanted. But being a little wild I didn't. But some of the people in different branches of the companies, like engineering and accounting that felt . . . people that had been in the service, who didn't go to university, felt really badly about people who had acquired their degrees during the war and had not answered the service. So there was a little feeling there. But it died away, it was never anything serious. But there always was and there is to this day, there is a great difference between a field person like myself and a geophysicist or a geologist, not so much for a geologist but geophysicist because they are in the mathematical end or physics, they are a little more inclined academically. Geologists work is more field work where geophysics today is not. And there is quite a difference between a college trained geophysicist and there are very few geophysicists today came up through the ranks. It's very hard today, very hard to get to be a geophysicist.

#020 BC: Do you think it's because geophysics is more complex today?

SB: The actual geophysics is not any more complex than it ever was, but it is more sophisticated, the instrumentation is sophisticated, let's put it that way but the actual geophysics is not any more complicated than it ever was.

BC: Then why are there so few that don't come up the way you did?

SB: Well, I think young people today realize that they're bucking their head against a brick wall. They go into computer work or they go into something else. They know, like normally, in a company, like where I am now, ICG Resources, they have a geophysical clerk there who has a diploma from Tech in Petroleum Technology. Now this young man here as a case in point, would love to be a geophysicist but I don't believe he ever will. It's a log involved process and there are lots of college graduates with degrees who are

aspiring to the same thing so it's pretty tough. . .

BC: And there aren't too many George Blunden's around who are willing to teach?

SB: Very rarely anymore.

BC: Do you think that, that's because the management level today doesn't have that kind of time?

SB: That's right, there is a lot more strain on management today than in our day. In our day, it was more of a. . . . well, we were explorers you know, we were all small companies and hell, lets' get out and do it and have a little fun at it. Where today, the money involved and the stress and strains of being an executive today is not my bag of tea at all, no way.

#037 BC: Yet you're still working.

SB: Yes, I enjoy it because I've had my own company now for 20 years. My wife and I have a lot of freedom and I know so many people that. . . .like, I've been with Gulf now off and on for nearly 10 years and I haven't been in their office an hour in the whole ten years. They just send the maps by courier to me and phone me up and say, here's what we want done and I go and do it. And we have a very lovely relationship, we've never had a harsh word and it's a lovely way at my age, for my wife and I, no problem.

BC: Let's go back to how you got into the field business really because we've jumped way up to where you are today. But when you'd been with Cal Standard a couple of years, you were by that time making pretty good money, I would think.

SB: Not really good money, they started me at $250 a month and today people would really laugh but that was the case.

BC: In 1949 that was not considered too bad.

SB: It wasn't bad and then Mr. Gabey as I say, looked after me really well. So I was doing fine and then this field job came up. I was the only one there in the staff at Chevron, California Standard that had any field experience at all. The others were all right out of college, and I had worked as I say, 3 or 4 years before that in the field, always in the field. So I was a natural one for it and I wanted it anyway, I approached Mr. Gabey about it and. . . .

BC: How did you find out about the job?

SB: I approached him at first because each different geophysicist was running his own area. And of all the field people on the contract crews, I knew them well, there was a lot of complaining that people would come out from our company that didn't really know what they wanted to do. And the contractors, because these people were client representatives, were doing what they asked them to do and they knew it wasn't right but did it anyway. So it was a natural thing that somebody would take over the field operations. In my case, if a geophysicist from the office decided that he was going to do a large amount of experimentation or something which would cost the company a lot of money with no results, I would say no, we're not going to do it and I would talk to Mr. Gabey and he would call the young man in and say no, we wouldn't do it that way.

#061 BC: This was when you got to be the field supervisor?

SB: Yes. And everything worked out so it was more of a coordinated effort that way.

BC: So you really created your own job?
SB: Really I did yes.
BC: How did that sit with the rest of your fellow workers?
SB: Not well at all.
BC: Tell me about it.
SB: One morning Mr. Gabey called us all into the conference room and he said, there are going to be some changes here and he took another old friend of mine, who's now at Pan-Canadian, made him an Administrative Assistant.
BC: Who was that?
SB: That was a fellow named Ed Fullman???, who is still at Pan-Canadian as one of the manager of their geophysical department, fine fellow, Ed. So Eddie became Administrative Assistant to the Chief Geophysicist and then he said he was going to create the job of Field Supervisor, so everybody in the board room smiled and figured they were the one and when he said I was going to be the Field Supervisor, the smiles vanished and there were several very vehement, disagreeable remarks made in that I lacked education and I lacked this and I lacked that. And Mr. Gabey said well, he's the one and that's the way it was, but I had a lot of trouble. But nothing serious, the ones that I had a little trouble with didn't last with the company because they weren't in their right place anyway and the company found out, so it worked out fine. I enjoyed all those years, every day of it.

#078 BC: When you first started out, because of this obvious feeling that there were those that would just as soon see you fall flat on your face, how did you protect yourself from that situation, how could you?
SB: Well, it wasn't really a matter of protecting, I just went out in the field and did what I knew I had to do. And everything fell into place.
BC: Can you remember your first time going out in the field as Field Supervisor, what you did and where you went?
SB: Mr. Gabey just called me in and he gave me a list, I knew pretty well where all the crews were working anyway and he said, here's all the crews, here's the Party Chief's names and everybody and he had a list of each geophysicist in charge of each crew and then, you just coordinate the field effort, that's all we want you to do. And I did it and I really enjoyed it all those years.
BC: So what was involved in that job? What is coordinating field efforts?
SB: Each crew has a different set of primer. The holes would be a certain depth, the spread lengths are different and the group lengths, everything in the geophysical field work is different and it would vary from crew to crew depending on what the geophysicist was looking for. So all you did was go out and make sure that each crew was shooting the program, technically the way the client asked for it. And you just went and visited from one crew to the next to the next and made sure that everybody was. . . . And in those days each crew did an interpretation on the crew. Now I didn't bother looking at any of them, I looked at that records, I would get in the dark house and look at the seismagrams every day and make sure they were shooting the stuff right. But as far as interpretation, the

geophysicist would come out from Calgary and go in the field office and look at the interpretation. I didn't bother with interpretation, all I was concerned with was operations and that's what I'm doing right to this day. And the strange thing was those geophysicists were so unhappy about me getting the job. I said to them up at Banff a couple of years ago, some remark was made about how much money was around and how well my company had done and I said, all right boys, just hold it a minute. Would you have gone out and spent 20, 25, 30 years in the field like I have done. Well, no way. Well, I said, what are you complaining about because it wasn't their way. When my children were growing up, I was never home, never home and those other boys didn't want that so it's a matter of what you want.

#106 BC: Yes, I was going to ask you about that because being the Field Supervisor, how much time were you actually out in the field?

SB: I was out in the field 52 weeks a year. I never even had a vacation because something would come up and I might be in Jasper for a day or so and they'd phone me and I'd go away again. But I was out in field year round, every day, up until about 4 or 5 years ago I was out in the field steady. In the winter time especially, I would go out sometimes in October, November and come home the end of March.

BC: Maybe in for Christmas surely.

SB: In for Christmas, sometimes not even home for Christmas, only a couple of times.

BC: Why was it so necessary for you to be out all the time? Most crews, they're in for so many days and then they get out.

SB: They weren't in those days. Now they were 20 days in and 10 days out but the thing is if you've got 3 or 4 crews going, or in those days, we had 15, there was always a crew working. It didn't matter when, there was always a crew working. And even now, today, it you have say, three crews, they won't all shut down the same time. So there's always something doing.

BC: So you would go out and you would just travel from crew to crew to crew, checking on them. . .

SB: On the actual field procedure.

BC: How many times did you have to hit each crew, you had 15, you couldn't go every day to 15 places?

SB: No, I would go to a crew and stay 2 or 3 days and then go to the next one. If there were any who had a problem, I would leave the crew I was at and go to that crew. We kept very good supervision. There was no schedule to it. Each crew had a daily report and weekly report and a monthly report. And all those used to come across my desk.

#129 BC: Where was your desk?

SB: I had a little desk there. I had a little office of my own at California Standard at one time and I came in one time and they had a chesterfield in there and there was a young lady laying on the chesterfield in my office. And I asked her what the hell she was doing, and she said, what are you doing in here, this is a ladies rest room now. So that's how much I was in my office.

BC: So your office must have been a brief case, was it, or two or three?
SB: Just about.
BC: How did you live? Let's talk about going out in the field, where you lived and how you lived and how the crews lived. This would be about 1951 that you started going out as a field supervisor.
SB: In those days, al the married boys bought trailers. The younger ones lived in hotel rooms or motels but the married ones bought trailers. So what we'd do, a crew would move into a small town and they would rent an office somewhere in the basement of a hotel or use a hotel or motel room as an office. The Party Manager and the Party Chief would move into there. A lot of the singe ones would get room and board. So if I came to visit a crew, I would get a room in the hotel or motel in the same town the crew was in, do my work, go out in the field with them, stay all day and do my work with them. About 1948 they started putting crews in camps in the north country, up Peace river area. So in the winter time you'd just go in the camp and they'd have a place for you and you'd stay in the camp for whatever time you wanted and then go to the next crew. But it was constant moving.

#149 BC: You never did get your own trailer and move from place to place?
SB: No, I never did because then you had to tow it behind you . And if you were moving as much as I did there was no point in having a trailer of your own, no way.
BC: How did you move from place to place?
SB: By car or truck, mostly car.
BC: You didn't fly from spot to spot?
SB: Oh yes, but I did a lot of driving though. I used to drive 100,000 miles a year. I would get into a new car at least once a year. I had very few trucks because once you got to where the crew was, they had trucks available anyway. So a truck was harder to drive on the highway so they gave you a car which was more comfortable.
BC: Where was the first crew that you went to visit after you took over as supervisor, do you remember the first time?
SB: Yes. The first crew was in a little town called Bashaw??? northeast of Red Deer. That was a Western Geophysical crew. They were with California Standard for 11 years straight. Pretty well the same personnel which is today unheard of. It's unheard of to have a guy staying with a company 11 years.
BC: Can you remember any of the people on that crew?
SB: Yes, the Party Chief, a fellow named Dick Mercer, he is still with Western Geophysical and the observer was a fellow name Jack McCullough, he's a heavy duty mechanic in Rocky Mountain House. And ??? Lovan???, who is now the Vice-President and General Manager of Western Geophysical Co. of Canada, he was on the crew as a jug hustler??? then. The mechanic, Mike Hansen, lives right up the street from you, he's still with Western Geophysical to this day. And an old English friend of mine, Jack Lipsey??? was a shooter, he's with Western, he's the janitor of the new shop out here, but he's. . . . . he got off the plane from England or the boat or whatever and went to work for Western Geophysical just for something to do and he's been there for 35 years.
BC: What does he do?

SB: He's like, they call the janitor, but he's the handy man around there, everybody knows him and everybody likes him and there's a place forever there for Jack. A fine old gentleman. He comes here to visit me, he lives right across the park over there. He's rented a room over here for 30 years, in the basement.

#180 BC: Can you tell me something about some of these people or can you remember any incidents of that crew in those early days?

SB: Yes I remember that Western crew, there was a small carnival came into Bashaw and we used to be quite a bunch to drink and fool around, mostly drinking but they were pretty rough and ready. They'd all been in the service and if there was anything going, they were ready. So somebody cheated one of the boys in one of the carnival games in the little carnival in Bashaw, a little touring road show. Somebody cheated one of the Western boys and the boys got a few drinks and went down and said, we're going to tear that carnival down. They tore it down too all right, it was a very serious thing, the Mounted Police had to come from Red Deer I guess. Anyway they had links of chain, they'd wind a piece of chain around their hand and leave about a foot hanging out the other end and that's what they were swinging. But the boys tore the carnival down, I remember that real well.

BC: Were you there?

SB: I was on the outskirts. I was not ready for any of that stuff.

BC: But you were there that night?

SB: Yes, I was there when they tore it down. As a client rep on a crew like that, or a Field Supervisor, I knew all the boys, knew all their names after all those years but you didn't really mix with them that much. They didn't feel right with you, you didn't feel right with them. I used to mix with the Party Chief and the Party Manager. But the boys went their own way and they wanted it that way. They had the idea they couldn't act naturally if somebody was a round. They didn't even mis with their own Party Chief.

#205 BC: Well, I think this is the way it usually is?

SB: That's right.

BC: You have to have some time when you don't have your supervisor there and as a supervisor you can't really be too easy one night and then the next day, call them on the map. It's part of management.

SB: That's right. It's the old story, familiarity breeds contempt. It's exactly right.

BC: This Dick Mercer and Jack McCullough, can you remember any stories about them and their association with you while they were with this crew at any time?

SB: Yes, Dick Mercer and I one time, we were out at Hanna and it was very strange, the Chief Geophysicist at California Standard and Francis Hale was a very religious man, a very nice man but his was of life was different than ours. So he brought the Vice-President of Western Geophysical from Los Angeles with him, I'm trying to think of his name. . .but he was really a good fellow. Anyway the day before Mercer and I had gone into the bar and we met a couple of ladies there and we got whooping it up pretty good, during business hours too. The next morning Francis Hale and Dick Mercer's boss from Los

Angeles so we went out in the field and worked all day and that evening we went in to have a glass of beer. Mercer and I were sitting in this bar and these two girls came over and they said, oh boy, did we have a ball yesterday and [snicker], Mr. Hale was absolutely mortified because I was married and Mercer was married too. We hadn't done anything seriously wrong but Mr. Hale didn't appreciate that very much. But the Vice-President knocked on my door about 9:00 and he said, he thought that was very humorous, you and Mercer would have loved to be anywhere in the world but there. And we saw those two girls coming too but we couldn't get out of there. But Jack McCullough too, his wife was from Rocky Mountain House and she did not like the geophysical business because Jack was away from home all the time and he was pretty wild. One time he quit Western and went back and he had a little garage on the road there by Condor, which is around Rocky Mountain House and I stopped in there one day with a bottle of whiskey and she spotted me going in the back door and they had a little house. And she come running across that prairie as fast as she could go and she said, Spike Brown, you're not going in there because I know what you want. You want to get him out of here and back to work for that outfit. Anyway he finally came back anyway but he stayed a few more years and then went back home because it wasn't a way to raise a family.

#242 BC: This must have been very difficult on you and raising your family, how many. . .?

SB: I have two boys, one's 24 now and one's 21. It was hard, it was really hard, it was harder on my wife than it was on me. I don't know, I never even thought about getting out of the business, it never even occurred to me. I enjoyed it.

BC: Your wife never pressured you?

SB: Somewhat but not really. She knew I enjoyed it and we were making a good living at it and so I just stayed there. I never seriously thought of getting out, I never tried it.

BC: With your boys today, do they ever say, we wish you'd been home more when we were young Dad.

SB: Not at all.

BC: They didn't miss you as a hockey coach?

SB: No I did things like that too. I coached a hockey team for them and when I was home I packed their hockey team all over that area you live in. I was the only one around there that did. When I was home, I made a special effort.

BC: You did get home at times then?

SB: Oh yes, I would get home. I wouldn't be home that much, I was out there all through the week, but sometimes I'd get home on the weekends, I'd pack the hockey team. . . I sponsored the team over at Spruce Cliff for years. And things like that you know, so my boys have never said that to me. My oldest boy is in the same business I am and he's in Vienna Austria. He's been with Chevron, was with them 2 or 3 years, then he got this job and he's gone to Austria, he's on his second year over there.

#266 BC: What is he doing in Austria?

SB: He's a field engineer and they're seismagraphing the Austrian Alps, so he's living right in

Vienna. So it couldn't have been that bad because he wanted to get in it, he didn't go to university, he went to Tech and got a diploma in telecommunications but he wanted to go in the same business I did right away. And my youngest boy, he worked in the geophysical. He didn't like it much but he did it and now he's taking geology at university. I think they might have missed me but it's never really been said.

BC: Let's look at your years with Cal Standard, some of the people that you worked with during those years, perhaps some of the other parties. Some of the people within Cal Standard and some of the people from the various seismic crews.

SB: There are several fellows at Cal Standard now that are still there that I know really well. Well Jerry Henderson who is now President of Chevron, came to work with us as a geologist in about 1954 I think. Jerry has a doctors degree in geology, a fine person. Bill Bannister who's now Executive Vice-President, he was a geologist during those days. George Grant, George Grant is a neighbour of yours over there.

#290 BC: Don't run too quickly past these people, let's look at your first gentleman?

SB: Mr. Henderson. In fact Jerry Henderson is the first Canadian ever to be President of Chevron. In the old days the President was always an American because it is a subsidiary of Standard Oil California. We watched Jerry go up through the ranks, in 1955 I had a geophysical crew working in the Race Horse crew north of Coleman and Jerry was doing surface geology there, right out of university. And George Grant, who is an executive there now, was on that crew. Bill Bannister was in and out of there, coming to visit the crew. And they were doing surface geology along the foothills, all the way from Nordegg to the American border in the summer of '55. Another old friend of mine that's there, Bob Flower, he's a senior geologist there, he's been there all his life.

BC: He was on this crew too.

SB: Yes, they were all together. And a geophysicist, Heinz Agnew, who was at Chevron before I got there, he is still there in an executive position. Dave Miles who was Chief Geophysicist, now vice-President of the polar region. He was the first Party Chief of the first geophysical crew that ever came out and I was the client rep on that crew. Those are the fellows who have made a career at Chevron, they're all still there, they're all fine, fine people. And then another friend of mine, Jack Muir???

BC: And they were all on this crew down. . .

SB: Yes they all worked out in the fields with us. We were all out in the field. We were the original nucleus of Chevron. All those people. All of them are there over 30 years now. The odd one is retired. John Grey??? who is one of the senior geologists in this whole country was Personnel Manager when he retired, he is retired now but a fine, fine person, John. And he is one of the old time geologists of Alberta in the oil business here, John Grey.

#333 BC: How successful was Cal Standard during the time that you were with them?

SB: Well, they spent an awful lot of money but you see, we got in a little late because of our involvement down in the south country, Taber and that. We were a little late, the barn door had nearly closed by the time we got to going. They had just about closed the door

so as a result we were a little slow. But then we got into the Joffre field around Red Deer, and Pembina, things like that and then naturally here in '73 when they got back into the field there at Edson, why everything straightened up. But Chevron never did really surprisingly do much Arctic work either. Where Gulf and Imperial and lately Dome have been big operators in the Arctic. Well Chevron never really has done a lot of Arctic work. So they concentrated theirs around the known fields mostly because they were a little late getting in.

End of tape.

Tape 3 Side 1

BC: This really then, the decision to work down in Taber really stifled Cal Standard for many, many years.

SB: Yes, it did, it really hurt them but then they got into as I say, the know fields and things progressed and Chevron has done very well. Chevron today, has done very well. This downturn in the last few years hasn't affected Chevron at all because, being a subsidiary of Standard Oil of California, they don't carry any debt load so they have not reduced staff or anything. People that are still there all the years have had very secure positions there.

BC: Let's talk about, you mentioned Joffre, you mentioned it a couple of times. When did Chevron move into that are, could you tell me about it?

SB: Chevron went into Joffre in I would think, around early 50's. The Joffre field was not a very prolific producer.

BC: Could you just place it for the tape, exactly where it is?

SB: Joffre is just northeast of Red Deer, maybe 10 miles. There's a big coal deposit there also that they've talked about developing. But the Joffre field was never a prolific field, it was never as well known or as big a field as Pembina or Leduc or Redwater or any of those, it never was as big but it was a step in the door. And then Chevron from there moved on and the got into. . . .

#015 BC: Did they discover Joffre?

SB: Yes.

BC: Can you tell me about that?

SB: Well, I know we seismagraphed around there. We did structure tests, hoe work and geophysical work for years, around the Gull Lake, Red Deer and Joffre areas for years and then when they drilled a few wells. . . . They're shallow oil production there. They finally got a little field of their own going so that was a start, but the amount of money the parent company had put up. . . . People complain about the American influence in the oil business, this is ridiculous. Without the American money and originally the know-how, which Canadians have themselves now, but without the money, I don't know where the oil business would be today. I don't care what the government says about Canadian

ownership, it's nonsense. Free enterprise is the only way to go and you can see why people are hurting today. In those days too, everybody had a good job and we enjoyed life and you could go and you could work, work, work, that's all you knew how to do and everybody enjoyed it. Today young people that want to do the same haven't got the chance, it's not right. And I'm not here to politicize but I think it's disgraceful. So as a result we moved from Joffre up into Edson and all those areas and then they got up into Judy Creek and those places were big huge gas fields. And then Chevron started to build, they have a huge gas plant there, they have a gas plant north of Edson, they have gas plants and they more diversified their operation. And now in the North Sea and things like that, Chevron is a very successful operation and the expertise. . . it was very interesting to me to see these boys come from right out of university and go through the training process and climb the executive ladder and get these exalted positions where they are today. Through nothing but intelligence and really hard work and all of them that I now have done it the hard way. I don't know of an executive in an oil company in this town that hasn't done it the hard way. I don't think it was as hard mentally and as much strain in the old days as it is now but we used to really work and people seemed to think that because you were in the oil business you were getting big money for doing nothing. There would be nothing farther from the truth than that, you produced or else, you produced.

#039 BC: You worked 50 weeks out of 52 but your crews that were out there, how much. . . were they working 12 hour shifts or 8 hour shifts or what were they doing?

SB: No the field crews go to work at 7:00 in the morning and in the summer time, maybe come in at 9:00 or 10:00 at night, 16 hours a day. And in the winter time we'd go north and it's not uncommon even today for a geophysical crew to put in 400 hours, not uncommon at all.

BC: That's in one month.

SB: One month. Mind you , they pay them for it. 191 hours is the minimum, so they pay them 191 hours and everything over that is overtime and room and board is free, so a young fellow can go in there and make a lot of money.

BC: The room and board is free because they now provide camps.

SB: Right.

BC: Let's look as I say, at some of the people that were working. Cal Standard didn't have their own geophysical crew, they always hired crews, did they?

SB: Yes. And then in about 1955, the Parent company, Standard Oil of California formed Chevron Geophysical Co. Which was a geophysical company strictly to do work for the parent company, for Standard Oil of California. Then they sent a crew from Texas up to Calgary and they staffed it. People out of the Calgary office took over the crew and they hired all Canadian boys. The instruments and the trucks came from the States but the whole crew were Canadians.

#056 BC: What did these Americans do that came up?

SB: They just brought the stuff up and went back home. We completely took the operation of

the crew over.

BC: And that would be one geophysical crew that you had of your own?

SB: Yes. Chevron Geophysical crew and Dave Miles was the first Party chief on that crew and Heinz Agnew was his assistant and Jack Muir was the observer. Those were all career California Standard people and they went to work on the Chevron crew.

BC: Can you remember where this first crew went?

SB: That was in Lacombe.

BC: Do you know the year?

SB: I think about '53, in around there somewhere. I'm not sure about that but I know there office was across the street from the Lacombe Hotel.

BC: Why did they decide to do this?

SB: Well I think they probably felt that they could get better technical data out of their own company crew. But we found that the company crew cost them a lot more money than a contractor did. For one reason. Because it was a company crew, if there was a real rough are where the terrain was difficult, they wouldn't send the company crew to it, they would send the contractor.

BC: Why?

SB: Because they were protecting their own company crew, their own company equipment, things like that. It was an inherent thing, they protected the company. And contractors used to laugh and say, you guys make me laugh. You do all the flat work and we do go up over the mountains. And it was a known fact, they did. And Chevron never did get too big with the company because they've only got two, right to this day.

#074 BC: They still have two though?

SB: Two, yes, an old friend of mine who died, I should mention him, his name was J. O. Hayes, we called him Bud. Buddy Hayes was a lovely man. He became Canadian General Manager for Chevron Geophysical and he died very suddenly of cancer here three or four years ago. Fine fellow, Bud. But he started out with California Standard, went to Chevron as a General Manager for Canada.

BC: What advantage would there be to having one geophysical crew, when you say you were supervising 15?

SB: In the early 50's, we had 15 and then in the middle 50's there was another downturn in the business. We had, GSI. Geophysical Services Inc., we had about a dozen crews of their's alone. And then we had other companies like Sub-Surface Exploration and Western and United and all those big American companies. They were all American companies. There were no Canadian geophysical companies at all in those days, very few.

BC: Why?

SB: Well, I think it was a matter of economics but Northwest, as I say, was a Canadian company, I think it was one of the first Canadian Seismograph companies ever to be formed. But all the big companies were from the States. But then in those days, in the early 50's, the Chief Geophysicist of Shell, a fellow named Ted Rozsa, he left Shell and started Frontier Exploration, became a Canadian citizen. And after that there were several Canadian companies formed, some that are in existence to this day but in the old days

they were all Americans.

#095 BC: So what would you find as the Field Supervisor, when you had a Chevron crew, one Chevron crew and how many non-Chevron crews would you have to supervise?

SB: I think probably 7 or 8 in those days.

BC: This would be by the mid 50's.

SB: Yes, there was a bit of a downturn and naturally the company crew kept working, no matter what, the company crew always worked, the other contractors would get laid off or whatever but the company crew always worked. If they had any work to do the company crew did it. And yet the contract crew would do far more work a day than the company would. There was more incentive.

BC: Did this not bother you?

SB: Oh, yes it bothered us, sure it did.

BC: What did you do about it?

SB: Well we used to complain. That company crew, those contractors are making us look really bad because there was an incentive for it and the people that supervised the contract crews made sure that the contract crew did more than the company crew did.

BC: They were paid by the mile were they?

SB: Yes, and they'd stay out longer hours. And no way did they want their company to look poorly in comparison to the company crew because the company had a more relaxed atmosphere because it was all in the company. Why go out an bust your butt when you were all working for the company the same. A contractor was trying to build a reputation and keep it up so he made sure that his boys did it.

#110 BC: Did you find that the contract crews, the men made more money because of that?

SB: No I think the pay was probably equivalent but the company crew wouldn't put the overtime in that the contractors did. No way, the company crew had a set number of hours a month and that's what they worked. A company crew, 20 day work and 10 days off and on the 20th day, they were all gone, where a contract crew, if you had a commitment to drill a well or something, they would stay and not even bother with their time off. They would work, where a company crew they shut down right the day they were supposed to.

BC: I'm surprised that a company like Can Standard would allow that to go on for very long. Why did the continue the practice?

SB: And they continue it to this day. I had a crew in Manitoba three years, my own son was on the crew and the Party Chief came over to me and he said, Spike, I don't believe the number of miles you guys are shooting today, you're making me look terrible. And I said, Charlie what are you worrying about, you're a company crew. I said, here's the difference, my surveyors are paid by the mile, my drillers are paid by the foot, my recording crew is paid by the mile. You guys are on a set hourly contract and they don't care whether you shoot two miles a day or two hundred. Where my boys are getting paid by the mile, there's no way you'll ever catch my crew, ever, not working with the company crew. Until the company changes and says, okay you're going to shoot by the

mile, put you on a turnkey??? basis, then they will go and do it but they won't. And a company crew will hire them by the hour where a contract crew you very rarely hire them by the hour, you hire them by the mile.

#130 BC: Why would companies have company crews then, when obviously it doesn't look efficient?

SB: What they essentially were trying to do, I think they originally thought the quality of the day they were going to get was going to be better, and it wasn't. Then I think probably they thought they might train people to come to work for the parent company and it didn't work out because geophysical people are more of a transient bunch of people unless you get to be a professional at it. The turnover in crews is unbelievable.

BC: They didn't use it as a training ground fro geophysics, for instance?

SB: No way. They put what we call a bird dog on a crew, a junior geophysicist out as a trainee. To me it's ridiculous because he goes out there and he has a superior attitude anyway. He thinks he's got a college degree and because he has, everybody's not as well off as he is and he thinks he knows more than everybody and to me it's been nothing but trouble all my life.

BC: So did you find these company crews gave you a lot more trouble than they're worth?

SB: A lot of trouble, nothing but trouble. In fact, it's a known fact, Chevron is the only company crew, I think, Shell had five or six at one time, Shell has got one left, Gulf don't have any, Imperial Oil don't have any. None of the major oil companies have their own crews any more because they can today hire people with technical expertise in a contract crew that they can't exceed anyway. They can match it but they can't exceed it.

#148 BC: Did you try to get Chevron to change this attitude?

SB: No it wasn't my place. I just did what I knew I had to do. And I didn't try to buck the system, if that's the way they wanted it fine, but I had a lot of disagreements with Chevron personnel that came out, that were rude to people, or were incompetent, and we just wouldn't have them.

BC: Can you think of any particular incident like that, that stands out?

SB: Yes, we had a fellow from Stanford University come out to the crew, blue serge suit on, white shirt and tie and his shoes all shiny and my friend, the old Englishman from over at Western, we were shooting refractions in the foothills so we had this hole drilled with 2,500 pounds of dynamite, that's a lot of dynamite. We were doing refractions, see the recorder would be five miles from where the shot was being fired. So I said to Jack Dempsey???. . . . and after we drilled the hole and put all the dynamite down the holes. . .we used to drill the deep holes 500 feet you know, well you'd fill the hole full of water and drilling mud and everything you know, to keep the dynamite from floating up the charge. So I said to Jack Dempsey, now when that college boy gets around the shot point, I want you to fire that charge without him knowing it and we'll see what happens to him. So Jack said, when I start whistling, you take off. He was a shooter, Jack, an English friend of mine, over here at Western. So he started whistling and I vanished immediately and this fellow was standing by the hole and we had a case with steel casing and that hole

blew with all this powder in the hole and the casing went about 1,000 feet straight up in the air and all this water and mud and everything went up and he stood there and the casing went right by his nose, it was so close. And it scared him so bad, he didn't dare move, and then all this water came down and just covered him and we thought, well we fixed you, you SOB, we got even with you. So we were in the motel that night, it was summer time, and I was telling the boys, I said, we got him, Jack was laughing and I said, we got him. And this fellow heard me. He didn't say anything for 4 or 5 years but he did mention it again that I had deliberately done it to him and I admitted it, I said, sure we did, because you had it coming. He laughed later on because he realized he did have it coming too. And another time, another fellow came out with us, all dressed up, with his shirt and his shoes and we were down in race Horse creek. Well you built your own roads for 11 miles to get to work. Dave Miles and I were riding a long and here is this chap sitting there and we got the jeep stuck. So we got out and cut a log down and put it underneath the back wheels and got another log and we were putting it.. . . and this fellow was sitting in there, he was junior to Dave Miles and finally Miles said to him, get the hell out of there and give us a hand. And here he was with this suit on and I goosed this jeep and it came out of the mud hole and he fell face down, right in this huge mud hole. So Miles said to him, it serves you right, coming out in the field dressed like that. But those were the things you had to put up with, they came out of college and treated you like some kind of a country cousin. But there were ways to get even with them, we always managed to find something for them to do.

#185: In the middle 50's we had a whole bunch of GSI crews and I mean a whole bunch, probably 10 or 12 crews, all GSI. But they were slowly. . .they had been with Chevron for years and they were slowly getting out them of the business as far as Chevron was concerned. They more went to different contractors to give somebody else a chance. And Western Geophysical, they had a crew, Western F-11 was with us 11 years straight, summer and winter. And as a result a new company started up which was called . . . it wasn't Can West, it was before Can West, it was. . . . Ted Rozsa left Shell as Chief Geophysical and started up a company called Frontier Geophysical and he had . . . his partner was Wilf Bailey and there was Wilf's brother Dick Bailey, who is now the owner of Norcana Geophysical. Jerry Sykes, who is now the Exploration Manager worldwide for Intercity Gas and Joe Johanson, who is a math instructor at Tech. And they trained a whole bunch of people and put them in this business, they were really good people. But I remember, up at the Idyllwild flats, which was west of Caroline, this Western crew had been with Chevron for 11 years. And my neighbour was the Canadian General Manager for Western Geophysical, so the company said, okay, we're going to take these two crews, Western and Frontier and put them in the same area. And the one that does the best job is going to stay here and the one that doesn't perform so well is going to go. But no one was to say anything. Naturally Frontier was just a new company with new rooms???, sweep clean, and there was no way Western could touch them. Not that they were in the doldrums but there was no way they could touch these boys, they were really hot to go. So as a result Western lost the contract after all those years and my neighbour was very put out, he thought I should have told them what was happening and I didn't

dare. So then we went from there.

#220 BC: What was the name of your neighbour?

SB: Don Prisby???, he's now back in the United States. But Chevron used Western for many, many years and it was funny, they never used Western very much after that, to this day, they have used them very sparingly and Western is a very. . .excellent company, actually. I don't know what happened there. Norcana, which Dick Bailey owns has been working for Chevron for years and years and years. In fact, any contractor that's working for Chevron, it will be Norcana. But they do good work.

BC: But Frontier, what happened. . . ?

SB: Frontier was sold out. Ted Rozsa retired and Wilf Bailey retired and then Frontier was sold out and a company called Can West, which was Ed Rutledge and a fellow from Shell that Ted Rozsa knew named Joe Little. They started up a company called Can West Geophysical which was a prototype of Frontier. And subsequently Can West sold out to, I think Golden Universal in the States.

#239 BC: What times would you be looking at?

SB: I think you would be looking at the middle 50's, maybe a little later than the middle 50's.

BC: That Rutledge started or that Rutledge sold out?

SB: It was probably a little later than that because I know when I left Chevron in '62, one of my friends went to work for Can West but Frontier started right in the middle 50's. And they put five crews out and did really well but Mr. Rozsa retired and so did Wilf Bailey. Can West came along in the early 60's, I know that and it has subsequently turned into Quest Geophysical which Ed Rutledge owns outright. And Alexco??? is a shoot off of the original, of Can West. But all those people are still active in the business, all of them. Ed Rutledge is very intelligent, a lot of experience. He worked for Pan Arctic for several years as their Arctic expert, very highly regarded. He has had Quest geophysical for now, I would say, 8 or 9 years.

BC: Did you work closely with him or was it mostly over the phone type of thing?

SB: No, I would go out in the field and see the crews, I knew them. I would go out and watch their performance and look at the records and all that. But you see the geophysical industry changed. Everything was done by the hour. They would charge you so much and hour for your recording crew and your survey was extra, your drills were extra, your dynamite was extra, everything was extra. Then GSI in the middle 50's. . . .

#266 BC: This is how, when you first were starting, that's how it was?

SB: Yes. But GSI, now they're probably not going to like this very much but GSI was the first ones to come in here and start bidding geophysical jobs turnkey???, which is by the mile. And I know at Chevron, they didn't bit them by the mile, they bid them by the hole. So as a result the whole industry changed because if you're supervising a crew and they're shooting turnkey, you cannot go out there and disturb or disrupt their operation unless they're doing something flagrantly wrong. They bid it by the mile, you have to show them what you want done and you have to watch them, but by the hour, if you want to do

experimentation, suppose your record quality is poor, then you can afford to change the hole depths, go to pattern holes, do whatever you like. But you cannot do experimentation on a turnkey crew because the geophysical contractors will not stand for it.

BC: They're going to lose money.

SB: That's right and as a result, I would say, some of the big companies still, will not ask for bids turnkey. Gulf is one, Gulf will not to this day, ask for turnkey bids, they always bid it by the hour.

#287 BC: In doing the turnkey type of bid, would there not be a danger of missing something?

SB: Not really missing something but very speculative. If you bid a job in the foothills and you didn't scout it properly and you didn't know what you were doing and you bid it too low and then the weather changed on you or the terrain was too difficult for you or your equipment wasn't proper, you could lose a lot of money. Now on the plains a turnkey job is the reverse. You could make a lot of money on a turnkey job if you had everything organized properly.

BC: Is this when it started, when they were doing a lot of work on the plains?

SB: Yes, that's when it first started, then they got into what we call roll along geophysics, which I'll never forget the first day I saw one. They had . . normally the old time geophysics, we drilled a hole every quarter of a mile and the cables were out a quarter mile on each side of the hole. So your sub-surface coverage was only half of that distance. So one day up at Lacombe I was out and it was a Shell crew and they had a hole drilled every 220 feet and they had ten miles of cable laid out. And I had never seen it before and I came in and phones Francis Hale, the Chief Geophysicist of Chevron and I said, Francis, somebody is shooting something up here and I have never seen it before. And so he explained what it was and he said, you sure you haven't had a few drinks today, Spike, and I said, no. So that was the first roll along I had every seen whereas roll along is standard procedure now, where your sub-surface coverage is total, depending on the number of holes.

#314 BC: Who was the head of that crew do you remember?

SB: I don't know how it was, I don't know whether it was Shell's own crew or who it was. But I did notice some shooting going along and that's the first one I ever saw.

BC: And whereabouts was that?

SB: Straight east of Lacombe.

BC: Do you know what year that would be?

SB: It's pretty hard to pin down a year now but I would imagine it was around '57, '58, somewhere in there. Now roll along today is standard procedure, everybody shoots roll along. Now depending on the coverage you want 1200%, 2500%, depending on the number of holes per mile, your sub-surface coverage is total. And it's all tied in with . . . .when the geophysicist switched over to computers, like in the old days, we shot a hole and we had a tube of fixer and a tube of developer and . . . .not a tube, but a tank of fixer, developer and water. And what you shot was what you got. And you put it in the fixer

first and then the developer and then the water and then at night the clerk hung them up or some of the junior people, namely me, most of the time, hung them on the line in the office and then you rolled them on a broomstick to get the wrinkles out of them. But then they switched over and when they started switching over to computers, that's what roll along did for them, they could not interpret the data properly without shooting roll along and having the computer background to it. That's exactly why they did it.

End of tape.

Tape 3 Side 2

BC: Why would it be necessary. . . .you mean really the computer changed the geophysical business?

SB: Yes, absolutely, the age of the computer changed the geophysical business. Today the sensitivity of the instruments and the techniques involved are so complicated, old timers like me, we haven't really got a clue. I can go out and get the acquisition of the data in the field but as far as me going into a computer centre and programming it or whatever, I might as well stay home because it has passed me by. And at my age, I am not concerned. It's the age of the younger people and the results today are fantastic. The seismograph has been. . . . in my day, in the early days, I think most geologists figured well, maybe, it is a valid tool, but I think most of them thought maybe there's a little witchcraft in here too, but now it's universally accepted and proven so over the years too.

#015 BC: Yes, even the fact when you called them the doodlebugs, it's the idea of witching, isn't it, you really were thought to be shysters a little.

SB: Yes, that's right, but the techniques today, it is a very complicated technique and very complicated. Some of the people involved in it are world renowned.

BC: Scientists.

SB: Scientists, oh yes. In fact, all the big companies would have people who are world renowned. Like Chevron has a lab at ??? California, where all these techniques are worked out in advance and they get into stuff now that are beyond belief. It's just the same as the space age, it's the same thing, we got into the space age, you couldn't believe it, it's the same with this too.

BC: If I could go back to the shooting by the hole and by the charges of dynamite as they used to and then when the turnkey idea came along. Why did that change, why did it change to the turnkey and do you know who was the first company to do that?

SB: I think that GSI was the first one, as I said before, to do the turnkey business, as far as I know. And I think it was an economic thing originally. In the middle 50's times were

tough and GSI, in order to get work, I remember at Chevron, they came over and they offered to shoot at $90 a hole, I believe 10 holes to the mile or maybe 12, which is $1,080 a mile, which today is not bid that low really. And in the downturn you'll find, it seems unfortunate. . .in the downturn, instead of the price remaining steady, where people can keep their head above water, geophysical companies, if they are in financial difficulties, they will bid it so low, they can't possibly make any money and they get themselves in more trouble. I've seen more than one company go broke because they bid everything too low.

#038 BC: With this first start of the turnkey type of bidding, were there quite a few companies went under at that time?

SB: Oh yes, there were.

BC: Can you think of any?

SB: We had five crews at Chevron for a company, and I can't think of the name now, and you could see they were going to go broke, you could see it. One winter instead of hiring the cats to do the work and pay them by the hour, they went and bought them. So the cats sat all summer, it was a ridiculous situation, there was no work for them in the summer and here they were saddled with this. And they were all driving big cars out to the field and . . Sub-Surface Exploration, that's who that was, they went broke. There were several of them went broke, probably 15 or 20 but I can't recall the names right now. If I looked back I could. But it was tough. So as a result, when GSI started turnkeying, everybody started turnkeying.

#049 BC: And some of them weren't really prepared to be able to do it?

SB: Well, they could do it but they underbid it to start with. I can remember telling my boss at Chevron, I said, I think this is ridiculous, this is going to kill the industry. . . to take a bid that low, you know. Why the clean-up people that were cleaning up our lines were making more money, well were making nearly as much as that, $750 a mile around Rocky Mountain House and that was just to clean the trees up. And here were these people shooting for $1,000, or $1,100 a mile.

BC: And how many people would they have to hire on their crew?

SB: Well the normal crew is around 25 people. The thing is, as a result, the geophysical company would ask the drillers to bid it by the foot. Normally a driller worked by the hour, so they bid it by the foot. So in order to make a decent living, they had to work really hard and it was strange, it was unbelievable, the footage went absolutely up, because they couldn't make a living on this. So it made us wonder, why weren't they drilling these holes all these years.

#060 BC: I was going to ask you, what difference did it make to the . . . .?

SB: It increased production all the way around, at least double.

BC: Was it as thorough?

SB: Some companies it was, yes. Not all companies, but it was pretty thorough. The production, like today, six miles a day is an average day, well in the old days, when we

did quarter mile spreads, we used to shoot 2 miles, 3 miles. Now it's 6 miles is the minimum. Some good crews will shoot 10. I was with Lee Geophysical, we shot 600 miles in 30 days in grande Prairie, all road allowance and it never rained once. And we had it all laid out where the surveyor was turnkeyed, the drills were turnkeyed, the recording crew was turnkeyed and all the employees, the observer was contract, the shooter was contract, so everybody was making good money and a lot of people, don't believe that, but we can prove it, we shot 600 miles.

BC: What year was that, do you remember?

SB: It was about 1979. We had several days, we shot 25 miles.

BC: You should go in the Guinness Book of Records.

SB: Well I tell you it was unbelievable, but we had everything planned right down to. . . everybody knew exactly where they were supposed to be, the drillers, the surveyors, the chaining crew went out and did their bit and the surveyor did his, the drills just drilled holes like you wouldn't believe. The drilling was really good up in that area, then the recording crew behind. They put extra people on the recording crew but it certainly paid off.

#077 BC: So this turnkey that came in in the mid 50's really did a service, it made people. . . .

SB: It depends who you are. It did a service to the oil companies but to the contractors, as I say, on the plains, some of them made a lot of money, but others got into difficulties. Companies that started out with a lack of executive personnel really got into trouble because they underbid the jobs to start with, then the terrain was bad, the weather was bad or they couldn't. . . .and they were the ones that got in trouble. Even today, with this serious downturn, some of these companies have just closed the door for the summer. Mind you, they'll always get a job in the winter, no matter how bad they are because there's only a certain number of crews available. But some of those smaller companies, I don't know how they keep their head above board by doing it this way. I'm surprised there hasn't been more companies go broke in the last year.

#088 BC: Looking at the work that you did, we're still with Cal Standard or with Chevron, this, what you called the roll along which came in, you were working east of Lacombe at that time.

SB: Yes, we hadn't got into roll along ourselves yet.

BC: Did you very shortly after that?

SB: Yes, right away. In fact, Francis Hale came up there and had a look at it and said, I don't understand. See, the patent for the roll along belonged to Petty Ray Geophysical Co.??? out of the States. They had a patent and I think Shell were the first ones ever to use it, but I think shortly after that, the patent ran out. As soon as Petty Ray's patent ran out, well everybody jumped aboard. And you don't see anything now, it's all roll along, everything.

BC: Francis Hale, he was your supervisor?

SB: He was the Chief Geophysicist at Chevron.

#099 BC: We haven't talked about him at all?

SB: He succeeded Phil Gabey, Phil left California Standard and started up Delta Exploration which is now Seiscom??? Delta, which is a big, big company. Phil Gabey and his brother Ewing started Delta in Jackson, Mississippi and Francis Hale came up. He'd been all over the world, South America and everything, and Francis came up here as Chief Geophysicist to replace Phil Gabey.

BC: Can you tell me anything about Mr. Hale?

SB: Francis was a very nice man, very quiet, very devout family man, a lovely person, Francis. He might have been a little out of place with all us rounders, at times I know he was, but he was a fine, fine person and his wife Lois was a lovely person. They had two boys who were very young at that time. They were lovely people and Francis stayed here a long time, he was probably here 7 or 8 years.

BC: Was he there most of the time that you were with Chevron then?

SB: Pretty well, yes. And then when Francis left, there was a chap came in and he only was here a short while, a fellow named Tom May, who relived Francis at Chief geophysicist, but that's just about the time I left Chevron in '62. Tome was only there a matter of several months. Francis went back to San Francisco and when I was working in California in 1974 I called him up on the phone and he remembered my voice right on the phone, but he's retired now, living in the bay area as far as I know. Fine man.

#117 BC: Looking at some of the work that was done while you were there in charge of the field, were there any spectacular plays that you were involved with, that Chevron was involved with, that you can remember, that we should . . . .

SB: Not really at the time. We spent an awful lot of time around Joffre, which is just around the outskirts of Red Deer. And we had our own little filed there at Joffre. But there wasn't anything really spectacular. Chevron's most spectacular area was the Pembina field here back in 1974, I went back to work for Chevron as a consultant for 6 months. Somehow, that's when the incentives first came in and Dave Miles figured, well we're going to try. . . he figured all the wells were too shallow and he figured he might go down into the Devonian deeper, see what was there and his success was beautiful. As a result, everybody jumped into West Pembina, which is the Edson area and there was lines there, half a mile. . . we did lines half a mile apart both east, west and north, south, all winter long, it was unbelievable.

BC: Why did you want to do them . . .why was it necessary. . .?

SB: Well, they wanted really close control.

#132 BC: Was the sub-surface that tricky?

SB: Yes, I guess it was really. Small reefs, pinnacle reefs, things like that. Now Rainbow Lake came in about '65 and '66, they were pinnacle reefs. Chevron never did get into Rainbow Lake very much at all. Mobil and Banff Oil were the big operators in Rainbow Lake. Now everybody is in there. There was no offshore work at all in those days, not a bit, it's only a very recent thing.

BC: So in doing this, we've jumped ahead a little bit but that's all right. . .in Pembina, was

there anything different in the way that you had to work . . . obviously it had already been worked over once by crews had it not?

SB: Yes, but then the first well they drilled, the production was unbelievable. So as a result, everybody got into the act and then the government had some land sales, they put the land back up for sale and stuff that had been seismagraphed 20 years ago, everybody was in there just wild to go. So as a result, everybody moved in there again and it was all very hush, hush you know.

#148 BC: Did you look at the earlier records, because it had been shot over before, but not shot correctly, was this. . .?

SB: You see, the techniques in those days were not as good. The efficiency and the general improvement in geophysical instruments, I mean, it was impossible to find it in the old days. This way, with the new instrumentation and everything, it was right there and all they had to do was interpret it properly and it was there.

BC: Did you have a chance to look at any of the old records, vis a vis, the reshot records? Was there even and indication?

SB: No way, there was no indication at all.

BC: That's very interesting isn't it?

SB: There was no indication at all really. And yet those first records at Leduc, that reef stood out just as plain as could be. They were absolutely gorgeous and they were old string galvanometers and the original, old, primitive seismograph instruments as compared to today and yet the Leduc and Redwater fields, those instruments mapped that field absolutely beautifully. But in complex areas, like Turner Valley, is one in point, they still to this day, haven't been able to interpret Turner Valley properly. There's stratigraphic traps with faults, there's folds, reflections are bouncing from all over and it's one of the most complex oil fields in the world, is Turner Valley.

#163 BC: Do you think there's still something under there hasn't been quite looked at?

SB: Well yes. Then around 1955, we got into a foothills play. We started up at Grande Cache Lake, where the MacIntyre Coal Mine is now and we shot all along those foothills. We shot refraction seismic surveys in those days, where the actual recording . . . and I would be five miles away from where the actual holes were drilled and they were big charges, 2,000 pounds and all that, and that was a refraction seismograph survey.

BC: Why would you have the huge. . . .?

SB: Well you had to have it to do refractions properly. But the others are reflection seismograph. Now refraction work isn't done much anymore. But we worked up in those foothills from way up there, all the way right down into Montana. Well I worked there for 7 or 8 years and in the summertime, because of snow and that, every summer, as soon as the creeks would go down, in June or July, we'd go in there and work until the snow came.

#175 BC And this was all with Chevron?

SB: Yes. And it was funny, Chevron, Shell and Imperial. One time we moved out crew from

Blairmore to Grande Cache Lake, Shell moved their crew from Blairmore to Grande Cache Lake and so did Imperial.

BC: Were you working together?

SB: No, not working together but they followed each other around there for several years. It was amazing.

BC: There must have been some rather interesting incidents happen, when you were all kind of, who's going first.

SB: Well, I know when we went to Grande Cache Lake, we were sleeping in tents with wooden floors and all of a sudden this palatial trailer outfit pulled in there and there was Shell. It created a lot of animosity, the boys in my crew were very unhappy because we were hauling water from the creek and cooking on a wood burning stove and here was them in the lap of luxury and then Imperial moved in and they were the same way. So we put up with that one winter, right until freeze up and the next year we had a camp like everybody else.

#189 BC: Was this Chevron's way?

SB: Yes, really. They figured to do foothills work properly that you had to kind of rough it. Because it was extremely difficult to get the camps into those isolated places and if you did sometimes the camps weren't in there, they were 40, 50 miles away. Where with our camp, we could take it in anywhere and set it up and that was the main reason for it.

BC: What happened when you were 40 or 50 miles away?

SB: Well then you had to drive your trucks all the way out there to do your work and all the way back at night, so it cost money. And it was all helicopter supported in those days too. Mind you we didn't leave many cables in those days, but they do what they call portable work now, which is portable drills and they ready the cable with the helicopter and the boys stand on the ground and they throw the cable out the helicopter and the boys pick it up and hook the geophones up. That's portable work. But we had helicopters on every crew but we didn't use them as such. . . mainly we used them to ferry the boys from, once we got a camp, from the worksite to the camp and we would leave whatever vehicles we had or whatever equipment, we would leave it in the field and use the helicopters to get to work and back home.

#205 BC: How big would those helicopters be then?

SB: They weren't that big. They were the equivalent of a Bell 206 today or a Hughes 500, they weren't that big.

BC: How many would it accommodate?

SB: 4 or 5. We never used any of the big Sikorsky's, they do now.

BC: This would take a bit of flying back and forth then.

SB: Yes it would take 2 or 3 hours in the morning to get them all out there and 2 or 3 in the evening.

BC: That's a big waste of time and money.

SB: Very expensive. The going rate today on a helicopter I imagine, is around $6 or 700 an hour on a Bell 206. But actually by the time you drove everything, it wasn't really that

expensive. Oil companies are funny this way. They don't mind paying for something, if they think they're getting value for the dollar. It might cost a lot of money but if they figure out that it's not costing as much and the boys are getting to work and the thing is, if they have to drive 100 miles to get to work, when they get there, they're a little tired and at night, they're very tired. And the way it is, with the helicopters, you get out there, you're fresh and at night, they pick you up and you have your supper in a matter of half an hour. So really it pays off.

#221 BC: Did you sort of, the first out were the first in sort of thing.

SB: Yes, first out were the first in and you planned who had to go out first. If you were in a problem with surveying, you took the surveyors out first and depending what the recording crew was doing, the drillers, you know. The first out was the first in.

BC: In this 6, 7, or 8 years that you were working the foothills there, who was the Party Chief?

SB: That was that Western crew, that was Western F-11, with Dick Mercer, who is still with Western and Warner Loban, who is now Vice-President for Canada and General Manager of Western Geophysical and old friends of mine. And a chap named Jacques Cool???, Jacques has been at Western 30 years. They were all there and they are still there. But that Western 11 crew did all those refractions for us all those years, the same crew and the same bunch of people, with very few changes.

BC: You'd get to know them really very well.

SB: You knew them like your own brother.

#236 BC: Can you think of any incidents that happened?

SB: They were a hard drinking wild bunch of guys really. But they used to work. As a result we let them get away with things in the evenings, in Blairmore or wherever that were a little rowdy maybe. But they worked so hard and they weren't doing anything malicious, they were just young boys, boys will be boys. Nothing serious.

BC: Did you live with those crews or did you fly in and out?

SB: No I didn't live with them. If they had a camp I would go into the camp and I might stay a day or two. But if they were in a town, the whole crew would be in one motel. I never stayed in the same motel with them because it wasn't a good idea because if they got living it up or something you felt like you had to go and make them behave. And it wasn't our problem, it was the contractors problem. And they were all really nice people but a little rough and ready. But we had no trouble with them.

#252 BC: Can you think of any particular incidents that happened to the crew during those times that. . .

SB: Yes, one time in Hinton, the Chief of Police put a couple of them in jail. So he phoned me up to go get them out and when I went in to get them, one of the drillers was sitting in the Chief's chair. The Chief had stepped out from something and this driller was sitting in the Chief's chair with his feet on the desk. So the Chief come back and he said, let my boys out or there's going to be a riot. And the Chief said, there'll be a riot all right. So I

had a heck of a time smoothing that over. So the next day, they went up to an Indian Rodeo at Grande Cache Lake and it took 2 or 3 days to get in there in those days, and they took a bunch of whiskey with them. And these natives were having their own rodeo you know. . . and I remember I landed there with a helicopter and some of them had never seen them before. So the boys got whooping it up int he teepees with . . . .and I had to go and shut it down because there was going to be serious ramifications from that because they took that alcohol in there you know. But the boys were all entered in all the riding events and the whole thing you know. They were really hot to go but not bad people. A lot different than today where you have marijuana and you have drugs and you have insolence and lack of respect. In those days, when you told them to do something, or you asked them to do something, they couldn't wait to do it, they did it. And it wasn't a matter of a boss or. . . it was a matter of, all those years I knew them all well, they were friends of mine and they would do it and do it the best way they knew how. And they were so experienced that they would do it before you told them to in most cases. And they committed very few errors because they knew what to do.

#279 BC: Do you find today there's a big contrast, a lot of errors committed because . . .?

SB: Oh yes, you have to watch everybody today like you wouldn't believe. Some of those crews, like when I started out, it would take a man 10 years to get to be a Party Chief. I mean it, 10 years. We used to do interpretation in the field in those days, and he would write a report at the end of it. Or a Party Manager would be at least 10 years. Today, 3 months. Some of them run these crews today, they have no right to be there and they ruin, they wreck their equipment and their surveying is lax. . .the whole thing, you have to really watch them today. Because they can get you in all kinds of trouble, they can get the wrong lines or they can cut lines in the wrong place, disturb the forestry. You've really got to watch.

BC: Why do you think there's such a contrast in the people that you're getting out in the field today as against. . . .?

SB: Well, I'm probably going to be called a red neck for saying this but this is a permissive society and I have no time for the permissive society, no time. We take these kids into camp today, we pay them an average of $2,000 - $2,500 a month and feed them. There's too much money to start with. The turnover on a crew today is at least 50% a year because as soon as they get a few dollars, they're gone. Like a little thing happened to me here a month ago, practically on the Northwest Territories border. Five of them come in there with their automobiles, so we asked them to take their automobiles out, take them to High Level, take them anywhere you like, but take the out of there. Well there was a big to do about it but if they've got there automobile in there, they're going to go where the nearest alcohol is, they're going to go. So we made a fast rule, they're be no automobiles in camp and it's the only way to do it. It doesn't seem right that you have the right tot tell me I can't bring this car in there but we've had people killed doing it, we've had accidents, we've had everything. So as a result, we have no vehicles in the camp and they don't drive the company vehicles after they get in. You have a man go around and check that they're all there and if somebody catches you with a company vehicle, it's immediate

expulsion, immediate. And rightly so.

#317 BC: And you still can do that today?
SB: Oh yes.
BC: So what happened with these young fellows who wanted to take their cars in?
SB: Well, they objected very strenuously and we explained what it was and they said fine, so they took them out and they came back. They didn't like it, make no mistake about that, they didn't like it but that's the rules. And this is the thing. I was in the Navy when I was 17 and there was rules. I got into trouble one time for silent contempt, which is giving an officer a dirty look. Now that's ridiculous. But we have rules in there. We pay them well, they've got TV's now with a disc, where they can pick up 64 channels, they've got washer and dyers, they've got a camp attendant making the bed every day. So we ask them to keep their living quarters clean and we ask them to do this and that. And if they don't do it, fine.
BC: Now with the downturn in the economy a little bit, if they don't comply, you can say take a hike.
SB: And it's funny, in the downturn, the boys will comply because they know they can't get another job. The curious thing about a downturn is, it's a very callous way to live, but it separates the men from the boys. The old timers will survive but the young ones, they can't possibly. And yet you get some good young people, but I tell you, you see a real difference. If you hire 10 people, 5 are from the city, I don't care what city, and 5 are from the country. The 5 country boys will be head and shoulders above the others, without fail.

End of tape.

Tape 4 Side 1

BC: So you could just continue on the whole business of. . .
SB: Yes, where the country boys were far in excess is they had a little mechanical training or they could nigger rig something for you with a piece of baling wire and make it work. And they were interested in doing it. And another thing too, you see the city boys, and you can see it, it's so obvious, they are so spoiled, and you can see them. I've heard them say, what the hell am I doing up here, and they're absolutely unhappy as can be and they don't like it so we say, why don't you go home, you don't have to stay here. Whereas country boys or an Indian native, we have natives on this crew right at the moment, they're happy as can be to be there because they eat well and they get paid for it. But the city boys, they certainly don't work out. And it's funny, you can get them from every strata of society, it doesn't matter whether their families are really well to do, middle class, or lower class, it doesn't seem to make any difference and it's depressing, it really is.

BC: Yes because with the upturn in the scientific side of the crews, you really need. . .
SB: Yes, you'd think they'd want to learn something.
BC: And you really need people who . . . .
SB: It's partly our industry's fault. We have not trained anyone below the college level, ever. Drillers. . . surveyors, yes, and observers, but driller especially. If you ask 100 drillers why is he drilling that hole and putting that dynamite in there, you would get 100 different answers and some of them would scare you. But we've never trained them in any way and it's partly the industry's fault, really. And yet you give a driller $100,000 piece of equipment and say, go away, go and do it, what they do to some of that equipment would scare you.

#018 BC: Do you think that the time has come that perhaps some of these industrial colleges should be giving courses like that?
SB: Well, Tech started about 15 years ago, giving a course in exploration. It was very good, all the graduates got a job right away. But there's another problem, if you get to be a geophysical clerk in a big company, okay you're the geophysical clerk, all the data comes into your office. You catalogue it and everything, you do this and you do that and you plot shot points on a map but you don't have a degree. So where the hell are you going to go, you're going to be a geophysical clerk forever. And it's very rare to see a young boy go in today and end up being an interpreting geophysicist, it's very rare. Everyone is concerned with the college trained professional. And I have seen boys in my career that were absolutely heads and shoulders above any college trained professional I have ever seen. But there was not chance. I was one of the lucky ones really.

#029 BC: Yes, you're from a . . . .
SB: Because of Mr. Gabey, and George Blunden and people like that. I was very lucky.
BC: I think even when you were going in, there weren't that many non-college people being trained.
SB: No way. No, we used to recruit right across Canada, Chevron did, Cal Standard, and they were all college. In fact, we got on our little chair there, we would hire nothing but Ph.D.'s and it was surprising. The President of Chevron today is a fellow named Jerry Henderson, a very, very capable person and a fine guy, Jerry, he is the only one of those Ph.D.'s and we must have had 25 of them that's even still with the company. And Jerry was an exception. You could see from the first day he went there.

#036 BC: Those people that had the Ph.D.'s and went with the company, did they leave the company because having a Ph.D., they could move faster in another company?
SB: No, most of them didn't most of them left because they either felt their work was demeaning or they wanted to go into research or they wanted to go back and teach at university. They were academics, is what they were. And I know, we had a Jewish chap there,. . .
BC: I think you told me about him.
SB: Yes, Lionel and I know he felt the work was demeaning to him, I know he did. And he

was very poor at it, very poor, he had no initiative of any kind, it was disgraceful. But he didn't last very long, either.

BC: You were with California Standard up until 1962, now why did you leave them?

SB: I had a bit of a drinking problem in those days, and there was four or five of us over there that had the same problem. And we were from the old school, we figured what the hell, they can't run that outfit without me. But we found out the hard way. One day they called me in and asked me to resign so I did. But I still. . . I worked for Chevron since, I am personal friends with all of them still to this day, but I have changed my life style since too, I haven't had a drink for 14 years. Which had to be done. And in effect, what happened, somebody said to me the other day, it was the best thing that ever happened to you because it made you straighten your life out. And it did. I was absolutely horrified, I was heartbroken, where I grew up, I went in there when I was 22 years old. And all those friends of mine, we went in, it was small company in those days, we all progressed together, we were all getting along fine and all of a sudden you're not there anymore. It was a very traumatic experience.

#053 BC: Yes, because you'd come in when there were just the 25 or 30, at the time you left, how many were in that company?

SB: Probably 2,000. But they're all personal friends of mine to this day.

BC: Now, you wouldn't be asked to resign quite the same I don't think. They recognize that alcoholism is so prevalent that it's looked on as a health problem.

SB: They have had several people that I know of at Chevron, where they send them to this hospital in Texas, one girl and two men that I know of. And none of them managed to straighten their lives out, so they were forced to let them go. But I was never even approached to go. I used to do my work, I was slack, it could have been done better, but then I would smarten up and go and do it all just first rate. In fact, after I left there, I thought, I wonder what those people think of me. So a friend of mine had a little company of his own and he phoned and asked for a reference one day and I was listening on the extension and they said, he was the best man they ever had. So there was no animosity there. And then in 1974 they phoned me up to go back to work for them which made my whole life circle complete.

#066 BC: How long did you have an alcoholic problem before you. . . .?

SB: Probably 15 years.

BC: And it really had affected your work that much?

SB: Oh, yes. The thing was, I knew I could do it. And people who knew me well used to get mad at me, and say, Spike you can do it standing on your head and yet you don't. I was dreadfully unhappy, dreadfully unhappy, but one day I said, that's enough. Now I didn't quit drinking when I left Chevron, I quit drinking about 1968. I stumbled around and worked for. . . .I always had a job because I had a lot of experience and I was Party Managing crews, where I used to be the supervisor of the whole show, I was a Party Manager and things like that. But I took it because I knew in my own mind, it was my own fault, I put myself exactly where I should have been. So then one day in 1968 I

decided I'd had enough and I quit drinking and I've never had a drink since.

BC: Did you go to AA or anything like that?

SB: Oh yes, I've been going. I don't go to the AA much anymore, if a friend of mine needs it, I will go with him but I . . . . I shouldn't say I don't need it.

#078 BC: No, but that's what really got you back on the right track, was an organization, not just yourself?

SB: You can't do it by yourself, I've never seen a person do it by themself, no way. And AA is a strange organization. There's a lot of free loaders there. People think there's a magic formula to quit drinking and they've got the formula and there is no magic formula. The magic formula is that you look at yourself every day and you say, I'm not going to have a drink today. Yesterday is gone, tomorrow isn't here but you won't have a drink today. I had it really tough for about 3 months and after that it just seemed to go away and I've never. . . . I've got liquor in this house like you would believe because we entertain a lot but not me. Hopefully I will never have another drink, hopefully but you can't say that either. But the more I see it, the more it scares me.

#087 BC: That's one of the hazards of the oil patch I think.

SB: I don't think there's as much drinking now as there used to be. I don't know. Well, these crews today, if they get to town, they're pretty hairy and they're a different kind of people. We had fun at it, these guys fight and the entertainment in the bars is all rock music and loud stuff. There was no entertainment in those days. It's a different type of drinking today but maybe there's more, I don't know, because I don't frequent the places so I really don't know. It seems to me there isn't as much drinking as there was, maybe there's more.

BC: When you left, you then had to go as a consultant. Who did you work for.

SB: After I left Chevron, I went back to work for Chevron, they got in a little trouble in Pincher Creek. A bunch of ranchers down there asked where I was and they said, I was no longer with the company and somebody within the company made a very unkind remark about me and some very rich rancher, who is now the Lieutenant Governor of Alberta, Franklin Stutton???, his daughter worked with us. I knew Frank really well, he said, he was always a gentleman and always a perfect man, so he got together with a bunch of his rancher friends and refused to allow Chevron's crews on their property. So they hired me to go down and straighten the mess out, so I did that.

#102 BC: That's interesting. Was this just in 1962?

SB: '62. And then Clarence Copperthorn out here, somebody said, you and Spike must have had a good thing going on all those years. So Clarence phoned me up and he said, we're going to sue California Standard. And I said, for what, for defamation of character. So he told me what the guy said, I said, forget it. So we went to lunch and Clarence wasn't a bit shy about anything. He sued Calgary Power for a power line and took it to the privy council. I like Clarence, he's a fine guy. But I said, no forget it. So I worked for Chevron out there. Then I went to work for GSI.

BC: Now, just before we leave. You went out, how did you go about settling it for them?

SB: Well, I went to all these people and told them, what, we've been dealing with you for years, they've always treated you right and just because I'm not there. . you know. And so I talked them all into signing, it was fine, there was no problem. So I did that for them. I though I was going to refuse for awhile. Being an alcoholic, an alcoholic always blames somebody else for his problems, so I thought, I'll get even with you boys but then I sat and thought about it and thought, what, after all those years. They've been so good to you, what's the matter with you. So I went and did it for them and straightened it all out.

#116 BC: Incidentally, when you went to do that, you were now a consultant, what did they pay you, did they pay you more. . . .?

SB: They paid me a heck of a lot more money than they did when I was working there. In fact, I was making as much in a week as I was in a month and I didn't set the rate, they set the rate. And it always made me laugh. Like, when they hired me in 1974, they asked me to come down, so they asked me what me rate was and I told them, they said, no way, it's too much. I said, well, you phoned me, I didn't phone you. So that's all right, I came home and about 15 minutes later the phone rang and they said come on down, so I signed it and away I went. And it always made my heart sing because I was making 4 times as much money or more than that as I was when I was employed there. And I've never been able to understand this, why. But it's the old story about the oil business, make no mistake, when they need you, they really need you. And when your time comes that they don't need you anymore, you'll be gone. It's a very ruthless society, make no mistake about that. When you can do something for them, now this is not bitter, this is the truth. When they need you, they really need you but when they don't need you, you pack your bag because you'll be gone. I don't care who you are, top echelon or anybody.

#131 BC: Have you seen many people that have suddenly. . . good-bye?

SB: Hundreds. With all the big companies, Imperial, Shell, Chevron, Executive Vice-Presidents . . . make a mistake.

BC: Can you think of any particular. . . like chevron for instance, which you worked with, during the time you were there?

SB: Well, they brought a man in here as President of Chevron, just after I left, a man named Brown, and we should have been buddies because his drinking problem was worse than mine. And all of a sudden he went out. And the same as John Galloway before, we talked about Mr. Galloway figuring Taber was the big oil field. Well Mr. Galloway was proved wrong, he was of no more use and he was gone that same day.

BC: But there was a real reason there because obviously his judgement was. . . and he became obsessive. . .

SB: Yes. But the way they look at it, I would imagine, in a downturn, they say, okay, we've got this many geophysicists, how many are non-productive. And if you're non-productive, out you go.

BC: What about the Manager, the top man, was he non-productive, this Mr. Brown?

SB: Yes, because he would go into the bar as soon as it opened, stay there all day and out he

went.

#146 BC: Now that's a particular problem and you can see them having to do that, but I was thinking more of people that came in with certain qualifications and when they'd sort of used them up, they spat them out. Can you think of any of those kinds of situations?

SB: Yes, I've seen people that they've hired that weren't qualified to start with, that had a degree in Applied Mathematics or Physics, that didn't adapt and yet they hired them. So it was just a matter of, they do an evaluation of every employee yearly or maybe semi-annually and if you got a bad evaluation for a couple of years in a row, you want to be careful. Then when times got tough all these ones with improper evaluations, out they went. It's a very ruthless. . . .really you know. Another thing, when things are booming, they don't mind having people on staff because everybody's making money. But when times get tough, they're not making that much money and they have to report to their Board of Directors and their shareholders. Very adequate people lose their jobs because they cut staff. I've seen probably more very adequate people lose their jobs than I have the misfits.

BC: This is what I was really meaning, there were people who were good that leave for whatever reason.

SB: That's right. I've probably seen more of those than the actual misfits.

#165 BC: Sometimes for instance, when Mr. Galloway left and someone else came in, the tendency to gather your own about you, sometimes. Was there any of that happened at chevron, where there were other people that really left because they happened to be in the wrong camp?

SB: The man who replaced Mr. Galloway was a very austere man from California named George Knox. A career geologist, many, many years. And he was probably about 60 and this was his last place before retirement. And the Executive Vice-President was a man named Don Weir???, who had been a professor at the University of Saskatchewan and Don effectively ran the company. Don couldn't go over Mr. Galloway's head and he knew it was wrong but as soon as Mr. Knox came, well Don gathered all his people together and they physically ran the company for Mr. Knox. He delegated the authority but in those days most of the Vice-Presidents were Americans, except for Don Weir, then they switched around and they promoted Canadian people. So the head of the Land Department would be Louis Labelle, was a Canadian, Vice-President of Engineering was George Fernival, another Canadian. But you could see them, they were slowly bringing the Canadian people with ability up to where they should be and you find that with every company now.

#186 BC: So let's go on with your career after you had straightened out the ranchers, what did you . . .?

SB: I went to work for GSI, which was Geophysical Service Inc. from Dallas, Texas, who had worked for Chevron all those years. So I went to work with them as a Party Manager. I

didn't stay there very long and then I went to an outfit called Velocity Surveys, which is an old friend of mine named Freddie McConnell and Bob Grier. So I went to work for them and I was drinking pretty bad. So I phoned them up one day and said, I'm going to leave, I can't hack it anymore and they said, don't be crazy, you've got the best crew we've got. And I said no I'm leaving. So I did leave. And then I went to work for. . .

BC: How long were you with Velocity then?

SB: Probably about a year.

BC: Can you tell me anything about your time with them, you'd certainly known Mr. McConnell for a long time.

SB: Freddie was at Northwest Seismic with George Blunden.

BC: Yes, I was going to say, you'd started really, although you started before him but you were buddies from away back.

SB: That's right.

BC: Do you think that the fact that you knew. . . is this an important thing in the oil patch, having worked with someone there, someone there, you. . . .

SB: Absolutely.

BC: The old boys system. . . .

SB: I haven't gone looking for a job now for 15 years. No way, the phone rings and if it doesn't I just stay home but the phone rings. Two years ago we counted, I had 27 offers and I haven't gone in an office looking for a job for years and years because it's all friends you know. And the thing is, it took awhile after I quit drinking before they realized that I had put my life in shape but once everybody knew, and the seismic business is very tight knit, everybody knows everybody, and once the work got out, Spike's not drinking at all anymore, then I never looked back after that. No reason to.

#215 BC: Which of course made it much easier for you to stay off the bottle.

SB: Absolutely and I knew that if I didn't stay off the bottle, what the consequences would be because I saw friends of mine, some of them from Chevron, came to work for me after that and just did a terrible job and I had to get rid of them. And that one, he's been stumbling along, how he's still alive today, I'll never know but I knew the consequences of my lifting up that glass. Then I met Irene, I was divorced, lost my family, and lost everything and then I met Irene in Fort Nelson and I'd been sober about five years then and we were married right shortly after. So my whole life turned right around. And everything has been for the best. But I know what alcohol can do to you. I've often said, I'm going to write a book on the people I've known with an alcohol problem. I've seen some of them that would scare you. But it's not for me and why people have a problem I don't understand. Everybody said to me, you'll never quit drinking Spike, not you. And I did boy, and my Dr. Stinton??? up there, used to live up in Spruce Cliff, he's been an alcoholic counselor through his church for many years. And he said I was one of the very few he has ever seen that absolutely quit drinking and never had another sip. But it depends how bad you want it. If you want it bad enough you'll do it and I wanted it.

#237 BC: What made you, there must have been some job offer, something that made you

feel. . . .

SB: No it wasn't really that, it was my little boy, Randy, who is now 22, he was 7 years old, it might be 15 years now, I don't know but he was 6 or 7 years old. And I wouldn't see them for awhile, I'd be out of town, then when I'd go out there, I'd spoil them rotten. But one day I'll never forget it, I went up there and he looked right through me and he had that hurt look on his face and wondered, what's the matter with this guy, is this my father or who is this monkey. So I just quit, the next day, I quit. I got a little trouble with my car that night and paid a $450 impaired driving fine and I went into the Black Knight with an old friend of mine from Imperial Oil named Trevor Graham and I ordered a triple rye. He said, boy you're really getting after it today. I said, because that's the last one I'm going to have. He said, what do you mean, I said, I'm going to quit drinking, he said, when is this going to happen, I said right now. And that was it. It wasn't easy but it's all relative, how bad you need it. So during those years. . . .

#256 BC: When you were Party Manager you were out in the field then of course?

SB: Constantly. Then I went to work for. . .

BC: Whereabouts, what part of the country?

SB: All over, I was with GSI in Arctic Red River??? one summer, the first summer, 1962, I had a crew in the Arctic Red River. Then Velocity Surveys I had a crew at Whitecourt and then I moved to Stettler. And then after that I went back to GSI and had a crew at High Level.

BC: Where you working in any of these places, what oil companies were they working for?

SB: It's pretty hard to remember all that because the clients were always different. Then I had a crew for Home Oil one time, and George Blunden was Executive Vice-President for Home Oil. When they told him I was going to run the crew, he said, well that's great. But he told me on the phone, now listen, don't get us both in trouble. But I was funny, I could go into camp and stay there for 2 or 3 months and not have a drink and a bit salesman would come in with whiskey and no way would I drink it but when I got out, look out boy.

#275 BC: It's interesting that Mr. Blunden was continually coming into your life.

SB: Always come into it yes. And he recommended me to several places. I know he recommended me at Velocity Surveys and I just phoned them up and said I'm looking for a job. Come on out right away quick. And then I went from Velocity Surveys to a little outfit called Comanche Exploration, which was an old friend of mine from my United days, he owned that.

BC: who was that?

SB: A fellow named John Sweetnam??? and John had several field men that weren't very good so I went in there and straightened his mess out for him and I did pretty well with him.

BC: How long were you with him?

SB: About a year.

#288 BC: What would you have to do to straighten out a mess. What did you do?

SB: Well, you physically went in the camp and you started over. You started right with the basics, the chainmen, the surveyors, the drillers, the observers, and the crew.

BC: You would change the crew.

SB: Change everybody that had to be changed. . . . Yes, it was with Comanche, I straightened all that mess out. His Party Managers were drinking and big timers, so we got rid of them. Then after Comanche, I worked for . . . .oh yes, I worked for an outfit called Experalta??? a fellow named Jack Anderson who was an observer technician, very talented. But a poor businessman. I worked for him, Experalta, for a couple of years.

BC: Is his company still going?

SB: No it isn't, it's gone. It was mismanaged. He made a lot of money in the Rainbow Lake fields working for Banff Oil. John Rudolph, who was the President of Banff Oil and before John, a fellow named Walt Hoig???, they were both geologists at Mobil and when Hoig went over to Banff Oil as President, he took John with him. And then Hoig went to New York with some American company and John Rudolph, who I grew up with over here, he ended up President of Banff Oil.

#315 BC: What do you remember about Mr. Rudolph?

SB: John Rudolph is a big tall guy about 6'7" and John is. . . well, when we were kids, he was such a big kid, he was a gangly kid you know. He was different, more of an academic type, he didn't play hockey with us or any of those things. John went into Banff Oil and got a stock option. Did very well out at Banff Oil, make no mistake. And then I think Aquitaine??? took over Banff Oil, I'm sure they did. So I think John got lost in the shuffle there somewhere and he started an outfit here in town called Blue Sky Petroleums but then he got fed up here 3 or 4 years. . . no longer than that, in the downturn of '72, he got really fed up with the government and moved to Denver. And I'm sure he's got an oil company in Denver.

BC: Di you work with him other than this one?

SB: No.

BC: So your paths really didn't cross?

SB: No. We used to see each other but I never worked with him. And then after I left Comanche then I went into my own company, an outfit called Geosearch. A fellow named Jim Ziegler??? who was Chief Geophysicist of Canadian Fina???, we started a company with two crews called Geosearch. And I was the major stockholder in Geosearch. I had 51% and Jim Ziegler had 28 and there were three other people had minor shares in it.

End of tape.

Tape 4 Side 2

SB: And we were up in that Red Earth area, both crews. So I went in there as Vice-President and Operations Manager, but I had the major interest, I bought the major interest. So in the downturn of '72, in the summer of '72 we moved both our crews to Denver.

BC: You had just started it in '72, so you had to . . . .

SB: Yes, I started there in January '72. So I put quite a lot of money into it, then one of our observers intermixed the instruments from one truck to the other and ruined both sets of instruments. So we spent about $40,000 trying to get these instruments back in shape and we moved both crews down to Montana and North Dakota. Well, we were shooting turnkey and the instruments didn't function properly and we lost an absolute fortune so in the fall, we made an application to the Alberta Opportunities Co. for a loan, $390,000. So Jim Ziegler was an American citizen, so when the time came, the loan was all approved and everything and the morning I left here, Irene said to me, are you going to sign that. And I said, well I've had second thoughts but I will think about it. So anyway I went down there and Jimmy Seymour, who was Peter Lougheed's assistant in Calgary, was an old boyhood chum of mine, so he called me in his office and he said, Spike this is a lot of money, now you've got the old family home up there, you're getting along in years, what are you thinking of. So I told him. Ziegler was an American citizen, who subsequently left his wife and children in a big house in Bayview and took right off. And one of the other chaps had an interest in it, he was living in a rented apartment in Spruce Cliff.

#019 BC: What was his name?

SB: Bill Hall, a surveyor Bill Hall, Bill's a good guy. And then the other guy was an observer named Mike Hick???, who was the one responsible for ruining the instruments. But Ziegler picked him up somewhere and thought he was the world's greatest and I though he was the worst I'd ever seen. Anyway, when I went to sign this note, none of these people had any assets but me and I would have had my house gone, the whole bit would have gone, everything. And once we got the new instruments we could have probably made a go. But then they put the gas export tax on or whatever and things went absolutely for the birds. You couldn't get a job in Calgary. So I said, we're going to put it in voluntary bankruptcy.

BC: So you decided not to sign, this Mr. Seymour. . . .?

SB: That's right, I refused to sign it. Jimmy said that's the best thing you ever did and it turned out it was the best thing I ever did.

BC: How did the rest of your partners feel about that when you didn't sign?

SB: Well, they wanted me to sign it because I was the patsy. They had nothing to lose anyway. They were very irate but that's neither here nor there. So we put it in voluntary bankruptcy in October and at the creditors meeting everybody was yupping and hollering, there wasn't that much money involved really. But somebody that I knew really well stood up and said, I don't know what you are all crying about, you know who's the biggest loser here, Spike Brown is the biggest loser here by far and he's taking this, so what are you people worrying about. There was nothing substantial. Mine was substantial. So it was all right, we just took off from there.

#034 BC: How much did you feel that you lost in that?

SB: I lost about $160,000 I guess. But I was lucky I didn't sign that note, I would have lost my house and everything. So from there, I don't know what I did that winter. . . oh, I went to Gulf with Mr. Prudholme??? that's right. I went to Gulf and on and off, I've been with Gulf 10 years. It seems like every time things get a little slack, they phone me up to go to work for them.

BC: Now when you say you went to Gulf, you went there as a consultant. And what has been the work that you have done with Gulf?

SB: I'm actually a consultant field supervisor. I do anything the want me to do. If they want me to permit people I do it. If manage a crew, I do it. Supervise a crew I do it. It doesn't matter to me what they want me to do.

BC: So sometimes you are just going out in the field before things happen and . . . .

SB: I go out and scout the jobs for them and then I would take the crew out. So I worked for Gulf till 1973, the spring of '73. . . no till '74 and then in the spring of '74, I was home painting this room and somebody phoned me up and asked me if I wanted to go to California. And I thought it was one of my friends being smart and it was a guy from Philips Petroleum in Norman, Oklahoma. Where he got my name from I'll never know. So I went to California, stayed until November. I originally went down there as a consultant and I ended up running Western's crew. They dismissed their Party Manager and I ended up running their crew for them on a consultants fees, which should never have been because one time their office made a mistake and they sent my cheque to

another Party Manager who was an employee on the payroll and they sent his to me. And that was the end because they were all just wild. And rightly so. But it was a personal deal between Warner Loban and me. I said, now Warner if anybody finds out we're both in a lot of trouble. So he said, nobody will find out but somebody did. So that was. . . .well, I'd been to California and I took the crew over to North Dakota and then I took them up to Edson in the winter time.

#057 BC: Would this crew be a Canadian crew, it was Western?

SB: Yes.

BC: This is rather interesting, kind of, the crews going down south.

SB: Yes. In fact, Western got into a lot of trouble down there. I moved a crew from Wilden??? California which is just outside of Sacramento to Bowman??? North Dakota. That was fine, Bowman was far enough south of the border that you wouldn't get any trouble but when I had Geosearch, we did work close to the border and the border inspectors harassed you something unbelievable. So I phoned Warner and said Warner, when we. . . and then we moved up to Williston???, we're shooting the line starting at the Canadian border, going south for 30 miles, right on the border, going south though. And I said Warner, we're going to get in all kinds of trouble over here.

BC: Why would they harass you?

SB: Oh, the border patrol. You go in there on a visa or work permit and the way you get into the States is, you have to advertise for equivalent personnel. Well in those days, you couldn't find anybody, we advertised and everything but the crew had been in California. So we got them over there and this border patrol man was just doing his job. He said, let me see your visa, your work permit. So what happened was on your work permit there would be EP6-10 which meant El Paso, Texas. So the border patrol inspector said to one of my drillers, he said, when were you last in El Paso, Texas and he said I've never been in El Paso, Texas in my life. So the guy knew he was on to something. So he checked the whole crew. And I went in there on a letter that I was a consultant and would be paid in Canadian funds and deposit it in a bank in Canada, I wasn't displacing anyone. So he checked everybody in the crew and found out only one other guy and me were in there legally, the rest were in there illegally.

#076 BC: How did they get the illegal permit?

SB: The chap in their personnel office in Houston used to be a border patrolman, so he just indiscriminately made these things out. So I remember I got on a conference call, I phoned Warner Loban here and then he phoned the President of Western in Houston and the personnel manager, we had a conference call. So I said, he's going to deport the whole crew. Now I said, I don't want any part of a deportation order. Why should we be deported for somebody else's mistake. So what I said to this. . . .it just happened to be a very lucky stroke, I took this man and his wife out to dinner and he had just transferred over from Chicago and he'd never seen a geophysical crew in his life before. So he said, tell me what you do, and I said, well, we drill holes and put dynamite down the holes and then we explode the dynamite and record the shock wave. As soon as I mentioned

dynamite, his eyes lit up and he said, you mean there's dynamite in all those holes. I said, oh yes. He said, what do you intend to do about it, I said, tell you what I'll do and I'll shoot them all and record them and be gone. We will voluntarily leave the United States. So he said, okay that's a deal, I'll give you a week. We shot the 25 miles and took off and nobody ever got deported but what we called the President about was the ramifications. They had 7 or 8 crews from Canada working in the States and if they start checking everybody, they probably wouldn't have let them in again. Because you don't fool with the American Customs boy, no way. So anyway, we got out of there and came home, which was very lucky.

#094 BC: The man who was putting these false numbers down. . . .

SB: He wasn't working there anymore. And I don't think the personnel office realized what he was doing.

BC: Because they could have got work permits without. . .

SB: It wasn't very easy. You could get a work permit for a trainee but a driller or an experienced person, it would go on interminably, because the Americans are protective of their own. Which you probably can't say anything about it but. . .

BC: Canada is the only place I think, where Canadians have to compete with the rest of the world?

SB: That's right. I said to him, what about a unilateral treaty where you guys even come into our country to combine and everything like that. You come across here, you've been coming across for years, every facet of your. . . if you can make a buck up here, up you come. Yes, he said, I admit it isn't fair. I just brought the crew home and it was fine. We came home just the week before Christmas. But as soon as I mentioned dynamite that scared him half to death.

#106 BC: That was kind of a touchy thing.

SB: Right. Well he didn't understand. Perfectly safe but. . .

BC: The crew when they came up, you had another job for them to do up here or was that the end of your tenure with. . . .

SB: No. I brought the crew up here and then I took it up to Edson to work for Hudson Bay Oil and Gas all winter. And it was about the end of March that the mix-up in paycheques came along so I told Warner, I'm just going to leave. So I did. And then . . . .

BC: I'm sure there would have been. . . who was the Party Chief, do you remember?

SB: Well, there was 4 or 5 of them and they'd all been there 25 years and being unemployed, come in off the street, end up running the crew, for that kind of money. You couldn't blame them for being disturbed really. So I just went in and told Warner, I'd rather leave.

BC: What was the name of your boss?

SB: Warner Loban. Nice man, a prince of a guy.

BC: Can you tell me anything more about him?

SB: Warner started out as a jug hound, which is the lowest thing on the crew by far. And he has a college education but he started out at the bottom and he moved from place to place and he's been Vice-President and Operations Manager. That neighbour of mine, Frisbee,

when they first set the deal up, one of their old time Vice-Presidents out of their head office went back to the States so they made Frisbee Administrative Vice-President and Warner, Operations Vice-President and it didn't work out. So Don Frisbee was an American citizen, so they took him back and gave it all to Warner. But Warner is a prince of a guy. He's come up the hard way and he's got a heart of gold, he's just a prince of a guy. He's helped more guys in his life than anybody I know. People that have got drinking problems go into Warner, he looks after them like you wouldn't believe. Just a marvelous guy. But I never worked for him when I was drinking. So I worked for them that winter. . .oh, then I went back to Gulf again. That would be. . . . no I went to Chevron, that's right, in '74 I went to Chevron and I worked for them. Oh, I worked for Gulf in the summer at Dawson Creek, that's right. In the fall of '74 I went up to Dawson Creek, the summer of '74 actually, I went up to Dawson Creek for Gulf and then I went to Chevron from the first of October till the end of March.

#134 BC: When you were in Dawson Creek in '74, you'd worked a lot of this territory through all of your years in this business, so you would see quite a lot of changes. You were into. . .back out in the field with them were you?

SB: Oh yes. Every little town in Alberta has changed so much it's unbelievable. You know, they've grown, they've got all the amenities now, sewers and running water and in those days, like Sundre was a tough, tough town. Drayton Valley was a tough town.

BC: In what way was it tough?

SB: Well, there was all oil people come in there and they'd haul an old trailer in there. There was no decent living accommodations. Now they've got the big motor hotels and everything, it's unbelievable the way they've changed.

BC: When were you in Fort Nelson, when you met your wife?

SB: I met Irene in, that's when I had Geosearch, 1972. We were married in '73, in June. And I met her, well early in '73, in March and we were married in June.

BC: And Irene was born in Fort Nelson?

SB: No Irene is from Ontario. Her mother still lives in Napanee???, but Irene worked for an insurance company in Ontario and then she didn't like Toronto, so her and a girlfriend came out here and they worked for Metro Ford in Calgary. And then she got a job with CN Telegraphs in Fort Nelson and she started out as a telephone operator and then when I met her, she was manager of the business office.

#152 BC: So she married you in time to see you go into voluntary bankruptcy?

SB: Yes, it was a terrible year. I'll never forget it, we were driving through North Dakota and she said, boy are we in some shape, we are and that hurt my feelings. She said, we haven't got a window or a you know what to throw it out of and I said, you got that right but it was a terrible time. And then our first anniversary was spent in California, in Woodland. But that year, she was on 21 different airplanes and that winter we went to Hawaii and we'd never been on an airplane together. I was always going somewhere, she was always going.

BC: What was she on 21 airplanes for?

SB: Well, I was working in California, I was working in North Dakota and then I was working in Montana and she'd fly down there and she was all over. She went back to Fort Nelson a couple of times. She went down east to visit her mother. But we'd never been on an airplane together until we went to Hawaii that first spring, we'd been married a year then.

#165 BC: When you were up in Dawson Creek, were you again reworking places that had been worked once?

SB: Not really no. We were working new stuff there. There was a big gas play going on in those days. When we went to Fort Nelson, some of that stuff had been done before but when we got to Dawson Creek, no it was all new stuff and it was in the foothills west of Dawson Creek, it was really tough work.

BC: In what way was it tough?

SB: Well, the hills were so steep and all that. You had to have cats anchored half way up the hill to tow your trucks. It was really dangerous. Well the same as those refractions out in the foothills, some of the hills we went over, you wouldn't believe. And cats would anchor, one cat would be halfway down the hill and another would be farther up with his cable out holding the one that's halfway down and he would be hooked on to your truck. Foothills are hard, hard work, very expensive.

BC: How many miles could you do in a day?

SB: Oh, you only did a mile or two, none of this 6 miles a day, no way. You did a mile or two and that's all that was expected too. It was really hard work.

#182 BC: Where would you say was the toughest place you ever worked?

SB: The toughest place I ever worked was. . . .oh, I think these foothills out here, west of Cochrane, Moose Mountain. Shell and California Standard spent a fortune out here at Moose Mountain and that Moose Mountain anticline is a huge structure. It's the biggest anticline in the foothills. So what they've been looking for out there are stratigraphic traps, they've been looking for that for years. So we spent 3 or 4 summers seismagraphing that Moose Mountain, just north of Elbow Falls but boy oh boy, you talk about steep hills, this was unbelievable, that was the toughest work I ever did. You had to really be careful. And yet we never had anybody seriously hurt.

BC: What would be the most prevalent type of accident you would have on a seismic crew?

SB: On a steep hill, if the cable breaks on the cat or the cable slips loose or something, or some guy on the Knobroller??? decides to take a hill by himself and he gets halfway out and then he spins out and starts to come back down the hill backwards or sideways, that's when you get in trouble. But we had strict rules, there was nobody went up any of those hills unless there was a cat there. And sometimes the cat's too, if the cat's didn't have ice plugs you welded it on the tracks. You'd be sitting in the truck, it'd be towing it up hill, all of a sudden he starts to slide down towards you. So all you did was open the door and bale out and run like hell but it was very dangerous.

#202 BC: Did you lose many trucks that way?

SB: We lost a few, everybody did. It was very dangerous.

BC: When you say that you'd go out and scout or permit or whatever, would be one of the things that you would scout, would be the terrain, would this be one of the things that you do as a consultant?

SB: What we would do, we would get the aerial photographs of an area, and you could pick out all the terrain, the height of the trees, if you got experienced at it.

BC: Who would have photographed that, they'd have had a crew in?

SB: Well, the government has aerial photos of most of this stuff, some private companies did it too. And what you would do, you would buy some land at a land sale, and then you would look at some aerial photos and then the geophysicist would lay the program out and then you physically, with a helicopter or with your truck or whatever, you went out and you made sure that the program he had on the map was. . . that you could do it.

BC: You'd have to be a bit of a navigator along with everything else.

SB: You had to be everything, yes.

BC: And still do, because you're still doing this.

SB: That's right. So you would make sure that the way he had it, you could do it. And if you couldn't, then you would suggest that he change it. But up in the Arctic, it wasn't like that, at Arctic Red River, you just stuck to the high ground. That was before the days of the environmentalist. All the cats did, we worked for Texaco there, you just stuck to the high ground, the cats just took off, there was a ridge there. They would shoot that ridge and then you might go through a mud hole or something and then get on another ridge. The lines weren't very straight, we like to have them perfectly straight, they weren't very straight but it was the only way you could do it. Now you can't even do that, you can't. . .most cats in the Arctic today have got a rubber pad on the bottom of the blade and you can't even touch the rubber pad to the ground. It's ridiculous.

#229 BC: Do you think you did a lot of damage up there doing it the other way, to the environment?

SB: Well, you probably did, yes. You probably did.

BC: What kind of damage did you do?

SB: Well, the trees, you knock down the trees, eh. But the thing is, agriculturally it isn't good for anything anyway. You get environmentalists that worry about whether the lemming is going to be able to run into the Arctic Ocean to have his bath when his life is over and all this nonsense. And the caribou, you're going to change the migration route of the caribou. Hell you get a seismic run and the caribou will run right down it. But they object to pipelines, they say that you're going to change the migration route of the caribou and you're displacing all the flora and fauna and all that. The thing is, you spill oil or anything over there, up in that kind of country and it's there for 100 years. But how much oil is spilled.

#244 BC: Do they know if it'll be there for 100 years, it's never been spilled, has it?

SB: No that's right, but it probably would be.

BC: Because in Leduc where they had the Atlantic 3???, you would never know there had ever been any oil because it is biodegradable really because it is a natural substance.

SB: That's right. I was in Leduc when that Atlantic 3 well was going wild. That old farmer was wringing his hands, saying his land was ruined forever, well it wasn't. But I don't agree with environmentalists, they get too involved. We had a Natural Resources Conference in Yellowknife one time and there was probably 200. And Stuart Hogson??? who was the Commissioner of the Northwest Territories at the time, he said to me one night, I'm going to ask them how many have ever been up here before. So he did and I think out of the 200 there was probably 5. There were botanists from Japan and zoologists from Bali. It was absolutely ridiculous. So what is more valuable to you. Do you leave the north in it's natural state or do you produce natural resources.

BC: There has to be the cut-off.

SB: That's right. They disturb me immensely.

#265 BC: I don't think we talked about Leduc and you being at Leduc did we.

SB: Yes. I was on a Western crew at Wetaskiwin at the time. And I remember the well blew in there. Yes, I think we talked about it because remember I mentioned when you could have bought leases up there at Leduc for nothing.

BC: That's right.

SB: Cliff Cross was a prominent oil man here in Calgary. Cliff went up there and bought options boy, and that's how he got his start. Cliff Cross made a bundle doing that.

BC: After you'd worked up in Dawson Creek, I sort of interrupted you there, where did you go from there or where have you been.

SB: I left Dawson Creek and that's when Chevron called me so I came and did that west Pembina field for six months for Chevron. After that, I came back to Gulf, '75 and I worked for Gulf, '75, '76, '77.

BC: And whereabouts were you?

SB: All over Alberta, Red Earth, anywhere and Saskatchewan. And then I went, I'm not sure when, I think it was the first of January, 1978.

#287 BC: We're looking from '48 to '78, you're out doing Party Chiefing etc.

SB: And then a geophysical company named Lee Geophysical started up and they didn't have a competent Party Manager. So they were frantically phoning me. . . .oh, I know what happened. The summer before I went to work for Pan-Canadian out here at Carbon all summer. And I permitted a big job, 700 miles and kind of supervised the crew and everything and they wanted me to sign a 2 year contract with them but I had a disagreement with one of their field personnel who was not adequate and I won't mention his name because it isn't worth mentioning. But anyway I had a disagreement with him on the second of January 1978, I was in the motel in Slave Lake and he was at the camp at Red Earth. So he got a little abrupt with me and he said, he left a note at the desk saying that Mr. so and so would be at the Sawbridge??? Motel at 10:00 a.m. and I left him a note saying that Mr. Spike Brown would be in Calgary by then. So Easton Wren??? who was the Chief Geophysicist, another fine person, he phoned me here and he said, what the hell are you doing home and I said no more, I've had enough. So I went down, he wanted me to stay but I didn't. Then I went to work for Lee Geophysical, which was a

small company, first time out in the field.

#312 BC: Who owned it?

SB: A fellow named John Campbell and another fellow named Helmut Hofer???, they each owned 50%. So they were frantically phoning me here so when I left Pan-Canadian, I talked to Prudholme??? and he said, well they're going to work for me, that's why they've been phoning you. So I said, okay. So I ran the crew on a consultant basis and they paid me extremely well, extremely well. So I ran the crew for them for '78, '79, '80 and in the fall of '80 they wanted me to move to Denver as Vice-President of American operations with a piece of the action. And it was hard work because they'd never been in the field before, the two principals in the company were programmers and they knew absolutely nothing about field work. And they're fine guys both of them. So as a result I was working 15 hours a day, 30 days a month.

BC: How did they get into this kind of a business when neither of them were in it?

SB: I think Gulf advanced them the money, I'm pretty sure they did.

BC: Did they advance them the money and suggest they get you?

SB: I think maybe. Prudholme as much as said so. Anyway, as a result, they had their crew in the field when I came out there.

#338 BC: They had chosen the crew themselves.

SB: Yes. And they had a surveyor at $250 a day who was incompetent, they had a geophysical electronics technician at $250 a day and at $250 a year, he was overpaid. And they had a bunch of city boys, driving all their brand new trucks and they had the worst drilling crew in the business and I knew them all. So I really had a problem so I worked 16 hours a day.

BC: So what did you. . . .were they all contracted and you had to work with them?

SB: No, I replaced them all, every one of them, except one chap, a young fellow named Dwayne Brown, who was the observer. I kept Dwayne, he was the only one, I replaced every one on the crew. Slowly, slowly. Not all at once because you couldn't work.

BC: I was going to say, how would you go about replacing the whole crew?

SB: You replace 2 or 3 at a time and then teach those people what you want to do.

BC: where would you recruit from, you were working where?

SB: Edson.

BC: So where would you recruit from, where would you get new people?

End of tape.

Tape 5 Side 1

SB: So I replaced the whole crew, started with the drills. I traded three drills to Petro-Canada, three track conventional Drills for one little civil??? auger, that's like trading a Cadillac for Model T Ford.

BC: Why would you do that?

SB: Because they didn't do the work properly and I couldn't hack them anymore, they were so inefficient and so dishonest, they were drilling the holes short, they were on long lines, they were getting stuck, just anything but work. So I traded three track conventionals to Petro-Canada for one civil??? auger. Unbelievable. So then I picked up some rigs from friends of mine, a fellow named Byron Johnson from Grande Prairie, I phoned him, I said, listen you get over here, we'll pay you by the foot, you can make yourself a lot of money. Then a surveyor friend of mine named Neil Nelson phoned me up, I was in Athabasca at the time and he said, he had been working for another company the year before and they had kind of closed down, he was looking a job and he used to be a surveyor on my Western Crew and very competent. So I hired Neil and we paid him by the mile and he did really well, and Byron Johnson, all his drills, he did really well. And then I put Dwayne on a contract rig as a consultant doing the observing. And then we replaced all the jug hounds and that and I got rid of the $250 a day geophysical technician and their expensive surveyor. And pretty soon, it all turned around. That was the winter we started in Edson and then we went to Valleyview and then we ended up in Saskatchewan, east of Kerrobert in the middle of winter, in February with the wind blowing, it was unbelievable. But those kids stayed with it, and a lot of those kids were from Ontario. I hired a couple of them first, they were nice looking boys, one boy, a kid named Tim Wilson, his father was a doctor and his father wanted him to be a doctor but Tim was young. So I hired him and his best friend, a fellow named, we called him Jethro, his name was Rick Fortier???, I hired those two.

#020 BC: Now those were city boys, were they?

SB: Small towns in Ontario. St. Catharines, Ancaster, not big cities, no, no. So then pretty soon, I would say look, I need three or four more, they would phone home and get a couple of their buddies and out they came. Pretty soon I had about 8 or 9 of them and they were all just absolutely excellent. The benefit there was they didn't know anything about the business and when you told them to do it, they didn't know enough not to do it any different. It was lovely.

BC: So you became a teacher, or have become a teacher?

SB: Oh yes, over the years.

BC: As you were taught many years ago?

SB: Mind you, all my teaching is field work. That's what I enjoy and that's what I know. Technically, I look at the records, I used to interpret them, I can pick up the records and do that but I don't like it so I don't bother with it. But field work, like organization and getting it done. I can do it and I like to do it, that's what I like to do. So the next summer, we did what they call a spec shoot. At 1978, we were in Falher when the Commonwealth games were on in Edmonton. And we shot a whole bunch. . . .a spec shoot is where a geophysical company will go and shoot a bunch of data and sell it to different companies. And the companies do the interpretation and everything. They would have a program. . . .

BC: Is that done very often?

SB: Oh yes, it is now. It's been a means of survival for some of them, you know, when they couldn't find any work for the crew so they go out and do a speculation shoot. So we did

a spec shoot at Falher and then we went to Grande Prairie and did that 600 mile spec shoot. So the next winter we went back to work for Gulf and then the next summer we moved to Manitoba, a little town called Melinda??? Manitoba. We moved down there and stayed from April to the first week in December, in Manitoba. And then we came back here and the next winter we worked for Forest Oil at Valleyview and then we moved to Grande Prairie. We worked for Forest Oil all winter long. And then that summer I went to Denver and was going through all the legal processes to accept the company, Lee Geophysical Inc. in the States. And my wife had second thoughts about it, you know, this is my old family home, we've been here all our lives.

#044 BC: You were just about set to move to Denver?

SB: We had the house up for sale and everything. But all my old friends would say, you make my sick you know. So when the deal was finalized, it wasn't good enough. So I left Lee Geophysical and went back to Gulf the next day. So I worked for Gulf. . . .well, it was 1980 because I left Lee in November of 1980 because the elections were on in Denver and that's every two years, some of those elections, so that's when it was. So then I went back to Gulf for '81, all winter, up around Gift Lake???, which is north of High Prairie and Peace River and Cadotte Lake??? and I was looking after a Quest crew, an Energenics crew, and one other, but I can't remember who.

BC: It's interesting that in the 10 years, you have done so much consulting with Gulf, a firm of that size whom you would think would have enough field work that they would have their own Field Supervisor.

SB: No, it's the strangest thing. Gulf to this day don't have field man. Ray Prudholme??? is Geophysical Operations Supervisor, that's the same job that I had at ICG Resources. So he gets a trainee, a geophysicist right out of university. First of all, they put him in the program for a little while, then they put him into training with Ray, show him how the field operations work but it doesn't work out properly because they don't like being in the field. I've seen 6 or 7 of them.

#062 BC: They sort of go out and they're under you at some point are they?

SB: That's right and they have nobody. . . like Prudholme himself comes out but Prudholme, on my crews, I've gone six months and never even seen him. Where he just knows that we'll do it the way he wants it so he won't come near you. If he gets some big brass in from Pittsburgh, he'll bring them out there but other than that, he doesn't come near you. He might come once during the winter. He just leaves you alone. But if you didn't do it right, you'd certainly hear about it because he's a very capable person. He's the best friend I have every had.

BC: We haven't really talked about Ray very much.

SB: Ray started out in the Peace River.

BC: With Gulf?

SB: He had a real tough life when he was a kid I believe. And he started with Gulf as a jug husker and he's been with Gulf right now, I think 33 years and he just progressed right through from the very bottom, up through, observing, surveying and he is a highly

competent person. He's a typical example, now I don't know whether Ray. . . somebody mentioned to me one time that they think Gulf sent Ray to the University of Toronto but he's never mentioned it to me so I don't really know. But he's a typical example of a person who started at the very bottom and knows. He will amaze you, how smart he is. He will ask you questions that just scare you about field procedure you know, and if you don't know. . . . So he's been a fine friend to me.

#078 BC: Can you think of a particular kind of thing that he would be concerned about and he would ask.?

SB: Yes. Like in the camp, if the light plant breaks down or something, you know, I'm not an electrical, who cares, if it breaks down you've got a standby, you plug your standby in. He'll phone you up and ask you how many KV's an hour it puts out and all that kind of nonsense. I don't even have a clue, I have to go read it. But he will ask you stuff. And he laughs you know, just to test you. So he's had these geophysical trainees in there and they don't work out, they don't because they don't want a field job as a career, no way. So it's right up my alley, whenever they need field work they phone me. So it's what I like to do anyway, so it's been just a lovely thing for me. But they won't go out in the field. He just lost one, he went to BP. He borrowed my truck Stampede week on the Monday so he brought it back Sunday and said he hadn't gone out of town yet. I said, how come, he said, it's Stampede week, I said, what the hell's that got to do with it. And then they borrowed a Honda 200 from Airborne Geophysical and he was goofing around, he lived at the top of Scotchman's Hill, he tried to ride the bike down that steep hill and ended up in the Stampede grounds I guess. So he didn't go out of town, so I didn't even send the bill to Gulf for the truck because I'd get Les in trouble and he's gone, he is no longer there. So I don't know whether is was that or what. But he will tell you out in the field, he doesn't like it, they don't like it.

#096 BC: If you were looking to recruit people to go out and do what you do because certainly you don't want to. . . .I'm sure you don't want to be out in the field as much as you have had to be lately, where would you recruit from?

SB: I would recruit from a crew? You get a young Party Manager that's very, very smart and very conscientious. That's where I would recruit from, that's where you have to recruit from.

BC: Do other companies recruit from the field like that?

SB: Oh yes. Some of them do, Shell does, Chevron does.

BC: But this is part of Gulf's policy that they . . . .

SB: They call them a Trainee Field Superintendent and there's no way. They're not interested, they really aren't interested and it disturbs me. And yet they'll come out on the crew. . .in fact one of them got in a violent argument with Dwayne Brown about how fast he was driving this motorbike. Dwayne said I drive 100 mph and this guy said, well you shouldn't. He said, it's none of your damn business how fast I drive it but yet in all intents and purposes, this guy is the client representative. So you shouldn't be rude to him, eh . .. So last fall we went in and we did a surface dynamite shoot at Bragg Creek

#110 BC: What is a surface dynamite shoot just for the record?

SB: Okay, there were no holes drilled and it was the forestry's decision. Inside the forest reserve we put the charges, 62 pounds, on a stick about 5 feet off the ground. There was a hole every 220 feet.

BC: How deep was the hole, just enough to stick a stick?

SB: There was no hole, just to put the stick in. So when the charges started going off, I was sitting in the Municipal Office in High River and I could here them going off over there. And the people were phoning me. . . . and like I've worked down there for Chevron over the years and permitted it all and I know everybody in that country. So any company drills in Bragg Creek or Millarville or Turner Valley, they always phone me. So I said to Ray Prudholme, when we come off of the forest reserve we can't shoot those surface charges on those ranches, it's just impossible. So we went back to drilling the holes and we finally got it done. But Les was out there then but he didn't even like going out there and you could be home in half an hour.

#127 BC: Why did you not want to do the surface explosions. . . .

SB: On the ranches?

BC: Yes.

SB: Well it was knocking all the needles off those coniferous trees, you're going to kill every one of them. And the ranchers with cattle on the ground. . . .

BC: Why did you have to do it that way?

SB: The government decided for environmental purposes that's the way we would do it.

BC: So you really did more damage to the environment?

SB: Absolutely. And those charges there was cattle running and after a day or so, they wouldn't be bothered any more. The helicopters were all flying over and a lot of people were irate about it and phoned me. So when we came off the forest reserve we went back to regular holes. You take a 5 or 10 pound charge of dynamite and put it down a 60 foot hole, all you get is a little thud. But those 62 pound charges, when they went off, you'd think you were at. . . .

BC: Why did you have to have such big ones?

SB: Well they figured because they were shot on the surface, the energy loss was really bad so they had to increase the charge size you see. It was really crazy.

#132 BC: Through the years, the size or the amount of dynamite has been reduced.

SB: Oh yes. Nowadays we shoot one kilogram, two kilograms.

BC: As compared to what was it you originally. . .

SB: You shoot 10 pounds or 20 pounds. And you know we used to damage a lot of farmers water wells in the old days. I haven't had a water well claim for 10 years. Because you know they're lying to you, because the charges will not, those small charges will not. In fact the government did a study down here, they've never published the facts but the government knows. They shot different sized charges at different distances away from a bunch of wells down here in southern Alberta and none of them were damaged. But in the old days you bought water wells like they were going out of style. If a farmer had a poor

water well and a seismograph crew came along, aha, here we go. And it was a very disagreeable task to settle with a farmer well who sais his water well was damaged.

BC: Because sometimes it wasn't necessarily but you. . . .

SB: I would say 50% of the time, they weren't legitimate claims.

BC: How would you settle such a claim?

SB: Well most companies paid them even thought they knew they were wrong.

BC: You didn't drill another well for them?

SB: We have on occasion, oh yes. And put a pump on it and sand screened the bottom and cased, the whole bit.

#149 BC: Better well than they had to start with.

SB: Absolutely, but some of them were unbelievable. Well there's one out here at Cochrane, an old rancher named John Boothby, it's been going on for 35 years. He had a well inside his barn and I knew old John, he's a cantankerous old man, very, he's got a big ranch. So I went up and I said to my crew, boy there's no way we're coming within a mile of Boothby's because he's going to get somebody. So the government limit is 600 feet from a water well. And he had the water well in his barn and instead of the guy going in and asking him where the water well was, they shot a hole, Shell did, about 300 feet away. And John Boothby was a personal friend of Premier Manning's and a staunch Social Creditor. So he got on the kick and every time. . . . I worked around Cochrane for years and every time I'd see John, he's get me there and we'd have a been or something and he's tell me about what's going on with Shell and he made their life an absolute hell on earth for about 15 years. So several people quit Shell over it because they couldn't settle with him and it got so frustrating they decided to leave. So they drilled 4 or 5 water wells, put sand screens in the bottom and cased them and put the pump rods in and put the pump on and built the pump house and they go out there and pay him every year. And he has never. . . they gave one friend of mine a blank cheque and said, you get him to sign it, get him to settle it and he wouldn't.

#167 BC: What is he waiting for, what does he want?

SB: He doesn't need the money and it's his way of guaranteeing that if something happens to any of those wells he's got, he can go back to Shell again and say, my original well, no problem, now you've got to do it again.

BC: They've done all these different wells and none of them any good or. . .?

SB: Oh they're all producing now but if something happens to them, he will say, my original well was a beautiful thing, you know. When you get in a damage claim, the water well was always the best one. If a horse fell a created hole, it was a first cousin to Najinsky??? or whatever and if a cow died, he was the grand champion at the spring bull sale or whatever. You always bought the best, I even bought mink one time.

BC: Tell me about that, when did you buy mink?

SB: I bought mink up at Rimbey one time.

BC: What happened?

SB: We were shooting a line by this guy's house. So he phoned and said that the mink had

eaten the kits. So I go out there, so there's the mother mink there but no kits, none at all. So I said to him, how do we know they ever had a litter. Well, he said, because I'm telling you. So any strange noise, the mink becomes disturbed, she will eat them, this is a known fact. So any way we get a guy from the fur branch down from Edmonton, he examines these animals and he said, oh yes, they had a litter, each of them, three of them. And I said, how many did they have and he said, I don't know. I said what's normal, he said, 2 or maybe 3, but 2. So we bought 6 sapphire blue minks at $1,500 apiece. And there was no way we were responsible for that, there was gravel trucks going over there, there was airplanes flying by and the whole bit. And he said how quiet it was, I sat in his kitchen and there were graveling, building a new road there, there was trucks working and scrapers and everything, the noise was unbelievable but he had us.

#193 BC: What other kind of strange stories like that, what else have you had to buy?

SB: We bought the mink. . . .we bought many, many water wells, probably 200 water wells. Then we had one up at Leduc, it was a flowing hole, we have a real problem with flowing holes. So you can't let the farmer keep it because if he keeps it and he doesn't put the pump and the system in properly the water will flow run down into the ditch into his neighbour's place and that kind of stuff. We had a flowing hole up near Leduc and it went on for a long time too. We tried every way we knew to cement it. We finally had to get ??? and it cost up $35,000 to cement it off. But we finally got a little smart, if we were going to shoot a line, what I would do is get a 5 gallon pail and drop into every farmer along the line and tell them who you were and say, I'm going to shoot a line down here and I want to test your well. So you would turn the pump on and see how many seconds it took to fill the 5 gallon pail. A lot of them wouldn't let you do it because if they were going to get you . . . .you know. But most of them would, so we would test them all and go back and turn it on again and if their production was the same and the colour was the same then they had no case. But you never really had a good way of beating them.

#213 BC: Was that quite legal for you to do that?

SB: Oh yes, certainly. We always stayed. . .the minimum was 600 feet, we always stayed 1,000 but then they would literally complain. The thing is they would have an old cow who was dying of colic or something, they'd drag it out in the field. With Pan-Canadian out here, this guy, he boarded cattle for a living and his wife used to be a secretary for a geophysical company so she knew whereof she spoke. So she phoned me up one time and she said, we have lost a Lamosine??? bull calf just out here. So it was the middle of winter and the calf belonged to a doctor in Vancouver, 6 months old, black and white. We go out there and look at it. There was probably 4 or 5 animals that died, there was a real cold spell there in November, a couple of years, 3 or 4 years ago. And there were these animals laying there, but that bull calf there was no way. So we had done . . .oh, 600 miles around there so I went around and when I paid all these farmers off, I asked if they'd ever seen this Lamosine bull calf. One old guy, he sort of laughed and he said, oh yes, I saw it more than once. And I said, how do you mean. And he said, it was always running loose, they couldn't keep him inside and he was always running loose. So

anyway I went out there and this girl, she knew all the answers but I just flatly told her that if she wanted a new calf to sue Pan-Canadian. They made a belated stab at it but then they backed off. But I don't know whether they ever had it or what happened to it but the old neighbour there, he figured somebody stole it because it was always running loose anyway.

#240 BC: Somebody had a deep freeze full.

SB: But I've had a marvelous, marvelous career really. So we're pretty well up to date here I think

BC: Yes I think so.

SB: Yes. But all the people that I have met throughout my career, I have had a ball, just literally a ball and when I didn't it was my own fault. But all the friends I've made and the friends I've got to this day, it's unbelievable and they're all really good. . . . Geophysical personnel people are different you know, we weren't the big money types, like drillers on big rigs or anything like that. But all through the industry, like the golf tournament we have in Banff every fall, they're all just a really good bunch of guys and all of them help each other and it's kind of a little closed shop. If you're one of the boys and they know you're reliable and that, you don't have a problem. And that's the way my whole career has gone, I wouldn't trade it for anything. First day out of the Navy till today, I wouldn't trade it. And recently I'm back at Inner City Gas, I just finished a track job at Shekeely which is just south of the Northwest Territories border and a geophysical company called . . . . . .

#261 BC: What's a track job please?

SB: All the equipment is on tracks. Like bull dozers but they're not as heavy. These were Bombardiers, they're very light. The forestry won't allow you to go in there with cats in the summer time because you tear all the lines all up. So we put a track crew in there and we shot 89 kilometres here in September, we just finished. So I've been working with them. And I've been back at ICG for about three months and they're a bunch of fine people too. Dick Siegfried??? the President is an old geophysicist and a fine man, Ben Smith, the Executive Vice-President was a cohort of mine at Cal Standard in the old days, came there as a boy, right out of university. And Jerry Sykes, who is world wide Exploration Manager was on that Frontier crew back in the old days. And then Dave Caldwell from Home Oil and another friend of mine from Gulf is Chief Geophysicist, a young fellow named Dave Cooper. So it's just like a little family. And a girl named Sherry Carroll??? is the District Geophysicist, she's an old GSI person. So we're all just like a little family there so it's very nice to be there. And I've enjoyed this Betty.

BC: Well, I've certainly enjoyed listening to you, I know that there's much more that we could talk about and I'd like to leave the door open so that we could do that but I want to thank you, you really opened many doors. It was tremendous.

SB: My pleasure, I enjoyed it very much. That's good.