

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Bob Sears

INTERVIEWER: W. J. Wood

DATE: June 1984

JW: Today is Thursday, June 7th, 1984. I'm at the Foothills Hospital in Calgary, Alberta, where I'm interviewing Mr. Bob Sears. My name is Jim Wood and this is Tape 1, Side 1. This interview focuses on Mr. Sears' career in the petroleum industry. Bob maybe we could start this afternoon by your just telling us a little bit about when and where you were born and where you grew up and that sort of thing?

BS: I was born March 10th, 1927 in Carlsbad, New Mexico but I grew up primarily in a little community called Capitan, which is located about 150 miles northwest of Carlsbad, up in the foothills country, country that's much like Cochrane. I lived there until I, well, I guess you could say I lived there until I went into the Army. Actually I spent a couple of years, the last 2 years of high school I spent in a military school, then after that, this was during World War II, so I went into the Army for a couple of years.

JW: Was your dad ranching out there, that's kind of rugged country out there?

BS: Well, my mother was Postmaster and my dad was involved in selling insurance and later on got involved in some real estate development.

JW: Did that pan out at all?

BS: Well it did, they moved back to Carlsbad when I got out of the Army and he was involved in selling real estate and in the development end of it as well. He also had an interest in company ??? that bus transportation to go to the potash mines that were located east of Carlsbad.

JW: So were you drafted then, into the Army or did you volunteer?

BS: I volunteered.

JW: What did you end up doing for Uncle Sam?

BS: Not very much. They tried to make a radio repair man out of me, without much success.

JW: So did you stay mainly in the States then, you didn't get overseas?

BS: No, I never left the United States.

JW: You got out of the Army when, about 1945.

BS: It would have been '46 I guess. The war had been over about a year.

JW: So they hung on to you for a little while?

BS: Yes. And then after I got out of the Army then I went to the University of Oklahoma.

#045 JW: Let me ask, you went into the petroleum engineering program, is that correct, at Oklahoma?

BS: Yes.

JW: What caused you to select that, where did that interest come from?

BS: There was a cousin of my dad's, who lives out in the east Texas, sort of right in the

middle of the east Texas oil field. I thought quite a bit of him and he suggested to me one time that I should enroll in this petroleum engineering. I didn't know anything else I wanted to do so I thought, I might as well try it. I didn't know a thing about it. But it just seemed like a good idea, so it was on the advice of my dad's cousin.

JW: Well, that's as good a reason as any. You went on to get an MA degree didn't you, or a Master of Science I guess it would have been?

BS: Yes.

JW: Not too many people did that. How come you continued on through?

BS: 2 reasons. First of all, the job market wasn't particularly good that year so I decided I'd just be better off to go on to school for awhile longer. Secondly, there were a lot of courses that I wanted to take, that I had just gotten. . . I found that the courses at the graduate level were quite interesting, so that's the reason I hung in there.

JW: Did you have to write a thesis as part of that degree?

BS: Yes, I did.

JW: What was your thesis topic, do you recall?

BS: It was something, sort of an obscure thing on, I think it was called the Viscosity of Interfacial Films or the Effect of . . . you know, I can't remember the exact title.

JW: That's okay.

BS: I know I was dealing with something, a chemical called sodium maristate??? and studying the behaviour of interfacial films. This was of importance in understanding the affect of temperature on the stability of oil field emulsions.

JW: You had some exposure though in the oil patch, during university didn't you, you had some summer time work and so forth?

BS: I worked one summer as a truck driver for Dow.

JW: That was their acid truck?

BS: Yes.

JW: Were you just driving the truck or did you get any first hand experience with actually working with the material and so forth?

BS: We'd drive the truck and then we'd get out to the wells and hook them up. This cold I've got is an aggravation. Then I had that one summer where I drove the truck then you'd hook up the equipment to the well head when you got there. And I had one summer working as a roughneck on a drilling rig.

#094 JW: Who were you working for, do you recall?

BS: A little contractor called Hondo Drilling Company, just a small company. I think they had 2, maybe 3 rigs was all.

JW: Was this fairly common, this was down in Oklahoma then, or Texas?

BS: This actually was in New Mexico?

JW: Was it fairly common for these companies like Dow and some of the drilling outfits to hire summer students.

BS: Yes, most of them were fairly good about hiring.

JW: So they'd come into the university and get guys out of the geology and petroleum engineering departments and so forth?

BS: Yes.

JW: So with a fresh Master's degree in Petroleum Engineering; what year did you graduate by the way?

BS: I got the Bachelor's degree in 1950 and the Master's in 1952.

JW: You really hustled through that Master's program didn't you, 2 years with a thesis is pretty good isn't it. Was that common for most people?

BS: That was more or less normal thing. You know, somebody taking a PhD, it takes them a lot longer than that. The Master's degree shouldn't really take more than about 2 years.

JW: Had you thought about a PhD at all, or were you pretty well through with the academic world by that time?

BS: I thought about it but I decided that I wasn't good enough in mathematics or in foreign languages to get a PhD so I didn't bother.

JW: Okay. You would have had a fair bit of exposure to Spanish down in that part of the world, especially New Mexico and so forth?

BS: Well, we grew up speaking sort of a street Spanish but it wasn't very good.

JW: Not university qualified. Okay, you graduated in 1952, had the job market improved down there by that time?

BS: Yes, it did. I got a job with Southern Production Company in Fort Worth, Texas.

JW: How did you get that job, did they come on campus and recruit?

BS: Yes. They were looking for a petroleum engineer and so they sent one of their local representatives. Southern had some production, near Norman where the university is located.

JW: Did the academic training at Norman allow you to go right into an oil field and contribute to Southern Productions activities or was there a period where you had to take the theory and learn how to apply it?

BS: There was a long period of learning how to apply it. It was probably 2 years before you're much good to anybody because you're just busy learning what's real.

JW: So in university then, they didn't really get a lot of practical, kind of hands on experience?

BS: No, almost none.

#144 JW: I wonder if that's changed at all now, or if it's still. . . ?

BS: If anything I think it's probably worse.

JW: I wonder if you could just give a little background about the company, Southern Production as you knew it in 1952?

BS: It was a fairly small company. As I said, its headquarters were in Fort Worth, Texas. They had probably about 100 employees all together I guess. They had production, some in Oklahoma and some in New Mexico and some down in Louisiana and the Gulf Coast of Texas and a bit up in Wyoming. So you know, by industry standards it would have been a fairly small company.

JW: But fairly active sounding.

BS: Yes. Then they later got involved up here in Canada. First of all, as a non-operator, just as a partner. It was Mobil and Woodley in a drilling operation over in the Swift Current area.

Then later, when I got involved, we had taken a farm out from Pacific Petroleum. I think we were committed to drill about 20 or 30 wells on this acreage that we were getting from Pacific. So they sent up myself and another young drilling engineer to look after the drilling operation up here.

JW: Who did you come up with, who was the other fellow you came up with?

BS: A young chap by the name of Tim Alexander.

JW: Do you recall your reaction when being told that they were going to send you up to Calgary? Well, first of all, were you aware of Calgary or the Alberta oil scene at all when you were down in Texas and Oklahoma?

BS: No. We had heard that there was a discovery up in Leduc but we didn't know anything about it. Essentially, it was just a blank spot as far as we were concerned, we didn't understand anything about Canada. As far as my reaction to coming, I was pleased to come just because it was something new and different?

JW: Did you arrive and go to the Palliser Hotel like just about everybody did I guess?

BS: Yes. Got into the Palliser Hotel and the next day I was given a car, this was in February of 1954. So I went down to the war surplus and bought myself some warm clothes and then I headed out for the first drilling location.

JW: The next day, right away?

BS: Yes.

JW: And was that up at Edson, up that way?

BS: Yes, it was about 40 miles southwest of Edson.

JW: That must have been an adventure in its own right, just getting up there at that time?

BS: Well, it seemed like it.

JW: Do you recall any of the trip in, what kind of road was there, you went up to Edmonton and then from Edmonton over to Edson probably?

BS: Yes. It was not a bad road, it was narrow and crooked but it was paved. The road was built on the grade of the old Grand Trunk Pacific Railroad. And they didn't do much about widening it out either. It was just wide enough for 2 cars and no shoulders.

#221 JW: Well, in February too, everything would be frozen so you wouldn't encounter the mud and all that either, that's true.

BS: Right.

JW: Maybe before we get into activities at Edson and so forth, who was at Southern Production in Canada at that time?

BS: Mike Strong was heading the organization up. Then in addition to him it was Jim Hicks who was sort of the production manager and Ken Germond was exploration manager. I reported to Jim Hicks.

JW: What kind of an introduction did Jim Hicks give you when you showed up, were they glad to see you and happy to have more people show up or, okay, you're here, get on out there?

BS: I don't really recall too much about that meeting with Jim. All I know is he gave me a car and then I took off with it but I can't remember any of the details of the meeting.

JW: Where were there offices, do you recall where Southern Production's offices were?

BS: They were in the Petroleum Building.

JW: What was your impression of Calgary as a town when you arrived, you weren't here very long but. . .?

BS: I was surprised, I wasn't expecting as large a town as what it was. I was woefully ignorant. I thought I was coming up to a place which was out in the frontiers and I was quite pleasantly surprised to find out that it was quite a bit larger than what I had been expecting.

JW: You went on up to Edson then the next day, actually what did they want you to do out there and what was going on?

BS: We were getting ready to drill a well up there and they wanted me to work with the surveyors and the earth moving contractors to get a location prepared. So it was my job to just sort of coordinate this.

JW: Hadn't the location already been determined by seismic or some other means?

BS: Yes, they'd picked a location on a map but you still had to go out there and put a stake into the ground and then you had to level it.

#272 JW: Right, make a well site and all that. And were these contractors already arranged, were they waiting for you?

BS: Yes.

JW: So that was all set up.

BS: That was all done.

JW: So they had a drilling contractor then come in and spud the well?

BS: Yes, an outfit called Trinity Drilling. Pete Bourne was the tool pusher on that rig.

JW: So did you stay out there until they completed the well?

BS: Yes. We started drilling I guess, in March and completed drilling in May. But then we weren't able to . . .no, I guess we completed drilling in June. We weren't able to get the well logged until sometime in July because all, we'd been building some summer roads and then it started to rain and when it rained it washed everything out that we'd put in. So we were sort of hung up there until it dried up a bit and we could go back in and repair the damage to our road system. Then after that we started building roads into another drill site but it continued raining so much that we finally quit. I went up to the Peace River country at that time.

JW: Was it common for a petroleum engineer with a Master's degree to supervise outfits pushing in a road and clearing well sites and that sort of thing. Was that because the company was small or was that. . .it seems to me like they could have better utilized your talents I wonder.

BS: Well, it was a small company and it was just, you did whatever needed to be done. They didn't have any research department or anything like that, they just needed people.

JW: Okay, that's interesting. I'm going to turn the tape over here now.

Tape 1 Side 2

JW: I'm just wondering, Bob, when you came on up and were working with Trinity Drilling

and so forth, up in the Edson area on that well, were there noticeable differences between the way those kinds of drilling operations and so forth, and completions and that kind of thing were done here as opposed to what your experience had been down in the southwest U.S.

BS: Only in the sense that they had to weatherproof these drilling rigs up here, which wasn't done down there. But other than just trying to cope with the cold weather there wasn't any noticeable difference.

JW: What constituted, in the mid 50's, weather proofing a rig?

BS: Well, you had to get steam heat out there and enclose the derrick floor with canvas so that they could block off some of the wind so that the mud didn't freeze up on you.

JW: So the steam would come out of the boilers there wouldn't it, I guess?

BS: Yes.

JW: Just out of curiosity, do you remember the name of that well up there at Edson?

BS: We called it Southern Production A1-1. The project was the A1 project and it was the first location on there. So that's the name that we gave it.

JW: Did you get anything out of it?

BS: Nothing commercial, we got a little bit of gas out of the Cardium but that was all.

JW: Maybe we could just, before we get you up into the Peace River country there, you mentioned Southern Production had some farm-ins with Pacific Petroleum. Maybe you could just talk a little bit more about Southern Productions land position at that time, if you recall?

BS: I don't remember. I know all the acreages we had we got from Pacific but I don't recall how many acres was involved or anything like that.

JW: There were a lot of companies at that time that got acreage from Pacific Petroleum, weren't there? They farmed out quite a bit of their lands in the mid 50's, early 50's?

BS: Yes, I think they had more than they could handle. And they had a lot of companies like Home or I mean like Southern Productions that wanted to get into the business up here. But my recollection of that is pretty dim right now.

JW: Okay. I guess Ken Germond though, was the one that arranged these farm-ins on Pacific Pete's land?

BS: Yes.

#045 JW: Were you around Calgary enough to meet these guys?

BS: Yes, I got to know them fairly well. But after I left Edson, I went up to the Peace River country for awhile and we were drilling some wells up in there. Then I came down to Rocky Mountain House in the fall because we got a small oil discovery down there in a little field called Farrier???. Ended up drilling I think, 3 producers and 2 dry holes down there before we finally figured that we had the thing developed about as much as we could get out of it.

JW: Those were fairly deep holes in that area too, weren't they, you were getting down. . .?

BS: They were around 8,000'.

JW: Was Tim Alexander, was he still with the company at that time?

BS: Tim had gone back down to the States. He only stayed up there about 6 or 8 months I

guess and he moved back down to the States.

JW: Do you remember any stories or situations up in the Peace River country or Rocky Mountain House that were maybe a little bit different or interesting?

BS: No, not that I can recall. It was all fairly routine, no excitement or anything.

JW: No bears?

BS: I think our only experience with bears was down in the Edson area, when we were trying to build these roads that one summer. We ended up with an old mama bear and a bunch of cubs that were raiding our camp and we ended up destroying them because they were such a nuisance.

JW: Yes, they can be, once they find your camp and so forth, you can't get rid of them. What were the living conditions like, you mentioned the camp, what was that like?

BS: They were trailers and fairly comfortable.

JW: Did you have a cook on site?

BS: Yes, we had a cook and a cook's helper. Actually it was quite good conditions. We didn't have a camp over at Rocky Mountain House but we did at Edson.

JW: Where did you stay down at Rocky, in the town site there or motel, or hotel it would have been?

BS: We stayed at the hotel.

JW: So from Rocky then, they sent you over to Virden???, is that when you went over there, how did that work?

BS: When Tim Alexander moved back down to the States, then I moved into Calgary to replace him. The company was sold to Sinclair Oil Company and I didn't really want to work for Sinclair because it was too large a company. The guys from McCardie and Coleman came along and I knew some of them, so they offered me a job with McCardie and Coleman, which I took and that's when I got sent over to Virden.

#105 JW: Oh I see, okay. That was Paul Rothwell was managing that company then I guess?

BS: That's right.

JW: What kind of a fellow was he?

BS: Oh, he was good. More of a landman type promoter. He didn't know much about engineering.

JW: That was when, about 1957 I guess?

BS: '56 and '57.

JW: Who else was at McCardie and Coleman, that company hasn't come up before in my recollection anyway?

BS: They didn't have much staff. If they needed a geologist they just used consultants and they didn't have any other engineering staff. So they had a couple of land men, or one landman besides Paul and that was the extent of their staff.

JW: Who was that other fellow, do you recall?

BS: I remember his first name was Ralph but I don't recall his last name?

JW: Okay. So you were sort of hired on to really run the whole technical aspect of the company then.

BS: Yes.

JW: Because these other guys couldn't have done that.

BS: Now they had a production foreman that lived over at Virden that pretty well looked after their day to day operations. His name was Pete McNarry. He provided most of their technical input up to the time that I got there.

JW: So what were you brought on to do?

BS: We were drilling a number of wells and . . . I can't remember now just how many it was, I think we drilled about 12 wells and all of them were dry holes. Abut that time they decided that they were getting too old and they wanted to get out of the business, so in December of 1957 they notified me that they didn't require my services any longer. So I ended up out on the street looking for work around Christmas time in 1957. But I was fortunate that Home Oil had been advertising for a reservoir engineer and so I joined them in January of '58.

JW: This McCardie and Coleman, it's kind of a pricy operation to drill 12 dry holes, who was financing them, where were they getting their money?

BS: They were pretty well to do men down in Wichita Falls, Texas so they were using their own money.

JW: Oh, I see. So it wasn't a syndicate or anything like that?

BS: No.

JW: So you spent a few years out in the Virden area there didn't you?

BS: About a year and a half I guess.

JW: Yes, I wonder if you can just describe the conditions out there, what was that oil field like, say relative to some others you've been in.

BS: Well, it was shallow for one thing. The depth was only between 2 and 3 thousand feet, whereas production in Pembina was around 5,500' and this production in Rocky Mountain House was around 8,000'. So this Virden production was quite a bit shallower.

JW: So it's not that expensive to put a well down is it?

BS: That's right.

#171 JW: Where were you living out there at that time?

BS: I lived in a basement suite for quite awhile, and then bought a trailer house. That basement suite was pretty ???.

JW: Was it a pretty rugged situation out there at that time, or just sort of typical of any oil field situation?

BS: Nothing particularly unusual about it. Just a normal town which at the time was over crowded with people.

JW: Was there a lot of drilling activity going on out there at that time?

BS: Yes, there was. The field was getting close to being developed but there was still quite a bit of activity there.

JW: Were they inflating the prices, the townspeople and that sort of thing?

BS: The rents were inflated.

JW: What kind of a relationship did the petroleum people have with the town folks, that was basically an agricultural community I suppose, prior to the. . . ?

BS: They got along together fairly well. No friction that I can recall. But before they let me go

there in December of '57, McCardie and Coleman moved me back to Calgary. So that was a . . . you know, they could have just let me go over in Virden, which would have been a bad situation because there wasn't any work over there.

JW: Right. Well, none of the head offices were out there either, were they?

BS: No.

JW: Basically all that was run out of Calgary still wasn't it, or maybe a little in Regina. So that was your severance was a trip back to Calgary?

BS: Yes.

JW: You'd been up to Malmo??? then too, hadn't you, a little bit?

BS: No, I never did get up to Malmo. We had production up there but I never did get up there. It was actually operated by Sun Oil Company, so we didn't operate it, they sent us our cheque every month and that was the extent of our involvement.

JW: Did McCardie and Coleman, did they, after 12 dry holes, just give up entirely and fold up their Canadian operations?

BS: Pretty much. Although they did drill a few more wells later on, but nothing. . . you know, maybe a half dozen wells over the next 3 or 4 years. Certainly not enough that they had any need for a drilling engineer.

#231 JW: You have a couple of more minutes on this side of the tape, I wonder if you could just talk about, sort of a day in the life of a drilling engineer, say out in Virden. What kinds of things were you involved in at that time?

BS: Well, you'd be involved in reworking some of the producing wells that they had as well as going out to wherever the drill sites were where we were drilling and you'd take morning reports and then just do whatever needed to be done in the way of cementing pipe or you know, running the long string if there was any that needed to be run. In this particular instance we didn't drill any producers so all we did was just set surface pipe and drill the wells down and test them and then abandon them. There's a lot that a person did you know, that I find it difficult to put into words in a coherent manner what we were doing.

JW: Were there geologists out on these wells?

BS: Yes.

JW: Who picked the drilling locations?

BS: Paul Rothwell.

JW: Why do you think he was so unsuccessful or it was just the nature of the game?

BS: It was the nature of the game. The previous 2 years they had been quite successful and drilled a number of producers. He just took farm outs from companies such as Canadian Superior and Imperial. For awhile there he had a real string of luck and for a few years, then he had a string of bad luck.

JW: You just happened to get in on the bad luck side of it. Was that frustrating for you, you know, working 12 in a row with no production?

BS: Yes. But I didn't worry much about it at the time.

JW: Well Bob, maybe we ought to leave that for the day and next time get into your experience there with Home Oil, how would that be?

BS: All right.

Tape 2 Side 1

JW: This is a continuation of my interview with Mr. Bob Sears. The interview is taking place at Foothills Hospital in Calgary, today is June 13th, 1984 and my name is Jim Woods. Okay, Bob, I wonder then, last time we left off and you were on your way back to Calgary in January of '58. Did you have any prospects at that time, or were you just on your way back and hoping for the best?

BS: Actually, we came back before January, came back in October of '57 and I worked for about 2 months here in Calgary for McCardie and Coleman and then, just before Christmas they notified me that they didn't need my services any longer and they gave me a termination date of January 15th.

JW: Was the oil patch booming at that time, or were jobs hard to come by in general?

BS: They were in general, fairly slow. 1957 and '58, the industry experienced one of those sort of slack periods. But I was able to get on with Home Oil Company. They had advertised for a reservoir engineer and I was tired of the drilling and completion work because it kept me out of town too much. So I went to work for Home then in January the 16th, 1958 here in Calgary. Morris Paulsen was the person that hired me. There were just 2 of us in the reservoir engineering department at that time, Hal Morrison and myself. Hal was senior man and we were starting out on the development of the Swan Hills field.

JW: That's right, that had been discovered not really that long before had it?

BS: About a year previously, yes.

JW: What was your first impression on coming to Home Oil, as a company and so forth, what do you recall of your impressions of Home?

BS: Well, I thought it was a good bunch of people. Everyone that I met was friendly and they seemed to be anxious to get their work done and they were always real helpful. So it was a good place to work.

JW: Coming there on January 16th, you missed one of Bob Brown's Christmas parties, I understand he used to throw pretty good parties every now and then.

BS: He had 2 parties a year. His big one was the sort of his birthday party, it was usually held in March and then the Christmas party was a lesser, how should I say it, it was mostly company employees and sponsored by the social club. Whereas this party that occurred in March, it included not only all the Home Oil employees, but a large number of outside guests from other companies that Brown would invite and it was quite a set-up. The only problem is Brown eventually got to the point where he was drinking too much, so these parties at times, you got to wishing that he wouldn't have them just so that you wouldn't have to see him, how should I say it, you wouldn't have to see him in sort of a drunken condition because it was embarrassing.

#072 JW: He was good though, as a President wasn't he, I mean, he was. . .?

BS: When he was sober, there wasn't a nicer, more effective person around. But when he started drinking he just turned entirely.

JW: Did his friends encourage that or try to discourage that I wonder?

BS: I don't know, I couldn't say.

JW: Did you get up in to the Swan Hills field at all then, you must have gone up there once or twice? Was that your first task at Home Oil then, to start dealing with the Swan Hills reservoir?

BS: Yes. And I think that one of the first places that I went to was just a short trip up to Swan Hills. I wasn't involved with any of the surface facilities, so when you're working on reservoirs you can work on them just as effectively 1,000 miles away as you can 2 miles. Because you can't see anything. So there wasn't really much call for me to go up on the field work.

JW: What were your impressions though, when you did get up there of the field? I understand that the conditions were a little bit primitive and lots of mud and that sort of thing.

BS: No question but what it was a muddy place whenever it rained. I was impressed because we had built. . .or that first summer they built a lot of roads, using equipment that was brought in before break-up and we ended up having a pretty good road system around the field itself, and yet there was no outside access for a couple of years, except when it would freeze up in the wintertime.

JW: Sort of a closed system then in the summer.

BS: Yes, you'd have to stockpile everything that you needed.

JW: Did they have a bit of a camp up there where you went in and stayed?

BS: No, I never did stay up there, we just would fly in and then fly out. We had a big camp, you know, for people that had a reason to stay but I didn't.

JW: Were there any problems with the reservoir or interesting situations that you had to deal with or figure out in terms of that Swan Hills reservoir or the oil production out of there?

BS: There were problems all along because we didn't understand the nature of the reservoir. It was desirable to go and inject water into the reservoir, because if we didn't we'd have to put in a whole bunch of ??? pumps, to keep the wells producing. So we needed to maintain pressure. So we began to carry out studies on the reservoir but none of us understood the geology of it. We made recommendations based on our understanding of the geology which later turned out to be wrong. And it's just fortunate that we didn't do any great amount of harm to the reservoir.

#139 JW: Can you be more specific maybe?

BS: We had an idea that the thing was laid down like a bunch of pancakes and it wasn't so. But we designed a water injection pattern based on an erroneous understanding of the geologic model.

JW: That wasn't your fault though was it, that was the fault of the data that you were receiving?

BS: I wouldn't say that it wasn't my fault. I mean, there was a group of us working on it and we all were wrong. We formed a committee that comprised of people from Gulf and Pan American, who now are Amoco and from Texaco Canada. We worked on this steady for oh, 2 years I guess but it was 2 years of studying the wrong model.

JW: Why do you suppose the information, the model that was designed was wrong, was it not

enough structure testing done or not. . .?

BS: There wasn't enough communication between the geologists and the engineers. None of us just understood how the reservoir was really laid down. I mean, this happened in a number of fields, it wasn't just Swan Hills. At one time we treated it as though it was just one reservoir. Later on we decided that there had to be some layers in it, and then after awhile we identified a number of additional layers, plus also identifying the fact that some of the layers had communication vertically and some didn't. I don't think anybody could really be blamed, it was just a learning process that we went through. Nobody had worked on one of these Swan Hills reefs before and we tried to treat it as though it were a Leduc reef and it wasn't.

JW: How then did you finally determine the more or less, exact nature of the reservoir, just through further study and . . .?

BS: Through a lot of . . .we started water flooding the thing up there about 1961 I guess it was. It wasn't until about 1970 that we'd studied the thing enough that we began to have a pretty good idea of what the geology was. We went quite a few years there working with incorrect geologic model. Fortunately, it didn't do us a great amount of harm.

JW: Were there other fields in your experience, where harm was done, with having faulty information or building an incorrect model and then treating it incorrectly and a field was damaged or a reservoir was. . .?

BS: Not that I'm aware of. Not damaged in the sense of losing recovery. Damaged in the sense of maybe having it cost you more to get out the oil than it should have. You know, just loss in efficiency.

JW: How did you finally, when you recognized the true nature of the reservoir, what actions were taken then, how did you treat it?

BS: We went to, instead of a line drive flood pattern, we went to a 9 spot flood pattern and we recognized that we couldn't push water from one edge of the reservoir over to the other edge. Instead we had to inject in a number of different segments. When we recognized that we probably tripled up the number of injectors that we had.

#250 JW: Are you using subterranean water for these things, water that you're pumping out as. . .or are you using surface water normally?

BS: You're using surface water. They built a dam first of all then just dammed up a creek in there and that was the best water supply that we could develop. The subsurface waters that were available would have been too corrosive and weren't suitable at all for injection purposes.

JW: Were you involved at all in the tertiary recovery design or process that that field is now undergoing?

BS: No, I have not been much involved in that. I've tried to stay out of it. I got involved in a number of other projects at about the time we were doing that tertiary recovery so I've never had a great deal of involvement with it.

JW: Okay. What other kinds of things then, did you then become involved in at Home Oil?

BS: I ended up there, for a couple of years, in sort of an acquisitions group, working on the purchase of Davis Oil Company down in Denver. Then I also, the last 2 or 3 years that I

was there, was involved in setting up a training program, sort of training and career development program for engineers and technologists.

JW: Maybe, would you care to comment on that Davis Oil Company acquisition, that deal kind of went sour for Home Oil, didn't it?

BS: We paid too much money for it, that was the basic problem. The management wanted it too bad so they took every possible plus factor there was and ignored all the iffy things and built all the value that they could into it. Instead of it turning out that all the pluses came through, why all the negatives came through. But it was just one of these things, they decided they wanted to make an acquisition so they did and we probably paid about twice as much money for it as we should have.

JW: Were you one that were pointing out some of the negatives or the iffy aspects to that and not being listened to? Or did you just evaluate it and say, here's what you're going to get, it's up to you?

BS: It was more that, here's what the numbers look like, you can do what you want to with them. We had a company president at that time that was a pretty strong willed individual. Brown wasn't there anymore. So the person that replaced him, well actually, after Brown passed away they had, Ross Phillips replaced him for awhile and then later on they had another chap that came in and replaced Phillips. He was just bound and determined that he was going to make an acquisition and so he wasn't amenable to much in the way to be negative.

JW: Okay, I've got to turn the tape over here so we'll stop for a second.

Tape 2 Side 2

JW: On that Davis Oil Company deal, did you have any involvement with Bill Wilder and Consumers Gas?

BS: No. They kept pretty well separate. Some of the boys that I worked with in the financial end of it worked with Wilder and some of the Consumers people. But I myself didn't because by then it wasn't a technical thing, it was strictly just dollar crunching and they were running out numbers and there was no reason for an engineer to get involved at that time.

JW: Who started this acquisitions group at Home Oil, that you were a member of, how did that come about?

BS: I think it happened once they decided that they were going to get serious about making this purchase. There wasn't anyone that was really responsible for it, it was sort of a headless monster without having any real direction.

JW: Was it formed under Al Ross or when Bob Brown was still there, or later?

BS: No, it would have been later. This was probably around 1979, sometime along in there.

JW: Were there other deals or acquisitions that you were involved in looking at?

BS: We looked at a number of them, none of which ever came to fruition. I mean, for every one that you consummate you probably look at 20 or 30 that don't go through.

JW: So you were looking at evaluating oil and gas reserves and what the production potential was of the various companies that you had. . . ?

BS: Yes.

JW: You mentioned then you got involved in the training aspect?

BS: Right. This was something that I had been particularly interested in, was the need for a coordinated training program for engineers. I finally was able to convince our management that we needed something of a formal nature. So they eventually gave me permission to go ahead and develop a training program for our new engineers and I think that of all the things I did at Home Oil, I had more satisfaction from getting this training program developed than anything else that I ever did there.

#048 JW: Maybe you'd care to describe a little bit of what that involved and your philosophy behind it and the nature of the program?

BS: What we ended up with was a series of courses that were given to the engineers after they came on board. The program would run for about 2 years and included training in a number of different technical subjects and it was [phone rang]

JW: Yes, Bob, you were talking about the training program there and bringing in the new engineers for, you mentioned a period of 2 years, where they would have their skills brought up to par and so forth.

BS: Yes. Now that involved about sending them off to do field work for about a year plus every second month there would be some type of formal training course that would last about a week. This was quite an achievement just to get it approved. It took a lot of talking and convincing but eventually our management went ahead and approved the concept.

JW: Why do you think they were reluctant, if they were, or at least slow to come around to your point of view?

BS: Oh it's just when you've never done something before, you wonder if it's necessary or not.

JW: Did you model this program after some others in the industry or was this pretty well your own conception?

BS: It was pretty well my own concept. It might not fit another company, it just happened to fit Home Oil Company quite well, the way we were organized.

JW: Were these engineers that you were training, were they pretty well fresh out of university?

BS: Yes.

JW: Does the need for a 2 year training program with a year of field work and periodic review sessions and monthly reviews and so forth, suggest anything about the kind of training they're getting in university?

BS: No, the university's do as well as they can. They don't know how to train students any better than they do and you have to . . .there aren't any good petroleum engineering schools available in Canada so you have to take whatever training you can get and then train them in petroleum engineering.

JW: That's a funny thing, after what, more than 40 years of pretty active petroleum, there not being a decent program or course in petroleum engineering in Canada. You wonder why they haven't developed a good program somewhere.

BS: Well, they just didn't.

- #106 JW: Bob, you mentioned getting a training program going as something you can look back on with some satisfaction, I wonder if there are other highlights to your career that come to mind?
- BS: I think getting the geology of the Swan Hills reef sorted out and making our engineers understand the geology of this reef was one of the outstanding things that I did. I sort of acted as a liaison between the engineers and the geologists. It was probably the next most satisfying thing that I did.
- JW: How about people, who can you look back on, what people played an important role in your career in the industry?
- BS: I'd say that Morris Paulsen did in the sense that he hired me to work for Home. Then I worked for Al Morrison was my immediate boss for a large number of years so he certainly had an influence in my career. And probably Bill Lundberg and Howard Geddes, they would have had the biggest influence on my career.
- JW: What do you think of western Canada's prospects, petroleum prospects for the future, what's your view down the pike for western Canadian oil production?
- BS: I don't think that we're going to see any large production. I think that the heavy oil will gradually be developed because there just isn't enough of the light gravity stuff available. I mean there's a lot of little small wells being drilled these days but they're not developing much reserve. A person can make money at it, just because of the incentives that are offered, both pricing and the tax incentives. But I see it as being highly unlikely that we ever get any significant increases in proven reserves. It just isn't there. So I think it's more or less of a mopping up operation from now on.
- JW: Did you ever have any occasion to become involved in Arctic studies?
- BS: Very little. Other than sort of a consulting standpoint but I did very little with it.
- JW: Do you think there's any prospect up there, do you think Jack Gallagher's ever going to be proved right?
- BS: No. I think his prospects up there are pretty nebulous.
- JW: Well, Bob, we've covered a fair bit of ground here, albeit some of it briefly. I wonder if there's anything that maybe we haven't gone over or that you'd like to add upon.
- BS: No, I don't think so Jim.
- JW: Okay. Well, in that case, I certainly do appreciate your contribution and thank you very much.
- BS: All right. You're sure welcome.