

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Ned Gilbert

INTERVIEWER: David Finch

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David: Today, is November 19th, 1999 and we are with Ned Gilbert at his offices, for a few more days, at #300, 400 - 5th Avenue S. W. in Calgary, my name is David Finch. Ned, would you start by telling us where and when you were born?

Ned: May 3rd, 1922.

David: And where was that?

Ned: Madison, Wisconsin.

David: What were your folks doing there at the time?

Ned: My father was Chairman of the Botany Department at the University of Wisconsin and my mother was not at that time teaching but she had been an art teacher.

David: What do you remember from those early days?

Ned: It was during the Depression. When I was growing up, say about 8 or 9, my brother and sister were 10 years older than me so they'd pretty well moved on and the CCC, which was. . . you'd have to find a proper definition of it but it was. . . there were lots of unemployed people.

David: Conservation Core.

Ned: Right. They were building a park in Madison and my father had been instrumental in getting this park started, it was called the Arboretum and he had encouraged people to put some money into it and they picked up most of the land around, I think it was Lake Wingra. So I used to have the pleasure on weekends of going out there with my father. I was just a child but it was quite impressive that all these men were working and they were all wearing khaki clothes.

David: What was the name of that lake again?

Ned: Wingra.

#019 David: And they were making a park around it?

Ned: It's a very nice park. And what they were trying to do was to restore the countryside to the way it was when the pioneers first came there. It's called prairie, believe it or not but it doesn't look like our prairie here in Alberta. And then other than that, my father being a botanist and my mother being an artist, we had lots of. . . I would go for walks with my father at the cottage, we had a cottage in northern Wisconsin and I would go out when he was collecting fungus, that was his speciality was fungus and so I would go out with him while we were collecting mushrooms and things. Other than that, having a mother who was an artist and a sister who was an artist, they both taught art, we had lots of craft work around the house, some of which I took part in.

David: How many siblings did you have?

Ned: A brother and a sister.

David: And you are where in the birth order?

Ned: Definitely last. Like, 7 years and 8 years.

#030 David: Now you told me before that for your generation you got more education than some. What got you into. . . obviously your father was in the university but what got you interested in going on to university and so on?

Ned: Oh I don't think there was ever any question that I was going on to university. All my friends were going on to university, except that I graduated from high school in 1940 and as you know, the war, the American side was starting about that time. I tried to enlist in the Air Force and was told I was too tall among other things and would never get out of an airplane if it was crashing. Subsequent to that I had pneumonia twice while I was in university and that caused me to delay my graduation. Also about that time the army drafted me and took one look and didn't want me, thank the good lord.

David: So what happened then?

Ned: My professor, head of the Department of Geology said, we think you ought to get a job and handed me two applications. One was California Standard and one was Sun Oil. In due course they both said they wanted me to go to work for them and Professor Twenhofel said, we recommend Sun Oil to you.

#044 David: The professor's name?

Ted: Twenhofel, a very famous sedimentary professor, quite a famous man.

David: Now you jumped ahead just a little bit. Did you not have summer jobs when you were working at university?

Ted: Yes, I worked for the U.S. Geological Survey as a, the first year a rodman and the second year a chain man and the third year as an instrument assistant.

David: These are all on survey crews for what purpose?

Ted: We were tying in triangulation points for air photographs primarily, I think for roads, mapping.

David: Any adventures on those summers?

Ted: One time in particular, I was taking notes for the instrument man and we were in resort country of northern Wisconsin and he flipped the transit over to get a rear view down to the rear rod man and the transit turned out to be so high above the man down below that we were looking out into a lake and there was a young lady in the nude sunbathing out there. Well, the poor rear rodman, if you've ever done it, you hold a rod very straight up, well he held it for a long time. Finally we waved him off and brought him up so we could see what we were doing. That was just one, there were lots of incidents.

#060 David: So this was a summer job that kept you occupied?

Ted: I walked on an average of 15 miles a day as a rodman and chain man.

David: And that picture you have in your office, is that from that period?

Ted: No that's actually when I started here in Canada.

David: So you decided to go with Sun instead of Cal Standard. Where did you work? You did

some work for them in the States before you came here.

Ted: No, my first job with sun was in Nova Scotia. I was sent from school to meet the other geologists in Amherst, Nova Scotia. I had quite an interesting experience crossing the border. In the first place they didn't really send me a fancy passage, I was going coach on the train for several days. I actually went on a troop train and when I crossed the border at Sarnia, when I explained to the immigration people that I was going to Canada to work, they said, where are your papers. I said, they're supposed to meet me here. Well, they had no papers and in the next 48 hours I crossed that border, each time they'd take me off the train and send me home by bus and I'd phone . . . anyhow I crossed the border at least 6 times. By the end the immigration man and I were good friends, he took me home to his home for dinner one night, had me analyze the rocks in his rock garden and then put me back on the bus. Each time you'd hit the American side, they'd flatten you against the wall with your arms out, search you. . . because there was a war on. Very interesting. But from that I went to Amherst, Nova Scotia, and again, because of the war, Sun Oil didn't have any young geologists. So I was there with, the Chief Geologist from Tulsa, Chief Scout from Tulsa, a geologist from the head office and another man who was my immediate boss who they had brought back from retirement. All these guys roughly 65 years and one Ned Gilbert who was 22. So my evenings were spent partying with the local kids and I'm sure those older guys wondered about this kid they had. But it was a lot of fun because it was a wonderful experience.

#085 David: So what were you doing there?

Ted: Field geology.

David: And what part of Nova Scotia?

Ted: We were working from the northern border of Nova Scotia down to the Bay of Fundy and all the way across the country. We started in Amherst and then we moved to Tatamagouche, it's over on the east coast of Nova Scotia. And basically I waded and walked every stream in that area. One time I was coming down, my boss would drop me at one point in the stream and then he'd go down and park the car as far down as I would make and then he'd go a bit farther down and then I would bring the car down to him. And I was rounding the stream and since I'm 6'5" and the stream banks were difficult to crawl over with trees and branches, I found the easiest path was down the river to study the rocks on both sides. But I came around the corner of the stream and probably was up to my pockets in the water and here was a moose standing on a sandbar, looking down at this funny thing in the water. And of course, he towered over me, and worse than that I could see off on the right a field of cow mooses, a harem of these. He looked at me for quite awhile and finally decided I guess that I was harmless and trotted off. I crawled up onto a sandbar and sat there on a tree stump and shook for awhile. Then I took off quickly down the river.

#105 David: So you're just doing surface geology, just looking at the cutbanks, did you find anything?

Ted: From our geology, we found enough of a structure to warrant the drilling of a well. And

the following year a well was drilled. The structure was largely a salt dome, a plug of salt. The well, although I wasn't on the well, it's my understanding that they drilled about 8,000 feet of salt before they got through to any sediments and in the course of the drilling they lost something like 7,000 feet of pipe in the hole at one point. Just plain lost, they couldn't find it. When you drill through salt it washes out so I suppose there's a cavern down there with a large piece of pipe sitting in it.

#114 David: Did they find oil there?

Ted: No it was a dry oil.

David: Now there was oil before this wasn't there, in other parts of Nova Scotia?

Ted: I don't think there was any oil in Nova Scotia. Other people were drilling wells, Mobil was drilling over at Prince Edward Island. I don't think anybody found anything at the time. I don't know of very much since.

David: Can I back you up for a moment. What interested you in geology in university?

Ted: Well, I suppose two things, I collected agates, Wisconsin has lots of agates and I collected agates on the lakeshore of our lake at the cottage. And in addition to that, one of my father's best friends was State Geologist, so I at least talked to him to some degree. I'm sure he was instrumental in assisting me in getting that summer job the first time with USGS because it was through the State Geology.

#125 David: Did you not tell me one time that your father had a relationship with Aldo Leopold?

Ted: Yes, he hired Aldo Leopold. Aldo Leopold was unable to get a job and as you know he's a very big name in conservation these days and environment and my father made a place for him in his faculty and also in the university for him.

David: Your father's full name?

Ted: Edward Martinius Gilbert.

David: And your mother's name?

Ted: Esther. . . I'm reluctant to give the middle name and the reason is. . . it's Lowry. When the Royal Bank asks what my mother's name was I refused to give it to the Alberta Who's Who and they said, well no one else ever has and I said, well, it's kind of distinctive. However I do want it to be preserved.

David: And your siblings, their names?

Ted: Thomas Lowry Gilbert and Jane Montgomery Gilbert.

David: Now you go by Ned, but that's not your given name.

Ted: My name is Edward Everett Gilbert.

David: And where did the name Ned come from?

Ted: My father's name being Edward also there was a conflict and my parent's had a good friend who was named Ned so I became Ned. It's been a problem all my life. When I worked for Sun Oil here, I signed all the leases and I signed them E.E. but there isn't a soul in Calgary who knows who E.E. is. And when I lost my job at Sun and applied several places for a job and signed my name E.E., the guys didn't even know who I was so they didn't even bother to check the resume further. And I talked to one of them on the

street one day and I said, how come you didn't at least give me an interview and his face fell and he said, you mean that E.E. Gilbert is you. He was terribly embarrassed. So was I because I didn't get the job. So after that I wrote E.E. Ned and ever since I left Sun it's been E.E. Ned. Now I'm just using Ned, I'm trying that because still nobody knows who E.E. Ned is.

#153 David: So how long were you in Nova Scotia?

Ned: Just for the summer. We left there in September and I went first to the Philadelphia office which is the head office of Sun Oil Company, now still know as Sun Oil Company because the Suncor part is just in Canada. And I had an interesting experience there. We came in on a Friday and on Saturday I was working on some maps in the office and I went into the men's washroom and there was a large gentleman there. We washed our hands together and chatted and I held the door for this gentleman. He walked across the hall and into the biggest office I'd ever seen in my life. It turned out that that was J. Howard Pugh who at the time was the 7th richest man in the United States. And the following Monday when we had our meeting, I didn't think that I as this child should go to this meeting so I stayed back in the office and was working. One of the geologists came back and said, Mr. Pugh won't start the meeting until you get there. Well it was a different Pugh but even so. So I got to the meeting and Mr. Pugh said to me, Mr. Gilbert, what do you recommend we do. I hoped this was the right answer, I said, Mr. Pugh, Mr. Storm has quite a good presentation for you, I recommend we listen to that. I probably didn't say another word.

#173 David: And that fellow's name was Mr. Storm?

Ned: L. W. Storm was my boss. But the man who was actually in charge of the party was Sam Woods, was probably the man who was going to make the presentation.

David: So you're back in Philadelphia now. . . ?

Ned: Yes. Now after that, Harold Weeks who was the Chief Geologist called me in and said, Ned, we've got a couple of opportunities for you, where would you like to go. One of them is Evansville, Indiana and one of them is Tulsa, Oklahoma. He said, these fellows you've worked for over the summer would like you in Tulsa, which would you like to go to. And I said Tulsa. He said, too bad, I really hoped you'd want to go to Evansville because that's where you're going. He said, it's closer to home, I thought you'd like it better. I said, it's because it's too close to home that I would like to go to Tulsa. But anyhow I was sent to Evansville, and in Evansville I was given a back room office and I learned to sit on wells. Well site work primarily.

#187 David: Can you tell me about that, I mean I know generally what happens when somebody does that but in your words, what actually did you do when you sat on a well.

Ned: Well to start with you would study the geology around the well, in the office, so that you knew basically what the geological section would be. And then you went to the . . .

David: But this is all surface geology, there's no geophysics at this point.

Ned: I don't know whether they had geophysics or not but it had no bearing on what I was doing. When you drill a well, you drill through the section, as from the surface to where you're hoping the production will be. And you want to know roughly what the thickness is of each of the sections would be so that you knew roughly what to expect in the samples that came up from the well. But when you drill a well it's just like drilling a thick piece of wood with different grain in it, so you'd find different sediments coming up at different times when you're drilling ??? abrasive bit.

#198 David: So what information would you have had for that?

Ned: I would probably have had samples of nearby wells that I could examine and therefore have a pretty good idea of what I would be looking for. The wells that I sat on were mostly in Kentucky. Evansville, Indiana is right on the south end of Indiana and the area we covered was Kentucky, and a little bit of Illinois nearby although I never worked there. One of the wells I was on was actually a cable tool hole. Probably one of the last cable tool holes drilled. And more than that it was in a pumpkin patch. And cable tool in quite slow and so it was Halloween time and I asked the farmer if he minded and he said, no you go right ahead, make pumpkins. So I carved pumpkins for everybody I knew. We had an oversupply of pumpkins.

#210 David: So on a cable tool rig you were just getting cuttings out of. . . .

Ned: Very fine samples because the bit really is just a hammer bit and it just hammers it up and samples would be almost powder. I don't remember, I think it was a dry hole but I don't remember now.

David: And how long did you sit on that hole, months?

Ned: Oh no. None of the holes really took. . . . possibly I was only there for a short period, near the zone where they were expecting production. It's really only on a wildcat that you spend a lot of time. This was probably a wildcat though, I don't know. I don't remember spending a lot of time there.

David: So this was the early 40's right?

Ned: So that's 1945, in September. And then it was just about Christmas that I was again called into the office and told that I was moving. L. W. Storm had been moved to Calgary and when he was asked who he would like for help he asked for me. I arrived here I think, about the 4th of January.

#224 David: And what did you find when you came to Calgary?

Ned: Well, my home was the Palliser Hotel.

David: For how long?

Ned: Oh for years.

David: You lived there continuously for years?

Ned: Yes. The only other office building in the city I think was the Lancaster Building. There was a building down where the Glenbow is now, it was called. . . I've forgotten the name. There was hardly an office space to be had. Pre-Leduc the Canadian Petroleum Association were seriously considering taking over the top floor of the Hudson Bay Co.

which was empty, sort of a warehouse. After Leduc, Gulf took it all. I was signed up to have 2 offices there when I went back to school before Leduc. When I came here Mr. Storm was here. So I arrived in January and he stayed through that winter and the next summer but in the fall of the year which would be 1946. . . . '47. It was '44 that I went to Nova Scotia so I got some dates wrong, I arrived in January '45 in Calgary and he stayed through that summer but the following winter he went home. He was over 65 so he was really there because they wanted him not because he really needed to be. And so he went back and spent the winter with his wife and I was here through the winter as the sole employee of Sun, which was just lots of fun because in '45 I would have been 23 and when anybody had a Christmas party, why, Sun Oil was Sun Oil. Sun Oil had 27,000 employees in those days but just me in Calgary, so I got invited. I remember one memorable time, Jack Bevel who was then head of Gulf, British American in those days I think and he was having a party in the penthouse at the Palliser for his Board of Directors and as I came off the elevator there was this receiving line. Jack Bevel, a long line of Directors and Gulf's head office was in Pittsburgh which wasn't very far from Philadelphia where my head office was. So Jack introduced me as the Manager of Sun Oil Company and this guy's face fell and he said, he's the manager. Jack said, yes, he's the geologist, the landman, he does everything. Well, they were quite impressed at this kid, and I'm sure they went home and talked to their friends in Philadelphia. In any event it was a memorable time to be here as a child.

#266 David: So you lived in the Palliser, you had a hotel in the Palliser, it was your centre of operations.

Ned: The Palliser was also my office, the same room was my office.

David: Okay. What did you actually do in those days, did Sun have any wells in the west?

Ned: Sun had, prior to Storm's coming had acquired quite an interesting parcel of land. Frank McMahon who became a world renowned name in this part of the world was, at the time, I understand, in poverty so to speak or between oil successes. I believe he borrowed money to file on a quarter million acres of CPR land and he went to Winnipeg where he met with H. J. Weeks, who was the Sun Oil Chief Geologist from Philadelphia and George Hume. George Hume was then Chief Geologist for Canada and George Hume had McMahon come and meet them there. It's my understanding McMahon went over on the coach and came back first class on a sleeping car. He sold the property to Sun for a quarter of a million bucks. I think it probably cost him about less than a penny an acre. So it was a great deal from his point of view. He also had an override??? So we had that big block of land which, the northwest corner of it was Bassano, the east side was Brooks and the south end would be ??? so it was sort of in the bend of the Bow River. We then spent our first summer doing seismograph on it. I brought a company seismograph crew up from Beaumont, Texas.

#294 David: What kind of operation was that?

Ned: It was conventional seismograph. In those days I think we did 2-D, we didn't have 3-D. Sun Oil had their own crews in the States. The crews were not winterized so they

couldn't go through the winter so when it got cold they went home too. So Mr. Storm and the crew all packed up and left leaving Ned Gilbert. I also used the geological information that was available and made regional maps. During the winter what I would probably today call prospect maps. Being the only person I would study the area, make the map, study the land situation, make my recommendation to home office in paper. But I would have typed the report myself, drafted it myself, sent it all off to Philadelphia and if I got approval, then I proceeded to go and get the land. So that the following year, when a crew came back, we had quite a bit of additional land that I had acquired. 500,000 acres in the Coronation area, 500,000 acres in the Sibbald area. I'd also acquired 1,300,000 acres in Saskatchewan but I farmed that out to a company called Albercan. That land was up in the North Battleford area and they drilled I think 13 holes in it for me. It cost me only ½ cent an acre to get it from the CPR. We subsequently did seismograph on the Sibbald area and the Coronation area and found the Sibbald field, the Superba field, Hamilton Lake, Bulwark???, every one of them a gas well and Sun Oil was not looking for gas. Gas was 10 cents a thousand, 10 cents and MCF as we see it today. Oil was only about \$1.87 a barrel but even so what they really wanted was oil and every time I got another gas well the boss would call me in and say find me an oil well.

#329 David: So you weren't doing very good eh?

Ned: No I wasn't doing well.

David: Now this is still '45?

Ned: This is the winter of '45 and going on into '46. At the end of '46, Storm had come back in the spring along with the seismograph crew so he was there. We were about to drill a well at Eyremore, it's south of Bassano and west of Brooks. But I had decided I wanted to go back to school so in the fall of '46 I took leave or whatever, anyhow I left. Storm got somebody else to sit on the well. He was loaned to the geologist by Imperial Oil. It was a dry hole and if you look at it today it's surrounded by gas well, just surrounded by gas wells. It may have been a gas well then I don't remember. In any event I then got my bachelor's degree in geology, completed the work that I'd started before.

#351 David: So you didn't have your degree before this?

Ned: No all this time I'm a junior geologist, I mean junior.

David: So when did you get that, the spring of '47?

Ned: I got that the spring of 47 right. And then I returned to Calgary where I got married. I was engaged before I left.

David: Where did you meet Lyn?

Ned: In Bassano. Her actual name is Evelyn.

David: Her maiden name?

Ned: Johnston.

David: How did you meet?

Ned: At a dance. I kept the room at the hotel all the time but I also had an apartment in Bassano where our crew were and I would spend part of the time each week at Bassano and part of the time in Calgary, not every week. But she was a school teacher at the high school in

Bassano and a couple of the young ladies in the town told me that I ought to meet here because they thought that I would like her and when I went to this particular dance I danced with a young lady named Johnston and I said, oh you must be the schoolteacher I'm supposed to meet. And she said, no, it must be my sister. Her younger sister was visiting her this week so the younger sister introduced me and it must have been the right thing to do. So the following year she was teaching in Innisfail and we visited part of the time but. . . .

#378 David: How did you get around, did you have a company car or were you doing all this on trains?

Ned: No, I had a car.

David: What was that?

Ned: The car that we had in Nova Scotia was shipped over here on the train. I don't know why. And when Mr. Storm left after drilling the dry hole at Eyremore he put this car in storage here so that when I came back I got it out of storage and put some air in the tires and that was my car.

David: What kind of car was it?

Ned: It was a Chevrolet. Cars were very scarce. . .the war. . . .

David: So that's why the company hung on to it.

Ned: I think that's probably why because one weekend when Storm and I were in Lake Louise, a couple from Chicago came up to us and offered to buy the car. And Storm said, no we can't sell you the car, what do you want to see. It turned out they wanted to see the same scenery we wanted to see so we put them in the back seat and they got a free tour.

David: There were no cars to rent in those days?

Ned: There were no cars to rent, there were no cars to buy, there were no cars to do anything. So having a car was quite a thing.

#398 David: So you were living pretty high on the hog for such a young guy weren't you?

Ned: My expense account was considerably larger than my salary.

David: What was your salary?

Ned: It seems to me that I remember it being around \$300 a month and that was probably even the second year. I suspect it was more like \$200 or \$250. It wasn't a lot of money. But I could live quite well with \$200 or \$250. Especially when you're living in the Palliser Hotel and the food is free, so to speak.

David: Yes. And the company is paying for your car and gas and other expenses.

Ned: It probably accounts for why I had argyle socks knitted for me.

David: You did? Where did one go to get argyle socks knitted?

Ned: I found a lady who would have lived very close to 17th Avenue and about 4th Street and she knitted for me.

#419 David: So what was Calgary like in those days?

Ned: Very primitive. I'm quite sure the population was 70,000. Madison, Wisconsin at the time was 70,000 and Calgary was 70,000. Madison, Wisconsin is now more like 95,000 and

Calgary is more like 950,000. I wish I had known more about oil fields and what might happen here. Maybe I would have screwed up my courage and borrowed some money but I don't know. I wasn't willing to take that kind of a risk. But lots of people I knew did. The back lanes downtown were gravel, the Palliser Hotel was the highest place in the city and the city fathers wouldn't allow another building to be built higher than the Palliser. When I was out in Bassano, Frank Siegel was our Chief Geophysicist and he and I would drive to Banff or Lake Louise every weekend and yet there were people in Bassano who had never been out of town. They just found us very strange. Actually we found them strange.

#444 David: So you were still looking for oil in the southern Alberta prospects. Do you remember the day Leduc came in?

Ned: I wasn't here, I was in university.

David: You'd gone back again.

Ned: No, Leduc was discovered in February of '47 but I didn't get back here until June.

David: Okay then I have down here that you got your degree in the spring of '46. But the spring of '46 is after February.

David: But '46, not '47.

Ned: No, I went back in the fall of '46, I graduated in '47. Sorry about that.

David: So you were out of town.

Ned: I was at home and my wife wrote me a letter and sent me a clipping on it. I sent the clipping on to Philadelphia and told them about it. They obviously considered sending somebody up here but didn't send anybody up and thank goodness because as a result I was able to come back here when I graduated which was probably in May. It was May because I was married in May.

#469 David: What day in May were you married?

Ned: May 31st. And then we took two weeks honeymoon and drove back to Wisconsin so that my family could meet my new wife. They didn't come to the wedding. And then we drove back. One of the few times that Sun was very generous with me, they paid me for my honeymoon. When I got back here was a cheque.

David: What was the company going to do now with the discovery of Leduc?

Ned: Well, we had through my efforts the previous year acquired quite a bit of land which we still had and now with the discovery of Leduc I was able to begin to hire staff. Initially my office was in a building which is no longer there, it was called the Slezas Building, just about across the street from what was then the Post Office. A very sleazy building if you'll pardon the expression. Schlumberger was next to me in one office, a bookie was on the other side, a bootlegger was down the hall. I didn't know these people very well but I knew they were there. My office was all of 10' x 10' and my furniture consisted largely of dynamite boxes that I had made into map cases and my drafting table consisted of a shutter that I had borrowed from the Bassano Hotel which was resting on two trestles. I remember one day when two officials from Aberader??? came to visit me, they were considering coming to Canada and they were just overwhelmed at this Sun Oil office.

From there I was able to move, the Burns Building opened up and we were able to move into the Burns Building where I had a 20' x 20' office, quite palatial, which I had to clean up myself. There was no cleaning staff. Schlumberger had an office beside me, 20' x 20'. We kept the door open between us. One day the chief ??? of Schlumberger from Paris came to visit and he came in through the Schlumberger entrance and made a quick tour of the Schlumberger office and out through my office, pulled the door closed and said, Charlie, nice place you got here.

#526 David: So you're starting to hire people now.

Ned: I began to hire people then. The first person I hired, he had been a male secretary in the CPR and he also did some drafting work for them. I hired him as a draftsman and secretary and his name was Art Birchall. He's deceased.

End of tape.

Tape 1 Side 2

David: So you hired a male secretary, was that typical in those days?

Ned: I don't know.

David: He was also a draftsman.

Ned: I couldn't get a secretary to come to the Palliser and work for me.

David: Why?

Ned: People would frown on it.

David: Oh, I see, okay.

Ned: The lady just wouldn't do it, I had to take my paper out.

David: Right when you had your office in your room, but by this point you had an office in the Burns. So give me an overview then, so you're still looking for conventional crude oil, this is 1947. Where does this story about you buying a rig come in?

Ned: I don't know the exact date but we could find the date that the Sun Langdon well was drilled and then work back from that. Langdon just east of Calgary. From that original block of land that we acquired from McMahon, we had expanded and we had acquired all of the CPR lands mineral rights from Bassano west to past Strathmore somewhere. We didn't have a block just immediately east of Calgary which was owned by Mobil Oil. So we acquired all that acreage and we also acquired the Blackfoot Indian Reserve mineral rights and we did seismograph on that whole spread of land again with their crew from the States. One of the prospects was what we called the Langdon prospect and there were no drilling rigs, it was again just at the tail end of the war still and drilling rigs were very scarce. You didn't just go and hire somebody to drill a well, you bought a rig. So I hired Cody Spencer of Denton and Spencer engineering firm and he sought out a rig for me and he eventually found the Shell Oil rig, a big steam rig. I'm sure it was called a 1014-J, a well at Jumping Pound that it was on at the time. And we bought the whole rig for

\$100,000. In order to pay for it, the only account I had was my expense account here in Calgary. Philadelphia sent Winfield Givens, who was head of the Land Department in Philadelphia. They sent him up here with a cashier's cheque for \$100,000 and I joked with him. I suggested I had never held \$100,000 and maybe I should just pack up and move to Mexico. I think he really wanted to get the Mounties into it to be sure that I didn't do this. But anyhow I put the \$100,000 into my expense account and wrote a cheque to pay for this rig. I don't remember seeing a copy of it, I suppose the company records would have it.

#037 David: So there were no contract drilling crews in those days, that's become so common now.

Ned: Yes, now it's very common. We then proceeded to use this rig but it wasn't an ordinary rig, it was a steam rig. So Sun Oil sent a man up from the States, George Bentley, and since he was more senior than me, they made him manager. And I became Assistant Manager so to speak. I still was handling land and geology and geophysics but he now was handling drilling and production, which we had no production. So he was experienced with steam rigs but he was experienced with the Gulf Coast territory and since the location of the drill site was in a bit of slough, he proceeded to purchase the biggest timbers so people came from miles to see this thing. They were 12 x 12's. He made a mat out there and he put this big rig on it so that it wouldn't sink into the swamp. Well it wasn't a swamp and people were just most impressed. Instead of a muddy well site we had a raised wooden deck that was as big as the well site. Marvelous thing. I understand he gave all the timber to the local farmer when he left. You could start a lumber yard with it. And the rig was drilled on that wooden platform.

#053 David: What was the fuel source?

Ned: I don't remember at this point. I suppose it was oil but I really don't remember.

David: And that well, what was it. . . ?

Ned: It was dry. Again if you look around it, there are a lot of wells around it now. It's partly the fact that the price of gas was 10 cents and the price of oil was \$1.87. What's economic then is radically different at today's price, \$35 Canadian.

David: So did you abandon these wells, you didn't just cap them in and use them later?

Ned: No they were just abandoned. And I'm sure we dropped the land. We didn't drop the land immediately, we drilled some additional wells more to the north I believe. Because we had acreage to the north some distance and I'm quite certain we drilled at Irricana and places like that.

#064 David: So what did you get into next?

Ned: I think most of the drilling by this time was moving out into the Coronation and ???.

Initially I was still in charge. I had by now hired something resembling 10 or 12 people, some geologists, some land people, secretarial people. And we were certainly beyond the Burns Building, we were now into this building that I can't remember the name of which was where the Glenbow is now. I'm sure you can find the name. It effectively was just to

the west of the old post office and across the street. So my staff was partly there and partly in the Burns Building. Then about that point we moved all into the Stuart Warner Building which would be essentially just to the east of where Channel A is now. It had a garage in the back, the ground floor was an automotive repair building and the second floor was where our office was. Progressively from that we moved into the Baron Building. I'm not certain, it seems to me our office was on the 6th floor. And also as we were growing and expanding all this time, we had offices on the top floor of the Hale Insurance Building which was essentially to the north of the Baron Building. There's quite a large building there now but it was only a two story building then. From there we eventually moved into what's called the Petrochemical Building on the corner of 7th Street and 8th Avenue. Somewhere through there, I suspect it was in the move to the Baron Building, we were expanding so much that my boss gave me the pleasure of being either Chief Geologist or Chief Landman. I chose the Land Department.

#095 David: Why?

Ned: Because I had an idea it was more fun. I had so much more freedom as Chief Landman, I felt that I liked it better. However in spite of having to give up geology I continued to recommend plays based on my geological thoughts even though I was now a landman. And this caused some trouble because the home office would not let me go into a land play without a geological recommendation. So I'd have to go to the geologist and browbeat him into putting a prospect around. For example I wanted to go into Saskatchewan and buy a free hole because I knew that other companies were doing it. But the geologist said, there's so few wells, we can't draw a prospect. I said, well just draw a line around a basin. And that's what they did and we proceeded to lease it. I had at the time probably a crew of about 20 or 30 landmen leasing in the field. They weren't my own staff landmen, they were contracting. And as a contractor it was rather awkward, the contractor was a man named Kaufman who was the father-in-law of my boss. So when I tried to negotiate with him I was sort of between. . . I won't call one of them the devil but it was pretty close to that. My negotiating room was scarce but we did get a lot of land.

#113 David: But you're still looking for conventional oil at this point?

Ned: Still looking for conventional oil. You're probably referring to the Oil Sands because early on even before anybody else came up to be with me, other than Mr. Storm, even way back in the Nova Scotia days, which was right at the beginning of my career, Mr. Storm had been sent to Ottawa to find out about the Oil Sands by Mr. J. Howard Pugh. Mr. Howard Pugh could see that down the line of time we had declining reserves of oil, conventional oil and rising market requirements, so that somewhere out there we were going to run out of conventional oil. And so he wanted to be protected from that. So Mr. Storm visited the Oil Sands possibilities in Ottawa and when I came to Calgary, I don't remember anybody telling me to do it but I certainly do remember that I spent quite a lot of time with Carl Clark in Edmonton. And I have a strong recollection of having visited with him in a laboratory in Ottawa, but I haven't found anything in his references that indicates that he was there so it must have been in Alberta. He had a laboratory, a very

oily smelly laboratory, I think in the basement of the Geological Building as well as in a building nearby where he did his work on it. Many years later I had an opportunity to review some of Sun Oil's files to help them write a history. And in the course of that I discovered that in 1948 I was recommending the core hole programs in the Oil Sands. Now that was probably when I was still a geologist. Our first properties were. . . one was almost where. . . that company that went out of business last year, I'll give you the name later. . . had properties subsequently. We did core hole work there and our results were not very good and so in 1951, even though the company had just advised that they weren't going to stay in the Oil Sands, I kept on recommending it. It's a wonder I didn't get fired on the spot for recommending things that my management were not approving. Because there's a letter in the Sun files saying that Philadelphia had turned down our continuing in the Oil Sands. In spite of that I wrote several more letters recommending it and very shortly thereafter I was down in Toronto negotiating for the leases that are now the Great Canadian Oil Sands. I have a copy of that letter even though. . . .

#150 David: Well, can you explain this obvious discrepancy between the official policy and where they ended up going?

Ned: Well, I think they read my letter and I showed them how the new regulations worked and how relatively cheaply you could control this block of land that we already knew results. I mean, it had already been core drilled by the government so we knew the oil was there. Whereas previously we had been doing it on our own trying to find spots. But as you know from the records, for many years Sun Oil didn't make any money on that project. It's really only in recent years that it's become economic.

David: So that '51 but they didn't open the plant until '67.

Ned: No but it took a number of years to do preliminary work. And you then have to go into the Great Canadian Oil Sands history which was Tom Clark, not Carl Clark. Although I took an active part in those negotiations with the government, I really can't put the full story of how the Great Canadian Oil Sands, which was Tom Clark, became Sun Oil. But Sun Oil had the land but Tom Clark was going to do the project but he couldn't do it, so Sun gradually had to take it over. You really have to look at the Great Canadian Oil Sands history and try to fit that in and probably I should do that for you but I don't remember exactly all the pieces.

#168 David: Yes, I don't either. You mentioned Carl Clark, how well did you know him, what kind of a man was he like.

Ned: I didn't know him personally. I mean I didn't know him in so far as having dinners or anything like that but I often visited him in his laboratory. I learned from him how the reservoir looked and what he knew about it and in subsequent years when Sun Oil was beginning to be active in the Oil Sands I, even though I'm now a landman and not a geologist presumably and officially, I continued to acquire lands up in the Oil Sands. Just a couple of days ago I met some Sun Oil people and they asked me if I knew the Fire Bag property and I said, yes, when I worked for Sun Oil the geologists at Sun called that

Gilbert's Folly. By the time we had core drilled it even briefly, we had concluded that Gilbert's Folly had 11 billion barrels of oil under it. And yet this was a block of land that was acquired considerably away from our property, way over to the east where we didn't even know there was Oil Sands. Subsequently I also picked up a block of land around the Amoco project at Gregory Lake to the south and that also probably had somewhere in the range of 10 or 11 billion barrels. But this is a land man buying land, sometimes without geology.

#188 David: Based on what?

Ned: In that case it was based on the fact that I knew that Amoco was doing a research project there and it was well worth acquiring the land around it. But in those days I was Assistant Exploration Manager and I was working with Frank Siegel who had become Exploration Manager. Anyhow he had gone past me and persuaded management that we needed an Exploration Manager and he ought to be it. So it was with his connivances as well as support that I was getting this land.

David: And he had been a geophysicist. . . ?

Ned: He had been our field geophysicist.

David: So by this point we're into the 50's. Sun is expanding it's operations, buying lots of land. And production yet, did you get any oil yet?

Ned: Oh yes we had oil.

David: In the south or up Coronation way?

Ned: Probably more likely in the foothills, I frankly don't remember where our first oil would be. Coronation area would be some . . . most of that area was gas. Saskatchewan by now, we had lots of production in saskatchewan.

#204 David: How did you get to know Cam Sproule?

Ned: Well, in those early days there weren't an awful lot of geologists here. I had given my little booklet that describes the Alberta Society of Petroleum Geologists which became the CSPG, they have it in their archives now but the total number of members wouldn't have been 50 where it's now 4,000 or more. I don't really know where I first met Cam but certainly I met him at geological luncheons and other places. You're probably referring to the fact that Sun Oil got into the Arctic. That would be many years later and I don't remember the years. Again I knew that industry was active in the Arctic and I couldn't get my local management to support me in going in there.

#219 David: This had to be about the 60's then right?

Ned: 60's at least, yes 60's I would think. One day I was down in Houston talking to some of the research geologists and they asked me why we didn't have an interest in the Arctic and I explained that I couldn't get anybody to support my recommendation. So they said, well I'll tell you what, why don't we write a letter to Philadelphia with a copy to you and your boss asking why we're not in the Arctic. And I said, great, then I can respond and tell you exactly where I want to go because I've been over to see Cam Sproule and I couldn't go to him as a consultant because I didn't have any authority to hire him. But he

had enough interest in the Arctic that he had pulled out a map and showed me why he thought the Arctic waters which are ice most of the year, why they were interesting areas and why he had persuaded Global Marine to buy that land. And I had this map with me in Houston so I'm showing it to them. So they wrote the letter to Philadelphia and copies to both of us and within two days I had permission and was en route to Las Angeles to negotiate with Global Marine. When I got to Global Marine's office they didn't know who Sun Oil was and so I had brought along our annual report and I opened it up and I showed them that Sun Oil and Sun Shipbuilding were the same company and they were immediately impressed because Sun Shipbuilding was building a ship for them. But they didn't know that Sun Shipbuilding was Sun Oil. So immediately they said, oh, we'd like to deal with you. So we made a deal. So we acquired all that acreage which was around 8 million acres of ice.

#244 David: Everything that they had, you got?

Ned: Yes. So suddenly I'm not just a little company in the Arctic, I'm a big company in the Arctic. This must have been in the late 60's even into the early 70's because very shortly thereafter I'm out of work. Sun Oil changed the management in Canada. They went into a merger with Sun Ray DX and as a result management was changed throughout the exploration side of the company, largely towards the Sun Ray management. The Sun Oil management seemed to have won out in the Marketing and Refining, Exploration seemed to have gone largely to. . .

David: So Sun was downstream and Sun Ray was upstream.

Ned: So a lot of the people that came in were then Sun Ray people. In any event the Arctic was taken away from my phase of operations and made into a separate group. So I didn't do the best thing for me but it was an interesting thing for the company.

#267 David: So how involved were you in going to the north and developing what was up there and so on?

Ned: The very early part of it, I had something to do with but the bulk of it was done by others in Sun Oil Company. I flew up there once with a public relations man from Sun Oil's head office as well as several of my crew of geologists and we came into Inuvik on a commercial plane and there we took a charter plane that we had already arranged for. I foolishly relied on somebody to move my bag from the commercial plane to the charter plane and arrived in Resolute sans luggage. It's not a place you want to be sans luggage. I had my briefcase with me however and I had the foresight to have brought four bottles of Johnnie Walker Red Label Scotch and even though I knew that liquor is prohibited, I managed to trade one bottle to the leader of the Resolute camp for a sleeping bag and warm gear and some clothes. He was delighted, I was delighted. The other side of my briefcase consisted of the maps of the territory I was going to show these people. So the next couple of days I used other bottles to buy us accommodation and we had quite a good trip. We flew quite a bit across the Arctic Islands, looked at this property and then we flew on down to Prudeau??? Bay and circled that and then back into Inuvik. So it was a very interesting trip for me, it was the only trip I ever took up there.

#292 David: But what can you really see from the air, you're looking at a bunch of ice?

Ned: Geology is basically, you're exposed, you're really not looking at ice, you're looking at almost desert. We could see the land most of the way. We could see a lot of ice in the water. It was summertime and there was a lot of water but still you can see a lot.

David: So what stands out for you from your Sun Oil years as things you're proud of or things you really liked doing or . . . ?

Ned: I think I'm still proudest of the Oil Sands and Oil Shale and I haven't even mentioned Oil Shale to you.

David: No, we'll get there.

Ned: I think Sun has made such a success of the Oil Sands and the fact that I had so much to do with it in the early part, it's certainly the highlight to my way of thinking. Although our production man told me at one point that that free hole land spread that I bought in Saskatchewan paid for Sun Oil's operations. In other words those fairly cheap free hole leases that we bought, he said, the production we got from that paid for the entire operation. So that's interesting too because I really had to force the geologists to put a line around that circle.

#312 David: So that conventional oil in Saskatchewan kept the company alive in Canada?

Ned: It really kept the company alive. It's surprising to me when I see what production is coming from small companies today, so much more production than we were able to produce.

David: Because?

Ned: I don't know why, I think it's because of improved producing techniques. These horizontal wells they're drilling are really quite fabulous. Sun Oil, not because of anything I did, Sun Oil was one of the early implementers of that horizontal drilling. But that had nothing to do with my prodding them into that interesting technique.

David: What was the impetus for it then?

Ned: I think it was the heavy oil play in the Lloydminster area. Now I probably got them into that. Again I pushed Sun Oil into buying an awful lot of free holed heavy oil which subsequently was dropped by management who didn't see the same promise in it that I could.

#327 David: And that's proved out hasn't it?

Ned: It has but it's like I say, Sun Oil doesn't really hardly know I exist. But I do and what's more, most of my Sun Oil staff died before or are dead now.

David: Well, when you get in so early, when you were so young.

Ned: Well, that's true but even the staff I hired who were generally younger than me.

David: And they're all gone.

Ned: And they're gone. Just lost a good one a couple of days ago but he was ten years younger than me. Some months ago the Vice-President of Sproule Engineering called me and asked are you the E.E. Gilbert that used to work for Sun. Actually there is an E.E. Gilbert. I said, yes, and I said, what did I do wrong. He said, we have a letter here, we'd

like authenticated, we're using it in a lawsuit. I said, fax it over, I'll see. There were eight names of people who had copies of that letter, I'm the only one alive. And some of them are considerably younger than me so something's right.

#344 David: Anything else from the Sun days before we go on to the Tar Shale?

Ned: That was Sun too. It was really about the same time as the Oil Sands. We opened the project at ??? in '67 but Sun's activity of it was probably in '63-4 in that area. Even though we had the land before that. But in that period in there Great Canadian Oil Sands came into being and that was private people. Although I knew a lot of the people I really can't in my mind put together what happened there. But about the same time one of my landmen came to me one day and his aunt's basement had flooded and he had been down in the basement helping her to dry it up and books were wet and he was prying pages apart and he pried a page apart and he discovered he was looking at an oil shale project in Saskatchewan that was discovered by the Geological Survey of Canada, oh like, 30 or 40 years before. And he's reading 60 gallons per ton. Our Oil Sands was more like 30 gallons per ton so he could see right off the bat that it looked a whole lot better than the Oil Sands were going to pan. His name was John Dixon and he brought this book to me, I'd like to have and John says maybe someday he'll give it to me. He's still alive. It described a stream in Saskatchewan called the Nabi River. So I got my Saskatchewan guys to see if they could find the Nabi River but they couldn't so I sent one of my landmen, Earl Hastings, who later became Senator Hastings up to northern Saskatchewan to browse around and see if he could find anything called Nabi. You usually find these things in the bar so he found somebody in one of the bars who knew that Nabi stood for man so we then looked at the map and here's the Man River hardly 100 miles, probably 50 miles from where he was at the time. So I then sent Mr. Tisdale whom you've met in my office here and Ralph Chaney from our geophysical department up to see what they could find. They did find an oil shale. From that I again had to ask permission to do what I wanted to do which was to file on land. So I made a pitch, I already had made a pitch to the Exploration Manager and he in turn to our management in Calgary. So that we had permission to go up there and see what we could find. Of course we were probably looking for something that was twice as good as our Oil Sands and we never did find anything twice as good as our Oil Sands but as a result I got permission to file on the outcrop as well as a considerable block of land in Saskatchewan. Saskatchewan had no regulations that applied to oil shale but Manitoba had regulations that applied to oil shale strangely enough. Manitoba's regulations would have required my hiring 1,800 stakers to go out and pound stakes and I just didn't want to. Too much of an expense so I persuaded them over a period of days to let me have it as an oil and gas permit which I could just file on. But then they wanted me to do surface work on it and I wanted to do core holes. So again that took me quite a bit of negotiation with them before they let me drill the core holes because under their regulations I should have paid them 20 cents an acre instead of 2 cents and acre if I was going to do core holes. But I showed them that if we dug an outcrop ditch right down all the banks there would be erosion later and if I drilled a core hole it would be much more ecologic. This was long years before ecologists but I just

didn't want to dig those trenches and so they allowed me to do that. So I filed on 2,000,000 acres in Saskatchewan and 1,500,000 acres in Manitoba. And did all this before industry knew what we were doing so that Imperial Oil came in later and Atlantic Richfield. Imperial Oil took lands to the north, Atlantic Richfield took lands to the south, neither one of them found much of anything. They dropped their lands fairly quickly. We kept our lands and we did a core drill program along the outcrop all the way from Carrot River, Saskatchewan east to the Pas and down to almost Winnipeg, approximately 40 core holes were drilled. We found that the best part of the reserve was in the north, near Carrot River, Saskatchewan. We couldn't get anybody who could do. . . we tried to set up a core lab analysis in Saskatoon with the university and they couldn't move quickly enough. We used the Colorado School of Mines and finally Sun Oil set up there own laboratory in Richardson, Texas and analyzed all the cores we were getting.

#440 David: And what did you find?

Ned: We found. . . probably the best oil shale we could find was about 25 gallons per ton, not too unlike the good quality Oil Sands, but the conclusion was that we needed \$8 a barrel to make it pay and the price of oil was still around \$2.87 so the project was considered uneconomic and was gradually turned down. It was turned down but we had enough credits that I kept the land for quite awhile and then we gradually dropped it. By the time I left Sun Oil company which was in '72, all we had left was a 5,000 acre lease, which Sun Oil subsequently farmed out to somebody who didn't do anything on it and dropped it.

#454 David: So Sun has no. . . ?

Ned: Sun has no interest in it.

David: And you?

Ned: Since I left Sun Oil or Sun Oil left me, Mr. Tisdale and I have picked up a lot of that land, not a lot, several hundred thousand acres of it.

David: That's quite a bit of land.

Ned: Yes. At least five time. And five times we've made a deal with somebody. Over the years we haven't made much money out of it but we've made enough to cover our basic costs and it's been a lot of fun. At today's price I think it's economic. I don't know how long the price of \$35 a barrel will last. Judging by my history it'll go up and down. As I described it once when I went to work for. . . somewhere along in my career, I think it was 1980, I had a 10 month assignment with Petro-Canada and the price of oil then was \$30 a barrel Canadian and they had hired some 10 or 15 consultants to give them individual forecasts of what the price of oil would do and it looked like the 10 fingers on your hand spread out as wide as you could get. One went down to \$10 and one up to \$100. I was asked what I thought would happen and I said, in my opinion the price of oil will be allowed to rise just about to the point that the Oil Sands can become commercial and then the Arabs will drop the price and we'll go broke and then some years later the price will rise again and again we'll try to put the Oil Sands on production and again it will drop. Well, they laughed uproariously at this crazy guy who's got this strange

recommendation but about 3 months later my boss came to me and he said, you know, I think you're right.

#489 David: So what's keeping the Oil shale from going ahead now? Do you still think of it as oil shale or tar shale?

Ned: Oh no, it's not tar shale, it's oil shale. Tar sands is actually oily, I mean when you grab a handful of oil sands and put it in your hands, you squeeze it, you probably could even get some oil out of it. Oil shale is just a black shale, not unlike coal although not quite. . .it looks quite a lot like coal. And it's radically different than the Colorado oil shale which most people think of. Colorado oil shale is so hard that you could use it as a counter top in your kitchen. And it would stay hard right on through. Our shale is so soft that we can easily dig it out, almost by hand, from the outcrops. It's quite a different beast. Ours retorts at around 500 - 700 degrees, I think that's centigrade. Anyhow several hundred degrees lower than Colorado.

#510 David: What does retort mean?

Ned: Burns. You put it into a kiln and you raise the temperature, you actually don't burn it but you effectively boil the oil out of it.

David: So what's preventing this from being developed now.

Ned: Currently we have 300,000 acres roughly.

David: Can I interrupt you for a minute. I mean, I feel like I'm sitting in the room with J. Howard Pugh because 70 years ago the tar sands was not going to happen and he had this long view. Now probably the only difference between him and you was he had a lot of money, if I can be so bold. So you're looking for somebody with a lot of money to do this.

Ned: Yes. And momentarily we have 3 have parties who want to do some work with us. But one of them now controls our land and Mr. Tisdale and I are working with him but he hasn't raised the money that is needed. I would think that within a month or two from now if he still hasn't raised the money we will persuade him that he better do something or he's going to drop the land again. You see, the oil shale regulations in Saskatchewan, there were none at the time I took the land, so I sat down with their Saskatchewan lawyer and periodically their mining people and wrote regulations and those regulations still exist.

#546 David: As you did with Mr. Sommerville in Alberta.

Ned: Yes, but Mr. Sommerville didn't let me write them to the same extent. But in Saskatchewan I was very instrumental in putting them together.

David: And what did you write yourself?

Ned: An easy permit. Because you get it for 2 cents an acre. The main thing I got in Saskatchewan is, even in the opinion of Sun Oil Company, they best royalty regulations. It's called a net profit. You get to write off costs. Effectively they are getting something like that in Alberta but we didn't have that originally.

End of tape.

Tape 2 Side 1

David: So back to that last comment.

Ned: I think I was describing how the regulations work. I was saying that the royalty allows you to recover your costs to a large extent before you pay the full royalty but even so, the full royalty is still considerably less.

David: In Saskatchewan than in Alberta.

Ned: In Saskatchewan than in Alberta. And the other aspect of the regulations is that you get to acquire the land for 2 cents an acre so 100,00 acres is \$2,000 and the second year you pay 4 cents, the next year you pay 8 cents and it goes up so progressively it gets quite expensive quickly. So you've really got to do your work in your first or second year, otherwise you're spending too much money on rentals. That's part of the reason why we've picked it up and dropped it five times.

#011 David: You've said something about having made some money off of this but only by farming it out to somebody else.

Ned: Almost by default. The first time we picked it up was with a fellow named Dr. Yandel, a very early medical doctor in Saskatchewan who had moved to the United States. One of the second times, second or third time, I made a deal with a company called Erskine Resources and they paid us something like \$50,000 and then they defaulted on the work program and they could either give the government \$30,000 more or they could give it to us so they gave it to us. So that was the best deal I've ever made on the project even though they didn't do any good. It's a shame because you have all that work and time and what have you. Another time we picked it up and I persuaded the Alberta government to drill five core holes and \$40,000 worth of research.

#023 David In Saskatchewan?

Ned: In Saskatchewan. A pretty good deal too. They spent I think \$60,000, we spent around \$4,000. They wanted us to use their Taciuk Processor and I wanted to use it, which is an Alberta one, Aostra project. . . .

David: Taciuk Process, what does that do?

Ned: It was designed by a man named Bill Taciuk and it is a retort. And it's the same process that Suncor is now using in Australia.

David: And it's making production?

Ned: No, they're still in the research stage. But they have built a large one of these that will turn out about . . . I've got the term somewhere, anyhow they're building a full scale model of this thing and they're going to run it in the Australian Oil Shale.

#034 David: And how does the Australian oil shale compare to Canadian?

Ned: I think it's very good quality, I think it's quite high, I think it's better than Saskatchewan.

I'm told it is, I don't know.

David: So for those of us who don't know how you're going to heat us this product and make oil out of it, what happens?

Ned: well, the way the Taciuk Processor works is that you grind up the shale. . .fairly fine, we'll call it 1/4 inch size pellets and to start with you have to heat it with gas. Once you get the first batch heated you can run the spent shale through ahead of the new batch and that effectively heats it sufficiently to retort, evaporate these vapours out of it. The vapours come out and are trapped. . .I wouldn't say they're distilled but they must go through something like that. . . .

David: Condensed off somehow.

Ned: Condensed off in some fashion. So that they don't burn in place. I'm suspicious if they burnt it in place it might explode but it doesn't work that way. It comes off as a vapour and it does bring out the oil.

#048 David: So the oil is coming off in gaseous form, it's not dripping out at the bottom somewhere?

Ned: I don't think it's dripping out, it's coming out in a gaseous form.

David: Okay, but because it's under pressure and heat, it's not burning, like there's no oxygen in the. . . .

Ned: I don't believe there's any oxygen in the system. And yet if you look at the big thing, you'd wonder how it could keep oxygen out. It's like a big horizontal pipe with flanges inside that keep it turning. To my way of thinking it burns the light ends which I think are valuable and I think that's a possible error in the project. One which we hope to correct, but we have not got the money to do it. Sun Oil would probably like to read my transcript.

#056 David: So what comes out the other end. You've got these gases coming off. . . ?

Ned: What comes out the other end is a spent shale which is slightly burnt. . .it probably looks burnt. The material is like a light weight aggregate that you could use in concrete, the only trouble is, you're going to be processing something like 100,000 tons a day and the market for light weight aggregate I soon discovered was not that much. So you're going to have a big pile of light weight aggregate left over. It does produce other things too. Basically it's a light weight aggregate and oil. Some gas that you can use in the process for reheating.

David: And the light weight aggregate is pretty inert?

Ned: It's pretty inert and it probably goes back in the same hole that it came out of. Actually it contains some fertilizer so it may actually produce a better soil than the original material.

David: Because you've taken off the oil. And would it be like. . . it's not rock, it's not as dense as gravel.

Ned: No it's certainly not as dense as gravel. It'll go back to being fairly soft soil and it does contain these fertilizer components which could produce Some of the processes we've seen actually use up almost the entire product. Again it's a question of whether there's a market for the entire product.

#072 David: But there's no tailings ponds or anything like that because there's no water involved.

Ned: No water involved, no tailing ponds. I think it's a much better system than oil sands.

David: And what's slowing you down?

Ned: I haven't found the right guy to sell it to. Most people say, Colorado Oil Shale doesn't work and they turn it down right on the spot. Trying to settle my problems with Erskine, my lawyer made me go and try the project on 'we the people' and I must have canvassed the oil patch and nobody was interested. One of the more interesting things about our oil shale is that its pour point is less than freezing. So it continues to pour till about 15 degrees farenheight, whereas most heavy oil is very heavy even at 90 degrees farenheight. I therefore think that our oil shale oil would make an extremely good diluit??? for other oil shale but I've tried to sell it on that basis to Husky, to lots of people who should know better and they've all turned me down.

#084 David: So you've said three things I'd like to ask you about. So pour point is the point at which a product pours, it's temperature.

Ned: Yes.

David: Diluit would be something you could use to dilute heavier oil?

Ned: Yes.

David: And the third thing that you said that I wanted to clarify. . .I've lost it now. So what comes out of tar sands is a really heavy oil so you're saying this is a lighter oil.

Ned: What come out of Suncor's project is really a very light oil but they've effectively refined it. The basic oil that comes out I would think is a heavy oil but they have improved it immeasurably so it's as light as the colour as your yellow sheet of paper there.

David: But not when it comes out of the sand.

Ned: I don't believe it is.

David: No. But your raw product when it comes out of the shale is already lighter than their raw product.

Ned: No strangely enough it's not. It's categorized as a heavy oil but it's pour point is radically different than most heavy oil pour points. There's a heavy oil in the States, that's so heavy that if you upend a container of it, it won't pour out. This would most assuredly pour out.

David: So that would be even thicker than molasses.

Ned: I've got a sample in my office, I'll show it to you.

#100 David: Where do you see this project going then in the future?

Ned: Mr. Tisdale and I say it keeps us alive because we intend to get it working before we leave. He's a few years on me. I think as I say, there are two companies standing in the wings that would like to take it, not from us, but from this man we're working with who has bankrolled us in buying the land several times now. He's picked it up twice now. . . with him we've picked it up twice. When we've dropped it nobody else takes it so a couple of years later we pick it up again. The Saskatchewan government doesn't seem to

mind because nobody else wants it. But it's always a bit of a fear we have when we drop it that maybe somebody will take it. I think before it gets dropped again, either one of these two companies we're talking to will do some additional work on it at least. Whether it will be enough to make it commercial, I'm really kind of doubtful. I'm afraid we'll have another drop in the price of oil and that will delay it again. Maybe four or five years out we'll pick it up again.

#116 David: But the process seems to be in place for refining this.

Ned: I think there is a process in place. I'm not completely sure that it's as good a process as I think we need. It's those light ends that I want. The light ends in our oil shale oil are such things as zylines???, taluines???. . . and there's one other, very high end things. Very light weight oils.

David: And how would you use those?

Ned: One of them makes TNT. Taluine is the Tri Nitro Taluine I think it is. But not just explosives, they're used in aviation fuels.

David: Well, let's hope something happens here. What does Mr. Tisdale bring to the project, he's more on the production end isn't he?

Ned: He's probably been involved in more field work on the Oil Sands than any man in Calgary. When we both lost our jobs in '72, he was hired by Unocal, Gulf, Hudson Bay, all kinds of companies who were doing core drilling. And he has done just a world of work with them as well as what he did for Sun. One of his claims to fame is that he was working with. . . originally we had a bucket wheel up there, a great big thing and it was constantly hitting these heavy sandstone ledges that were interspersed in the sand and you couldn't count on where they would be. When the bucket hit that, quite often it would break the teeth. Well this big bucket was very difficult to replace the teeth on, it was expensive and difficult. He suggested to management that he might put a small charge of dynamite down and they said, oh no, we don't want it dynamited, it might hurt our foundations or something. But one day when they weren't home, he had in the meantime gone and talked to the dynamite company in Calgary and discussed it with them that he wanted to set the fuses so that it would break progressively, blow off progressively. They showed him, they said, we'll come up and show you how to do that. And they did and when management was not there one day, he set off a charge and suddenly the bucket wheel drove just like it was digging through butter. Nobody ever thanked him for it. But he was the one who did it. And now they don't just use 1/2 pound charges, now I understand they use 300 pound charges.

#148 David: And this just shakes it up so that. . . .

Ned: Shakes it up, breaks it up so that it digs easily.

David: That's great.

Ned: I hope somewhere down the pike you interview him. He may not speak quite as freely as I tend to do.

David: Maybe not yet. You've been involved in some other prospecting more recently haven't you?

Ned: Diamonds, is that the one?

David: Yes. What got you into that?

Ned: Another fellow, Chuck Newmarch and I . . . The Alberta government were trying to put a park around some coal mines in Alberta and I discovered that I could negotiate on behalf of the client to get back the money they had spent on their coal exploration if I negotiated with the government. That is, I could get them to repay the money that the company had spent on exploration because they'd stopped the party from exploring or from developing coal. In the course of my work there I discovered that the B.C. government was somewhat fearful of what Alberta was doing and they were revising the boundaries of their little parks. If they thought there was an exploration project underway within the park they would change the boundaries of the park. Well, as a result, I realized that some of the boundaries of parks were going to be changed in B.C. so we started looking at places where the boundaries were being changed to see if there were any prospects, mineral prospects that perhaps had been avoided because they were within the park before. We started looking at platinum in the Kaslo area, however we didn't find any in our prospecting. We gradually moved east and were working in the Cranbrook area looking for . . . this was just a summer project. Every summer we'd be out there with our picks and pans until finally it became more work than I thought I wanted to do. I wasn't quite as willing to climb the mountains looking for such things. So down in the Sparwood area we had heard of Kimberlite pipe. Work had been done on a Kimberlite pipe by a student in Saskatchewan so I spoke to him and he said, he thought we were crazy to follow it up, he didn't think it was worth anything. In spite of that we staked it and did some ore work on it and then when our little group didn't feel we could carry on with the costs I found somebody nearby who had additional lands and I made a deal with him to take it over from us. They haven't done anything except pay us a little bit of money, about \$25,000, which isn't much but it covers our costs of operation down there. Just recently we got them to give the gold prospect part of it back to us so that we can still prospect for gold on the property that hopefully they're going to find diamonds on. They have actually found some diamonds but nothing commercial.

#195 David: And where did you say this Kimberlite Pipe was, what area?

Ned: It's north of a town in B.C. called Sparwood. That's fairly close to the Kananaskis where you hike through.

David: Yes. Now what got you involved with the University of Calgary in the Petroleum Land Management Program?

Ned: The Canadian Association of Petroleum Landmen had been negotiating with Management faculty to develop a program called Petroleum Land Management and I as well as a number of other people applied for the initial job as Industry Director and I succeeded in getting the job. The university had done quite a bit of work on how they wanted to set up the program and then I was able to maneuver that program a bit further and bring in some more geological training into it that I thought was necessary. And I was the initial Industry Member, Bob Schulz was the University Member and presumable we worked together although I was The instructor also on the first course of that. . . it

was a two year course with about 2 or 3 lecture people each year and I was just the first one. Schulz was a great guy, a little bit different than me but still a great guy. He teaches time management and things like that. They call him Dr. Bob.

#222 David: So this was an attempt to give some kind of a more formalized accreditation to the Landmen wasn't it?

Ned: Yes. It worked extremely well. The industry landmen were very supportive of the program. A landman whose name should go down in fame and I can't think of it right now but maybe I can fit it into this thing later, he was at Husky at the time and he persuaded industry to support this program by hiring the students in the summer and every one of our students got a job and that was very helpful in getting the program started. But I think the students were well trained too. As I talked to people in industry about what we were doing, various people said, could I possibly get a job as one of your instructors. Now we didn't pay them a lot of money, it was more a labour of love. Although the first courses I ever gave at the university were probably dated early 60's or 50's and I got \$25 a year. These guys got \$2,500 a year. But I think it was a very good program. I hope it's still good but I haven't been an active part of it for the last six years or so.

#241 David: More recently, earlier this year you were awarded the Cam Sproule Memorial Plaque from the Canadian Institute of Mining. Can you tell us about that?

Ned: Well really it came almost out of the blue. I really didn't know it was coming. I wasn't a member. It was a delight. It was awarded on my birthday and I was really quite pleased with it. It came about in part, largely it came about because one of my friends who is a CIM member knew of my interest in the Oil Sands and how instrumental I had been in that and that's a large part of how I got the award. The impressive thing to me was that 10 members of CIM had to sponsor me. These days it's difficult to find 10 guys who even know you.

David: So who was that one that was. . .

Ned: It was Ian Mackay.

#258 David: So they awarded you for that, so that's one sort of a medal. Now more recently you've been snuck in as the Canadian President of the AAPG. Before we get to that, when did you become a Canadian?

Ned: In 1967, as I describe it, just in time to vote for Pierre. Once.

David: And why did you become a Canadian?

Ned: Well, I had been here since 1947 as an American and I had finally gotten around to asking Sun Oil if they had any objection to my becoming a Canadian and they said, no, if they wanted to transfer me, they thought that they could probably transfer me as a Canadian. And since my family were essentially Canadian I felt that I wanted to. . . my children are both adopted and it was really quite awkward every time I hit the U.S. border because they thought the children ought to be that father's, not the mother's. So they always made them American and that was a nuisance. So I decided to formalize it.

David: Now many Americans wouldn't have done that. Why did you become a Canadian?

Ned: I felt I could make a better person here as a Canadian than as an American.

David: Did you want to become involved in politics or anything like that?

Ned: No, I've been more or less involved in the Reform Party but I don't have the courage to run for office. My skin is not thick enough.

#282 David: So mostly it was because you were living here and working here and you intended to continue, you thought you should become a Canadian. Okay, you are now the President of the Canadian region of the AAPG. How did this come about?

Ned: For the last couple of years, well for many years, even while being a landman I was very active in the Geological Association as well, the AAPG. I've been Chairman of conventions and I've been working actively with the House of Delegates which is the local representatives of the American Association of Petroleum Geologists and the House of Delegates has primarily John Hogg, now with Pan Canadian, had been pushing for an international aspect of the American Association. Americans as a rule sort of think they can tell the rest of the world how to operate. The rest of the world would prefer to listen to a Canadian than an American because Canadians are more amenable to fitting themselves into the rules of the new country whereas Americans tend to, and I better not say this too loud, tend to try to put their rules on a foreign country. So John had been trying to get international regions set up. For some reason the American Association decided that they were going to pick the first President to get the region started. The local group in Calgary didn't want the AAPG to pick the man that was going to run them so they came to me and said, you fit the rules of what the Americans want, would you allow us to put your name up as the first President. It's going to be a one year assignment and your one job is to design a bylaws and possibly a constitution for this organization and we'll help you. And I said, what a wonderful way to go out in smoke, as the President of the American Association, Canadian Region. But it's got 1,400 members, it's the biggest region there is. Then ensued some battle while they persuaded the Americans not to appoint somebody but to appoint me. So I got this thing by default, not by default, I mean, I'm the only name put up. But it hasn't turned out to be quite as easy as they described it to me. I've got a lot of work and so much so, that I'm closing my office because almost all the correspondence and I have an awful lot of correspondence coming in, is coming by e-mail and in order for me to use e-mail in my office, I pretty well have to shut off the telephone. And I do have a roommate and he wants to use the phone too, so I'm going to go home where I can get a different telephone arrangement, where I'll be able to use the phone and the e-mail. Probably I'll just nicely get it moved. . . I think we're almost finished the bylaws. However maybe my friend down south will get the money and we can do the oil shale.

#332 David: So what else does this AAPG role mean.

Ned: I don't think it means too much to me except that I will be the past President for 3 years and that will allow me to take part and perhaps try to encourage more Canadian to become members of the AAPG. I joined the AAPG before any of the present CSPG

members were even around I think. I started in '45. When you mention that to most people they think, gee, I was born in '60.

David: That is amazing. So you were involved, well you're still involved but you were very active for 52 years in the oil patch. What else is there to do?

Ned: I guess that's. . . where a lot of people play golf, I still work at the oil business. I don't know what else there is to do but I certainly intend to keep my interest in the oil patch somehow.

David: And the tar shale. . . ?

Ned: If it's only through things like the CSPG and the AAPG. I haven't done anything with the landmen for quite awhile.

David: But the shale is it?

Ned: Well it is. But no, with this fellow in the States, Mr. Tisdale and I have been studying. . . he's whetted our appetite on some other strange things. One of them is a subject called gas hydrates. There are absolutely enormous reserves of methane trapped in ice crystals both in the Arctic and under the oceans. At the present time nobody really quite knows how to produce them. I think they're probably having a major effect on the so-called warming of the earth but it's not being caused by you and I driving our big cars. Because this methane is seeping thorough the ocean and coming out. Probably the Russians know more about it than anybody.

#370 David How come?

Ned: Because they have a lot of frozen ground I suppose.

David: And they're working on this.

Ned: Yes.

David: So are you saying this is another potential fuel source?

Ned: Oh, definitely. Absolutely immense. We've also been working on another project which, both gas hydrates and this other project, when I try them on my scientific friends, they roll their eyes and they think, gee Ned's over the hill. He's smoking pot. This other one is oil in the granite. Actually oil from the granite and I'm not going to take you much further than that in this conversation or you too will think I'm

David: Well, I've heard of this one too.

Ned: Have you? Well, I think it's quite fascinating, I think oil fields are being replenished from below. Now most of my friends think that oil is coming out of sedimentary rocks. I'm not certain of that. But it's like the fact that when I started geology, we were reprimanded if we mentioned plate tectonics. Some of my friends at Northwestern University were told that they would be given a flunking grade if they relied on plate tectonics in their discussions. Whereas today if you don't believe in plate tectonics you probably got a flunking grade. But things have radically changed. And I think probably that will change on this other subject. So that's yet in the future.

#396 David: That's an interesting one because I'm not a geologist but I do know that geological theory does have some holes in it as to how the oil got there and how it migrates.

Ned: It's like the oil sands. Forty years ago, everybody thought the oil came from decapitated reefs, maybe not 40, 30 years ago, but I don't think anybody still knows where that oil came from or how it got there. But it's actually enormous.

David: And because there's so much of it there, nobody worries where it came from, they just know it's there. Back to your shale project for a moment, is that going to become a big mining project then.

Ned: Yes, it will be a mining project.

David: So just scoop, shovels, trucks, dump it into the processor. So it's not going to be those conveyor belts and so on, it'll be. . . .

Ned: It might be conveyor belts but it will probably be. . . judging what Sun Oil has done with trucks, it's almost certainly going to be trucks.

#413 David: Yes. Because that's what the big coal mines are now is just exclusively the big electric trucks.

Ned: Interestingly enough in the early days of Sun in the Oil Sands, they brought up a big truck and it was too big for the roads so they brought it up in pieces. They assembled it at the plant site with a big crane and the truck could not operate on a more than a 7 degree slope. They discovered that the bottom of the tire, with this thing sitting on the oil sands, the slope in front of the tire was more than 7 degrees. And all the power in the world, they couldn't get out of their own hole.

David: That's amazing.

Ned: So they disassembled the truck, sold it to Morris and Knutson for scrap and didn't do it again until this new project. But you know you never hear about the fact that Sun Oil did it, ten years before they did it. I've never heard anything, no mention of it but I know it happened because. . . I wasn't part of it but I saw it.

#432 David: Who would know more, Tisdale?

Ned: Oh he would for sure.

David: That's an amazing story. So what has excited you most about your career, the science, the technology, the discovery, the deal making, the people, the stomping around out in the field, what?

Ned: Well, I suppose the deal making was a large part of my part because whether it's my gold mining friends, my oil shale friends or my oil sands friends, it's I who generally, put the deal together. But I think it's the technology. The fact that I'm both a landman and a geologist, you don't see many landmen who are geologists, I hired quite a few when I was at Sun. I kept taking them out of the Geological Department and putting them in the Land Department. I mean I asked them if they wanted to come but they usually did.

#449 David: And was the draw for them the same as it was for you, just the interest of being in the field and putting the deals together.

Ned: Well, the deals are really no in the field as much as they are in the office. But from my point of view though, Sun Oil was a great company to work for and I still love them even though I lost them. They gave me just a lot of freedom.

David: And other individuals you'd like to talk about? I think I would like to interview Mr. Tisdale someday, any other things I should be preparing when I go to talk to him. Certainly on that application end, he's a great source of information isn't he.

Ned: You mean the field. Definitely. He's got just wonderful stories. On the other hand if you would like additional stories, he was in the war where I was not. And he had wonderful stories on the war. Not the kind of stories that you might discuss around the table. I'd love to listen to your tape after. I've tried to tape him but he sort of clams up. But I've told him to tape his life, the stories he will let people hear today and the stories he would let them hear 20 years from now because they're just wonderful. To a man like myself who didn't fight, to a guy who has been in Italy and Holland and blood and guts. He was telling a story the other day where he was working on our oil shale project. He was staking the locations for some holes we were going to drill for Aostra. And he was living at a nearby farm house and they had given him a box lunch for lunch and among them were two bangers, you know, big things made out of venison. And he's pulling this out of his lunch and he looks back behind himself and he was using snowshoes and he looked back on his trail and here's a big grey wolf sitting there looking at him. And he looks us and their eyes met briefly and the wolf stepped out of the track and howled and in a ring around him, howls came back. Now I don't know what I would have done, I might have died on the spot. But he just kept on eating his meal.

#501 David: That's amazing. Well, Ned thank you so much for spending these couple of hours with us. It's been really wonderful and I'm really glad that you're turning over your papers to the Glenbow so there's lots more information there. And I encourage you to continue with your note making and so on. I know that you've been working on something of a written version of your story. But at this point, on behalf of the Petroleum Industry Oral History Project and especially on my behalf, I'd like to thank you so much for taking the time to be interviewed. Thank you very much.

Ned: Thank you very much for interviewing me.