

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Eugene Cook

INTERVIEWER: Betty Cooper

DATE: September 15th, 1982

BC: This is Betty Cooper and it's September 15th, 1982. I'm at the home of Mr. Eugene Thompson Cook at 2327 Uxbridge June 25, 2012r. N.W. in Calgary. Mr. Cook, I'd like to start right at the beginning, where you were born and some background on your mother and father and then we'll look at your schooling. From then we'll go on into how you got into the oil patch.

EC: Well, Betty I was born on the homestead of my father, the northeast quarter of 411-2 west of 4, approximately 30 miles southeast of Medicine Hat. Our nearest town was Irvine, Alberta, approximately 8 miles away. I was about 2 years old when my father moved into Irvine where he had business interests and I was educated in Irvine and in Medicine Hat through to the end of grade 12.

BC: Were you an only child?

EC: No, I have two brothers and one sister.

#013 BC: If we could just put their names so that we have it all on the tape.

EC: I have a brother Fred who is retired now and living in Rocky Mountain House and I have a brother, Berton, who lives in Red Deer. He is a civil servant and will shortly be retiring. I have a sister who is married and retired and lives in Innisfail, Alberta.

BC: Had your family been in that area very long?

EC: My father came west in 1899 for the first time and went east, came back again in 1901 and settled in the Medicine Hat area where he spent his lifetime. My mother came from Ontario also and she came west in 1910. She joined her brother who was a homesteader near Foremost at that time. They were both from Ontario, from the Shelbourne, Orangeville area.

BC: Oh yes, you mentioned that your father moved off the homestead not too long after you were born to business interests in Medicine Hat. What did he do in Medicine Hat?

EC: Actually it was into the town of Irvine that we moved. He was involved in a livery feed and sales business, handling livestock, horses and cattle. He spent a great deal of his time there as well as still continuing with his farming and ranching operations.

#030 BC: You would have a lot of opportunity to be around some of the larger horses that were around in the earlier part of the development of this country.

EC: Yes. At that time, up until about 1930, nearly all of the farming activity was carried on with the aid of horses. My father was very active in that business of handling horses and supplying horses to the trade.

BC: I don't know if we put down the date or your birth and the month?

EC: I was born in 1914, in May.

BC: Good. Now you say that your early years were all spent in Irvine to get your education. Was it in a small, sort of 4 room school house?

EC: Even smaller than that. Irvine was a small town, it only had about 250 people and we had a two room school. As I recall it the first room had six grades and the second room ran up to the end of grade nine. In fact, grade 10 was held there too, the year I went I had grade 10 there.

BC: Were you the only one in grade 10?

EC: No, there were two of us took our grade 10.

#045 BC: Now you went into Medicine Hat for grade 12?

EC: I got most of grade 11 in Irvine with the aid of a teacher there, largely on my own with his help.

BC: You'd study at home, did you?

EC: Yes. And in the school. And then in grade 12 I went to Medicine Hat and finished up there with high school work and then went on to Calgary Normal School in 1932.

BC: Would you have boarded at that time?

EC: I stayed with my aunt actually in Medicine Hat. She was living there and she had a very nice home quite close to the high school, Alexandra High School.

BC: Now you went into normal school, '32-'33. This is when the Depression certainly had hit the Prairies. How did you manage the money to get there?

EC: Well, my family were able to get enough money together to send me there. You know, it didn't cost a great deal. I boarded in Calgary in Sunnyside for \$22 a month, board and room and very nicely looked after. It was amazing.

BC: Could you take one year of normal or could you take two years here at that time?

EC: At that time they only had a one year course. And you were only in school for about 8 or 9 months. During that time you did a little practice teaching here in the city of Calgary and you spent about a week out in the country before graduation. And then you were on your own.

#064 BC: Where was your first teacherage?

EC: I taught down near Foremost in a school about 6 or 8 miles north of the town of Foremost, a country school and I didn't have a teacherage. I never did live in a teacherage. I always boarded with someone. I spent four years in that school.

BC: How large was it?

EC: I think the maximum attendance there was about 23. I don't recall us having anymore than that. I had a multiplicity of grades there. I remember it was quite a situation to me starting in, I think I had 8 grades the first year with 23 children. Of course, there was a lot of doubling up and combining the courses as a result of that.

BC: This would be very difficult for a new teacher to handle I would think?

EC: Difficult. A tremendous problem. I don't know how one ever coped with that but you muddled through somehow.

BC: Can you recall your first day in school?

EC: Not particularly. I think I was so nervous and afraid that I don't recall very much about it really.

#077 BC: In those days, I don't want to dwell on this part but I think it is important to record it, in those days with 23 youngsters taking from grade 1 to grade 10, there would have to be a real desire on their part to learn because they'd have to do a lot of learning on their own. Or did they not care?

EC: Oh, they cared. They were a pretty good bunch of children I thought. Varying degrees of ability and various backgrounds. You had some families with great ambitions and others who think school was just a necessity and as soon as the child was 15 he left and went back out on the farm.

BC: Was that the day he had his 15th birthday sort of thing?

EC: That was it, they graduated.

BC: How many did you lose that way?

EC: I can't really remember the losses but there was one family in particular I remember, their goal was to attain that magic age of 15 and all of them left when they were 15. There were four of them that I can recall of that one family whose goal was just to get to be 15.

#092 BC: Too bad. You stayed there for how long?

EC: I was there in that school for four years and then I went up to another school north of Winifred, about 30 miles west of Medicine Hat, where I taught for two years. I was put into that school by the School Superintendent, I think because, that particular district wanted to keep their children at home for grades 9 and 10. And I had had some success with grades 9 and 10 in the other school where I was and I was moved into that school to carry on and further the education of those youngsters. There were four of them that I had in those two grades. In fact I stayed there two years and put them through to the end of grades 10 and 11.

BC: 11 in those days would be like the junior matriculation, would it?

EC: Yes, that's correct.

BC: So they really had finished their high school.

EC: They had up to that level yes.

BC: What happened to children if the school didn't offer a grade 11?

EC: Well, they would have to find some means of getting out to another centre where they offered the courses, probably in a near by town. Bow Island for instance, there was a fairly large school there and the children would have to make their way over to that point. In those days there was not the bussing system that we have today. Today children are bussed miles to go to school and the small rural one room school is nearly a thing of the past. And they're all concentrated in larger centres. But in those days it was a matter of a one room rural school. And people prided themselves, that was the sort of community centre, the place for them to congregate and have meeting, parties, dances.

#115 BC: It was sort of a mini town hall was it?

EC: It was. The community centre.

BC: I think that's something that's been lost in some of the smaller centres with the schools being consolidated.

EC: Oh yes. I'm sure of that. The system is entirely different now with no common focal point in each of these smaller rural communities. They all travel to the nearest town or city. Of course, the roads are so vastly improved that they can do this readily.

BC: And from there you went to Rocky Mountain House.

EC: I went to Rocky Mountain House. I got out of the rural area and into the town scene. Rocky was a town with eight rooms and it was a consolidated school and they drew pupils from the surrounding area to it. And I spent two years there working in. . . well, I started in grades 5 and 6 with some work in the upper grades and the last year I was there my home room was grade 7 and 8 but I also worked up into the high school because I at that time, was qualified to teach a certain number of options which had been brought into the education scheme.

BC: What sort of options?

EC: This may seem surprising to hear that I was qualified in this but I was qualified to teach the option of dramatics. I taught Dramatics 1 and Dramatics 2 in the high school. I taught Bookkeeping 1 and Bookkeeping 2 in the high school. I also had taken a course at university, a summer school course, which qualified me to teach biology in grade 12 and I took that course. None of the other teachers had taken this particular subject and didn't want to teach it so they gave it to me.

#140 BC: I was going to ask you, during this time that you were teaching school in the rural areas, did you go to university in the summertime to upgrade at all or was that the fashion then?

EC: Yes, it was the fashion. You were under certain pressure to get yourself improved and qualified for the teaching of the optional subjects. I spent four years at summer school, one year in Calgary and three in Edmonton and became qualified in these various optional subjects and also I took. . .one of those years was a university year of summer school. I took English and Botany 1, which helped me in my teaching in high school.

BC: So this would be the beginning of getting a university degree then would it?

EC: Yes, if I had pursued the educational line. I didn't. I dropped out of education because I enlisted.

BC: And never went back to it?

EC: I never went back to the educational field.

BC: Interesting. Were you married during this time before the war.

EC: No I wasn't. I didn't get married until 1942. I was in the service at that time. In fact, one couldn't afford to get married.

BC: Well, I was going to ask you, we didn't establish what your salary was?

EC: I was one of the lucky ones I think, because I started in at \$850 a year and the salaries for many teachers were lower than that. But I never got less than \$850 a year but I never got more than \$900 a year. Even after 8 years of teaching and having improved myself academically I was still only getting \$900 a year the last year I taught.

BC: It's not very much to live on is it?

EC: Well, you know, living was a lot cheaper in those days. The highest monthly board bill I had was \$35 and I boarded for a time in the Mountveiw Hotel in Rocky Mountain House for \$35 a month. I had a room upstairs in the hotel and ate in the dining room and took anything off the menu which I wanted. Amazing to think back that one could live for \$35 a month in a hotel in this province.

#175 BC: Indeed. During those years, they were the Depression years, what was the effect of the Depression on the youngsters that you were teaching?

EC: You know, I think that they didn't realize that there was a Depression particularly. There wasn't the communication there is today. There was radio of course, but there was no television. And I don't think that people, younger people, school age children, particularly the younger ones, even thought about there being a Depression. They were happy with what they had and made do, as we did.

BC: Indeed. What kind of social life was there, say in Rocky Mountain House?

EC: There were of course, the local dances, there was the picture show, there were parties, card parties. There were bridge tournaments, the usual thing that goes on in a small town.

BC: And then in 1941 you joined the RCAF?

EC: Yes, I enlisted in '41 as an AC-2 at \$1.30 a day. As a matter of fact, I think I was better off financially the day I enlisted than I'd ever been in my life before. Because I had all my food, all my clothing, all my medical and dental work looked after at \$1.30 a day.

BC: And they were training you?

EC: They were training me.

BC: What did they train you to do?

EC: I went into Air Crew. I qualified physically for Air Crew and I went in for Air Crew and after ITS, that's the Initial Training School, I had to make a choice, whether I would be a pilot or whether I'd be a navigator. Or I could have taken a bomb aimer or the rear gunner. But I didn't want to be one of those, I thought I was more interested in navigation and the use of the mathematics that I might have than anything else. So I chose deliberately to take navigation. And I went into what they call the Air Observers School training and graduated as, in those days, we were called Air Observers, or Navigation B's, Navigation Bomb Aimers, we were trained in both disciplines actually, navigation and bombing.

#211 BC: The mathematics that you mentioned you needed, would that be at a post secondary level in mathematics?

EC: Actually no, it wasn't that advanced, it was just having the facility to add and subtract and understand angles and maps and relationships of that nature. I found it relatively easy, simple and enjoyed it actually.

BC: And you went overseas, I presume, did you?

EC: Yes, upon graduation at Rivers in '42, I was given the opportunity to become an instructor in navigation. At that time the Air Commonwealth Training Scheme was expanding at a rapid rate and they needed people to instruct in navigation, the field I was

in. So I was asked if I would be an instructor and I accepted the opportunity and I was posted to Portage La Prairie. I spent a little over a year there instructing courses in navigation and then went overseas in '43.

BC: Where were you overseas, where were you stationed mostly?

EC: The manning depot, as they called it, was at Bournemouth, that's where we arrived. At Bournemouth, because I was by that time a flying officer and had this background of experience a little greater than the normal graduate, because of my instructor experience, I was selected along with 3 others. We were given the opportunity if we so wished to be trained specially for what they called, the Pathfinder Force. We were earmarked for that right out of Bournemouth and went to a special training process designing us to work as navigators or what we call set operators in the RAF. I was never associated with the RCAF overseas. I visited some of their squadrons once or twice to see friends and my brother but I was always with the RAF over there.

#247 BC: Did you get paid RAF salary or Canadian?

EC: No, I was paid Canadian rates.

BC: Why were you with the RAF, when you say Pathfinder, exactly what was Pathfinder please?

EC: There was a need for accuracy in bombing. The bomber command early on, found that they were not being accurate enough in their marking and bombing of targets in Germany. And certain crews were selected because of their skill and ability, to go in and mark the targets with special flares and then to direct the attacks of the main force as they were called. The main force of bombers which came along behind. I wound up on this Pathfinder Force, it was called 8th Group and I think when I joined them we had about four squadrons only of special crews that went out and marked the targets and then master bombers would circle the target and direct the attacks.

BC: That would be very dangerous I would think?

EC: It wasn't the most safe job in the world.

BC: How many sorties did you do like that before you were allowed to come home?

EC: I did the equivalent of two tours, which was. . .and they put in a point system part way through my first tour. And I did two tours and I did 52 complete sorties over Germany.

#277 BC: Then did they allow you to come home or did the war end?

EC: That was the spring of '45 and I was finished in March. The war was not over but it was nearing it's end. I was posted home about the end of March '45. I had to wait around for a long time to get out of England. I arrived in Toronto on VE Day. I came through a convoy to New York, to Montreal by train, up to Toronto.

BC: Were you expecting to just stay in the RCAF then, as a trainer or were you. . .?

EC: No, I had no desire to stay in the services. I thought this was the finish of the war and I would get out which I did.

BC: You had certainly put in your time. Now, after the war you never went back to teaching, you went into the university as many veterans did.

EC: Yes, there were a lot of us who took the veterans benefit of education. I was one of them.

I thought it was an opportunity that I couldn't pass up to get a degree.

BC: What did you decide you were going to study?

EC: During the war years, I had been associated with some engineers at Portage La Prairie and I was quite interested in these men. They were trained in various disciplines, electrical, mining, geology and civil. And as a result of my association with these men I thought this was a very interesting life to be involved in that type of discipline. So after the war and this opportunity was there for me to get an educational benefit paid for by the government I decided I would take engineering.

#313 BC: Which kind of engineering did you take?

EC: That again was a question that I didn't resolve until the second year. When I went up to Edmonton and enrolled in the university there was a lot of pressure brought to bear on me to stay in education but I didn't think I wanted to stay in education. As I told them I said, I had climbed the ladder of success, I had gained the magnificent salary of \$900 a year after 8 years of trying and I thought this was enough for me. Anyway I persuaded them that I be allowed to stay in engineering and they accepted my request.

BC: Were the DVA people, did they have the say as to whether you could go and what you could take?

EC: Not really the final say, they could try to persuade you but they failed because I fortunately had very good marks in high school, particularly in the last year. And the crunch came when one day I was taken up to the office of the Dean of Engineering, he said, what's your problem and I explained to him they were trying to force me to take education and I didn't want to. That I had enough of education, so he said, let me see your marks and I had my transcript there, he looked it over, he said, Cook I see no reason why you should be barred from taking engineering if you want it, I will approve this and that should end your difficulty. And I was concerned, very concerned at the time that I was being forced to take education when I didn't want it.

BC: I guess with so many veterans coming back it was a problem and if they could have you go into somewhere where you were already partly trained it would free a space more quickly perhaps.

EC: I think that was one of the reasons for it. And I think there was a need for experienced people in the educational field.

End of tape.

Tape 1 Side 2

BC: Taking engineering at the University of Alberta, you didn't have an opportunity to take Petroleum Engineering did you?

EC: No, Betty, they didn't have a Petroleum engineering course when I started up there. In fact, the first year of engineering is much the same for all of the various disciplines. I took the first year, thinking that I would probably take Civil Engineering but nothing was firm about that. In the second year you had to start, to a degree, specializing and it was still either civil or mining. But in the second year, in February of '47, they brought in Leduc and there seemed to be a new field of activity opening up in the province in the oil industry and I determined that I would attempt to take courses that which would fit me in some way for the oil industry. So I, in that year, decided I would take Mining Engineering because I could get quite a bit of geology in Mining Engineering. So I did then concentrate on the hard rock pattern of the Mining Engineering course and graduated in that in '49.

#018 BC: Now through the summer, you would be working for the summer I presume because you only got grants for the months that you were actually at school, did you not?

EC: Yes, that is correct. I was married and Carol, my wife, worked at the Correspondence School branch in Edmonton. She had been a teacher and she worked as a correspondence school teacher. But in the summertime of course, I was on my own and I did manage to get summer work each year. The first year I worked for the government on a highway survey project out east of Edmonton.

BC: Had you taken surveying at university?

EC: Yes, we had as a part of the engineering course, you get surveying knowledge or techniques and so on. I took that.

BC: How did you get that job?

EC: The government was advertising for summer students or summer employees.

BC: Were they advertising on campus?

EC: Yes. There were notices posted and I applied for and was accepted to work on a highways survey party.

BC: Were there any people that were working with you in that first summer that took the same turns you did, eventually going into the oil patch?

EC: No. We had a graduate Civil Engineer, a recent graduate who was our instrument man. He was a very fine gentleman by the name of Macdonald. We had a chap who was with me in the same year of engineering, in fact two of them, George Shipley, who later became a Mechanical Engineer and why he drifted into that I really don't know except that he had some associations with that particular branch of industry. He was in my class actually and was taking Mining Engineering but went into Mechanical Engineering really when he graduated. He was on the crew and another lad, who I believe, dropped out in about his third year, he didn't finish. So that made up our crew with the aid of the. . . we

had an engineer in charge of the party, a regular permanent employee of the government.

#043 BC: And that was the summer of '46, the summer of '47, where did you go?

EC: Initially I worked for Britannia Mines, in the Howe Sound, north of Vancouver. I was anxious to get a little bit of practical underground mining experience because of the nature of the courses I was taking. So I went out there and worked for a month and an opportunity arose where I could join a seismic crew in the Red Deer area, which I accepted. So I left Britannia Beach and came back to Red Deer and finished out the summer working on a seismic crew for Mr. Blunden.

BC: How did you like working in the Britannia mine, were you underground?

EC: Yes. That was a huge mine, a copper mine, and as I recall they had about 100 miles of tunnels. It had been in operation for many years. They used what they call the open stoke method of mining and I spent all my shift time there underground.

BC: How did you like that?

EC: I was not very interested in underground mining I must confess. I'm tall and I was constantly bumping my head on the tops of the tunnels and various pipes and projections and what have you coming down from the roof.

BC: That could be very dangerous for you then couldn't it?

EC: Well, I didn't enjoy it at all. You wore a hard hat of course, but it was very depressing for me. The mine was extremely wet, the water was just pouring through it at that time and . .

#062 BC: What did you wear on your feet?

EC: You wore heavy, heavy boots with steel caps on the toes.

BC: They weren't rubber boots though. So you went to work with Mr. Blunden on a seismic crew. Had you know anything about seismic work before you went there.

EC: Not particularly. I had done a little reading about it. In fact, prior to my joining him I had made application to him for a job and it hadn't materialized at the time that I went to Britannia Beach. It was a result of that application that he phoned Edmonton, inquiring about my availability and I was available because when I got the message I immediately left Britannia and came back to go to work on a seismic crew out in the open air.

BC: When you were working for the seismic crew, it was connected with an oil company was it not?

EC: Yes. That was a crew operated by Gulf Oil. And they operated in central Alberta. We spent that summer, as I recall it, in the Big Valley, Delburne, Stettler, Bashaw area working on various lines. . .

#078 BC: How did you enjoy that work?

EC: It was an interesting experience outdoors. I worked mainly as a drill helper and a water truck driver.

BC: When people look at seismic crews in 1982, the equipment that they use is very, very different than what you used then. Your geophones for example, would be pretty hefty.

EC: They used a larger geophone in those days and they didn't use nearly as many of them. In fact, I think, in large measure there was only one geophone per station. Today they use

probably 9 or even 18 or more per station. The size of the phone has decreased quite markedly from those early days.

BC: What about the drilling equipment that you were involved with?

EC: There hasn't been that much change in the type of drills that they were using in those days as compared to what they use now. They are still using drills of that same type with improvements, as well as more modern drills which they've brought into play.

BC: After that three months with Mr. Blunden, looking at your career late on, when you went into geophysics, there must have been some great influence on you during that three months of working with Mr. Blunden.

EC: I had planned to go into some phase of the oil industry and this exploratory phase appealed to me. I had at one stage, made an application for work with Haliburton in well servicing work but I didn't pursue that. Once I got involved in this seismic aspect, I was rather intrigued by the use of the technique and mapping the sub-surface and the application of geology to the use of the seismic tool.

#104 BC: There wasn't too much going on in the way of seismic work at that time, was there, in 1947?

EC: Not as much as there was within the next 4 or 5 years after that because 4 or 5 years later there was a tremendous surge of activity in the province. And the number of crews increased dramatically.

BC: You would have gone out to them, sort of June, July and August?

EC: We started the end of May and worked through to. . .

BC: You got out of university that early that you could go to. . .

EC: Out the first of May, yes.

BC: But you'd been to Britannia first.

EC: I was out there for a month. So I spent June, July, August and till about the middle of September with the crew working in central Alberta.

BC: Tell me about Mr. Blunden, your first impressions of him?

EC: We had much in common in many ways because he was a schoolteacher or had been a schoolteacher prior to the war. He had enlisted, he had been an instructor in the Air Force, in navigation. He had gone on from being an instructor to being an administrator and we had that common link in background, education plus Air Force.

BC: And you'd be a little older than some of the university people. Well, not some, most of them were your age because they were out of the forces.

EC: Well, actually I was one of the older ones. I didn't graduate until I was 35 and that's pretty old to be graduating with a Bachelor of Science degree. So there were lots of those lads that were with me in those courses that were veterans who had only. . . you know, they had gone into the Air Force at the age of probably 18 or 19 and came out when they were 23 or 24. So they were probably 7 or 8 years or more younger than I was when they graduated.

#128 BC: At that time too, in schools, in universities, there was still the belief that you had to learn everything before you were 21 or you'd never learn anything after. There

was still quite a few professors, particularly in the sciences that had this notion.

Did you run into any of those?

EC: No I don't think so. I was quite pleased with the reception that we had in Edmonton. There was a tremendous demand made on those professors and they were hard pressed to handle the very large classes and to have adequate space to handle them. There were many make shift arrangements and huts erected and so on, on the campus to provide classroom space, temporary housing for students and that sort of thing. But I didn't run into any of that feeling I don't believe. They were, I thought, very, very interested, they were doing the best they could for us.

BC: Did you find it difficult to go back to school after having been out and teaching and been away, well it would be 10 years I guess wouldn't it?

EC: It was a bit of a chore but I'd always been interested in reading and in study and I thought that. . . I really didn't find it that difficult. I think some of the other lads found it much more difficult than I did. Because I had that instructor, educational background and was interested in furthering my knowledge. So I think that I was, what shall we say, more able than many of the youngsters that came in there. There was quite a drop out in the first year or so, of lads that just couldn't hack that demanding routine.

#152 BC: And after having been in the forces, perhaps having to have that much individual responsibility must have been very difficult, a different kind of responsibility.

EC: Yes, it was quite a jump from teaching a classroom of youngsters to working in the Air Force as an instructor and then of course, the overseas experience.

BC: We started to talk about Mr. Blunden and we didn't get very far, you first impressions of Mr. Blunden?

EC: Well, a very able man. Very competent and well trained. He had been trained by Gulf in a course that they provided him with in Pittsburgh and then he worked at Pincher Creek for quite a time with various interpreters and graduated from that to running his own crew. But he had the administrative capability, he had the educational background and an inquisitive mind. So he coped very well and was highly respected by his peers.

#171 BC: The next year, we'll just skip through your university, you'd obviously changed and were taking the engineering but the next year was '48, when you would still be going out for a summer job.

EC: Yes. I was, shall we say, a veteran with Gulf and they invited me back for the second year. The greater portion of that, as I recall it, was spent down in the Pincher Creek area, as well as some of it in central Alberta.

BC: And who were you working with then?

EC: Down south it was with Pearson.

BC: With Stan Pearson, oh yes.

EC: In fact, I was on his crew both in central Alberta and down in the south. His office was in Red Deer and later on, when we moved down to Pincher, was in Pincher Creek.

BC: Was he fairly new with Gulf at that time?

EC: I don't really know how long he'd been with Gulf but he was a war veteran and had

trained in geology and he joined Gulf some time after the war, worked in a geological capacity, wound up on the exploration side using the seismic tool. And worked as an interpreter of seismic data.

#189 BC: So he became a geophysicist?

EC: Let us say he became an explorationist. I find the use of the word geophysicist somewhat restrictive. In my experience you can't just be a straight geophysicist. You've got to be conversant with other disciplines, particularly geology. So I think today, anyone who has done a lot of work in that area is an explorationist, he works in geology and geophysics. And to make the proper interpretations of data you must be conversant with geology.

BC: Is the same true of a geologist, do you think that a geologist or a geophysicist, those are passe names and both of them must have a dual role.

EC: They do. I think they must have a knowledge of both disciplines if they're going to work in exploration for oil. Because the tool has to be exploited and used.

BC: Where were you working in Pincher, was this down where Gulf had. . . had they discovered their. . .

EC: Yes. They had made the discovery down south of the town. And we worked in the area of their discoveries, extending and refining their control in . . . well, not too far from Waterton.

BC: Were you part of the crew that found the edge of that field?

EC: No, that was before I arrived on the scene.

#211 BC: Because this caused quite a difference in the look of that field.

EC: Yes.

BC: But you were not involved with them at all there?

EC: No I was just helping with the seismic work in '48 and it was just . . . they had drilled the Walter Mar #1, I remember it's being there and picking up some drilling mud from that drill site. And the rig was there waiting on orders with the heavy column of mud holding back the gas. I know they were quite concerned about being able to keep the well under control at that time because of the gas pressures. So they had made the discovery.

BC: Could you tell me a little about Stan Pearson, how well acquainted were you with him at that time?

EC: Not particularly well acquainted with Stan. He was the boss and in the office. Very nice gentleman. He entertained us at his home, the entire crew, on one or two occasions, very likeable, very knowledgeable, he knew the area and paid a lot of attention to detail. He went on as you probably know, to great heights in the Gulf organization.

#230 BC: Right. Did you have occasion to work with him or for him again later on?

EC: No that was my only year with him.

BC: Who else was on that crew with you. . . that stayed in or are there any people that were there that continued on?

EC: I think I was the only man out of the Alberta University down there that summer. I can't recall other people on that crew from Alberta. Maybe my memory is at fault here but I

can't recall other people from the University, in engineering particularly.

BC: Again, they asked you to come back, you didn't have to . . . they didn't come recruiting on the campus?

EC: The job was there for the next summer if I wanted it and I accepted it.

BC: What about at the end of your . . . you graduated the spring of '49 and where did you go?

EC: I made application to Gulf to join them as a permanent employee. I did not succeed. I looked around for jobs and finally wound up working for Northwest Seismic Surveys, a small contract firm which had started up based in Calgary and Mr. Blunden had joined them. And it was through this contact with him that I was able to join that company. He had been looking for people and he sent work up to Edmonton to me that the job was there if I wanted it so I joined him.

#258 BC: That's interesting because that's who you had in the first job after you were . . . the first job on the oil patch really.

EC: That's correct.

BC: Who else was in the Northwest Seismic Survey when you joined them?

EC: The principal was Mr. Jack Macmillan, a Calgarian, an engineer. He had been with Imperial Oil for a number of years. His partner, or two partners were Jack Timmins and we called him Ollie Anderson. Jack Timmins was a man who contributed a drill, I remember, to the company and some knowledge of the business and Ollie Anderson was a very, very experienced operator of seismic instruments. As he provided the instrumentation knowledge for the crew. Timmins provided some drill information, Macmillan provided the administration and financial side of the company. And they started up with one crew and expanded very rapidly.

BC: Where was their office?

EC: the first office was down on 10th Street, just below Riley Park on the east side of the street. I think there's a Safeway store in there now. That building was moved across to the west side of the street some years later and in fact, it's still there.

#286 BC: And how many were actually in the company, were you the 5th person to join them or were there some other people working there when you came?

EC: No, I think there were more than that. As I recall it they had either 2 or 3 field parties, working out in the field. And the crew would be composed of normally, about 14-16 people. You would have that, then there would be some subcontractors out there working with them, but the crew was normally 14-16 people. And in the office, there was Mr. Blunden in the interpretation office with the aid of . . . there were four of us in there when I joined the company. There were two men with Mr. Blunden and he was hard pressed so he brought in two graduates. I was one of them.

BC: Who were working with him then, do you remember the names of the others?

EC: Yes. The other graduate that joined the company at the same time I did was Allen Campbell. He is working for Mobil today. And then we had Spike Brown and we had another man, Jack Wey. Jack Wey is now retired from Gulf, Spike I think has his own little company.

#312 BC: Do you remember anything about them, did you work with them very closely?

EC: Yes. When I was in the office. . . I was in and out of the office an awful lot during the 4 years I was with that company. I worked with them quite closely for probably the first four to six months before I got shifted around to the field. I was in and out a lot. They stayed in the office working as computers and general office duties for all the time I was with the company.

BC: Can you think of any incidents in the office or around that involved either Spike Brown or Jack Wey or Mr. Blunden or the group? Were you a cohesive kind of team working?

EC: I think we worked pretty well together. I don't recall anything unusual about it. We worked in the office. I didn't have too much association socially outside of the office except for the odd party that we would have and get together. But we led our separate lives and went our own ways.

BC: You were a computer to begin with then?

EC: I was classified as a computer. But it wasn't long before I was shifted out of there and put into the field to act as a field Party Manager.

BC: What would that entail, the Party Manager, this would be in 1949, 1950.

EC: Yes. Northwest Seismic, being a contracting firm had various clients and I was selected because of my background and I had some survey experience. I was able to cope with survey problems in the field, I knew a little bit about interpretation. So I was able to manage the crew. In other words I was the manager of the field parties of 14-16 men. You'd have your recording crew, you'd have your surveying crew, you'd have a permit man, you would have your drill crews.

End of tape.

Tape 2 Side 1

BC: That must have been quite an experience Mr. Cook, to go out as Party Manager for those many people when you were pretty new at it yourself. You'd had a couple of summers of experience but not in the management area.

EC: Yes, I think it was quite a chore in a way and quite a responsibility for a man who had relatively little experience in that particular field of endeavour. You were sort of the link between the crew and the client, through your office and you were given specific programs to institute and undertake and get done. And that's what you did. They're all relatively young men that you worked with. In fact, on most of the crews that I was on, I would be the older man of the bunch. Of course, I was then in my middle thirties and a lot of these young lads, they were in their late teens and early twenties that were on these crews. A fine bunch of people usually, you very rarely had any difficulty with them. As long as you were specific in what you had to do and giving directions, they went ahead and did it.

#014 BC: Did you find the fact that you were in your mid-thirties and you were working with people that were a little bit younger than you, that this ever sort of put pressures on you because perhaps, you're working a similar jobs?

EC: No, I didn't feel under any undue pressure in that regard. I think they recognized that someone had to guide the program and they looked to me to do it.

BC: Where did you go first?

EC: One of the early trips that I really remember was my first trip to northern Alberta and it was just after Christmas of 1949 and January of 1950. I was asked to take a truck and another young man followed me in a second truck and drive from Calgary to Keg River post in northwestern Alberta.

BC: How far is that sort of, northwest of Edmonton?

EC: I think our camp was in the order of 500 miles out of Edmonton. We drove, I remember to Falher where we spent a night. It was bitterly cold and we only could get one truck indoors, the other truck had to stay out. Luckily we were able to get it started the next morning despite the bitter cold and we went on through Peace River. It was 42 below at noon when we went through there and I had never experienced such bitter cold, it seemed in that valley. We wound up at the camp that night and before the end of that week, according to my extrapolation on the camp thermometer it got down to 68 below zero. It was a big camp with two seismic crews, both under the direction of Northwest Seismic Surveys.

#035 BC: So you would be in charge of both of them then?

EC: I was not really, I was an assistant because Macmillan and Timmins were both up there at that time. It was a major undertaking for them, under contract to Imperial Oil and the camp was supplied by Imperial and occupied by these two crews. We had about . . .with all the personnel, camp attendants and so on, I think we had about 40 people in that camp.

I remember that experience vividly because I'd never been that far northwest before, out in the bush. We had two crews of bulldozing equipment to open the lines for us and I remember the cold particularly because we had metal chairs in the dining room, the dining room car adjacent to the kitchen. And I went in there and sat down on one of these chairs one day in the bitter cold and I didn't do that again without putting my cap underneath me. It was so cold. I remember the bulldozer people because I thought they were certainly a hardy group. They worked day and night opening lines in that country. And I remember one morning a fellow came in with a dead wolf. On their changing shift the night before he had been followed down the line as he walked from his pick-up truck to the caterpillar tractor. He was followed by several wolves and he turned around, he had a flashlight and he aimed the flashlight right on the eyes of this one wolf and blinded him and struck him down and killed him with a wrench he was carrying.

#054 BC: It must have been pretty close to him then.

EC: It was right beside him. He brought him back to camp as evidence that he had a wolf had been following him. The other wolves took off when this happened. I also remember that they uprooted a bear in his den one time, a black bear, and the bulldozer operator dropped the blade on the bear and killed it and brought it into camp. That was really something for me to see all that.

BC: Yes. They didn't have rifles in camp eh? Or did they start taking rifles after that?

EC: I don't recall them having a rifle in camp at all. In fact, as I recall it, they were not allowed to carry weapons up there. Another thing that impressed me was the problem of the cold with propane. Propane in these vessels that they're stored in is a liquid and as it generates it becomes a vapour, it flows out to your stoves. Well, in the very, very cold weather it wouldn't vaporize. So we had to heat the containers in some way and what we did actually was just cover them over with big heavy tarps and put 2 or 3 light bulbs in beside them and that was enough to make liquid change to a vapour and keep going.

#070 BC: Isn't that interesting, you wouldn't think there would be enough warmth in that.

EC: Yes. Another thing that I remember particularly was the fact that two of these bulldozers came off the Canol project and the sub-contractor, a guy by the name of Fred Sandy from Dawson Creek had bid on these machines which had been abandoned up on the Canol project. And he went in with a crew of men and secured these two machines and brought them back out, fixed them up and put them to work. And he told me about a shortage of fuel on their trip and tapping the Canol pipeline in a low point in a valley and to open up the pipe he just fired, I think it was a 303 shell or bullet, into the pipe. And he said the oil just spurting out and hit him in the face.

BC: My goodness, what did they plug it with after?

EC: I don't suppose he ever bothered to plug it. He would just drain off what he needed and carry on. Of course, the Canol line by that time, had been abandoned.

BC: Oh, so this was just the residue that was staying in there. Wasn't he fortunate that he came upon it. Were these brand new cats or were they . . .?

EC: No, I think they were used machines. They had been used on the Canol project and then

just left there and he bought two of them and put them back to work.

#088 BC: Some of the few that were put back to work, I think, there's a lot abandoned up there, weren't there?

EC: I wouldn't doubt it, yes.

BC: The man that followed you up, you went up in two trucks when you first went up there, do you remember the man that was in the other.

EC: I've forgotten his name, he was just a young man who went to work on one of the crews up there. You have to remember the importance of communication from that area. We were probably about 20 miles from the Keg River post, which was a Hudson Bay store and a telegraph office. The telegraph operator would take messages and send them out and that was our means of communication from there to Calgary or anyplace else. With the addition of radio, which worked only part time. They did have a radio in the camp, all the time I was there it never worked very well. Occasionally you could get through to Calgary but only occasionally.

#101 BC: It didn't work because of the power?

EC: No. It wasn't very modern in terms of today's communication systems so we relied mainly on traveling out to the Keg River post and sending out messages by telegraph.

BC: You really would feel very isolated?

EC: Oh yes.

BC: How did you take to that isolation?

EC: Oh it was fine, you settled into the camp and made the best of it.

BC: How many months were you there or weeks before you would be relieved?

EC: I didn't spend the winter there. I think I was only there about a month or six weeks and then I came back out to another assignment somewhere else.

BC: But you would stay that length of time. The tours are much shorter now.

EC: That particular crew, as I recall it, stayed right through to breakup. There may have been some people that came out and back and forth but most of them stayed in there.

BC: Today when we look at cold weather wear, we look at down filled jackets and down filled covered boots and these big down filled mitts which are warm without weight. Back in 1950, except for some of the army surplus perhaps, from the American army ski troops, there wasn't the same kind of winter wear. What did you wear up there?

EC: I wasn't particularly well equipped. I had winter clothing but nothing like the stuff they have these days. Felt boots of course, and heavy socks and underwear and jackets and things.

#121 BC: You had felt boots, which then you would wear underneath a rubber boot? Was that standard gear?

EC: Pretty well, yes. Most of the men had heavy rubber boots with felt.

BC: What kind of a coat would you wear?

EC: I just had a sort of a jacket coat, with a fur collar was what I had.

BC: Would it be lined?

- EC: Yes.
- BC: It would be a wool lining?
- EC: Yes. And of course, heavy, heavy sweaters and things of that nature.
- BC: The gloves or the mitts would be awkward too, I would think.
- EC: I just had big heavy woolen mitts with leather covers on the outside.
- BC: You came out with breakup. . .or you came out a little before that. . .
- EC: I can't recall the timing on that but I came out well before the crew left there and I was on various assignments that summer. You know, you've been to so many places, I can't recall all of the various areas I was sent to. But I worked in the office part time. . .
- BC: But you were out as a Party Manager a lot of the time?
- EC: Yes.
- BC: And the following winter you would have been sent out again I presume?
- EC: Yes, I think if I remember rightly I spent the summer of 1950 mainly in Camrose, working for Imperial Oil on our contract there. I also worked out of Vegreville for Mobil Oil but I'm a little hazy on which summer that was.

- #142 BC: Well, going back over 30 years, it's hard to tell, unless it was the summer that something specific was discovered.
- EC: I do recall the winter of '50-'51 because we were in a camp up at Hondo, near Smith, just about 150 miles north of Edmonton. And we were in a Northern Alberta Railways camp of boarding cars.
- BC: So you went up by railway did you?
- EC: No we drove in. The camp was spotted for us and I had made arrangements through a firm of camp attendants in Edmonton to send a man up and have it ready for us, have the stoves going and so on. And when we arrived we moved into the camp and it was a pretty rough camp I thought. We had been used to living in say, Camrose town, with pretty good facilities and this camp seemed pretty rough to me. I remember we got a bunch of Alibastine and big brushes and painted the insides of the cars ourselves to lighten them because they were just dark, dark, the wood.
- BC: Were they painted the same dull red as the CPR outside?
- EC: Not from the outside. Anyway we lightened them up with some Alibastine and I bought a bunch of pressure gasoline lamps because all they had in them was coal oil lamps and I bought these pressure lamps to give us some better lighting.

- #163 BC: You didn't have a power plant big enough to. . . ?
- EC: No, we had no power plant at all. We just had gasoline lamps.
- BC: And you cooked with propane then again?
- EC: No they cooked with coal. There was a cook came in there. He was a man that had experience with these boarding cars on the railroad so he did the cooking and he used coal. There was a coal car supplied and we had a water tank supplied. And we just took the water out of the tank in buckets. With the cold weather of course, it froze, you had to open it up every time from the top. Finally it got so bad, we had to send it into the round house at Smith and have it all steamed out and refilled. Every time it got to the point

where it was all frozen up we would have to do that. Quite an experience. My blankets I remember froze to the wall of the bunk and my oxfords were frozen to the floor. At the end of the month when I went to get dressed to go out I had to jar them loose. Quite an experience.

#179 BC: And the following winter, you were a brute for punishment, you went out. . .

EC: I went back to a similar situation. Another one of these Alberta car camps at Flatbush, just a short distance south of there. I was only there a relatively short time and they put the finger on me to go up to Peace River to assist with a huge program in which Home was involved and Imperial Oil. I went up there as Assistant Manager, I was there for about 7 or 8 or 9 months I guess, winter and summer, working with Mr. Timmins. We had a huge program under way in northwestern Alberta, both for seismic work and for slimhole drilling. We had about 75 men working in 6 different camps so we had a big problem with personnel supply, communication and keeping things running.

BC: Getting good cooks I would think, that was terribly important.

EC: That was a problem.

BC: Was it? Can you remember your cooks, any of them?

EC: I don't remember any one in particular but they always were a problem, they always are a problem it seems.

BC: What kind of food were you serving?

EC: The best we could get. In these camps in the bush you have to have the very best you can get. Frozen strawberries, ice cream, if you could get it.

#199 BC: Steaks all the time I guess.

EC: If you could get it you know. The big problem, the supply in the winter time was. . . with heated vans and that was a fairly easy way of doing it. Towards breakup we were given instructions to prepare for a summer program and this meant stockpiling a lot of items that were not perishable. I remember we asked the cooks to give us a list of supplies they would require and these things came in and they were very lengthy. So we just turned them over to the supply houses and had them filled. And I remember one cook wanted 300 pounds of coffee, he got it. So he stocked this up around these camps before breakup. There were fuel caches laid in by Imperial Oil to which the men could go for their fuel and we made the equipment as light and portable as possible. The drills were mounted on small caterpillar tractors with wide pads so they wouldn't sink in the muskeg. Unfortunately they did on occasion and they required a major effort to get them extricated.

#217 BC: This was quite a problem, trying to move the equipment.

EC: Yes. I remember that experience because it was a major operation.

BC: Was it successful, did they drill where you had been doing the seismic work?

EC: Well, this is one of the things that amazed me about all that operation up there. There were no discoveries of any significance made and yet it was the area in which, later on Rainbow, Zama and Bishtoe were found.

BC: Isn't that strange.

EC: One of the things about the summer operation that may be of interest to some people would be the way we supplied the crews with perishable items. Periodically we would go down to the wholesale houses and we'd sack up supplies and label them and attach long streamers to them and we'd mark . . . say, we had 12 sacks for a camp, we'd label them sacks, 1 of 12, 2 of 12, 3 of 12, 4 of 12. . . .

BC: So you'd know to look until you'd got them all.

EC: We had radios to communicate with the camps and we'd advise them we were coming in with a load. The aircraft would be loaded. We'd fly across the camp and drop the supplies in an area close to the camp and they'd just drop down, it was amazing how vegetables, you know, cabbages, cucumbers, lettuce, tomatoes and potatoes would all land and be edible. They'd land in the bush.

#244 BC: Is that right? No squashing?

EC: Oh there's be some damage of course, but still they were edible, nearly 90% of it. That's the way we supplied the camps.

BC: This would be the summer supply?

EC: That was the summer operation.

BC: To get to these, if they were dropped in the muskeg, how did they get to them to pick them up?

EC: Just waded out to them. They were a hardy bunch of people, those boys. I must say that I had every respect for those fellows in the sinter operations and the summer operations. The hardships they put up with. And the difficulties they had.

BC: Where would they be recruited from?

EC: A lot of them were farm boys looking for work. In the wintertime particularly they were farm boys.

BC: Farm boys from where?

EC: All over western Canada. And in the summertime you had your nucleus of people and you padded it out with lads from anywhere that wanted a job. We were fortunate, we had radios in those days and we could communicate back and forth with them from base stations that were established. Imperial Oil ran the radio system and we had communication every day with crews. My fear always was in case of an accident. And I do recall one time we had a lad, we thought he had a broken hip. He had been hurt by a tree which fell over when they were winching a stuck vehicle and the Imperial Oil people were alerted. They went in with a Beaver and landed on a little puddle of a lake and loaded the boy in, got him out to Steen River just at dusk and they didn't want to fly at night to Peace River because of the landing problem, it was a machine on floats. And they came in just at dawn and we off loaded him from the aircraft at the pier on the river in Peace River. The water was extremely high at that time, loaded him into an ambulance, got him into the hospital and luckily X-rays revealed that it was just a very, very bad bruise and not a broken bone. But that was one of the problems you faced in operating up there. And one of the things that you had to meet and overcome.

#285 BC: Did you always have to have someone who was a first aid man?

EC: As I recall it, in those days, only the shooter on the crew had to have first aid certificate and he had taken the St. John's Ambulance course. Other than that there were no trained person on the crew.

BC: Often in the muskeg area that's where the Alberta seismic work and the Alberta work in general got moving into the sinter months because of muskeg problems. Now you're obviously in that summer of '51-'52, you were working in the muskeg, that must have posed some rather particular problems.

EC: Yes. I mentioned earlier that they used wide track vehicles or caterpillar tractors, the recording vehicle was mounted on a wide track Bombardier type unit. And the crews were small, they did an awful lot of walking and carrying of equipment.

BC: Could you walk in the muskeg?

EC: The lines were all cleared before hand and they would wade through them or walk through them?

BC: What kind of footwear did they wear then?

EC: Rubber boots.

BC: Would they be hip wader type or just the . . .?

EC: I don't recall them having hip waders on any of the crews that I was associated with, I think they just used rubber boots.

#310 BC: It would be kind of cold, even if it was summer. Did you have any trouble with the mosquitos and the black flies?

EC: Terrible. They used gallons of repellent.

BC: Did anything repel them?

EC: There were the usual things that they supplied them with, some of them were good and some were not so good.

BC: Did you have smudge pots, things like that?

EC: Yes. Usually in the evenings the boys would have a smudge going. They worked awfully long hours, those fellows.

BC: How long would their hours be?

EC: As I remember a ten hour day was a short day, they did 12 hours frequently.

BC: They'd make a lot of money then?

EC: Nothing else to do so they'd work.

BC: Yes. So they'd make a lot of money in a short time?

EC: Yes.

BC: Those would be university students that you had in the summertime?

EC: No, very few of them ever got up there. These were just young lads that were drifters, you might say.

BC: And they'd come in for awhile and then off they'd go when they got their pay?

EC: Yes. Except for the nucleus, the core people, a lot of them were dedicated to their jobs but there's a lot of the younger people that would come and go.

BC: Would quite a few come off the nearby farms in between planting and harvesting?

EC: Yes, there were farm boys, they were always looking for work whenever there was a slack

time, particularly in the wintertime. The crews were staffed with farm boys.
End of tape.

Tape 2 Side 2

BC: [in mid sentence]. . .you had to drop the fresh vegetables.

EC: Yes, that's where we had to mark the supplies and drop them in from fixed wing aircraft to the boys on the field crews.

BC: Helicopters were not too common in the north at that point?

EC: No. We didn't have any in that area that I am aware of and we relied on fixed wing aircraft and we relied on machines that were mounted on pontoons and landed on the river at Peace River.

BC: Would they have pontoons or pontoons and wheels, sort of convertible?

EC: The ones that I recall were on pontoons, Beavers and some Fairchild. They didn't have the capability of landing on land when they were fixed with the pontoons. Winter equipped aircraft, you know, they put them on skis, with wheels and you can land, either on snow or you can land on a runway on the wheels. But the pontooned equipment that we had was just for water work, you landed on the rivers or the lakes only.

#012 BC: The pilots of those aircraft would be former RCAF pilots, or were they bush pilots?

EC: I think they were a combination of both. As I recall it, one of the Imperial Oil pilots was an ex Air Force man, very, very capable pilot. It was he that carried out the rescue of our man with the bruised hip, very, very bale man. Another chap that we relied on in Peace River, a contracting firm, so far as I can recall, he was just what you would term a bush pilot and also very capable.

BC: When you came down to Calgary in September, what were you doing, you were still. . .?

EC: Well, I was still working of course, for Northwest Seismic Surveys. I had various assignments in the field and in the office. I recall going to Thorsby in the fall, just at the time of the football playoffs. At that time, Calgary was in the playoffs with Edmonton, playing off for second place. And I remember I was quite enthusiastic about football at that time and sat in the hotel in Thorsby believing that Calgary was going to go into the finals against Winnipeg because Calgary had beaten Edmonton by 19 points in Calgary just the day or so before. However, to my chagrin, Edmonton rallied and beat Calgary substantially, in Edmonton and the final score was something like 42-38.

#030 BC: They did rally.

EC: Those were back in the days of Les Leer, I think that was his last year here and Keith Space was the quarterback and they had the great Bob Shaw as the pass catching end and Johnnie Bright was still here then as the fullback. Normie Kwong had left, he was off to Edmonton by that time. He was ahead of Bright going up there. I do recall that experience up there at Thorsby because I was very impressed with the hospitality in the small town.

We stayed in a hotel on this short assignment and we were instructed by the hotel dining room staff that there would be no food available a certain evening, we had to go to the church dinner. And it was one of those country dinners where everything and I mean everything was laid on for a very, very modest sum.

BC: Marvelous. I wonder if they still carry on that tradition. They were marvelous ones in those days.

EC: I have not been into one of them for a long time so I can't tell you but I must say I was very impressed with the way those people served us.

BC: Did they take you into their hearts too, here you were all of you oil people invading their small town?

EC: Some of them did, some didn't. They looked on us as good business and we formed some pretty good friendships in some of those places but I think it varied from community to community and perhaps with the reception that was accorded them, it was tempered by the response they got from the seismic people.

#048 BC: Because it would be quite a thing, a crew coming in and moving into a town.

EC: Oh definitely. I can recall being in Camrose and there would be three or four crews in there. That meant an awful lot of income for the garages and the eating places and stores and they were very welcome in most of those communities.

BC: The young men in the communities might not welcome them so much. There would be a lot of young single men on the crews that would be competition, they'd have more money I would think.

EC: I suppose so. Frankly I didn't become involved in anything of that nature. But I do recall the hospitality of most towns and particularly that town where we had that wonderful church dinner.

BC: You stayed with Northwest until 1953.

EC: Yes, I stayed until March of '53 and then I resigned and began looking for other work, thinking I would move on to a major company.

BC: Why did you decide to resign?

EC: Well, I was a little bit tired of the field work and the constant moving and lack of permanence that one experiences with seismic crew operations.

#063 BC: Did your wife move with you at all, was she able to move around?

EC: No, Carol always stayed in town. We had established a home here in Calgary, this was our base so she stayed here. I commuted back and forth on weekends or month ends or whatever.

BC: So that would be a strain too, I would think?

EC: Yes. She did accompany me to Peace River. We lived up there in a rented house for several months. But other than that she always stayed at home here in town.

BC: Also in Northwest, some of the personnel had changed by the time you left, had they not?

EC: Yes, but the key men were still there, the top men, the owners, Macmillan, Timmins and Anderson were all there. The other people came and went, there were a lot of changes.

BC: George Blunden was never a part owner.

EC: No, he was not a pat owner, he was on salary. And he left, as I think I said earlier, he left the spring of '53 and went to Home Oil. And after I had looked around for awhile he phoned me one day and said I understand you're in the market for a job and I have one for you if you want to join us. So I went with Home Oil in late March of '53.

#079 BC: And what was the position that you took, what was the job that was offered?

EC: Well, I think I was classified as a computer but you know, that takes in a lot of ground really. And I found that Home Oil was operating 3 seismic crews on a full time basis and they only had Mr. Blunden looking after them. So I wound up doing an awful lot of field supervising of the 3 seismic crews, working in various parts of Alberta, mainly. That plus the interpretation problems kept me pretty busy for a long time. We built up staff.

BC: You were still working out of town a bit then were you?

EC: Oh yes, I traveled a great deal through various parts of the province looking after these crews. I was on the road quite a bit of the time in the early years.

BC: And most of the larger companies did have their own crews at that time, did they not, and they gradually they let them go and relied on contractors.

EC: I didn't experience that. I don't think that would be my version of it. There were of course, company crews but they were also very reliant on contracting crews.

BC: Like, were these 3 crews company crews or. . . ?

EC: No.

BC: Oh, I'm sorry, I misunderstood you then.

EC: Home Oil never did have their own company crews, they always relied on crews under contract.

#098 BC: What crews were they, who were they contracted from?

EC: One of them was Northwest Seismic Surveys, with whom I was very familiar. We also had a crew from Exploration Consultants, which is now out of business, they sold out to Teledyne. That company was operated by Norman Christie, a very well known geophysicist.

BC: Did you ever work with Mr. Christie?

EC: Yes, many times in our association over the years. And we also had a crew from Independent Exploration. Independent Exploration was an American company up here running crews and we worked with them. Mr. Dunlap was the manager for Independent Exploration. Both Independent Exploration and Exploration Consultants were bought out later by Teledyne.

BC: Had your work changed very much then from when you were with Northwest?

EC: I think in a large measure it hadn't changed a great deal. I was saddled, I'd say with increasing responsibility and increasing responsibility in interpretation work. With Northwest I did not have a great deal of time that I spent with interpretation problems. I spent far more time it seemed, with crew management.

#118 BC: Oh, so this would be a change for you then to get back more into maths and physics?

- EC: It was increasing responsibility in that direction, yes, very much so.
- BC: Because I thought changing from one to another you'd really change companies and not really jobs but you had really changed the direction of your work quite a lot.
- EC: Yes I believe I had. Instead of being in the contract line of endeavour I was now the client and looking to the contractors to do whatever we required of them to do.
- BC: Did you find this awkward when Northwest was one of your contractors?
- EC: No, I always had an excellent relationship with those people and I never had any difficulty. No, we got along very well.
- BC: You changed hats quite readily eh?
- EC: Yes.
- BC: Tell me about that first while in there with Home Oil and the work that you did because you had to do a great deal of development in there. When you went in, there was Mr. Blunden and you were his assistant and that was it, that was the geophysical department I presume.
- EC: Yes, we started off with one filing cabinet with I think, 3 drawers and that was the beginning of the geophysical department and it expanded and expanded and expanded. Records kept flowing in and filed and reports accumulated and interpretations made and wells drilled with the attendant paperwork necessary for all that. And we did it from a humble beginning as I mentioned, of one filing cabinet. And gradually built up staff and expertise and made conclusions and recommendations for drilling in conjunction with the geology department and the land department because Home certainly had the team approach in their development of exploratory projects.
- #145 BC: Do you think that the development of the geophysical department was unusual or unique to Home at that time or was the geophysical science really expanding throughout the industry?
- EC: Well, in both sense yes. It was unique to Home because they had not had a department of that kind before so it was a new approach for them and a development for them. Home was a very small company at that time, as I recall, when I went with them we had about 75 employees in total, in Calgary and in the field. And I think by the time I retired it was more like 1,400 and it expanded from purely a Canadian operation to an international operation with offices in the States and in the U.K. But in the second sense the geophysics had become very, very much a part of the exploratory phase of development in exploring for oil and gas. I don't think there was a well drilled that Home didn't rely to a certain degree on the. . . I'm speaking of exploratory wells now, I'm not speaking of development wells but exploratory wells, they relied heavily on the first location to be chosen based on geophysical mapping. And I can cite incident after incident where this occurred and we got together as a team, we assessed the situation, looked at our data and finally decided, that is the spot. At that time, Alberta was an infant in the oil industry despite the fact that Imperial drilled something like 133 wells in western Canada before they found Leduc. Western Canada is a huge sedimentary basin and it only barely scratched the surface. So it required intense attention to detail to find more of these locations.

#176 BC: How was Home situated as far as their leases were concerned, were they in a good position, looking from '53 on, when you joined them?

EC: I can't remember precisely numbers of acreage, that sort of thing but they were like most companies at that time, in a very active land acquisition phase. Home had acquired acreage in Redwater and Leduc at the time of those discoveries back in '47 and they expanded that into many other areas of the province as time went on. And as various discoveries were made they would immediately start acquiring acreage in the vicinity of those discoveries.

BC: Having to sort of come in after a discovery has been made makes the land acquisition much more expensive.

EC: that is true. It is a problem for the land people to anticipate, if they can and to acquire acreage wherever there is a potential for oil accumulation or gas accumulation.

BC: With Home being a small company, this probably would be even more difficult for them in those days?

EC: Yes. Mr. Brown was a very. . . Mr. Brown of course, was R. A. Brown Jr., the owner of the company, he had the controlling interest and he was a very aggressive individual and if a play developed he always said he would find the capital to go ahead with it and he usually did. In fact, he always did I would say, if a play developed he would be right in there urging the acquisition of property.

#202 BC: It would be very exciting to work with an aggressive leadership like that I would think.

EC: Yes. I was fortunate to be associated with a Canadian company that was as aggressive as they were.

BC: And I think this is an important point too, it was a Canadian company and started really quite small at that time and yet went international. Can you remember any particular incidents involving Mr. Brown and your association with him?

EC: I had many meetings with Mr. Brown. He was always a gracious individual. He was very keen about pushing forward on projects. In fact, he had, at times, I think, to be held back by his advisors and staff to not be quite so pushy in getting into the drillings of various projects because we thought we had to assess them properly before we would recommend a location. He was very, very aggressive in pursuing any leads that might come along.

#220 BC: Did he take an active part, often they don't you know, but did he take an active part in your meetings where you say you had this team approach?

EC: Sometimes, he would be in to the meetings and listen to our presentations. But more often he relied on his Exploration Manager who would give him the conclusion, the summation of our findings presented to him. And if it was within the budget of course, there would be no problem. Usually there would be a budget set for the year or for the project and if you were within that guideline you could go ahead. If it was a bigger sum or outside budget then he would be drawn in by his Exploration Manager and given a briefing on what was proposed and the expenditure involved. He would either say yes or no and usually it was yes because he was so interested in pursuing new prospects. For the run of

the mill operation, except for his meetings with his senior people and particularly the Exploration Manager, he did not interfere with the day to day operations of a department.

#241 BC: Who was the Exploration Manager when you came to Home?

EC: I believe that Aubrey Kerr was considered the Exploration Manager. He was the Chief Geologist and Exploration Manager. Then . . .

BC: Did you work with Aubrey at that time?

EC: Yes. I remember Aubrey quite well.

BC: Can you remember any particular incidents with Aubrey?

EC: Not particularly no. He was a very capable individual and keenly interested in developing plays and using the seismic tool. I believe he was succeeded by Alex Clark who was a very senior geologist, I think he had been with Shell Oil for many years and he worked for Williston Oil and Gas at Casper, which was a Home Oil subsidiary in the States. It was closed down, all those interests arrived in the Calgary office, Mr. Clark came in and took over as Exploration Manager.

BC: How did this sit, he was an American coming in and you'd been sort of a Canadian company?

EC: I don't think there was any feeling one way or another. You know, the oil business is an international business and I don't think there was any thought about it at all. He was a very senior man with a lot of experience and he came in and stayed with us for awhile until he got an offer of a much more lucrative job with the Calgary, Edmonton Corporation. And he left us and Mr. Blunden took over. That was in '59. And I was moved up from my position to become Chief Geophysicist at that time, with Mr. Blunden heading up the exploratory division.

BC: That would be an interesting change, where you'd had geologists up till then and Mr. Blunden really was the geophysical side.

EC: That's correct. It was somewhat unique and I think a recognition of the importance of the geophysical discipline in oil finding.

End of tape.

Tape 3 Side 1

BC: As we start talking today, Mr. Cook, one of the things I know you are very able to comment on and that is that advances in the technology in the industry, particularly in the geophysical side, during your tenure in the oil patch.

EC: Yes, Betty, I do recall that when I first started in the business we were using what in today's technology would be considered a rather simple recording technique in the field, using paper records only on which to make the impressions of the returning waves. That persisted up until about 1956, when as I recall it, tape recording began, where we were able to record in the field the responses that we obtained from the ground on tapes and then those tapes were taken into a processing centre and recorded or rather processed in various ways. It meant a considerable increase in the dimensions of the interpretation that one was able to make on field records.

#104 BC: Prior to that, when there were the paper records, they were processed in the field and then the paper records had to be physically transported to and looked at again.

EC: Yes. We recorded our information in the field on paper and there was just the one copy that we had in the field. Copies could be made of them in reproduction centres in towns or cities but in the field all we had were the paper records and one paper record for each shot. Those were sent to an interpretation office, whether that was in the field or in the towns, and there were both, where they were worked on and results prepared. But after 1956 with tape recording, the improvement was remarkable. And that was only the beginning of a whole series of improvements. The tape recording system itself was tremendously improved as time went on and sometime in the early 60's they began what we call multi-fold recording. Prior to that time we only had the result of the return from a response point and there is one time. But with multi-fold recording, you fired a series of shots in succession and got a response from that one point any number of times. Today it is very common to have what we call six fold recording or twelve fold recording or any multiple of those, which adds greatly to the response results that one can obtain from the earth.

#033 BC: In what way do you get the better results, because you can pinpoint more directly?

EC: Yes. And you add up the responses. Where you might get one response from a sub-surface layer, you would get 4 or 5 or 6 responses and you add those together and as a result, the combined response is much stronger and can be interpreted more accurately.

BC: Can you think in some of the work that you were involved with, of areas that perhaps had been done the earlier way, with the single response, and then with the multiple response, actually discoveries were made that had been passed by?

EC: I think that northwestern Alberta would be a good example of that. We think back to the early 50's, there was a tremendous amount of work done in the Rainbow area, in the Zama

area, in the Bishtoe area and very meager results were obtained. But after the multi-fold recording system came in with the use of tape, the result was the discovery of Rainbow, with its many reefs and Zama and more recently a reef discovery up in the Bishtoe Lake area. And yet all of that country had been gone over with many crews and millions of dollars spent with relatively little return until this improved techniques became established and in use.

#050 BC: In your position, did you then have to have crews go back and rework areas, did you do a lot of that in Home?

EC: Yes. There were areas that were shot over using improved methods.

BC: Were you involved in any of these that you just mentioned, Rainbow or Zama, had you been in there earlier and gone back?

EC: Not with Home Oil. I had some association with northwestern Alberta as a contractor, working in a contract area, whereas with Home of course, I was in the client position. I was not associated with any work of a repeat nature in northwestern Alberta with Home that I can recall off hand.

BC: Do you feel that this has been one of the important leaps forward in the oil business, to have the refinement of the seismic?

EC: Oh yes, I'm sure that there have been many, many fields and pockets of hydrocarbon found as a result of this improved method. I noticed recently in the press that there has been quite a string of successes drilled up in the Sundre area or Madden area, where New Horizon, which had not been exploited before is now yielding oil, largely as a result of the improvement in recording and processing techniques. Another advance that was a very major step forward was in 1963 or thereabouts, when we had digital recording, which improved what we call the dynamic range of recording and led to a considerable improvement in the response that we obtained from the earth, a response that could be interpreted.

#074 BC: You had one or two other things that you had noted here, marine acquisition of data?

EC: Well, really that is just an extension of the land work and the marine work in the acquisition of data was hand in hand with the improvements that were made on land. One of the things that has occurred in the marine operations that intrigued me was the improvement in positioning of the equipment, in the sense that when you go out in the ocean you have to know where you are. You don't have road allowances and various other survey markers to go by so you must have some means of locating yourself. Decca, a great English firm, had developed, sometime during the war years, when I first became aware of it, a system of navigation using what they call the Decca navigation system. And this was refined and improved and used in positioning or determining the position of vessels at sea with great accuracy. That led, of course, to its use in survey work on the oceans. That and the development in marine work, of the air gun, as I recall it, was a great step forward. Initially in marine work that I was associated with we used dynamite for the energy source. Probably a 50 pound charge was fired at each shot and that provided the

energy which we picked up in its return to a marine cable but that business of using dynamite was superseded by the use of an airgun to provide the energy.

#098 BC: How did you use the airgun?

EC: That technique has been greatly refined since my exposure to it but as I recall it they had.

BC: Yes, I'd like to know how it was in the beginning because this is very important.

EC: A series of airguns which were fired from the back of a vessel and it created an impulse in the waters. Instead of using dynamite for the impulse, the airgun or the air explosion created an impulse which radiated in all directions and . . .

BC: How big would this airgun be?

EC: They were like cylinders with air expelled from the nozzles of the guns. I have had very little to do with airguns really in my exposure to marine work.

BC: When you look at the explosions, the land work as well as the marine work, there's been quite a change in the size of the charge that's set off, has there not?

EC: Yes. I think that is in large measure due to the increased sensitivity of the instruments plus the multi-fold recording, where you add together the responses rather than rely on one single response. You add together responses to build up the response to the point where it is meaningful. As a result you don't need such large shots as we call the explosion.

#118 BC: In the early days I've read of explosions that were quite a size with earth going skyward for quite a few feet.

EC: Yes, well, in my experience we didn't use charges of more than probably 20 pounds of dynamite in one single shot. For the most part they were 10 and 5 pounds, 2 ½, a pound and a quarter, depending on the area and the response required. That is in reflection seismic work, in the refraction work they sometimes used bigger charges, depending on the area in which you were working.

BC: Did you ever work with the kind of an instrument where they just sort of bang on the earth and that is supposed to give the energy?

EC: I had some exposure to that but very little. I know of it, I've seen some demonstrations of it but we didn't use it in our work. We did use some, what they call the Dinoseis method, which in a sense is the same thing, where you had a plate on the ground and agitated the plate against the ground. And that was used in Alberta, we participated in some work of that nature and had one or two programs run with it. It was not one that was very popular. It was useful in certain areas where dynamite might not be acceptable.

#138 BC: But by and large you still always kept to the dynamite?

EC: We used dynamite in most instances. We did some work with vibrators, which is another means of introducing energy into the ground. The trade name for it is Vibroseis and it again relies on a base plate being firmly fixed to the ground and then a series of impulses with various frequencies introduced into the base plate, and that varying frequency went into the ground and back to the surface.

- BC: How big would that base plate be that you would be working with?
- EC: In the vibrators I think they are roughly 3' square that they just plant on the ground. I'm not sure that I know the exact dimensions but as I recall them, they were about 30" square.
- BC: They obviously weren't very popular?
- EC: Yes. I would say the vibrator is a fairly popular tool. We used some vibrators in the U.K. years ago, some of the earlier ones.
- BC: Were there any other areas of advancement in the seismic technology that we should perhaps make note of?
- EC: Well, there are many other techniques used for putting energy into the ground, many of which I am not very familiar with. I'd had some experience with vibrators in the Vibroseis field. I mentioned the use of them in the U.K. We had vibrators that were mounted on tractors over there and the base plates were about 2" in diameter, they were circular base plates and we used them for a time in the U.K. There were other techniques that had been used to introduce energy into the ground, particularly in some of the remote areas of the world. For instance, we mentioned the use of these Vibroseis equipment, in some parts of the world they've been using the thumpers, which lifted a great weight about 10' or 15' above the ground and then dropped it on the earth to create a thump and the instrument was called a thumper. And that provided energy which was recorded. But you know, when you get back to it, today we're back largely using dynamite and vibrators. Another type of vibration unit called the Dinoseis. Beyond that I think they've pretty well settled down on these three modes of attack.
- #177 BC: But the most important thing is the improvement of the recording instrument itself?
- EC: That's only one phase of it Betty. I think you'll have to recognize that there have been tremendous advances technologically in instrumentation. Instruments themselves have improved. For instance, when I started in the business we had mainly what we called the 24 amplifier system, then we got to 48. . .
- BC: What was 24 amplifier system, what does that mean?
- EC: It simply means that you had 24 amplifiers with pick-ups from 24 points on the ground feeding into, initially a paper tape and nowadays they use it onto tapes. Anyway, they've now got to, 48 is a very, very commonly used set of instruments and more recently the 96 trace, as we call it, system is in operation. So there have been tremendous advances made and a lot of this is due to the miniaturization in equipment with the improvements that have been made in miniaturization. So that you can squeeze into a very small package a large number of units.
- #195 BC: With this multiplicity of records and recordings there would have to be different ways of interpreting otherwise it would take you forever to look at all those 96 lines, wouldn't it?
- EC: Yes. It all winds up on one piece of paper after going through the processing centres and what we produce are what they call cross sections, which gives you the sub-surface

represented in wave form on a piece of paper.

BC: Did the advancement of the computer along with the instruments, was this really essential for the kind of interpretation that one can do today.

EC: Oh yes, very much so. The improvements in processing had to be matched in large measure with improvements in interpretation. Man's expansion in all areas has been tremendous in the last 30 years. Improvements are made every day and refinements made in interpretation techniques.

BC: With all these changes, this is quite an adjustment for the people working in the industry and as someone who was in charge of people that had to do this, did you find that there were problems, particularly perhaps with people who had been doing something one way for 20 years, suddenly, very quickly, there were changes coming.

EC: Not really Betty, in my experience. Most of the people with whom I worked were very adaptable and creative people and they were anxious to try new things and they were always anxious to improve themselves by taking courses and taking part in seminars and study programs and this sort of thing to advance themselves. There was tremendous competition, I think too, among technical personnel, to achieve better results. They were all, in my view, a very dedicated bunch of people with whom I worked. Always striving to improve and anxious to obtain better results and achieve results in the form of discoveries of hydrocarbons.

#235 BC: With Home Oil, did you have an ongoing series of seminars, did you have a training program as some companies do?

EC: Yes, we encouraged people taking part in various programs that were offered. Periodically there would be someone come in town with a program, offered perhaps for 2 or 3 or 4 days, it might be an evening course, it might be something at SAIT, something at the university. All of them added to the experience, the ongoing education of people and Home encouraged people to take these courses and many of them did.

BC: Did they subsidize the fees, the costs too?

EC: Oh yes. By saying encourage, I should have perhaps stated that they would pay for the programs. Yes. That of course, and there were conventions. Every year there would be a convention or possibly two conventions and people were encouraged to attend them and learn some new techniques that might be offered.

#257 BC: When you came into Home Oil in '53, you mentioned that you and Mr. Blunden were the two people and you literally kept growing and growing and growing. Can you talk about some of the people that were added to the staff at Home Oil that worked for you and with you, particularly in those early days?

EC: Betty, there are a lot of people. I have to think rather carefully about the early people. I'm more familiar with the later years when I became Chief Geophysicist in '59. Prior to that time as I recall it, we had. . . one man that joined us was Jim Hume, who is now Chief Geophysicist for Home Oil. He came in the late 50's, he had been on some foreign assignments and he joined us, I'm not sure of the year, I think it was about '57 or thereabouts, '58.

BC: He came in as a geophysicist into your department?

EC: Yes he did. Another man that we had on staff too, in the late 50's and he was there for quite a long time afterwards was a Mr. Mois, Keith Mois. He was a very brilliant man in mathematics and had spent a lot of his time in the processing of data. He joined us and was our man in charge of the processing section of our work.

BC: Who was the overall manager when you went in, in '53?

EC: Mr. Blunden headed up the Geophysical Department.

BC: yes. Had Mr. Gillespie come to Home at that point?

EC: He was not there initially in '53. I can't recall exactly when he came, it was probably in '54 or '55, somewhere in that era, he joined the company. I'm not positive of dates there. He came in as a manager of the company and was in charge, not only of exploration but drilling and production too.

#301 BC: Did you have much to . . .well, you certainly did after becoming the head in '59, can you recall anything about Mr. Gillespie, what he was like, any particular stories?

EC: Well, Betty, he was a very interesting individual. He had a strong background in engineering work and in the oil patch. He was a very likeable man,. He was a man who believed in applying himself in the office and when hour came for closing down, he left, he wasn't hanging around. I remember that. A very able person and a very well liked person. And a man who believed in making decisions and getting things done. I have no great memory of him other than in those things I've mentioned.

BC: Did he ever talk about his time. . Mr Gillespie I believe had been with the United States Marines, looking for oil in Alaska was part of his work, was it not, during the war?

EC: Yes, I do recall him talking about being, I think, in the seabees, as he called them and working in Alaska in the Naval Petroleum Reserve. I don't recall too much about his activities up there except that he was there. I do remember his talking once about a communication network that was set up that never worked. And he commented on, he thought that some mathematician had misplaced a decimal point.

BC: What did he look like?

EC: Bart was a fairly good sized man, grey hair, ruddy complexion, bluff manner, rather forceful speech, likeable.

End of tape.

Tape 3 Side 2

#010 BC: Perhaps we should go through, in a little more organized manner, through some of the work that you were involved with when you were with Home. You came there in '53 and then in '54, you were involved in the Sarcee gas field.

EC: Yes, Betty, I recall that with interest because I was associated with Mr. Blunden who ramrodded the operation. He applied the refraction technique of seismic work in the north end of the Turner Valley and I was assisting him in operating a field crew and doing some work with him in the interpretation of data. Mr. Blunden applied his expertise in unraveling the sub-surface and as a result recommended and subsequently it was drilled, a location in what was then and still is now, in the Sarcee Reserve and that resulted in the Sarcee gas field discovery.

BC: Whereabouts?

EC: I can't give you the precise location but we used to go out on the road on the way to Millarville and instead of turning south down towards Millarville, we went on west a bit and then north up into the Reserve, so it was the west end of the Sarcee Indian Reserve. And I recall that we were highly delighted when Mr. Blunden had his success there. I was there the day that they ran the drill stem test, Bart Gillespie was there that day. I was out looking after the field crew and I dropped in there. I didn't wait for the actual turning on of the valve but that day they ran the test and I recall it ran about 50 million cubic feet a day and everyone was delighted at the success.

#034 BC: What difference did it make to Home Oil's position?

EC: Well, it was another gas strike and it was in conjunction with Shell Oil and that field is still under production. It was a very nice gas strike to make in an area where there was a good market for it.

BC: You mentioned that Mr. Blunden had used all his expertise to discover this. What were the major problems in the records and in trying to locate oil in that area of Turner Valley.

EC: Betty, I think the technique itself had been very little used in western Canada. I do know that Gulf had used the technique at Pincher Creek and Mr. Blunden had worked with the technique in the Pincher Creek area and understood how it could be used in the foothills area of the province. And that technique was used by him in the north end of the Turner Valley area, where you have these steeply dipping beds and broken up sub-surface and he applied it successfully in that area.

#049 BC: As a result of his application of this method, did others start to use it in the foothills area after that, become more accepted and popular?

EC: I'm not very well acquainted with its application. I do know it has been used in various

areas through the foothills. The two that are most familiar to me of course, is the Pincher Creek area and Sarcee, which I am somewhat familiar with, having been associated with both in some way or another. I believe that the technique has been used also farther west and to the north but I'm not aware of its direct application. I could not give you any specific examples.

BC: Speaking in geophysical terms, what were the problems that one encountered in Turner Valley area in seismic work, vis a vis the Leduc area for instance.

EC: You're looking at two different stratigraphic situations there. At Turner Valley you're dealing with a thrust sheet. Up in Leduc you're dealing with a reef in a sedimentary section, where the sediments are relatively undisturbed and the reef growth occurred. Whereas in Turner Valley you're dealing with a thrust sheet of the Mississippian thrusting out from the Rocky Mountains. It's an entirely different geologic setting.

BC: This would be quite a challenge, moving from one part to another.

EC: Yes, and it requires somewhat different approaches.

#070 BC: Did you find when you were going, because you did work all over the place in Alberta, that you were having to really juggle your application techniques depending on the part of the. . . and even when you started out, how you were going to approach this?

EC: Yes. There was some differences. You're dealing with a much more rugged terrain in Turner Valley, differences in elevation was a problem, drilling of shotholes, I remember was a problem.

BC: How was it a problem?

EC: In Turner Valley, the drilling was much more difficult than it was say, at Camrose or Leduc. The drilling of shotholes required a lot more time.

BC: Why was it more difficult, because of the strata, the kind of rock?

EC: Yes. You were going down through much more difficult sediments, sandstones and much more difficult drilling. We used a lot of rock bits in Turner Valley and we hardly knew the term rock bit in the sediments of central Alberta.

#084 BC: One thing about the oil business, it's always full of challenges it seems.

EC: Yes. No two areas are alike.

BC: Can we move on to 1956?

EC: Yes. I remember this time particularly because Home had acquired a large spread of acreage from the Calgary & Edmonton Corporation, which lies west of the highway between here and Olds and roughly from just north of the city here in the Beddington area through to Sundre. A huge spread of acreage which required a certain exploration by agreement and we attacked it by putting to work two seismic crews. I was present when each of those crews started up work and we worked them for a long time until in 1956 we were able to find the Hermaton, Elkton??? oil field and subsequently the Carstairs gas field on that Calgary & Edmonton acreage. I was put in charge of what we called a review office. It was an office downtown in a building which has since been torn down on 6th Avenue and with the aid of two assistants went to work on a review of a certain group of

seismic data which we had worked on but had failed to find anything of significance. We had drilled one well which failed and we were still intrigued with the area and as a result of the work which we did in the review office we came up with an improvement I would say in the attention to detail and it meant a reinterpretation of the Mississippian sub-surface mapping. As a result of that we were successful at finding the Hermaton, Elkton oil field. I recall how on a certain line of seismic which we hand plotted I discovered a certain amplitude change which I thought was significant and which answered a question we've had about what we call a seismic bust in the previous interpretation, which had been done by the contractor. I recall taking this information over to Mr. Blunden and sitting down with Mr. Blunden and Mr. John Carr, the Chief Geologist and pointing out to them that I thought this was a significant factor in the interpretation. We pursued that and came up with the Hermaton, Elkton oil field.

#128 BC: That must have been very exciting for you then?

EC: Yes, I was quite impressed with the fact that that little bit of work that we did in that review office paid off so handsomely.

BC: Was it a large discovery?

EC: Betty, I can't give you reserve figures but it was a substantial discovery and is still in production today. Subsequently we extended our techniques about two ranges each, it would be 12 miles east and we found the Carstairs gas field, which was a Mississippian out-lair??? as it was called. That field is still under production and a gas plant was built there to handle the gas out of that field.

BC: That's one of the things that you see throughout the development, you discover something and then a whole industry has to build around there, doesn't it?

EC: Yes. The Carstairs gas plant was built as a result of that and today is still in operation and to it they have piped gas from other fields and areas of gas production in the vicinity.

BC: So it would certainly have aided the growth of that town.

EC: Oh yes, I'm sure that it meant quite a bit to the economy of the whole area. One only has to look at the growth of places like Sundre, Carstairs, Olds, Didsbury in the last 30 years to see the changes.

#147 BC: From there, 1957?

EC: In northwestern Alberta I recall there was a huge area known as the Virginia Hills Petroleum Reservation. In it large blocks of acreage, usually in four township blocks were let out by the government.

BC: Why in 4 township blocks?

EC: I can't answer that question, I don't know the answer to it. The government though, did grant the Virginia Hills block, as we called it, to Hudson's Bay and Union. They did a small seismic program in there and then farmed out the acreage to Home Oil with a deadline for drilling the first well, which we found rather onerous.

BC: How much time did they give you?

EC: I don't recall the precise months involved here but I do know we were hard pressed to analyze the seismic data that we were supplied with and to come up with a location for

drilling. We did take these paper records, made copies of the originals, went to work on them, hand plotted all our cross sections and came up with a location which was 9 of 20, 65-13 west of 5. I remember we were anxious to get a road built into the location. It required the building of several miles of road and we were concerned about the first location because of its proximity to a creek that was up there. We obtained some aerial photography and since I'd had some experience with stereo pairs, I remember sitting down and studying these photos and deciding that it had a reasonably good chance of a location but to make sure of it we hired a helicopter. And I went in the helicopter, it was a little two place machine. They flew from Edmonton out to Whitecourt, we refueled there and one of our Home Oil field foremen, a road man, a man who built roads, met me there and he decided he would drive north. He would try to go up the road as far as a certain well site if he could make it and I was to fly on up, look over the location and come back to this well site and if he were there to land and then he would go back up and take a look at it. It all worked out very well and we did the flight and I came back to the well site, he went on board with my maps, looked over the route that I suggested on old outcrops of seismic work and the upshot of it was that he went to work with a crew, built the road, they got the drill in, drilled the location and in January '57 came up with a strike in the Virginia Hills, which was . . . well, it started a great surge of activity.

#200 BC: It was a very important discovery wasn't it? How much land did Home have in that area?

EC: We were given a farm out of that acreage which we earned by drilling and then almost at the same time, Home acquired another four township lot by farmout from Regent Refining, which was known as the Swan Hills block. And that again, was a case of being given a bunch of paper seismic records, which we reviewed.

BC: These would be given a little bit then, wouldn't they?

EC: Yes. They were all paper records prior to the use of tape. And we reviewed those and again picked a location and the rig had to come down on our lumber road from Kinuso, from Lesser Slave Lake. It came down that lumber road and there was a problem getting to where we wanted it to go and there was again, a problem of a deadline of drilling and they set up on, I think it was a secondary site, 8 of 11, 68-10 west of 5. However it was a success and that . . . you know, two successes in that Virginia Hills Petroleum Reservation in succession really excited the industry.

#223 BC: How far apart were they approximately?

EC: I think about 30 miles.

BC: Can you remember any of the people that were involved with you at this time, looking at the Virginia Hills first, some of the people that worked on that discovery well?

EC: I can think of Mr. Blunden of course, in charge of the geophysics, and we had John Carr, the Chief Geologist, we had George Fong, the staff geologist. We had Ellis Walker another staff geologist, we had Chuck Hamphill???, a staff geologist. They were all key men in the discussions. And remember these are all group decisions, there was no individual really involved in all this, it was a group operation in the exploration staff. But

you know, the Swan Hills discovery really excited us and we went on from there to another well about five miles southwest of the initial discovery, 11 of 19, 67-10, and it really was a good discovery because they had about 143' of net pay in that well.

BC: Was this the one that you really wanted to do first but weren't able to?

EC: As I recall it, we wanted to get down into that area, yes. Anyway we succeeded and they moved that rig before breakup as I remember it and got it down there and in August came up with a successful well there. Well, you couldn't move around very readily, you know, moves had to be rather limited and they did drill 4 of 20, which was only about ½ a mile away and when freeze-up came and that fall we put another seismic crew to work in there. And they were trying to find out another step out location, we filled in some seismic lines and we selected 10 of 10, 67-10 about 4 or 5 miles to the southeast and that was a success, 160 feet of net pay. So that set up the whole area, it was just a matter of filling in a lot of the area from that time forward.

#266 BC: Can we talk about the Swan Hills are itself, you must have spent a fair amount of time up there on location, did you?

EC: I was in and out, it was a fairly rugged area, difficult to get at. There were forestry roads into the area but the summer of '57 was very wet and we had an awful time getting supplies in and getting men and equipment moved around.

BC: How did you manage?

EC: We had another block which we acquired up there called the Morris River block in '57. We put a crew in there while it was still dry, I think that was just about breakup or a little after and they were fine for a little while but then it started to rain and we had quite a struggle keeping them going, getting supplies in and out with those roads.

BC: How did you manage?

EC: It was difficult but it's surprising how perseverance will get things done. There were no helicopters in use at that time and the Bombardiers and track vehicles that we have nowadays were not nearly as much in use then as they are now. However we persisted and managed to keep it going. I can recall winching many a mud hole on the way up there and back with the aid of a helper.

#297 BC: Mr. Hans Suter??? is always talked of in connection with the Swan Hills, did you work with Mr. Suter at all?

EC: Not at that time but I have since met Dr. Suter and value my friendship with him. He's a very fine old gentleman. He was the representative for Regent Refining and made the deal with Mr. Brown for the Swan Hills acreage. For some reason or other I never could understand that Regent Refining didn't want to pursue their exploration of the area and farmed out the acreage.

BC: Did you ever talk with Mr. Suter about his work in looking at Swan Hills?

EC: Yes, I have had some chats with Dr. Suter about that. He's mentioned his belief in the possibility or potential of the area and his inability to convince his management to allow him to proceed with an exploration program. Other than the initial seismic work, nothing was followed up on and the seismic of course, is merely the first step. You have to go

ahead and drill.

#325 BC: The seismic was promising though, at that, even though it wasn't followed up?

EC: I would say yes and no. You see certain things on the seismic but you know, at that time there was a very great scarcity of information about that particular area and to say that there was a Beaver Hill??? reef present was something that had to be confirmed by drilling. You could say that there was something anomalous on the records.

BC: When you say it had to be proved by drilling, who makes that final decision, who made it in Home as to where that pipe went down?

EC: I think that was a collective decision with the geology and geophysics put together, a decision made, well, this looks like the most interesting spot, let's try it.

BC: Were you involved up there in Swan Hills during the time that they were doing their initial drilling, were you on the sites at all?

EC: I was in and out of the area just in my capacity as the seismic supervisor of the field crew or crews that were in the area.

BC: Can you remember any of the people or were you associated with any of the people who were on the crews or headed the crews that we should perhaps mention at this point?

EC: Well, I do remember Howard Wycoff???, he was the Drilling Supervisor on the job at that time. I can't recall who was the Well Site Geologist. They probably had a succession of them and for the moment my memory fails me as to. . .

End of tape.

Tape 4 Side 1

BC: Mr. Carr held the position really in the geological part that you held as a geophysicist.

EC: Yes. He was the Chief Geologist and at the time of the Virginia Hills and Swan Hills discoveries he was partnered, shall we say, with Mr. Blunden, who headed up the Geophysical Department and Mr. Humphries, who headed up the Land Department. And they formed a triumvirate and we worked closely with all of them to further the exploration program.

BC: Can you tell me about Mr. Carr, your recollections of him?

EC: He was a very able geologist, very innovative, far seeing, and it was a result of his activities and his associates, I've mentioned Mr. Hamphill, Mr. Fong and Mr. Walker who were very, very closely associated with him in the Swan Hills area and the finds that were made there.

#014 BC: When you say he was innovative, could you give me an example?

EC: I think that he envisioned structural possibilities and I can recall this particularly in regard to the Carstairs gas field. He insisted that that area had to be examined, that there was every possibility of there being a Mississippian outlier there, which in an up dip position, if verocity were present, could contain hydrocarbon. And it was his persistence in this, I think that led to that discovery.

BC: What did he base his persistence on?

EC: I would imagine it was some knowledge of geology and vision.

BC: Were there many men that had that sense of vision?

EC: I'm sure there are. You must realize that my knowledge of the oil patch is very limited, in that fact that I was only in one client association, with Home Oil. Yet that company was quite successful because of these innovative people.

BC: Do you feel that Home encouraged people to gather themselves in that company?

EC: Very definitely. Aggressive management under the direction of Mr. Brown, coupled with an innovative exploration team led to these successes.

#031 BC: This was very important in those days, in some of the other companies they were much more conservative people?

EC: Well, perhaps Betty, I really don't know. All I'm familiar with is my own little corner.

BC: Pretty big corner it was too. The Swan Hills area, the terrain of it, there's a book that you loaned me here which is the Canadian Oil and Gas Industry's, the cover, this is July '58 and it has a picture of the almost extinct plains grizzly found in the Swan Hills area. This would be rather primitive country to be exploring in, it would seem.

EC: Yes. At that time it was quite a remote area and only frequented by trappers, hunters, some lumbermen, although the amount of lumbering that was done in there was limited to

the north slope, largely the north slope down towards the Lesser Slave Lake. It was so remote, it was amazing that it was not explored more in some sense. There was a story about the old trapper up there and I heard about this fellow and one day when I was coming out of that country, I think that was in '58, I came on a search party in charge of some RCMP. I inquired as to what was going and I was informed by some of the men that were assembled there that they were starting a search for an old gentleman, an old trapper who had failed to show up at Fort Assiniboine for his monthly grocery list and his monthly pension cheque. And I found out on enquiry that this old gentleman had at one time lived down at Barrhead but when the railroad came into Barrhead many years ago, he decided that civilization was getting too close and he moved back up into an area beyond Fort Assiniboine into the hills there someplace. And he only came out probably once a month to get his groceries and his pension cheque and he had failed to show up so they instituted a search for him. As I recall it they never did find him. He simply disappeared. And speaking of the wildness of the area and the grizzlies, there were quite a few bears up in that country and there is a story about an Indian woman who ran a trap line. She was confronted with a grizzly one day and by a lucky shot, with one shot from a rifle dropped that grizzly only a few feet away from her. This story was told up there and I believe it is factual. The pelt, as I recall it was on display in one of the towns on the south side of Lesser Slave at one time. Quite an area.

#070 BC: I would think so. The crews that went in there, would they go in there with guns, traps, anything like that or did you have a sharp shooter with them?

EC: No. As a matter of fact, they were forbidden to have rifles. The wild game as a rule wouldn't bother you. The wild animals would stay away from the camps except for the bears, black bears particular, liked to come around and eat on the garbage piles. But for the most part I think that they didn't bother people if they weren't bothered.

BC: You have a note here about the use of an airplane?

EC: Back in the 50's when we were doing a lot of expansion of our exploration efforts throughout the northern part of the province, we made fair use of the airplane for scouting.

BC: Is this the Beaver craft that you used?

EC: Yes. We had a Beaver at one point. We also used a Cessna. I recall coming in to the Virginia Hills strip there in one of those early winters, from a scouting trip up somewhere to the northwest of there. We were low on fuel and Bill Good, our pilot, had a cache at this strip so we landed there. I remember the snow was ver, very deep.

BC: On the landing strip?

EC: On the strip. It had been packed but there had been a lot of snow fallen and the sides were not so well packed and when we got over to the fuel cache we were just waist deep in snow and we had trouble getting the plane out of that location. Great difficulty getting it back up onto the hard packed snow. It took a lot of pushing and shoving and maneuvering to get it out of that snow.

#095 BC: There's no way that you can winch things like that out of course, or. . ?

- EC: We didn't have that equipment with us. We were relying on our ingenuity and we managed, we got it moved out to where the plane could move itself but it was quite a struggle in the cold I remember.
- BC: Mr. Good was one of Home's pilots? Could you tell me about him?
- EC: Bill was a pilot with the company for many years and had a lot of experience with various aircraft. He had flown in, I think it was northern B.C., prior to joining Air Canada. He flew with Air Canada for some time, left Air Canada and joined Home Oil. Was quite an experienced pilot in many aircraft, not only in commercial airliners but also in private aircraft, both single and multi engined.
- BC: He'd be a very essential person in this development of the oil because aircraft seemed to be so essential.
- EC: Yes. And he was confident, competent, capable in handling a machine.
- #111 BC: In the time that we have been talking, up until now, you were working for Mr. Blunden. But then Mr. Blunden was moved up and you were moved up also and your position became that of Chief Geophysicist in 1959 right?
- EC: Yes. I was in the right place at the right time I guess. Anyway I was moved up to the position of Chief Geophysicist and that meant an increase in my responsibilities for administration, budgets, personnel and interpretation.
- BC: How many people by then were on the staff of your department, approximately that is, how many geophysicists?
- EC: I think we had three.
- BC: And who were they?
- EC: Mr. Hume.
- BC: First name?
- EC: Jim. We had Mr. Mois, who did not only interpretation but the processing of our data, in charge of that. And shortly after that we acquired Mr. Golas??? and we had a Mr. Mahatchuk??? who was with us a relatively short time. He came in as a consultant first and then he worked for us permanently for awhile. So we had 4 geophysicists, we had I think, 2 or 3 helpers, computers and assistants to work with us. I know we worked a stage where we had 8 or 9 people plus myself in the department at, shall we say, the peak of our activities. I remember in 1959 we had our first venture to the Northwest Territories. Mr. Brown, who was very active as I mentioned earlier, in land acquisition acquired. . . and the work was finalized by Mr. Humphries in the acquisition of a huge spread of acreage in the Territories north of Fort Nelson. We called it the Celabeta, Trout Lake and Cotamilie??? acreage. It required a review of a bunch of seismic which was given to us as a part of the deal and we had to do additional seismic work and of course, drill wells.
- BC: Who did you get this from?
- EC: That came from Canada Southern. Mr. Merrill Reasoner was the representative here and he gave us all the data and I recall one of the first things we had to do was familiarize ourselves with the area. We flew up to Fort Nelson in the company plane, one of the bigger planes they had then and we hired a local man with a small plane, a Cessna, for scouting. And I recall flying up there on a beautiful fall afternoon and making a big

sweep, into the Territories, over to the Lliard River and back to Fort Nelson. The fall colours were out in full brilliance and it was very beautiful that afternoon. I believe it was that afternoon that we landed in the Lliard River at Fort Lliard. I recall coming into the dock there on this float plane and the mounted policeman coming down to meet us and I was most impressed with the size of the river. Those northern rivers are huge. The Lliard there, I think, was nearly a half a mile across and I said to the policeman, this water volume here is substantial, how deep is the water out there. He said, I think it's around 50' not too far out from where you are moored there. I had thought at one time that we might cross that river to get from the east side to the west side to work some acreage but kind of changed my mind when I realized the problem of fording that river. We went ahead with a plan for that winter and we hired a crew of bulldozers. They went up and opened up what is called the Simpson Trail. The Simpson Trail runs from Fort Nelson to Fort Simpson and our crew of bulldozers was among the first. In fact they were the first after a few miles out of Fort Nelson to open up that road for us to have access to the Celabeta and Trout Lake properties.

#181 BC: Were you with them when they went up there?

EC: I was not with them at the time they started up. I went up after they got up there. These fellows were pretty competent and they knew. . .well, they had maps and of course, the trail was there so all they had to do was open it up. One of the problems I remember was establishing an ice bridge across the Nelson River and that was done with some of our field foremen and company men from other companies. And they flooded the river and built up the ice to the point where it would bear trucks with loads. That was done as soon as the freeze up occurred. They opened up something like 200 miles of road or trail, to Trout Lake. When that was done we moved the seismic crew up there and I recall following them in. I used a passenger car and I think I was one of the first passenger cars ever to go into the Territories on that trail.

#198 BC: Did you have a special license?

EC: No, B.C. plates, it was a rental car.

BC: What was the road like for taking a passenger car in?

EC: Well, it was just a bulldozed trail and it was fairly rough but we managed.

BC: What kind of car did you take?

EC: I can't recall whether it was a Ford or a Chev but it was a rental car, 4 door sedan. Jim Gray, the author was with me. He was at that time the public relations man for Home Oil and he wanted to go up and see the country so he came along and rode with us up there. I took him to the camp which we visited and checked with the crew and their operation and the program and came back out. I recall that winter the crew spent up there, I was up visiting more than once. I went in with an aircraft one time, I remember it was a Beaver. Landed in the bitter cold beside the camp and the next morning I was worried that the plane wouldn't start but luckily. . . it was Bill Good again, he had the plane equipped with a special type of heater and he started up the heater in the morning and the plane was warm enough to start and we managed to get out of there although it was very difficult

getting it off to move the first few feet because it seemed to be frozen to the surface.

#220 BC: If it was that hard on a plane, what was it like on the other equipment that you had up there because you couldn't sort of warm it up so that it would work?

EC: Difficult. Well, you know, nearly all the vehicles on the crew were equipped with block heaters and they were plugged in at night. The power plant was big enough to provide power for the units and occasionally if a unit was not equipped properly they would have to be started up during the night to keep it, what we call, keep it alive. I remember we had one problem up there with a crew move, and coming back from what we call the Lliard River block, we had sent the bulldozers out ahead taking a chance that the road would not become blocked. But unfortunately there was a wide stretch of open country and the snow drifted in on the road and the crew was stuck in the snow. Luckily they had fuel, they had food and they had their radio and they were able to radio out to the base camp at Fort Nelson that they were isolated. We got a flat bed and a bulldozer loaded on to it, went back up about, I don't know, it must have been 150 miles, back into where they were and got them extricated. That was all written up in the Fort Nelson paper and that was in the days when Ma Murray was there, she was the local editor I guess, and owner of the paper. Anyway it got quite a little write up in the press at the time.

#249 BC: After that part of the Northwest Territories, then you moved again, did you not?

EC: Well, of course, you realize I was based in Calgary. I was merely looking after all this operation, with the aid of my assistants.

BC: Yes. But Home was looking at different parts of . . .?

EC: Yes. Home became increasingly interested in international work and one of the first areas that we got into was in the U.K., both onshore and offshore. In 1964 we undertook a huge exploration program in Yorkshire. This was a result of the discovery that had been made in the North Sea, particularly on land in Holland, in the Gronigan??? field and north of there, there was the extension into the coastal waters. And then of course, there was this huge sedimentary basin in the North Sea, which became of interest to the oil finders and gas finders. And as a result of this Home acquired a farmout from BP in Yorkshire, which we explored from '64 on, for several years.

#274 BC: Would a farmout in England be handled the same way as one in Alberta?

EC: I think there's a great deal of similarity in that you have the commitment to do a certain amount of work, to explore in the manner set out in the agreement and usually it involved seismic and drilling and then follow up work of course, would depend on the results of the early drilling. But we began a program there, initially with a gravity crew then subsequently with the aid of vibrators and because we became dissatisfied with our vibrator results, we resorted again to dynamite. Over there you could run the vibrators on the roads but the dynamite you were not allowed to use on the roads. As you probably are aware English roads are narrower than they are here, they're crooked.

BC: And some are more narrow than others.

EC: Yes, that's true. And you're not allowed to drill any shotholes on what they call the verge.

So we were forced to permit every shothole on private property and we did a lot of this, permitting our way across the country side in farmers fields.

#300 BC: What do they call the verge would be what we call the road allowance on either side I presume would it?

EC: The edges of the roads, yes. Anyway we did quite a program of work over there. Initially it was operated from here but as time went on we established an exploration staff in London and they operated the program from there. But initially the whole thing was operated from here and it involved a lot of travel and interpretation work here.

BC: When you were looking at your program of exploration, did you send over the complete crews, the drills, everything or did you decide you were going to do it and hire over there?

EC: We relied on contract facilities available to us in the U.K. There is a very, very sophisticated and complete servicing and equipment availability over there. We used a contract firm, an international firm headquartered in the U.K. for our work. They were familiar with U.K. problems and did an excellent job for us.

#327 BC: Did you find that the regulations were extremely different than what you had been used to in Canada, the amount of land that you could work with, the way that you could. . other than not being able to use the road allowance, the fact that the spaces, the farms would be smaller, did this cause a lot of problems in trying to get permission all along the side of the road?

EC: Oh yes. Much slower operation over there because of the complexities of first of all, laying out your lines. You try to lay them out in as straight a line as possible but they were usually short lines and they were not like here when you could run, in the uninhabited parts of this province, you could run for miles in a straight line but over there, you could only run maybe a mile or so without having a change of direction. And that coupled with the permitting problems and the restoration problems were quite a change for one used to working in western Canada.

BC: And in the wilds where there's grizzlies only and not people with their hedgerows or brick hedgerows.

EC: Yes. You had to restore the surface as you went through properties and restoration costs were quite substantial in many instances. You had to make very careful clean ups of all the shothole locations and if you went through a hedge, that hedge had to be . . .

End of tape.

Tape 4 Side 2

BC: [in mid sentence]. . . early and mid 60's.

EC: Oh yes, Home had a large land inventory in western Canada and the land had to be processed.

BC: How did they manage to have this large land inventory?

EC: By acquisition of crown sales, by deals with other companies taking in acreage in the form of a farmout or by freehold leasing. There is some land available in the province that you could acquire from land owners who had the mineral rights. So it's a combination of three things and Home was aggressive in its land acquisition policy, particularly in its early years. One of the big areas of course, that came into prominence in '65 was Rainbow Lake. Banff Oil was given the . . . what shall we say, they were the company that found the Rainbow Lake reefs initially. That sparked a whole new surge of activity in northwestern Alberta involving Rainbow and Zama and Bishtoe Lake.

#015 BC: This is the area we talked about briefly earlier about the fact that the new technology made these discoveries possible.

EC: Yes. And Home acquired acreage up there of course, and we had to process it. We had one reef discovery which I recall because of the fact that we unraveled some seismic, believed we had a reef present and it was drilled and unfortunately there was a problem with locating the rig, because of muskeg and when the hole bottomed out we were at the edge of the reef. And because of the logging program, detonometer studies and our own seismic interpretation, we had to come back up the hole and the drillers put in a whipstock. And then encountered the reef and brought it into production. But you know, the whole Rainbow Lake area I think, was the result of what I call the state of the art, seismic acquisition, processing and interpretation technique. The improvement had been substantial. This multi-fold recording coupled with tape acquisition and recording and processing made such a difference. And as a result of it, these reefs, these pinnacle reefs, relatively small, were uncovered and a whole succession of them were found and drilled with success.

#036 BC: That would be quite an exciting thing to be a part of that.

EC: Yes, it was another development in the whole spectrum of processing of data that intrigued me. We had a fair amount of activity up there involving both winter and summer operations. I recall we had one block of acreage that we had to process in the summer and we were just too late in getting supplies in. We had to resort to the use of helicopters to bring in fuel. We chartered a firm to haul in fuel and as I recall they could only take about four or five drums at a time from the highway into the site, very expensive.

BC: Would this be a daily kind of routine that they would be involved in?

EC: They would stockpile until they had the package filled. I can't at this time remember the

number of trips or anything. I do remember our problem with getting fuel for that crew. We were able to get enough supplies in, I mean the stuff that was not perishable. We did helicopter in perishables.

#050 BC: Why didn't they take other kinds of like, track vehicles or wheel vehicles in, were you using those at that time?

EC: We had a track crew with track vehicles. They went in, in the period just before breakup and after breakup. I remember some of them got in before breakup and some didn't. And it was quite a chore getting in the stuff that had to go in after breakup. They struggled, there was one stream that had to be crossed that was quite a problem but they managed somehow to get in there and get it done.

BC: In looking at the Rainbow Lake, you have a note here about the reef discovery and perhaps we should discuss that.

EC: I think I mentioned the fact that we had isolated the reef on our seismic and found that we had to whipstock to reach it. That was the one I was referring to.

BC: Did you use, the track equipment, did you use Bombardier equipment.

EC: yes. We had both wheeled and tracked vehicles at various times, depending on the area we were in and the availability of equipment.

BC: Again, you were in Calgary and just going up to see everything was going well.

EC: Yes. And of course, I had my staff who worked with me and frequently they would be assigned to these parties and keep me informed as to what was going on. I would visit occasionally and rely on their expertise for the day to day operations of these crews.

#069 BC: You talked, one of the first thing we mentioned when I started talking with you, Mr. Cook, was the team work that you had at Home. This was among all the different disciplines and sciences. What about working for instance, on Rainbow, would you have all your geophysicists that you had in the office, would they all be working on some part of that or would someone be assigned, Rainbow, that's your baby, you'll look after those records.

EC: No. We usually assigned one man, it was his responsibility to, shall we say, be the client representative. To represent the client in relations with the crew and to be in charge of the interpretation. And I stood back, observed, assisted, helped and kept my eye on the interpretation for which, well in the final analysis, I was responsible for the final decisions that might be made by my department. So I kept a pretty close finger, shall we say, on the interpretation results.

BC: Can you remember who was assigned to Rainbow in '65?

EC: I think that was Jim Hume's responsibility on Rainbow.

#084 BC: He must have been a very happy man, that some of the good things that were coming out . . .

EC: Yes. He did a good job on that one.

BC: Was it a difficult area to interpret, were there problems at all?

EC: I don't think one could say it was particularly difficult once you used the right technique.

And the right technique consisted of course, of the proper application of the multi-fold recording and then of course, the proper processing of the data when you had it on tape.

BC: As a geophysicist sitting in the office, doing this interpretation, how much input would he have on the crew that was out there making the recordings, so that indeed they'd give him the best possible.

EC: Well, he would make a decision as to the type of recording he would want, what we call a spread, shothole separation, the number of the multi-fold recording he would require and once it was on the tape then he would be in charge of the processing technique that would be applied in the office. And that would be in the hands largely of our man, Mr. Moise.

#100 BC: Tell me about Mr. Moise, we haven't talked much about Mr. Moise at all.

EC: He was a graduate of the University of Alberta. I think he wound up with his Masters degree in Mathematics. He had on graduation, worked for a short time with the National Research Council in Ottawa. Then he worked in Calgary as a computer with one of the contractors, went overseas to the U.K., worked with a contracting firm there, spent some time in the Middle East and North Africa, back to the U.K., came back to Canada. Worked with a processing company here for a time. Incidentally before he went overseas to the U.K., he worked with us for a time, then went overseas, then came back here, worked for a processing firm here, then came back with us. So he had quite a varied experience.

BC: Indeed. Can you recall any particular incidents in your association with Mr. Moise that we should put on tape.

EC: I don't think I have any particular noteworthy statement there. I have indicated he was a very intelligent person with his Masters in Mathematics and a very capable person and very well recognized for his background and his experience and he helped us quite a bit in our interpretation by his knack and knowledge of how to handle seismic data.

#123 BC: We move from the Rainbow into the Martin Hills.

EC: Well, I made a little note of this because we acquired a piece of property up there northeast of Smith.

BC: Was this again, your own land that you had got the leases on?

EC: I can't recall how Home acquired that, I think it was a Crown sale. And we acquired the acreage and then processed it, ran a seismic program in there and we were lucky, I guess, we found some gas which is still under production. It was a dual gas discovery.

BC: When you say dual gas, that means it's in two different zones?

EC: Yes.

BC: Were you expecting that, from your seismic information?

EC: You always imagine this one.

BC: You hope to have it in. . .

EC: Well, you know, the goal of exploration is to find some hydrocarbon. The acreage was in an area that was considered to have potential from a geologic point of view, it was a matter then of finding a location to drill and the seismic provided that information. Having drilled it we were successful.

#139 BC: By this time, in '66, were you depending mostly on the seismic information or did you still work with surface geology in deciding on your final location?

EC: The finding of hydrocarbon is a pretty complex business and I think that you have to recognize that as I have mentioned earlier, that geology and geophysics work hand in hand. Areas were indicated as being hydrocarbon prone or having the possibility of hydrocarbon accumulation. The next step is acquire the acreage. That is done through the land department. The acreage having been acquired, then you go in and explore it and one of the tools that we used was seismic.

BC: Was this particularly important in the Martin Hills?

EC: Definitely. You acquire the acreage, you have a huge spread of land, I think we had at least two townships there. You have say, 72 square miles, where do you drill? We found the answer by using seismic. There had been some drilling in the area, there was some mapping done by the geologists based on well results in industry's hands. It was considered an area of potential and so they went ahead and acquired it, we explored it by first the seismic and then the bit and were successful in finding gas.

#164 BC: Having found gas, then what would you do in order to get that gas out? That then goes to your pipeline department or that gathering. . . ?

EC: Well, one of the first things of course, is to find a gas contract. And there was one found and having found it, there was a gas plant built up there. Pipelines were built from the wells to the plant, from the plant to the main transmission line. I can't recall how many years it was before that gas went on stream but it was exploited and it's still under production.

BC: It would be quite a number of years though wouldn't it, from the time that first well came in before you could actually start marketing it?

EC: Yes. I must confess I don't have the dates on the exploitation of the Martin Hills field but there was a gathering system put in and there was a gas plant put in.

BC: Would you say it would take 4 years, 6 years?

EC: Yes, something of that order.

BC: A lot of people don't realize, I don't think, how long it takes before any money actually comes back in to the company. This must be something that you, in the managerial area have to look at very carefully.

EC: Yes. That is a great problem. You tie up an awful lot of money in an exploration program and it takes years before you get any return on it.

#188 BC: Did this ever deter you in looking for. . . or did you just say, well that's there trouble down the line and our business is digging and finding?

EC: No. I think that's the latter case. Our job was to explore acreage and the finding of the money was not our problem. We were given a certain budget, we spent it.

BC: Did you ever feel that your budget, had you had more money you could have moved more quickly?

EC: No, I don't think that is the case in my experience with Home Oil. If something was considered worthwhile, the money was usually found.

BC: So you would not have too many frustrations in that job then?

EC: There were a few times when we felt we would like to press on when we were held up but that was usually due to some government regulation or interference that would slow us down.

BC: Going way back, just for a moment and then bringing it forward, at the time of the discovery of Leduc when they went into an area that they hadn't really been exploiting or exploring in before, as a result of that, did you find that when you were doing any . . . when it went to the final drilling, that indeed you looked. . . made sure that you got to the bottom of things before you pulled out, or do you think there are areas in Alberta, that perhaps with newer equipment, with better seismic, that there may be something that's still sitting in another formation.

EC: I think we only have to look at the newspaper reports in the last few weeks, in regard to the Sundre, Hermaton area. I think we mentioned this earlier, there's been a discovery made in the Viking, I think they are drilling something like 50 wells in the Hermaton area to exploit the Viking reservoir in which they have found oil. Now that area has had a fair amount of drilling but no one apparently, had stumbled on the fact that there was oil in the Viking in this particular area. Also recently there's been a strike made at Big Valley where there's been a fair amount of drilling done in the past. And it too, is apparently a new horizon that has been found productive. And I understand from what I've read that both of these strikes are the result of refinements in seismic interpretation and the realization that those cross sections are telling you something if you can only read it. Someone had sufficient intuition or knowledge or something to follow it up.

#237 BC: That makes it very exciting, it's an ongoing discovery isn't it?

EC: It is. There are many, many areas of the province which are going to be exploited as a result of this increased knowledge.

BC: It's sort of like going over and then going over and then going over it all again. There really will be exploration jobs for the next generation and the succeeding one probably.

EC: That's right. Southern Alberta has had a big surge of activity in the last few years looking for buried channels. We did a lot of work in southern Alberta. We didn't come across these buried channels. We didn't seem to have the knowledge or the luck to stumble on them. And yet, there's been a resurgence of activity in that area to find these buried channels. There's been a resurgence of activity in the western part of southern Alberta, Claresholm country I'm thinking of particularly, with the finding of Barratsby??? in the Mississippian, which hadn't been observed before and it's there on the seismic records if you know how to read them properly. There's a huge area in east central Alberta which has been now exploited for the last ten years and it's still under investigation looking for channels and they've been highly productive of gas. And the finding of those channels I would say, is the result of seismic acquisition, processing and interpretation. So one can go on and project into the future that there's going to be a lot more of this in the sedimentary basins of western Canada.

#268 BC: That makes it sound very hopeful.

EC: One is always optimistic.

BC: You can't be in the oil business unless you are I guess eh? There's another note that I have here about the north slope of Alaska. That is moving a little bit outside of Alberta.

EC: This was a big program in which I was involved, very heavily involved. After the discovery of Prudeau Bay by Arco, Home acquired a large spread of acreage on a farmout from BP. It had a commitment to drill two deep tests, not in the Prudeau Bay area as such but in the interior in the north side of the Brooks Range. It meant drilling wells to something in the order of 18-10,000 feet. And it involved an interpretation of a bunch of seismic, they gave us some, we bought hundreds of miles of data that was available on the market.

BC: Where would you buy that, just as an aside?

EC: We bought it from a firm in Denver. They were agents for I think, several oil companies that sold their data on the north slope.

#295 BC: Was this a normal practice?

EC: Yes. Companies, after a certain stage of land acquisition and drilling, they frequently would sell their data. We were in the process of building up a library of information and we were encourage to do this to acquire as much knowledge as we could on the north slope. Out an beyond the fringes of the BP acreage that was farmed out to Home and on which we agreed to carry out a big exploration program. But beyond that acreage, there were other acreages that were available through Crown sales on the north slope and we were encouraged to get as much information as we could in anticipation that Home would bid on and acquire acreage up there. Of course, this is a rather remote area, very, very expensive to operate in. I recall one of the first things that I was faces with was acquiring a crew. We put out bid letters, we selected a crew, we gave them a deadline to be on the north slope ready to operate, I think it was on the 1st of March. The crew was assembled from various parts of the world, I remember there was one lad that came all the way from Madagascar.

BC: How did you find him?

EC: Well, we didn't find him, the contractor was in charge. He found the personnel, they were an international company, they had men available all over. They brought in this one lad I remember in particular from Madagascar, some of them came from the States, and various places.

#331 BC: Had he ever been up in Alaska?

EC: Not to my knowledge.

BC: He must have found that a bit of a shock.

EC: I imagine.

BC: Were you up there at all?

EC: I went up. After the crew was assemble on the north slope, we flew up within about two days after they had formed their camp. In fact, they hadn't started work yet, they were just assembling their stuff in the camp. That equipment all came in on Hercules aircraft, flown from Anchorage, no pardon me, from Fairbanks. Fairbanks, over the Brooks Range,

landed at an airstrip up there. Those Hercules were marvelous aircraft, huge machines, they loaded the camp into the aircraft, they loaded all the big Bombardiers into the aircraft, they loaded everything into the aircrafts. I don't know, how many, I think it took 14 trips as I recall it, to take up the equipment. Then they moved from that airstrip over to our first campsite and started work. And I was up there the day they started. This great windswept tundra on the north side of the Brooks Range, miles and miles of flat looking Arctic desert with the odd pingo sitting up in the vicinity of the camp.

End of tape.

Tape 5 Side 1

EC: We landed on the airstrip which was prepared by the bulldozer. I recall that this trip was in the very early stages of it being prepared, it was quite rough. And our pilot again, was Bill Good, we were flying in a King Air. But he put the machine down, Mr. Moise, Mr, Knight, another geophysicist that we had acquired, and I stayed over in the camp and spent the next day until we were satisfied that they were in the right spot and undertaking the operation as we were wanting it to be done.

BC: How many people would be in that camp?

EC: I think there were approximately 20 people on the crew and they had radio communication with their base camp out in Fairbanks. They had, not the day we arrived but shortly after, a helicopter was attached to the crew. The helicopter up there was just used the same as you would a light delivery pick-up truck around a crew here. Just for any transportation problems around the field. I remember one time, in a white out, the helicopter pilot failed to make a turn coming into the camp. I wasn't up there nor was Mr. Knight at the time but he overshot his corner, realized he was lost, put himself down, luckily he had communication by radio with the camp. Communication is so all important in these outlying districts. He told them he was down, didn't know exactly where he was, but he had a search light and he shone it up into the sky. They spotted him from the camp, went out with a track vehicle and picked him up and brought him back into camp.

#021 BC: That's quite a rescue operation.

EC: I recall another story, this didn't happen with any of our operation up there but I was intrigued by it. These big Hercules were used to fly in supplies for all of the north slope operations and they used DC-3's too. But anyway this big Herc was coming in one time and he was letting down through the overcast and there is a little range of hills in there called the Franklin Mountains, north of the Brooks Range and in letting down he touched the top of this mountain and thought he'd had a mid-air collision with some other aircraft. Luckily he didn't lose control of the plane, kept on going, came on up, circled back and came back out to Fairbanks and landed. As I recall it, he didn't go into the commercial base there, or air field, he went to Almondorf, the military field and landed. And they found on investigation on the bottom part of his plane was all dented up and other than

that everything was fine and they reconstructed it afterwards and found out that's what had happened. He had touched down on the top of the mountain. He had been letting down too soon in his descent into a base airport at Prudeau Bay.

#037 BC: I guess that the visual look could be deceiving too up there.

EC: Well, he'd be flying on instruments you see. He's coming down through the overcast in cloud. Another thing about that northern operation that always has intrigued me was the operation by Home Oil in assembling a drill crew and equipment. All the equipment supplies necessary for drilling one of those deep tests that we ran up there. I don't know whether you'll be talking to any of the drilling department of our company or not but I was most impressed with this operation. They assembled this rig and all of its equipment and manpower up at the Lower Hay in the Northwest Territories, put it on a barge and put a tug on it and put it down the Mackenzie River, along the shores of the Arctic Ocean, right through to Beachie Point???, offloaded it, assembled it there and then moved it back inland probably something like 200 miles. But the movement of the equipment out of Alberta, the lower Hay on trucks, putting it on a barge and then they did exactly, followed pretty well the route that Sir John Franklin did back in the early 1800's, about 1830 something. He went down the Mackenzie River to the mouth, he went along the coast to Beachie Point, where he was supposed to meet a ship that had come around past Point Barrow to meet him. They failed to make the rendezvous and Sir John Franklin and his party came back out, retraced their steps along the shores of the Arctic Ocean, up the Mackenzie River. I thought this was most interesting to me, that Home Oil had paralleled the route of Sir John Franklin.

#059 BC: Isn't that . . . The north slope of Alaska was a very important part of Home's development, was it not?

EC: Yes. We had a big program up there involving land acquisition, acquisition of seismic data and drilling. It was a huge expenditure. Unfortunately we had very poor returns.]

BC: So did they cease operations after a certain length of time?

EC: Yes. There was an office opened in Alaska, in Anchorage and certain members of the staff were based there for a time but it wound down and that acreage has reverted to the original people involved. Either BP or the State, I believe.

BC: It's interesting you mentioned that when you started out, one of the things that Home was to look at, was to see the extent coming out from the discovery at Prudeau Bay. Obviously you found past the edge of. . . .

EC: Yes. We didn't succeed in finding anything. Our lands were below the water line up in the Prudeau Bay area and there are certain lands I believe, still held by the company that may some day be exploited. To the best of my knowledge, some of that acreage has still not been drilled.

BC: When you say the land was below the water line, what does that signify in oil terms?

EC: Well, in the Prudeau Bay area, the productive zone is underlain by a water table and once you get below that your production will be water rather than oil. It's a crucial factor in oil finding to find the reservoir above the water line as it's called. In nearly all reservoirs

- there is a water oil interface and if you get below that water line you have water of course.
- BC: So you've no way of knowing whether up above that water, there may be some oil still sitting there somehow.
- EC: Only the bits going to tell you the answer and testing.

#089 BC: Shall we move on from Alaska then. When you said that Home had been involved in a great deal of international work?

EC: There was one area that I thought of interest for us to discuss and that was the Island of Malta. As a result of our activities in the U.K., we expanded into other areas of Europe including Italy, Malta and also in the Middle East. One of these areas was Malta. Home had as its leading officer in the U.K., a very able gentleman, Lord Beatty???, and he had a contact in Malta through some association with people there and as a result of his liaison and activities in Malta, Home acquired a huge production license as it was called, offshore from Malta. Prime Minister Mintor???, granted to Home as operator a huge concession. We had partners in this operation from Canada and from Italy but Home as operator carried out an active exploration program involving drilling of the license. We had to run a big seismic program, assess the data, pick a location and drill it as one of our first steps.

BC: Was that something that the government said, you must, if you are going to do this, then you will have to do this and this and this.

EC: Yes. They set out certain requirements which we honoured and one of them I remember, to my surprise, involved the training of two young men and it fell to my lot to look after these gentleman for a portion of their training.

#116 BC: Who were these young men and why did they have to be trained by you people?

EC: Well, it's one of the peculiarities of the deal in that the government of Malta insisted that, as a part of the deal, Home Oil should train two of their young students in some advanced education program. I remember these young lads were both graduates of a university in Malta, one was an engineer in, I think civil engineering, the other one was a graduate in I think, business administration. Anyway we sent these lads both to London, to the Imperial College and they were under the guidance of our London office during that phase. And then they were sent over here to Canada and to my surprise I was told to look after these lads. So they arrived in Calgary and fortunately one of our partners took the one lad from us and looked after him during the period, the time they were here. I think it was about 3 or 4 months as I recall.

BC: This was in 1971.

EC: Yes. And the other lad was in our charge, our department. We sent the two of them out to a seismic crew for a time to gain field experience and we had a crew working at that time down in southern Saskatchewan, a contract crew and they kindly allowed these young lads to go on their crew. We paid their salaries of course, and paid for their keep and their transportation. But they worked on the crew and gained experience in how a seismic crew operated on land. Then they came back to town and they worked in the office. One of them worked in the office of one of our partners and the other lad worked in our office.

And we gave him various assignments in the geophysical department and at the completion of their tour, I recall I took them to the airport and got them on board the plane and they had a tremendous supply of books. I recall it cost \$75 for overage charges on their baggage to get them out of here and back to Malta.

BC: These would be textbooks would they?

EC: Textbooks and books they had acquired while they were over here.

BC: Did you feel it was a worthwhile endeavour?

EC: It was an interesting exercise and I hope the lads enjoyed it and appreciated what we did for them.

#151 BC: Do you remember the name of the young fellow that was here?

EC: I frankly have forgotten the names of these lads. I do know that one of them. . .they were both under obligation to the government of Malta and had to spend some time then working for the Petroleum Division of the Malta Government. Later on one of them communicated with us looking for work in Canada and we supplied him with some leads. But whether or not he ever did come to Canada I do not know.

BC: Who was head of your London operation at that time, who looked after them when they were there, do you remember?

EC: I think it was Mr. Evans, a geologist who had worked here with us and then was transferred over there to head up the London operation. I think it was Mr. Evans. He is now back in Canada, has left the company and is working for another company.

BC: And after the Malta work then the next. . .were you back looking in Canada again?

EC: Malta was just one exercise in which we participated we were involved in umpteen operations in western Canada and various other places.

BC: Was there ever a feeling, because you were in 20 places at one time, a feeling. . . was Home ever in danger of overexpanding its activities and its investments to where they were stretched too thin?

EC: No, I don't think so. The company as a corporate unit had very good management and the company itself had good leaders and good management. I don't think that the budget was ever strained to the point where it was in jeopardy at all.

BC: Because it certainly does happen today doesn't it?

EC: Yes, I agree with you there. Some of these companies that have unfortunately because of over expansion got themselves into some financial difficulties but Home was never in that position. As a corporate entity it managed to stay within their budget or financed well their operations.

#182 BC: Well, we'll move into 1972 and we're looking at. . .

EC: One area there that was of interest to me was an expansion into the far north. And we got involved in a spread of acreage way up beyond the Arctic Circle in Elof-Ringnus??? Island which required the use of a seismic crew. Fortunately there was a crew in the general area that became available to us. We did have one problem and that was the matter of fuel supply. And it was quite a problem to get fuel. However we were fortunate through various contacts to learn of a shipment that was coming in from Denmark, of all

places, imagine bringing fuel from Denmark for the north part of Canada. But it was coming into Resolute to be stockpiled there. We were able to acquire sufficient fuel from that ship with its supply of fuel in barrels to supply our crew and we flew it in with the aid of straight winged aircraft and got it supplied. That fuel came from the Middle East to Denmark and wound up in Resolute and was transported from there to Elof-Ringnus if one can imagine such a thing. And you know, it was cheaper to do that than for us to buy fuel in Yellowknife and haul it from there by aircraft to our site in the Arctic Islands.

BC: Is this because of the cost of transporting by air as against ship, do you think?

EC: I think that was the reason. It was cheaper to buy it on that route than it was to transport it from Yellowknife.

#210 BC: That's quite a story isn't it? We could move on to some of the other areas, you were also involved in '73 in Mexico.

EC: Yes. Home expanded into the gulf of Mexico after there had been a series of discoveries made offshore Texas and Florida. Initially we were associated with a company which was based in Houston and we were a partner.

BC: What was the name of that company, do you remember?

EC: For the moment I'm lost. I can't recall the name of that company off hand. Anyway we worked closely with them and took an active part in the interpretation of data before we would agree to their plans. And we did that out of the Calgary office and made numerous trips down to Houston to confer with them. They were the operators and ran the field operations and drilling and so on. But we were actively involved in our interpretation of seismic data. There was one of the facets of that operations that was new to us and which we became quite familiar and that was the application of what is known as the bright spot technique of locating areas of interest for drilling. In the sedimentary section of the Gulf of Mexico, this bright spot technique which is simply a increase in amplitude of the seismic pulse. Wherever there is an interface between gas and water you'll find this marked increase in amplitude due to the velocity contrast that exists between the low velocity gas filled reservoir which is seated above a water filled portion of the reservoir below it. The velocity contrast there provides you with a very marked increase in the amplitude of the seismic pulse and in properly processed seismic data you will find this, what is known as the bright spot, since it sticks out as a marked anomaly on the seismic cross section. We investigated miles and miles and miles of data in the Gulf of Mexico in our search for suitable places to drill.

#253 BC: Did you find some suitable places?

EC: Yes. We were successful in gaining some commercial gas down there which is today being exploited. The initial phase of all that operation down there was handled from here. Later on there was a Houston office developed by Home and staffed with all necessary technical personnel, as well as management and it's still in operation on a much expanded scale.

BC: They have obviously had success down there with the success of the Mexican people in discovering oil in that area.

- EC: yes. It's been a successful operation and it has expanded from offshore onto onshore in many areas of the U.S. I have not been associated with that expansion except in a limited way. I was involved at one time with the work in Louisiana and I looked at data in Louisiana on a number of occasions.
- BC: This bright spot technique, is that peculiar to work in the offshore of Mexico or can it be applied to other parts of the world, other kinds of . . . ?
- EC: It is now a world wide application. It is widely used in Alberta, particularly east central Alberta now, in the shallow gas, sand play. It is very much in use there.
- #281 BC: It's interesting to find something new like that always coming up. You also were expanding into the North Sea in 1973.
- EC: Yes. We had a lot of work in the North Sea. We acquired. . . well, hundreds of miles of seismic data in greep??? shoots, as they were called, in our own work where we hired crews to do our work and through association with partners. It was a big operation involving a lot of . . .
- BC: While this was going on, while Home was so involved with Mexico and the North Sea, this sort of thing, was there less work being done by them in Alberta?
- EC: No. We always had a base here and this was still a very active part of the operation . There was land to be processed all over the west. At various times we had various programs under way to assess acreage.
- BC: So it was still a viable thing to have you people, your base here, the major base here in Alberta even though you were world wide.
- EC: Yes. The administrative headquarters was here, the main staff was here. As I have mentioned there was a staff of technicians and an administrative staff developed in London and in Houston after we had reached a certain point of activity where it became too much of a problem to handle those far flung operations from here.
- #314 BC: Looking into 1974, you were expanding again. Never mind the offshore, you were in New Brunswick, Montana and became quite active in northern Canada.
- EC: Yes. We had a fairly extensive operation in New Brunswick for a time and employed a crew down there working out of various places. I remember we worked out of Somerset, New Brunswick for a time, we drilled some wells down there. Unfortunately we didn't have much success, nothing commercial.
- BC: How long did you stay down there working?
- EC: I was only down there one trip. We relied on the contract crew who were familiar with the area. There was a crew we had that was familiar with the region that we. . .
- BC: Do you know what company went down?
- EC: I'm sorry, I can't recall the name of the company that was involved in that operation. We used so many contractors over the years, some of these names start to run together on me.

End of tape.

Tape 5 Side 2

BC: Your work in northern Canada.

EC: Yes, we had a big program. We headed up a consortium that had a huge farmout from Imperial Oil in the Mackenzie Delta.

BC: Who was in the consortium?

EC: I remember Canadian Superior particularly. I must confess that I can't recall, I think there were one or two other companies with minor interests. Canadian Superior and Home were the majors in that operation.

BC: And where were you working?

EC: In the Delta itself. We were not too far from Tuk Tuk for some of our operations. Imperial did the drilling and we worked closely with them in interpretation of data and making decisions on where to drill wells. I've forgotten how many wells we had up there, must have been 4 or 5 we drilled. And again, we didn't have much success, nothing of a commercial nature. We also. . .

#023 BC: What kind of an affect does that have on a company when you find you've done 4 or 5 wells and nothing showing?

EC: Discouraging.

BC: Do you try to cut your loss right then and just say, that's it or did you still have a commitment to do so many more?

EC: No. You have a commitment but you must realize there is a certain budget in which you work. There are certain budgets set at the beginning of the year, we will spend \$X for exploration this year. And that money is committed out of the cash flow to be spent as exploration money or in exploration activity. And that's the framework in which we worked. It's just like any budget, you have that certain sum that you can work with. And if you're successful, well, you're a hero.

BC: And if you're not successful on the third, you still say well, we've got a budget, we'll try a couple more?

EC: Oh yes. You're always an optimist, try, try again. But we worked in northern Canada in the Beaufort, in the acquisition of seismic data. We were involved in acquisition of data in the Arctic Islands and the Hudson's Bay. A lot of that area was just purely exploratory, a first phase, looking for possible anomalous situations which might be worthy of following up.

#039 BC: Have they been followed up since, some of those. . . based on the data that you. . . ?

EC: Not that I'm aware of. We also were involved in the Far East. . . I shouldn't say the Far

East, that's the Middle East, in Oman, where Home acquired quite a large concession from the Sultan of Oman. It was offshore and we ran a seismic program there, assessed it in our office here, made decisions, drilled I think, 2 wells. Again we didn't have any commercial success and that acreage then was farmed out to Sun Oil. They drilled and eventually I believe, that acreage has been relinquished because of our lack of success. We were also involved off the coast of Italy. That was operated in concert with the London office and here. But that was never drilled to my knowledge, not in the time that I was with Home Oil and I presume that that acreage has been dropped.

BC: Did you have to visit these various places?

EC: I never did go over to Oman. I was to Italy on several different occasions. We had quite an operation going over there at one time, in Italy, with SIR, an Italian company based in Milan who was the operator and we associated ourselves with them. And they handled the field work. We did a lot of interpretation work and conferred with them on the locations to be drilled.

#061 BC: Moving into 1975 and into some of the work you did in central Alberta.

EC: One of the areas of western Canada which has come into the forefront of exploration activity in the last 7 or 8 years has been the Deep Basin. Home had fairly extensive exploration activities along the foothills, from about west of Sundre all the way up to the B.C. border. We acquired a lot of seismic by purchase. We ran seismic crews and made interpretations and that has been followed up with some drilling. I was not involved with the drilling phase of that because by 1976 I was moved out of that direct operation of the department and put into a reference group, which was formed in the company after a revamping of the exploration division. And I became sort of a reference for a lot of the younger people who were coming up in the organization.

BC: You're really a walking oil dictionary.

EC: Well, I was at that time for the company in that particular phase or that particular department because of my time in the company and my association with so many different projects which had been a part of my experience.

#081 BC: Were you just one person, did they put you into this special sort of space all by yourself?

EC: There were I think, three of us in the group. Two geologists and one geophysicists.

BC: And who were the other gentlemen?

EC: We had Dr. Suter as one of the gentlemen and there was a Dr. Teitz, he was a very knowledgeable and experienced geologist who had . . .

BC: What was his first name, do you remember?

EC: That name is gone at the moment.

BC: That's all right. And all three of you had spent quite a few years with Home?

EC: We were all experienced in our own areas and we made our contributions in various ways. I was involved in the geophysics, Dr. Teitz was in the international area looking. . .

BC: Why was this done, was there a change in the policy at Home Oil at that time?

EC: I think there was a feeling that they needed some people divorced from the day to day

operations who would provide a reference or a research group to look at various projects and to provide a stimulus perhaps to some of the other people who might become so engrossed in their own little areas that they would fail to see the broader aspects of some of the problems. That was I think, one of the reasons for the approach and the creation of the little group. Anyway I stayed there until I retired in '79.

#105 BC: You had a name for your group, did you not?

EC: It was labeled the Pathfinder group.

BC: I think that is very significant in the fact that you were a pathfinder in your days with the RAF. A very responsible and sometimes dangerous occupation in the RAF. Was it as fraught with danger. . not this stage?

EC: Not really when you considered you were in a very well furnished and air-conditioned office.

BC: But you didn't have to make sort of. . . give direction that you then had to stand by, when everybody dropped the bomb.

EC: Not quite the same pressures, no.

BC: Since your retirement, Mr. Cook, you have worked as a consultant.

EC: Yes. I was idle for about 6 months and then I got a call one day from Mr. Hume one day at Home Oil asking me if I might help them out on some interpretation problems. So I have been going down there and working off and on ever since that time, helping out on various assignments that have come up.

#121 BC: Looking back on your years in the oil patch, what would you say was the most interesting, most challenging, frustrating experience, either or all or any?

EC: That's a rather difficult question to answer. I must say that I've had a pretty varied and full career in the oil business and I think I was fortunate to be associated with an aggressive, forward looking company that was staffed with some very fine capable people. And as a result I was fortunate to be a part of the discovery of some interesting finds in Alberta and to be associated in the international field with some developments in areas such as, let's take the North Sea. Although we were not successful in finding anything of significance over there, that exposure certainly broadened my outlook on international work. That plus my international experience in various parts of the world. I haven't mentioned being associated with projects in Indonesia, where I had quite an exposure in looking at many, many miles of seismic data in a project which failed to materialize but yet I had that exposure. I was associated with projects offshore Cambodia and I was exposed to projects in Australia. I looked at stuff offshore Peru, Brazil and you know it was all very, very wonderful experience. To be associated with all these various prospects and different geologic settings.

#149 BC: Who would you think, if you were to name one or two people that would have had the most influence in your career in the oil patch? Are there people you could pinpoint?

EC: I would think that Mr. Blunden had a very great influence because he gave me my first

chance at a job and then I worked for him and with him for many years. So he would have to be probably the most important person in influencing me and guiding me in many respects in my formative and educational part of the development. I mentioned the geologists in the company with whom I was associated, these innovators. And they were innovators, they were the finders that could help in locating areas of interest. That geological staff were certainly a prominent part in the furtherance of the company's objectives and my realization of any successes I might have had.

BC: Can you recall the names or are there just too many within that department?

EC: Well, I've mentioned earlier. . .

BC: I thought we might just rather them here.

EC: Earlier on I mentioned them, Mr. Carr and before him, in the very early part would be Aubrey Kerr and then of course, I've mentioned George Fong and Chuck Hamphill and Ellis Walker, men that were associated with some of those early successes which we enjoyed in the province of Alberta. Those are men that I recall quite vividly in those early successes which made quite an impression on me.

BC: I'd like to thank you for all the time that you've taken, Mr. Cook, in recalling just some of the work that you have done in the oil patch. And I hope that I can leave the door open so perhaps we can come back and perhaps go into more detail in one or two areas that I'm sure, as we listen to the tapes back, we'll want to know even more about. But I do thank you for your time and for sharing all this background with us.

EC: Well, thank you Betty, I've enjoyed it.