

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Earl Lipsett

INTERVIEWER: David Finch

DATE: June 2004

DF: Today is the 28th of June in the year 2004 and we are with Mr. Earl Lipsett at his residence at 10522 - 17th Ave. in Edmonton, AB. My name is David Finch. Can you start by tellin us, while I get a sip of my coffee, where and when you were born?

EL: I was born in Saskatoon, 1927.

DF: So you have a birthday coming up?

EL: Yes, the birthday will be next month, 21st of July.

DF: Tell us about your childhood.

EL: My father was a locksmith, master mechanic. Moved the family, when I was a year old, from Saskatoon to Prince Albert. I spent 5 years, as I recall, in Prince Albert. At that time the Prince Albert National Park was created, that's the Waskesu Lake area. My father was also involved with gun-smithing and during the latter years that we were in Prince Albert there were some new regulations that cut out the hunting in the area. As a result there was a drop in the economic potential for the area and my father came to Edmonton with the family and we took up residence in Edmonton.

DF: What year was that?

EL: That would be about 1934.

DF: Tell us about your education?

EL: Education was the usual I suppose. All of my school time was in Edmonton, graduated in about 1941 I guess. From there to the University of Alberta and did physics and chemistry.

DF: Why, what was your interest in those?

EL: My interest. I always wanted to do science and this was my way of approaching it. Geophysics was a little known major and that came about at a later date but I did graduate with a science degree with, as I say, chemistry and physics. That was in 1948. From there, I started casting around for a job and through a few phone calls and a couple of trips to Calgary because that was the centre for the oil patch in all of its manifestations. Looked around for work, got a phone call when I came back to Edmonton and I was on my way to Carstairs to my first job in the oil patch.

#033 DF: And that was?

EL: Why, I was a jug hustler, carrying around really big geophones and doing all of the scrub work and bull work and everything that comes with being part of an operation that was pretty unsophisticated by today's standards. The name of the company was Canadian Exploration Co., known in the industry as CEC. The name came from the founder and president of the company, Cecil E. Chesher, therefore CEC, therefore Canadian

Exploration Co. I didn't meet him until months after I had joined the company. When I went to Carstairs I was looking around for the big rig that I thought I was going to see and instead I saw some rather tattered small drills and some equipment that didn't look like anything that I was familiar with and just became part of the action.

DF: Tell us about that first crew you worked on, because oftentimes when you start something new you really remember things.

EL: The party manager, or the party chief as he was known, his name was Gordon Hess. He was a shorter man as I recall, a little on the broad side, very well liked amongst the crew members and we had promptly nicknamed him Papa Hess. I was with him for probably a year, maybe two, in various venues around the province. He was a very good man to work for. The other people that I can recall, the seismic operator who was in charge of all the good stuff in the black cavern of the instrumentation area, his name was Gerry (Gerald) Reilly. I haven't seen him in years. Along with this gentleman I fail to remember some of the other people that were part and parcel of the package. There would be the normal drillers and normal surveyors and all the other good guys. My memory doesn't. . . I just don't remember.

#065 DF: But your activities for the first few months?

EL: I was doing a little bit of everything. I was the surveyor's helper, I was working on the lines, on the seismic lines, tying ribbons on fences. Graduated from that into the office and began the training for the work that I was doing as a computer and got my first start as a geophysical interpreter.

DF: So computer, with an o, right.

EL: I'm not sure, I think that's an iffy. I've used both spellings and nobody has caught me.

DF: So how did your university education prepare you for the work you did as a geophysicist.

EL: Well, there was a geology minor. In geophysics we're talking basically math and physics in a wide range of courses and these all became part and parcel of geophysics as we know it today. In those days the mathematics and physics would be the key elements. The chemistry came some years later when, as a direct result of the geophysical action I was on, I had recommended geo-chemistry as a methodology of exploration to back up the seismic work. This was an unusual approach and I'm happy to say, worked reasonably well and it was very cost effective, in that all of the sampling that was done for geo-chemistry came as a direct result of the seismic drill holes. So we were able to integrate this and we wound up with sheets of geo-chemistry maps and we were able to tie that into the geology of the area and the geophysics.

DF: So how long were you with CEC?

EL: I started with them in 1948 and I will have left in 1956. The reason for leaving was primarily that what I thought was a going concern, in the wisdom of the principles of the company, namely Cec Chesher, that was the time when the company shut down operations. That left me with a new wife and the need to go elsewhere. CEC was very, very helpful and very much a company that cared for its employees and for me, I was on staff until I found a suitable replacement and that could have taken, I don't know how long. So with that as a background, I've always had a very soft spot for the way in which

CEC was involved in the human part of an operation, not only making money but being very much aware of the people that they're working with.

DF: Can you give us some examples of that?

EL: Of the humanness of CEC? Yes. They were extremely sports oriented, extremely so and to give you some indication of that, Cec Chesher was the president of the Stampeder football team and he was very much involved with the placement of bodies that were coming in from the States for tryouts and whatever. People that were brought on to the team found themselves with time on their hands and to keep them out of mischief they became office helpers for CEC, much to my dismay, because they kept coming and going right in the middle of various projects and didn't get an awful lot of work done. But nevertheless, they were off the streets as football players. There's a number of them, I think the one individual, I can't remember his name now, but as a quarterback, being a star was of course, the most remiss in attending his duties in the office. So that was the sports orientation was very much a part of that. Another part of their sports was their principles would play an awful lot of gin at the Petroleum Club over lunch and one of the favourite tricks that Cec had was to get on the phone with one of his people out in the field and invite them to flip coins to see who was going to buy lunch next time out. And it was a heads at one end, tails at the other or vice versa. It depended on the nature of the day I suppose, as to who the winners were. But they always paid each other off. Most interesting. That was the sports element. Avid hunters, Cec was, he was quite a guy.

#135 DF: Where was he from?

EL: Do you know, I can only say that I believe he had to be Canadian. Where from I don't know. I do know that as a geophysicist he had worked for Shell out of the Redwater area. This would be in the days when reef exploration wasn't well understood. And of course, it became a major component of our activities for the rest of my tenure at CEC. On a more personal basis, while I faithfully attended Stampeder football games, with lots of hot buttered rum and all the good stuff, my orientation is more of an arts background and my sense of activities was one of music.

DF: Really. Now where did those come from?

EL: My mother was a pianist, my father was, although he never mentioned it but once I think that he at one time had played the flute. He indicated that he would like me to play. So I became a flautist and a good one. In Calgary I was part of the Calgary Symphony, was the principal flautist, with the orchestra, involved in all kinds of musical activities. This was before the Jube (Jubilee) was built and then of course, there was performances in the Jube and there was performances in, I believe it was the Strand Theatre in Calgary. Did a lot of work with the women's musical club, I did some teaching in Calgary as well.

DF: How did this fit in with your geophysical work?

EL: I'm glad you asked. Music is physics. So I was able to twist that around I guess. However, the chief honcho next to . . . the 2IC, I'll call him that, he's a major in the army. As the second-in-command he was very much running the show and was my mentor. Now he was very much aware of the musical activity and he and the company supported this in ways that were above and beyond the call of duty. They allowed me to take time

off to perform, to go to rehearsals, to present myself to the school children for various school activities. So I was very busy from an arts point of view. Out of that I became a Director on the Calgary Allied Arts Foundation. And that would be in the old Coste House, if you might remember that. Very much involved with that and through that activity, as the music representative for the Council, I was working with artists in a wide range of activities. This activity continued to expand to the point where it began to interfere with the geophysical activities. But at the same time this 2IC, his name is Andy Lees, initials, A.W., he was very proud of the fact that there was somebody with a little, I'll say culture, as part of the action for CEC and it was very important. Our offices used to be on 7th Ave. and came Stampede time and the parades that were involved, I never did get to hang out the window and have a drink and see what was going on, I was in the parade. I could always expect a huge hand as we marched amongst the horses, side stepping various natural activities and I could always expect cheers from the office, here comes Earl and his piccolo. So we had good times and that was the way things carried on. But I should say that it finally got to the point where. . . and I should say as well, that when I was out in the field I would drive in to Calgary from Peace River, from various other venues around, always to meet rehearsals. So I was trying to do these things and I managed to fit that in. Never missed a rehearsal, never missed a day of work. I was very proud of that but I really didn't know what my name was.

#208 DF: No, you had some hours on the road.

EL: Indeed. That was before the four lanes or six lanes that we now have. It was the old Highway 2 and narrow and always an adventure. But one day Andy Lees came to me and he said, look Lipsett, you're either a damn geophysicist or you're a piccolo player, make up your mind. I got the message. Food on the table was a much more important thing so I stopped playing and addressed geophysics as a career from there.

DF: So how many years did you juggle?

EL: That would be 6, 7 years.

DF: Now you said you were a flautist and a piccolo player?

EL: Yes, it's the same difference. Flute is the mother instrument, piccolo is the high pitched instrument, used quite a bit in marching bands and that type of thing. In any case that was pretty much where I had to tone that down. Instead I took up golf.

DF: Golf, oh well. Now you said you were also involved in art?

EL: Only in the sense that I became exposed to the visual arts through the people that I was associated with. I'm not an artist in that sense.

DF: No, but before we went on tape you showed me some art in your house and you know about art. How did you learn about art?

EL: Exposure.

DF: Okay. Some stories on that?

EL: Not really. You find art wherever you find it. And I did collect Eskimo stuff and . . .

DF: How did that come about?

EL: Stuff that was acquired through trips into the north. Pick up stuff at Yellowknife . . .

DF: Yes, but thousands of people go into the north on exploration trips, you came back with

art, what's the difference here, why?

EL: It interested me, I enjoyed it, I liked it. I don't know what else to say. I can tell you this, that that flute went with me everywhere.

DF: Really.

EL: I took it with me into the far north, right up to the Arctic Circle, Yellowknife of course, into northeast British Columbia, into . . . it was with me everywhere. And it made for some interesting musical activities because there was always a guitar somewhere around and/or a mouth organ. And to sit on an outcrop in the middle of the night, which would be broad daylight in the summer time and have a drink or two and enjoy our music was a wonderful way of maintaining our . . . I was going to say mentality, our way of life. It was a little of home to do exactly that. So amongst the . . . there were no lonely moments. I can recall getting ready for a recital in Peace River. Worked all winter long on that recital with the local butcher, who was a fabulous organist. The church in Peace River, I don't remember which one it was, had a beautiful pipe organ in there, the only one in northwestern Canada that I was aware of and we prepared a recital complete with Bach and beer. Unfortunately that one didn't come to pass. In their wisdom CEC transferred me back to Calgary and I wasn't able to stick around to provide the recital. However, that's the way it goes.

#273 DF: Other highlights of your time at CEC?

EL: Highlights? No, I can't really think of any, other than it was a very. . . how should I say, it was a kaleidoscope of activities of one sort or another. Being on the move and involved with various crews, maintaining a liaison between Calgary and the various crews, carrying out the clients wishes, maintaining the status quo, keeping the crews in line so to speak. That really wasn't my job. It brings to mind that one of the chaps that was the troubleshooter for the company, his name was Victor Harms. He had a most unusual accident as a printer, he was doing some paper cutting in Winnipeg, he evidently got his hand caught in a cutting machine and lost the middle three fingers. He could do more with his thumb and little finger than anybody I've ever known but it did wreck his saxophone career. The typical approach was this, on these various trips Andy Lees would of course, come and see what's going on and in his very gruff way it would be, let's have a look at what you're doing and then, let's have a drink. If there was no drink he'd figure out a way to get one. The local bootlegger might be a supplier. And there was one incident with this, this was out in the Myrnam area, which is north of Vegreville. It was a Sunday and there was no booze around. We decided we were going to do a trip to another town in the area and see if we can't find a little bit of liquor. Well, Andy in his inimitable way, came across a ball game that was going on. Well, if there's ever a place for a bottle it would be there. He marched over to the umpire and asked the question. The umpire said, yes, but he had closed them down the previous week. The umpire was the local Mountie. So we simply became part of the ball game. Vic was, as I say, the troubleshooter and if there was a little bit too much partying on the weekend or whenever, Andy would say, in so many words, that he wasn't happy with the operation, he didn't like what was going on. As the evening would progress he would fire the crew, which

was fine with the crew. The crew was fired, now we can get down to some serious partying. Next morning it was Vic's job to hire them all back and everybody went to work, hangovers notwithstanding. But that was a typical way of handling things. Andy would fire and Vic would hire and I just carried on.

#348 DF: When had CEC got started, do you remember that?

EL: No. I can only say that it had to have been very new when I arrived. There was no old timers so to speak, a young group of people. I just don't know but if I'm going to say anything, I say I got started with them in '48, it would have to be, maybe '47, in that period. I don't think it was much earlier than that. Typically, it would be my sense that every seismic crew in Alberta was the same kind of conviviality and work their butts off and party hard and get the job done and away you go on to the next job. Terrorize the natives, and I mean the locals and there you are, that's what CEC was all about. They sent me on a couple of conferences and made sure we were well looked after and I . . .

End of tape.

Tape 1 Side 2

DF: So they sent you on conference for what purpose?

EL: Geophysical conferences. Into Denver and let's see, out to Toronto at one time, with the University of Toronto at one time. Not a great deal, we were too busy to go on trips. I was going to do the grand tour in Europe, I was going to do opera, I was going to do various concerts in France, Germany, England, all of the above. Had myself all ready to go, tickets were available, everything was ready. I booked my flight so that I would be able to do all of this wonderful stuff and there was a minor crisis in the company which required my attention. That was the end of that trip. I've never forgiven myself for falling into the trap of being indispensable. Of course, I wasn't but that's the way it was.

DF: What would you have done differently, in retrospect? Because I think you've hit on a key concept there, this idea that anybody is indispensable. Did you learn from that experience?

EL: Oh, I certainly did.

DF: How did you change your ways then?

EL: I didn't.

DF: Oh, you should have.

EL: I suppose. On the other hand, I was caught up in the enthusiasm of exploration and being very much a part of it and enjoying it in every way.

DF: Yes, because these years that you were with CEC were the big boom time.

EL: Yes. You could do no wrong. I mean, in the sense that you were part of a bigger picture and I found it a very exciting way of living. I started to get tired but nevertheless it was all part of the maturing that was going on in the industry. It wasn't until I had moved into the bigger part of the industry when I left CEC and went with a major company, and I'll talk about that in a moment if you wish, but as far as CEC was concerned it was a lot of good moments and a lot of caring people. We were all part and parcel of this group. When I

mentioned that this was a kaleidoscope of activity and people, in as much as people were being moved from crew to crew and taking life as it came and any emergency was solvable. So the indispensable part of it was just one's own view of how important you were. I learned the hard way that, even though one is indispensable you can still lose money on the stock market.

#036 DF: How so?

EL: Hot tips were rife and I was caught in that activity and I managed to get my shirt out and not much more. I learned that there's not very many free lunches around. So that's my story on investing.

DF: Now, later on in your career you were with a major oil company, you did some teaching, so you've seen other aspects of the business world. So just ruminate for a moment if you can, on what were the critical key aspects of a privately held geophysical company, what made it work, what were its strengths, what were its weaknesses.

EL: I really can't speak to the weaknesses, other than that the company folded and I'm not sure if it was just a smart business move to get out when the getting was good. There never appeared to be any real problems from my point of view. The company felt strongly enough about my activities that they gave me a share of the company, a share in the activities without needing to share in the administration of the company. That suited me just fine. But it didn't last for long as I say, because of the nature of the business, I think I rode the bubble as many people did and was able to move on from there. From there I took a position with Standard of Indiana, known in Calgary as Stanolind.

DF: How did that come about?

EL: It was again, a matter of getting out and making it known that I was available. Showed up on Stanolind's doorstep, had an interview and started working the next day. It was that fast. Major company, they didn't have time to waste with background and whatever. If I'd spent that much time with CEC that was good enough for them. From there I stayed with them, ultimately became a senior geophysicist on their classifications, was transferred to Edmonton from Calgary and out of Edmonton I spent a number of years in the Edmonton office but I was supervising crews out in, basically, northeastern British Columbia. That would be the Fort St. John, Fort Nelson area. Actually Fort Nelson was my stomping grounds and that took me into the Territories as well.

#070 DF: What year did you start with Stanolind?

EL: That would be about '57 or '58.

DF: And how many years were you with them?

EL: I was with them until '62.

DF: So what were the highlights of those years. And tell us, a big corporation like that, that's got to be different than working for a small . . . ?

EL: Very much so. The company had its own way of . . . well, its own administrative processes were not what I was used to. The range of people that I was rubbing shoulders with provided a huge amount of in-house training and learning, so it was a major education. I was dealing with research people, I was dealing with well, everything that one would be

involved with. At the time that I was with Stanolind, that was just about the time that we were getting into digital work, analogue tape recording, that type of thing. As a result of that it was a whole new approach to dealing with data. From that, that was in the years that geophysics really picked up and found itself in terms of data processing but virtue of the use of magnetic recording. That was not part of the scene with CEC. That was the old school. Now I'm part of the new school and Stanolind was very much aware of and encouraging new approaches. That took me into some pretty far out approaches to interpretation for very shallow, thin beds in Saskatchewan, to massive reef plays in the Slave Point area.

DF: (laughing) So Earl's wife, and her name again is. . . ?

EL: Diane.

DF: Diane was just in the room saying she was leaving. But let's go to her for a moment, how did you meet this exceptional woman? Before we went on tape you somehow linked her to CEC.

EL: No.

DF: No, meeting her coincided with your leaving CEC?

EL: No, that was my first wife.

DF: Oh, I'm sorry. Okay.

EL: Otherwise she's certainly keeping her appearance amazingly.

#103 DF: Yes, she is. Well, with hairstyles these days you can never tell.

EL: Okay. As I mentioned, getting ready for a recital with the butcher, during that winter the party manager, party chief, I'll use the term interchangeably, took a crew from Peace River, into what is now, the well known area of Zama, Rainbow Lake, Chinchaga and at that time was the most remote geophysical seismic crew in western Canada. Up the Grimshaw highway and off. . . it was a long way I can tell you that and remote and radio communication was almost nonexistent. We were running data from that crew out to Peace River and I in turn, would take it to Calgary and pick up a rehearsal for the orchestra at the same time, and turn around and drive back in my little A-40 Austin. That was quite a series of trips. That would be. . . that was a pretty remote area and it was a pretty iffy thing to try and maintain communication and to maintain a very primitive camp life. I don't know how we did it. I visited once, that was enough. The only other remote area that you would find interesting I think, the company sent a crew in to the Flathead region, quite a way south of Turner Valley, it's in the extreme southeast corner of British Columbia. The only way to get in there was to take a crew south to Kalispell, and come back in from the back end. Go through Customs twice to get into that particular valley. This is the Flathead Valley. Very complex geology, very tough area in which to work. It was an area that had been known for oil seeps of one sort or another. So wherever that was coming from, it was a prime area, the geology was just too tough for the technology of the time. Now I guess you can get in there from the Canadian side but you sure couldn't get in there at that time. So we did what we had to. On a more personal note, I tried to. . . well, I did, I spent a considerable amount of time developing contacts in Australia and was preparing to set up an office over there on behalf of CEC and be

involved in the exploration on the east side of Australia. I had government contacts, I had everything all ready to go. CEC decided that they were not going to invest the money. So my big move from an entrepreneurial point of view and to do some work over there fell apart. Only to discover that the target area became a producing area for others. So I shrug my shoulders and carry on. That's the one or two or three things that come to mind in that period.

#157 DF: So you weren't with Stanolind very long were you?

EL: It seemed to be quite awhile.

DF: Did it?

EL: There was too much going on, out of Edmonton. As I say, I spent a lot of time away, on the run and it was a fairly brutal pace and it didn't work very well for me. And I guess that showed. During that period of time, that was at the time where if I'm not mistaken, there was a lot of blood letting that went on in the oil industry. The oil industry was quite brutal in the way that it treated people. That would be true of all the majors, there was nobody who did it in a humane way. So there were a lot of people and I was one of them, that was at loose ends. The timing couldn't have been better in one respect. I went down to Calgary and spent several months at SAIT teaching and was offered the opportunity to join NAIT before it opened. That would be in about '62 I joined NAIT and we worked at preparing the school for opening. That became my background of teaching and administration for pretty much the rest of my career. Having said that, it wasn't the only thing that went on.

DF: So how did you get from Stanolind to SAIT though, that's sort of a lateral move isn't it?

EL: It was. I had feelers out to see which way I was going to go. Teaching had always been sort of a background but I wasn't all that interested. There didn't appear to be much in the way of activity unless I wanted to go to the tarsands, to Fort McMurray. I didn't want to do that. By then I had a young family. So I commuted to SAIT in Calgary from Edmonton, to get over a dry spell and at the same time, knew that NAIT was evolving. Again, I was at that spot, I took on a position in the Math and Physics department. There was no geology in NAIT at that time. In the ensuing couple of years, while on staff there, I developed the Exploration Technology programs, the Earth Science programs. So that was my background there. Having developed that, the exploration was a programs where we had to prepare and teach, geophysics, geology, math, physics, everything that was in there. These were 2 year technology diplomas and I had established the program with the help of the university department of geophysics, that would be Ernie Kanesiwich, now deceased. Along with him, I'm just trying to remember the names here. . . oh yes, one of the senior geophysicists on campus then was a fellow by the name of Keeva Vozoff. He was very much a supporter of what I was trying to do in a 2 year program, as compared to the 4 year programs that he was teaching. So he was very much a behind the scenes individual and very much a part of the advisory committee. Provided a great deal of input to work with me. Along with him was the fledgling computer department at the university, this was Alberta, and this was a chap whose name, I'll get back to him in a moment, other than that through him and with the development of the computer programs

that he was very much a part of at the university, he also was able to direct the first computer to NAIT through me. They made available a 1620 IBM system and that became our first computer action at NAIT, through the courtesy and participation of the computer department, the geophysics department, Gordon Williams was very much a part of the geological action and I was able to bring all of these people together and make this work. So we had . . . I'm desperately trying to remember the name of this chap. I'm having a seniors moment here.

#242 DF: It might come to you in a moment. But you'd been laid off in the early 60's. There was a dip in the industry throughout the mid 60's. Why then, the creation of this program at NAIT?

EL: It was obvious that this was simply a bubble. The industry, the overall industry was expanding, it just wasn't expanding quite as fast and the need for people was real. With the reality of this, technology background was critical to the manpower needs. Certainly the industry and I'm talking about the petroleum industry, were highly supportive of this. There wasn't anything like it at SAIT either. So this was a unique opportunity to develop the earth science programs that would be focussed on exploration. With that I was able to develop this and the program evolved from exploration into a petroleum program, a mining program, a water program, environment, the whole bit was rooted in what started then. So I had a good time with an awareness that this was going to last and it certainly has. And as part of that, I also maintained a consultative approach and I was very busy on my own hook. I was able to do that with the acknowledgement of NAIT, that this was happening. It provided opportunity for employment to many of the students and it provided an opportunity for me to be aware of contacts and where the industry was going and how they were going.

DF: What did you call that company?

EL: That was called. . . well, my own company was called Geoquest Consultants Ltd., it's no longer in existence. I also became vice-president of technical projects for Cinnabar Peek Mines, also out of business.

DF: Are you saying something?

EL: Yes, I am. I was a technical success.

DF: Okay.

EL: In as much as I have never applied myself to the entrepreneurial approach, it didn't seem to matter. I am very comfortable with. . . I'd have loved to have made an awful lot of money but I'm happy in the memory that anything that from a technical point of view, seemed to be okay.

#293 DF: So you wouldn't have had any more fun if you'd made a lot of money?

EL: That's exactly right. I'd be right back here doing the same thing. At least that's my view. Through that period I was very much involved in other educational programs at NAIT. Developed a coal mining program and became part of the YREC consortium, that you've never heard of. Yellowhead Regional Educational Consortium. I was putting together a program for the, major program, to be offered through this consortium at Hinton, Grande

Prairie, Fairview, Edson and anywhere else.

DF: What was the program?

EL: This was a coal mining technology and involved everything that had to do with that. It was part of, it was operating as part of our group of earth science programs. With experts on staff who are coal mining engineers. What more can I say in that respect. That was ongoing developmental things. The YREC consortium, I don't think is in existence as a consortium anymore but then long distance learning and that kind of thing is still very much alive. This was part of the sense then, to use those techniques and to work with BCIT in Vancouver, Burnaby actually, and get them involved. The British Columbia government, in one of their publications, acknowledged what NAIT was doing in the coal mining industry so I was very happy with that. Part of that action there, I was on the Occupational Health and Safety department's coal division and I created a whole series of programs for that department to work with, in terms of the licensing and the getting credentials for tickets for the coal miners in the industry. So I did that. So I've had a fairly diverse range of experiences. I was doing electro-magnetic work while I was at NAIT. That took me into the high Arctic, took me into the Nahanni, the Headless Valley area, it took me into northeastern B.C. and on into the Cassiar area. It's taken me into Saskatchewan and uranium exploration big time. Did a lot of aerial work. I can look back on those days and say, I was there stumbling amongst the rocks and the muskeg and it's now a mine and I'm comfortable with that. I don't know that I can say much more. I'm very proud of the time that I spent with NAIT and it provided me with just about everything that I would want in life, in terms of a technical background.

End of tape.

Tape 2 Side 1

EL: A little bit more history at NAIT. At the time that our programs were evolving in the geology and geophysics areas I encouraged the oil companies, and they were very helpful and we wound up getting a hole drilled, a deep hole, right on the campus. We were very careful about getting this hole drilled in just the exact right location because we knew a building was going to go on top of this. So we drilled a hole, we had dignitaries from the oil companies come out to congratulate us and to see what was going on. We drilled the hole, we cored it, we did all of the wire line work. We did all of this stuff and we bottomed it at, it must have been around 1,000' subsurface. But the surface varied by about 20' because what was the original hole, which was at the surface, we had to then excavate and this hole became completed with a wellhead in the basement of this particular building, which is now the Business Administration Building. It's called the Tower Building at NAIT. And so there's a fully operational well in the basement.

DF: Who's idea was this?

EL: You're looking at him.

DF: And why?

EL: Because it allowed us to do an all weather access for class work demonstration, without interfering with anything else. And that's still there. Now Hubert Sommerville was part of

the team that came out and was very happy about all of this. I was telling him some of the details of this particular well and he wanted to know the depth and I told him, I said, you know, we really haven't done anything in terms of regulations on this. He looked me straight in the eye and he said, well, at that depth you better take out a license. So we have, on the records, NAIT Tower #1, and a full log on that is in the files. And we had to do that.

DF: So did you find anything in that hole?

EL: Coal. And we had some concerns over some gasification. Coal bed gas is not unusual. It's the buzz word now. And so CBM was looked at them and we discovered. . .

DF: CBM being?

EL: Coal bed methane. There's nothing new. Only the techniques to exploit it. Exploitation is a favourite word of mine. It does not mean misuse. In my world exploitation means an appropriate production from an economic and from an environmental point of view, to do all of these good things.

#038 DF: Well, that's cross-generational then, because I think at one point exploitation meant, at whatever cost?

EL: Yes, at whatever cost. No, I've never used the word that way. And in terms of environmental concerns and the need, that's always been a very close area of interest for me. In view of work in which we were responsible, we being the oil industry, could go in and create seismic lines ad nauseam, without much concern about where these lines were going in terms of forestation and this type of thing. There has to be a greater awareness and that's been a theme of mine for years.

DF: What triggered that theme for you?

EL: The environment as such is certainly everybody's and it's not there to be taken apart and provide access for, now I'll use the term in a negative way, the exploitation of some particular resource. There has to be a better way of doing it. At the same time there's a lot of environmentalists around who need to look in the mirror and ask themselves the same questions. I think they're going a little overboard and compromise is of course, a need. Whether or not it's going to suit everybody it needs to be. I don't want to get into Kyoto, I don't want to get into tailings from mining operations, these are obvious. We are left with the dregs of that kind of thing. Same thing in the Yellowknife area with the Conn??? Mine now shutting down and the Giant Yellowknife operation and the pollution that was a direct result of the gold mining operations. It was never really considered in the long term, the implications were not there or understood or even cared about.

DF: Why not?

EL: Because industry, in the name of profit, there was only one thing to look at.

DF: And progress?

EL: And progress? I'm sorry, is that a question?

DF: It is.

EL: I'm not sure where the term progress would go or are you asking me?

DF: Well, I'm saying, cast back to the time after World War II when just about anything that could be done was being done. In that boom, particularly the post-Leduc boom and so on.

You were here during that bubble where it seemed like everywhere you turned there was interesting things to do and so on and so forth. My experience is much more intimate with the Turner Valley story where the Conservation Board had to be created because the companies wouldn't take concern for, in those days it was economic conservation, it wasn't even pollution. It was just economic conservation. So the profit motive, but also this belief in progress, you know. If we can do something then we should do something, then if we can make money at it then we should be able to do it. And you bring up the Yellowknife Mine. When and how did that attitude change, from it doesn't matter what our actions do to something more nuanced where we have to take the longer term view? It sounds like you were part of that transition.

EL: I guess I was.

#082 DF: When did it happen for you?

EL: I would have to say right from the beginning. For me, it was simply saying, oh my goodness, we're doing this, why are we doing it. Can we do it in a better way and get the same results. The end point results being production and profit and the progress that you're talking about. I have trouble with that. I had occasion to be in Labrador while I was still at NAIT and I saw the iron action. I'm talking about the open pit stuff and the incredible desolation that went with that. At the time it had to be the right way to go but nobody was caring very much about what was left after Brian Mulroney and what was it, the Iron Ore Company of Canada shut down their operations and it was absolutely brutal. It was out of the mind's eye, it was out of the way and who cared. Well, then you can come back in and look at that and say, oh my god, look at what we have wrought. I have a sad feeling in my bones. That's true of the uranium action at Great Bear Lake, same at Eldorado in Uranium City, the Gunner Mine there, it was a big open pit, not a huge pit but it was a big hole, that was flooded. Now it's a sink hole. That's probably the wrong term but it's just a deep, small lake. I don't know whether there's any fish in it or not. And if they are they probably glow at night. All of these things, I have a problem in reacting to it because my sense is that we've got to deal with this in the longer term.

DF: Well, let me throw one specific example at you then, the mine that you were involved with prospecting for on the Flat River, tributary to the Nahanni. Tell me that story. Not the Flat but the Prairie Creek mine.

EL: Well, this was before it was Prairie Creek Mine. I was contracted to do an electromagnetic survey.

DF: Aerial?

EL: No, ground. And to get in there I'm not sure, initially there was a camp set up and moved into this area from the Alaska Highway up in the Liard area, they had moved in.

DF: How did they move it in?

EL: I'm not sure. But there was a camp. They may have moved this in in pieces by air. That's more likely what it was, now that you've asked the question. In this job I flew up to Yellowknife and I had a plane waiting for me there, being flown by a fellow by the name of McAvoy. McAvoy was one of the fly by the seat of your pants bush pilot types and just before. . . I'm going to digress for a moment. The computer specialist at the university's

name was Robert Julius. That's another whole story. Sorry for the digression.

#134 DF: No, that's good.

EL: McAvoy, I met him and we needed to make our trip into Prairie Creek.

DF: What kind of plane?

EL: It was a STAL. And it stands for. . . this was my first experience with. . . I don't know who made this but, Short Takeoff and Landing was what this thing was all about. Two seater and room for some storage of one sort or another so I had my equipment. I met this guy, I can't for the life of me remember his first name but McAvoy. We took off and wound up at Fort Simpson. Now my memory fails me here. . . no, I didn't go to Yellowknife I went to Fort Simpson, that would have been with. . . who was doing that then, Canadian Pacific, CP I believe. In any event we got to Fort Simpson and McAvoy was waiting for me there, that's the story. He took me over to the landing strip, which was a football field. The damn plane is sitting at one end, by the goal posts and I'm looking at this and I'm looking at that and ooh, there's no way. It was at that spot that I did load the plane and there was some holes, some drill pipe and my equipment, I guess I had a sleeping bag. In any case I parked myself in this plane with this guy and I said, we're going. Revved up the plane and in a matter of feet we were up and over the goal post and I'm hanging on for dear life and it just scared the whatever right out of me. I said, now, do you know where we're going, he said, oh yes, but we're going to take a detour. What are you talking about, I've got some work to do. And we're now in the mountains. He said, well, he makes a point of prospecting every time he takes a trip into this general or any other area. And he flies around and picks out areas that he's going to look at. Okay. I'm now getting used to the idea of doing some ground contouring here, up and down and all over the place. I said, well, where are we now, he said, we're just coming into Prairie Creek. I said, where, where's this Prairie Creek. He said, it's down there. I saw nothing. And I sure as hell didn't see any place for a landing. He said, we're coming in. Where, where. He put that damn thing down on a gravel bar and the thing came to rest with the wheels in water. We got out. I threw away my shorts. We'll start all over again. And unloaded, and then in a very casual way, he said. . . firstly I didn't see where the camp was, it was hidden, this was really a cloak and dagger operation, nobody was supposed to know anything about where we were or what we were doing. The plane was unloaded and McAvoy said, you see that can over there, I said, well, it looks like it's all beaten up and whatever. He said, there were some sticks of dynamite in there. I said, oh, and where's the lid. Well, a bear got at it. I said okay, and where's the bear, he said, over there and I looked across the gravel bar and here's this damn bear and as far as I'm concerned it looked like an elephant. The bear was watching. In any case we gathered up this stuff and headed off to the camp. I settled down, it was a real orangutan thing, there was firearms like an army would have out there. It just scared me, I don't believe in that kind of action. And there was a drill rig there and they weren't doing much in the way of drilling. I was there and set things up to do the electromagnetic program, which I did. I brought a piece of an outcrop back, which I was using for calibration in the area and it assays at about 50

oz. of silver per ton. That was pretty big stuff. As far as the ground operation, we didn't clear any lines. We simply marched our way through on a grid that we had surveyed out and climbed up on the top of a few mountains. I'll call them mountains. They weren't all that big but when you've got a load of equipment it's that big. Did that and then the weather closed in. So I now have myself another schedule and I can't get out because McAvoy can't get in. That was a very interesting couple of days of boredom and frustration and everything else. When he finally came in he did the same darn landing that he made before and this time we had to pull the aircraft back onto the sandbar. Because we now had a lighter plane, up we went, got off that bar and headed straight into what I thought was just a straight wall but we managed to get out of there and wound up, instead of going back to Fort Simpson we went back to Fort Smith. He apologized for that but he thought he had to take that trip because he had to pick up some oil, he was losing some oil in the aircraft. Thank you very much, good bye. So, so much for Prairie Creek. It was identified as Prairie Creek and the area was identified in that way and nobody wanted to give away the location. There was a lot of spying going on and there were aircraft in the area that were coming in to see what was going on. That's my story.

#251 DF: Okay. And it's been developed since then?

EL: Evidently there's been some kind of action going on. I haven't been there but I think it had something to do with the environmental aspect of what they wanted to do and whether the Indian bands were making noises or whether it was the government or both. But it's all part of that national park area evidently.

DF: Well, unfortunately, the mine is outside the national park but the concern is that anything that happens there, that comes down Prairie Creek will come into the national park.

EL: I thought it was something like that but that was my one experience in Prairie Creek, thank you very much.

DF: So how could a mine like that be developed safely?

EL: I don't know. With a great deal of effort. And I would think that . . . well, because I don't know the configuration of the mine I don't know if there ever is an answer that will satisfy everyone. But I think the one thing that would certainly have to be taken into consideration big time would be the pollution factor of the mining. And perhaps getting some sort of retaining operation going that would mitigate the pollution problem and restrict any ground water flow or anything of that nature. Not easy to do.

DF: Especially in a remote location eh?

EL: Well, it really shouldn't matter whether it's remote or on your doorstep. There is nothing remote anymore. I would think that people have to have some sort of a sense of what the eye sees and be impressed with the way the operation could be cleaned up and kept clean, as opposed to tearing the place apart and worrying about what to do later. Typical of that, I would suggest to you, would be the coal mining that is going on west of Edmonton. And I'm speaking of the Wambuman area and the coal that's being stripped out and the rehabilitation of these areas has been most successful and very pleasing, not only to the eye but I guess, in terms of putting in a ground cover that meets more requirements than just an eye pleasing sight. I'm very pleased with what they're doing out there. How one

can work in this framework and ignore what the big machinery is doing and there's going to be a concern I'm sure, and I don't really want to think very much about it, is the Fort McMurray area and what's going on in the mining of that resource. I'm sure it's a big concern but nobody really wants to talk about the long term. I don't know enough about it to really cause any more than raise my eyebrows and say, what happens next. I don't know.

#311 DF: How did that come into your teaching at NAIT?

EL: Environment? In the process of teaching and in the process of identifying the statistical processes of the lines required for exploration, for surveys of one sort or another, you have to think in terms of how to do this in a way to take care that you don't want to destroy a perfectly good forest by running some lines into that forest and saying, oh well, in 80 years it will be back to normal. There are forests in there that would be not economical for very long periods of time just by virtue of a line or two that could have been very, very easily put somewhere else. You can change your configurations. So I would say that it simply comes into anybody's discussion of exploration, that you keep an eye on things. If you go on a field trip and you've got a bunch of lunch bags and food that is left unused, you just don't leave it to rot, you put it into a bag and bring it back with you. This is the kind of thing that we would insist on. We do the same thing with doggy-doo in the city, why not. One can look at that in that respect and we say, yes, we can at least ease the pressure a little bit by being aware. I taught some exploration programs for the Department of Lands and Forest, now very much a part of the scene. The theme always was to get across the idea of what exploration was all about and to allow the forestry people to understand that there are ways and means of reducing the impact of exploration. And understand that unless the forestry people are going to make demands and insist that exploration be done in a reasonable way the companies themselves will always find ways to cut another line and it becomes very permanent that line. So I'm caught between the need to be aware of the environment and at the same time, one needs to be, as you've indicated, part of the progress. But there has to be a saw-off on how one does this. Again, the costs don't need to be astronomical if it's done with some clear view of what is happening. I can tell you that there is work that . . .

End of tape.

Tape 2 Side 2

EL: The geophysical exploration work that we did in northeastern B.C., from Dawson Creek all the way to the border, meaning the Territories. Working in that there's areas where seismic lines have been cut with a great deal of detail. There are other areas where we've managed to do seismic lines that you will never see, hand cut lines and portable equipment, hand packed, cables, geophones. I'm talking seismic now. With helicopter support. Now that can be expensive. Sometimes it's not practical to do it in any other way except with helicopter support. Having said that, there's a price to pay for that and the price is that a forest has not been destroyed, there's been no clear cutting, there has been access in which you'd have a very difficult time ever seeing where somebody has gone

and drilled a whole bunch of holes. That's the way that it can be done. Expensive. But you don't need a great big bunch of equipment to do it. Equipment is miniaturized these days.

DF: I was going to say, isn't it partly the technology has changed.

EL: Exactly. And you can back pack some of this stuff. Now it's not easy when you're going up and down a mountainside. Well, maybe there's another way of doing it. Instead of going up and down go sideways. And run your traverses in a way that you can access the traverse but get there in a more respectable way. The net result is, it may not be cost effective but environmentally, it may be appropriate. And there's ways and means for that to happen.

DF: You said earlier that you're quite pleased with the technical successes of your career. Which ones of those would you like to talk about?

EL: The Slave Point action of northeastern B.C. has been a big success. I was able to translate reef development in the Texas area and project that into similar geology, not necessarily the same age but the same mechanisms and to identify these and to work with them as a guideline for some of the work that I was doing. We did, in some of this work, create some of the, what is now known as, 3D seismic. We were doing that in the 60's.

#038 DF: How so?

EL: How so? Well, we were developing it at that time. The configurations and the need to have superior computer power was a need because one is looking at multi-recording techniques and multi-surface configuration techniques. It was evolving at that time. So that was taking place in northeastern B.C. In terms of the areas of direct concern, I was involved with discoveries all the way up the line to the Territories and some work as far up as Beaver River and Pointed Mountain, if you know those places. The Petitot River area, Clark Lake, and its environs. Certainly the development of a major coal mine that has got government approval when the economy is right is part of this and I used geophysics in that as a major exploration tool very successfully. Work in Alberta, a lot of work around Redwater. All over Alberta, what is now producing areas of Carstairs and Crossfield. Our clients in those days was Amerada. Our target wasn't the target that is there now. In those days we were looking for major structure of the Turner Valley type. Didn't find it. But going back in, a lot of early work is still valid today. It takes a little more work to use the data and there's a lot of re-shooting and re-occupation of lands. Still, that was the start of where we are today, we can't ignore that. So I'm quite comfortable with having been part of this scene for quite a few years.

DF: What did you enjoy most?

EL: My goodness. . .tomorrow. There's always a tomorrow. Even when things are bad tomorrow will be better. In the geophysical exploration sense, seismic crews and that type of thing, it becomes rote. You're doing the same thing over and over and over again. You don't really know what you're doing. I'm speaking of the operational part. The sense of discovery is more remote, through processing and computer activities and the fact that the producing companies, the actual oil companies, are on a different time line. It's rare that they want to move as fast. . . well, the timing of interpretation is on a different scale than

what it was years ago. We had our deadlines of course, but it was a different kind of pressure. Now because the cost of a lot of this work is so high there is a time factor but that's operations in the field. The results can be quite a ways down the road. Coming back to your question about what was there most. I guess it's just this matter that the sense of what's coming next, what can we look at, what can we do to make it better, who's got an idea, should we drill deeper, why are we locating there. Decision making would be the part of it that I would like to say is the fun part. But to get there you've got to work it at just the whole labour of the mind processes and physical processes. So that's how I feel about all this stuff.

#096 DF: Any regrets, things you wish you'd been able to get into?

EL: That's a good question. I've thought about that from time to time, I wonder what I should have done, could have done, could have, would have. I don't think I'd want to change anything. Maybe that's a disappointing answer.

DF: Oh no.

EL: I just don't see there being. . .oh, there's some things I would have liked to have done, travel a little bit more. Having said that, I'm speaking from an exploration point of view. I should tell you that over the last four years or so, in my retirement days, I've been involved with a dig over in the Sea of Galilee, over in Israel. We're opening up a lost city there. So I've been doing that.

DF: Really. So from a geophysics perspective or . . . ?

EL: Both.

DF: Okay. Tell us how you came into that?

EL: I have, how should I say, a sense of discovery again, from an archeological point of view.

DF: Yes.

EL: Turn that into a geo-archeological thing. I have a nephew at the Weizmann Institute of Technology, just outside of Tel Aviv. His work is in ground water and geophysics and hydro-geology and on and on and on it goes. He's global in his interests. In talking with him and knowing what they're doing over there and involved with the University of Nebraska, who are running a dig over in the Galilee area, I just got involved. I visited over there and so, we do some magnetics, we do some electromagnetics. Others have been doing that and I'm just doing some digging and laying out some lines, doing whatever one needs to do. So I've found that another experience and at the same time, able to check out some of the aspects of the water depth and whatever else is on in the Sea of Galilee and do some geo-morphology??? work. So I do that.

DF: So this is very much hands on field work again?

EL: Yes. I do that, I still get out in the field in British Columbia and in Alberta I'll still get out and take a peek around. So it's always this challenge of seeing things and wondering out loud. Yes, I would like very much to be able to answer all of the questions that come up. We have to wait for the right time for that to happen. And no, I don't think I would change anything.

#139 DF: Tell us about your involvement with APEGGA?

EL: I'm a life member of APEGGA. I was registered in 1952. Through the geophysical activities of the time, APEGGA, which was then a different association than it is now, then expanded into geology and geophysics as professional status elements. That's when I made my change from engineer to geophysicist. I've been involved in various bits of activity on a volunteer basis. I've been a member of the library committee, I've been very much involved with ASET, the association of Alberta Society of Exploration Technologists. That was an offshoot to interaction with APEGGA way back before ASET was even well underway. More recently, over the last five years or so. . . oh, I've done mentor work at the university for APEGGA and the geophysical and the geophysical students there.

DF: How does that work?

EL: Just come in and interact with the students at various functions. Just be available to answer questions. Try to do it in that way, rather than a one-on-one basis, I'm not into that. Work that I've been extremely involved with, I'm on the investigative committee of APEGGA, which is a disciplinary process and we investigate and report on complaints and keep the industry in its appropriate slot with appropriate scientific reporting and professionalism that needs to be monitored. So that's what I'm doing. We do that as members of the investigative committee on various panels and make our reports to the discipline committee, which in turn can create the evaluations on complaints that come in from the public and from the industry itself. That's what I do with APEGGA. On another basis, I'm still very much flauting. I play with the Edmonton Philharmonic Orchestra and I've just finished a couple of gigs. With one of the groups in town we just finished Jesus Christ Superstar. So I played with that group and preceding that I played with a group that produced Li'l Abner. So I'm in a musical comedy. And I don't know what all, I'm just busy. So I'm back as a geophysicist who plays the flute and piccolo. And the wheel has made a full turn. And there you are sir. You must have some more questions.

#193 DF: Which of your contributions do you consider most significant?

EL: NAIT.

DF: Yes. Why?

EL: People. I was able to pass on a lot of this information through teaching and to feel a part of it. Knowing that there are students out there, former students, who've made their way in this industry and I would hope, well, I know they're very much turned in to the needs of my own background. Not only the technical aspects, but what life might be in an environment that is a valuable environment to retain. I get angry when I see pollution and yet I have to be sure that we try to deal with a solution to that, it doesn't serve any purpose to get angry, you have to do something about it. So my contribution is I guess, trying to put all this together and give it to somebody else and let them do the best they can. I'm comfortable with that.

DF: What do you see as a long term solution to things like tailings from mines?

EL: That is a very tough question. If there was, big if, a methodology to create a clean up that is economic. If one is going to acknowledge that the tailings need to be cleaned up what could we do with the tailings to help pay for the clean-up. We find that as a very good

question. My first visit to Yellowknife when I was a very young man and the bus from the airport took us into the whole town of Yellowknife, which was over the hill. I was a very depressed young man, I did not like what I saw. We were bumping along on the main road and as we were going up the hill to get into the town site and over to the Yellowknife Hotel, which was right on the lake I said to buddy that was in the bus with me, I said, I don't know, I don't think I like this. If this is Yellowknife I'm not going to like this. He said to me, he'd been there before, this is the main road and the road is made from mine tailings, all of the rock and the garbage that had come out of the mine. And he said, if you want to really see what all of this is about, when we get out you just pick up any rock from the road and I'm sure you'll be able to see gold flecks. This is the stuff that is not economic to process and to work with. So the mine tailings, using the term in a broader sense, went to building roads. And there you are.

DF: Paved with gold.

EL: And Yellowknife was paved with gold. Right.

DF: Small amounts of it but. . .

EL: Well, it simply wasn't economic to . . .and in those days gold was at \$35 dollars an ounce, as opposed to 10 times that amount. So there you are. And I can say, well, we're getting into techniques that are talking about nano-technology as a means of refining tailings and getting stuff out of it. That's something that may or may not exist. But still, tailings, there may be some industrial use of this stuff that hasn't yet been considered. So that would be the approach. And if you've got the Labrador open pit stuff that goes on for miles, Toronto has a lot of garbage, as does Montreal. And I think you know that that's what they're doing out of Toronto, or do you?

#276 DF: Sending it to an open pit?

EL: Yes. They've got, I don't know how many years. I find that acceptable. You're darned rights. So there's the ways and means. What man has wrought, maybe they can unwrought. I don't know where else I can go with that.

DF: Well, I think fuller cost accounting for these things has been evolving.

EL: Yes. Well, and to make a cost effective way and to get the, this may be an in appropriate time to mention it but if we can get the ear and the will of the politicians who make policy on this kind of things, perhaps educating them as well as the public that they are serving, will perhaps be a way to go. The greenhouse gases and that type of thing. It's only a part of the scene.

DF: Anything else you'd like to tell us about your career or your life?

EL: Not that's for publication.

DF: That's fine. Well, on that note then, I'd like to thank you so much, on behalf of the Petroleum Industry Oral History Project and the Petroleum History Society, but particularly myself for allowing me to come into your house today and to share with you a little bit of your story and to record it. It's been a real pleasure, thank you very much.

EL: Thank you very much. I appreciate the opportunity to share this with others.

DF: Thank you.

