

PETROLEUM INDUSTRY ORAL HISTORY PROJECT  
TRANSCRIPT

INTERVIEWEE: N. J. McMillan

INTERVIEWER: David Finch

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DF: Today is the 14<sup>th</sup> day of June, in the year 2001 and we are with Mr. N. J. McMillan at 211 Scarboro Avenue S. W. in Calgary. My name is David Finch. Could you start Mr. McMillan by telling us when and where you were born?

NM: Yes, I was born in 1925, on November 11<sup>th</sup>, Armistice Day in a small town in Manitoba called Sauris.

DF: What did your parents do?

NM: My dad was a railway fireman and engineer and my mother was a housekeeper with four children. I'm the oldest in the family and I have two brothers and one sister. We're all living.

DF: Tell us about your education.

NM: I went to public school and high school in Sauris and we were blessed with good teachers and a good school board. It was in the Depression when I was in the formative years and tough times.

DF: How did you get interested in geology?

NM: I was always interested in the outdoors and geology was an outdoor activity in those days. So I thought I'd go to university and take geology and see if I could make a career out of it. My childhood was an ordinary one, going to school, playing hockey, church and those sorts of activities.

DF: Tell us about university and your geology training.

NM: I went to University of Manitoba and we had one sedimentologist and palaeontologist, Ed Leith was the professor. He's a well loved professor in Canada who died lately. I was trained to be a base metal explorer because they didn't have a very flanged up program of oil prospecting but most of my colleagues went into the oil business anyway. And I found the first year geology and all the geology fascinating to me so that goaded me ahead. And you could get a job and I got a job with the Geological Survey of Canada as a student assistant and went to Yellowknife which was a big trip in those days, I was just a young fellow.

#036 DF: How did you get there?

NM: By plane. It was the first year they went by plane, the years previous to that they went by river boat from Fort McMurray and across Great Slave Lake, but I didn't do that, we went by plane.

DF: And what did you do for the GSC that summer?

NM: We were mapping about 90 miles northeast of Yellowknife in a gold belt, quartz veins with gold in them and we panned and mapped the structures in the pre-Cambrian and it

was a very interesting summer because we had a good teacher. Y. O. Fortier, who was the officer of the Geological Survey of Canada and we learned a lot from him.

DF: How did you get into oil field geology?

NM: I soon realized after going through university and every summer going out with the GSC, I noticed that you were away from people for long periods of time, 4 months. So I thought I'd try to get into a field, a branch of geology that you'd be at home more. So I got a job with California Standard as a beginning geologist to try out the sedimentary aspect of it, soft rock they call it. You had two classes of geologists, soft rock and hard rock. Soft rock you were a sissy because usually you did your work in civilization.

DF: What was your first job with Chevron then, or Cal Standard?

NM: They first taught me to sit on wells, wildcat wells and I did that in Virden. I was in Virden for about 3 or 4 months and I was deemed to be competent in well site geology so they sent me on my own up to Athabasca. I was with Cal Standard for just about 10 months. Because I didn't have my PhD and I noticed that to get ahead in Cal Standard in those days it was worthwhile to have a PhD., so I figured if these guys can do it I can do it. So I wrote to five universities in the United States that I thought had good petroleum geology programs and I got replies back from Kansas and California. Kansas offered me the most money for an assistantship so I went to Kansas. It was \$15 a month difference.

DF: Amazing eh.

NM: Yes. But it's a good thing I did because it wasn't crowded at Kansas and they had a good staff. So it worked out all right. And in the meantime I took a party out with Gulf in Canada here. It was a good party, I was the party leader. From the edge of the Paleozoic and Cretaceous rocks, from southern Manitoba up to the Northwest Territories on the east and then on the west, the Rocky Mountain front, we did several sections, measured several sections there. Because ore was known to be present prolifically in Devonian rocks and Devonian wasn't understood in Canada at that time. So Gulf embarked on a grand plan to understand the Devonian. So I sampled it must have been 50 different sections, all the way from Stony Mountain Penitentiary around to Canmore and in the Northwest Territories.

#085 DF: How did you get around?

NM: Car. And we rented boats sometimes, like to go to islands in Lake Winnipegosis and down the Peace River where there was no roads.

DF: Any stories from those trips?

NM: No, nothing outstanding. Andy Bailey if you've heard of him, sent me to Stony Mountain Penitentiary to collect fossils where they were quarrying, where the inmates were quarrying for the government. We went at noon and that was the time when the dynamite went off to break the rocks up into smaller pieces and they sent us out with a couple of trustees and told us where not to go, which I thought was interesting. But in my younger career I went a lot of places. I was in Australia for 2 1/2 years, soon after I was with Cal Standard and then I went to Papua New Guinea for 7 or 8 months to map the backbone of the island of New Guinea. And then I came back from Australia, that was in '58 I guess, things were slack and they were letting geologists go so I got a job in the U.S. with

Tennessee Gas Transmission Company as a scientist for their science lab. I was there for 5 years. The day Kennedy got shot I decided, because of the reaction of the people down there, I decided it wasn't a place for my family to be brought up so I decided to come back to Canada, which I did. But the company Tennessee Gas, transferred me, mercifully. It's an expensive trip with household goods. I was in Calgary for another 5 or 6 years with Tenneco and then I went with Aquitaine.

DF: And what were your jobs at those places?

NM: I was a senior geologist. I worked mostly alone in my career, with a small group from time to time working with me, but I guess you'd say I'm a loner. I was left to myself a lot, I could do my own thing and I embarked on a program with Tennessee Gas who were looking for gas to fill their pipelines anywhere in North America. I embarked on this program to try to understand the geology from Baffin Island down south to the Bahamas. And we did some seismic programs offshore, New Jersey. We had our office next door to Readers Digest, which was Pleasantville, they had a mail drop. Navigation was not so good then, we had. . I forget the navigation that we had but we had a tower on the top of the tallest building in New Jersey and then in Pleasantville we put a tower on top of the two story Readers Digest building to zero in on the ship. It was in the days when not much was thought about the environment, they used dynamite for the explosives and we'd go through a school of fish and hundreds of fish would turn up belly up, dead from the dynamite. And nobody seemed to notice that but a lot of fish were getting killed and there were seismic boats all over the shores of North America killing fish. It wasn't long after that compressed air started being used where it didn't kill the fish. Yes, they were great days. And then I picked a place on the east coast which had potential but a hostile environment, offshore Labrador. It was about 1,800 miles from Ellesmere Island, down to Newfoundland and we worked offshore there for several years and drilled in total over 20 wells. We made 6 gas discoveries, some of them probably huge but because of the environment there's no interest in bringing them into production now. Not much interest, there's interest. They probably will refrigerate the gas and produce it right at the well site. But there's lots of gas in Nova Scotia to be exploited first and the Mackenzie Delta before we get on to Labrador.

##153 DF: What's the ice pack like up there?

NM: Well you can't operate all year. It's a pack all right and icebergs are the main danger. We recognized that from the beginning and we hired a student to count the icebergs that we saw from the ship and located them on a map as we were doing seismic. In the summer of about 1968. Then we hired Dr. McGregor from the University of Alberta to do the statistics on the icebergs. He knew how many there were and the likelihood of an iceberg when it's floating, would it run into a ship or a drilling installation and he concluded that there's not much chance. He wrote a report with a lot of mathematics in it to show his points. We picked him because during the war, during the V rockets being fired by the Germans to England, they knew where they came from but they didn't know where they were going to fall so in England they made a map, that McGregor was involved in, of where they fell and knowing where they came from they'd know the likelihood of any one

rocket landing in a specific predestined place. And so he used the same technique with icebergs, we knew where they came from but when they started spreading out in the Labrador Sea we didn't know what the likelihood of hitting a small structure. So we've had no trouble with icebergs. But when you see an iceberg, god they're awesome and they could do a lot of damage so they're frightening. So the companies wanted to know right away what the likelihood of damage from them would be. And John MacIntosh Browning was the President of Tennessee Oil and Gas, that's their Canadian company and we went to Houston to persuade the head company to embark on an exploration program because it was going to be expensive. So they authorized us to file on 16 million acres of land, which we did to explore. This was land down to 600' of water depth, because we thought we couldn't drill any deeper than that. In those days we couldn't but now they can drill in 2,000' and produce oil from them easily. We drilled the first well and got about 100 or 200 barrels of waxy oil from a well called Lief, after Lief the Lucky. We found some big discoveries of gas, some of them will be enormous in the future. Certain geologists poo hooed the idea of their being any sediments there because we had done airborne magnetometer surveys to make a judgement as to how much sediment might be there down to the basement. And we found thick basins, something like North Africa and the North Sea and Saudi Arabia, the structures were dead ringers. All the structures were applicable to continental drift so we just followed our understanding of continental drift and made predictions from that and they turned out to be pretty good. For the Labrador Sea, we didn't drill many dry holes. I went there practically alone. We rented a small cargo ship, for hauling coal and a couple of scientists from the Bedford Institute in Halifax came with me and we dredged the continental slope to bring up samples to see if there were any fossils in them and what age they were and it was quite successful. We proved that at the surface anyway there's rocks that could have oil and gas in them and when we drilled we sure found them. But the company went ahead in a careful manner and then it got so expensive we had to take in partners. We took in 3 partners, Amerada and Total, a French company and we remained as operators. But we had good crews, good geologists, good crews. I made a point in trying to find out the best in the world and getting them to consult for us or their parent company to come and help us out. So I phoned to England and France and Moscow and San Diego, New York, getting people's opinions.

#236 DF: Where did your career take you in the late 60's, early 70's?

NM: Greenland. We drilled a hole in offshore Greenland too, where the geology was very similar to Labrador and that was a good spin. We worked in Greenland about 3 years, did quite a bit of seismic work and airborne magnetometer work and drilled one well. But since then other companies have been drilling wells there, the Danes and they've made some discoveries. Let me see my notes here. During that time while I was President of the CSPG, which was in '77, there was talk of running out of natural gas in the United States and in Canada. It was rampant and geologists were being let go from the big companies, a few geologists. The rhetoric is the same as now, there's rushes to flange up supplies. When you look at it over a long period of time it's slightly amusing.

DF: What do you think of these current concerns?

NM: Bush thinks that there is, or he's been led to believe that there's lots of gas under the shelf of Alaska, northern Alaska. And there is a lot of gas there but the amount that they're predicting is a drop in the bucket for the United States consumption. They say there's 16 trillion cubic feet of gas. Well, 16 trillion cubic feet of gas, that's 5 years supply and in the Mackenzie Delta there might be, we estimate there's 5 or maybe 10 trillion cubic feet of gas and that's a drop in the bucket too. And in Labrador I estimated years ago that there's 10 billion barrels of oil and the equivalent, if you translate that back into gas, 70 trillion cubic feet of gas. Cumulatively they can keep you going for 25 or 30 years but they're not an answer to anything. And Alberta, I was going to say it doesn't have much gas on a world scale but it has on a domestic scale, a lot of gas. After I was finished with oil companies I went with the Geological Survey of Canada in about 1982. My job was to help to estimate how much oil and gas we had left in Canada so we did the whole country bit by bit. Nova Scotia shelf, Grand Banks, Labrador, west coast off Vancouver Island. Now I'm emeritus and I'm doing hobby work.

DF: Such as?

NM: Fossil forests. In 1955 when I was with the Survey, I was with the Survey one year as a party leader in the Arctic Islands and I found several fossil forests, with stumps out of the ground. These fossil forests ranged in age from 45 million years to 70 million years, over a long span of time. And I couldn't get anybody interested in them until about '86 and there's been quite a lot of interest since then. So I'm working with the geo-chemistry of the wood to fit it in with the environment of deposition and the age. Because the wood looks fresh, it looks as fresh as wood you'd use in your fireplace and the alcohols and salts, esters, dyes that are in the wood, not much has been leached out and this is a problem. The wood is so fresh so it's a problem of how it was preserved, the conditions under which it was preserved and a little bit has to do with its age. So I'm working, the Italians are doing the geo-chemistry because they wanted some samples from me and they have a big lab which does geo-chemistry on wood which is from 10,000 year old buildings, Roman ruins. So they wanted to compare their 10,000 year old wood with the 45 million year old wood to see the gradation and then maybe fill in the gaps. Other places in the world find wood that's 20 million years old and 10 million years old but some of our wood in the eocene and paocene, that's 45 and 70 million years old wood, is fresher than these old structures in ancient times. So it's fun because we don't have to work fast and they've got the techniques to do the geo-chemistry.

#341 DF: How did you bump into those forests up north?

NM: I was mapping in general on foot. I walked across Axel Heiberg Island, it's the second biggest island in the Arctic archipelago. Damn near got killed. We put out caches of food at 5 different places across the island and the idea was every 2 or 3 days we'd walk from one cache to another where there was food and gasoline for the primus stove. Just as we were out of food and going to go to the last cache there was a river, unnamed river that was in our way. We could see the cache about 2 miles away and we couldn't easily get across. But we had rope because we climbed over the mountains which were covered

with ice and snow and we had rope for safety, for falling down a crevasse or some other injury. So this rope we used to get across the river and I went across first because I was the leader and I had the rope around my arms and took off in this cold water with ice along the shore. My partner was hollering keep going, keep going and the water was up to my nose and I was hollering don't make waves, don't make waves. And they were saying keep going. So I kept going and I was in the centre and then the water started getting shallower so we called it Wading River. Good name, Wading River, it stuck too.

DF: What was the current like?

NM: Swift. Your feet could get swept from under you. But we had the rope on, there was no real threat I don't think of drowning. But we got to the cache and we had a bottle of rum for medicinal purposes and we lit up the primus stove.,we had hypothermia and our hands were like ham hands, you could hardly do anything so we got the tent up a little bit, enough to get inside and we put the primus stove in there in a safe place and we had a drink of rum and lemon, a small drink. We both fell asleep at the same time and this stove going, ready to burn the tent down but we feel asleep from exhaustion. We woke up shivering because the stove went out of fuel but I thought, we could have kicked that over. But I was a lot younger and you don't think ahead so much when you're so young.

#394 DF: So it was on that traverse that you ran into the fossil forest?

NM: Yes.

DF: How did you recognize it?

NM: Stumps sticking out of the ground. The wood was so fresh in some places I couldn't tell whether it was modern stumps, by modern I meant 2 or 3 hundred years or maybe 1,000 years. I even sent samples to Lamont in Columbia University to do radio carbon dating on them, thinking that they were young enough that we could date them. They were baffled because they couldn't date them, they were too old. But they could see the wood was so fresh. And there weren't of those coal beds up to 30' thick associated with some of these stumpy areas, the coal is mostly lignite, cheap coal a long ways away. So that's a thumb sketch of my career.

DF: How did you come to be involved with the CSPG?

NM: I made up my mind early I was going to be involved with activities of the CSPG and I was on lots of committees. I was probably on 25 committees, the Society has 85 committees and I was on about 25 of them, over a period of time. I was asked to be a program chairman for a conference on offshore oil exploration in Canada. The conference turned out to be a very good one because we got good speakers from all over. I interested people from UBC and University of Manitoba and Saskatchewan and Alberta and eastern Canada, Dalhousie and I got Sir Edward Bullard from Cambridge University to give the keynote address. And everything fit and we were lucky we didn't have any glitches. We had 4 or 5 Russians. So then they asked me if I would stand to be Vice-President of the CSPG, which I said I would and we had an election and I won. Then I became Vice-President, President and past President, so actually it's a 3 year stint.

DF: So the only position you really run for is the Vice-President right?

NM: Yes. And in those days they had some demands on you because of . . . you see, you get so

many programs going when you're President, when you're past President you have to nurse them along. And when you're Vice-President you have to catch on to the programs that they have in mind. When I was President we were arranging for four more conferences, for four more years ahead, to '81. Because it takes a long time to get speakers, because they've got to alert their bosses to get funds to go to the conferences. The CSPG is a very efficient society. Because we have so many geologists in Calgary, close to run it. And it was the 50<sup>th</sup> Anniversary of the Society, so we did a few small things. We had a 50 year calendar with pictures of the geology of Canada, we had expanded luncheon talks and during that year of luncheons we had over 11,000 attendees to the luncheons in the Westin. There was no other society that ever patronized their luncheons like the CSPG does. And we started a student industry field trip. It was initiated the year before I was President then when I was President the students went on a field trip. We got 34 students from 34 universities in Canada to go to oil company's offices and see how the oil business works, go to lectures and then go out to rigs to see how the drilling goes. It was an astounding, a great success. It needed financing so a trust fund was set up and we now have just about enough money to finance it without special requests from companies. It generates enough money now. So that was initiated in the 50<sup>th</sup> year.

#502 DF: What else do you remember from the year you were President?

NM: We put a lot of effort into joining in certain activities with the Geological Association of Canada, GA, which is about the same size as the CSPG but they're hard rock or more involved in mining. But there's overlap and we thought we could save some money and be more efficient by combining some effort but the gaps are too big and it didn't pan out. They put out a newsletter and we made it possible for the CSPG geologists to buy the newsletter separately because they have Canada wide news in it. That was fairly successful. We shared some programs with them and that was very successful. The CSPG had a John Webb trophy for the best talk given in western Canada universities by students at the conference. Now Jack Webb was a well known geologist, he's dead now, was a well known geologist in western Canada with a scientific bent. We didn't have one in eastern Canada so we initiated one in eastern Canada. The Atlantic Geo-Science Centre is the centre of the GAC down there and we gave the first award during my tenure, to this new award. I guess it's a cup. So there's one now for western Canada and one for eastern Canada.

End of tape.

Side 2

DF: What else do you notice from your annual report there?

NM: The thing that disappointed me was we had scholarships of around \$1,000 that could be applied for by students in geology in any university in Canada and we didn't have one application. I don't know why. There was 25 participating universities and we got no

response.

DF: Did that have anything to do with the interest in exploration geology at that time or how do you understand that?

NM: I don't know. Maybe the scholarships were not enough money. We don't know why. Then we encouraged provinces to make geological high way maps. We had a good highway map of Alberta, you could take it out on a Sunday afternoon and drive down roads and know the geology you're going to and know the key places to go to to see where fossils are. The CSPG would put in seed money, Manitoba and Saskatchewan made a map and Nova Scotia made a map so there's some encouragement there. I think no pretty well all of them have maps. But that's 25 years ago, a long time.

DF: How about this archives and history committee?

NM: Yes, we initiated that in my tenure too. Jack porter is, I think he's still the head of that. They haven't been too active. They put up displays of historical events, like the Digman well and careers of other geologists at conferences, they have a booth.

#031 DF: What do you consider to be the most important things that the CSPG does?

NM: In our charter the first sentence says the purpose of the CSPG is to promote scientific exploration for hydrocarbons anywhere. And that means educational endeavours, conferences, symposia, colloquia and that's the main function of the CSPG, it's mostly an educational effort. Our parties are not very popular because geologists are too busy or not. . . there's a lot of effort gone in to have dances, get together, picnics, but they don't flourish. It's a characteristic of geologists I guess. I usually didn't go.

DF: Why didn't you go?

NM: I'm not the type I guess.

DF: When you were up north doing some of your research, did you use canoes much?

NM: Yes. We used canoes the first 3 or 4 years and didn't use aircraft. I took a year off and worked for International Nickle and used canoes.

DF: What kind of canoes?

NM: Chestnut, wooden canvas mostly. The odd party would have an aluminum canoe but they were hard to handle. The Chestnut canoe were. . . they're canoes.

DF: Any stories about bears up north?

NM: No. I saw a lot of bears but I didn't tangle with any.

DF: Which of your contributions do you consider to be most significant?

NM: There might be three. One, when I was working in the United States I spent two years on the Midland Basin, Delaware Basin in Texas and New Mexico and I did a detailed study on cores from drilling and was able to determine where the best porosity was for finding reservoirs. And I published on it after years and years and years of not getting permission, because they wanted to keep it a secret but we got it published. And then my Labrador efforts would be second in order. That was economic, the same as the Midland Basin was economic. But the third interest is the fossil forest, which is not very economic at the present time but scientifically it's very fascinating. There were no, during the late 70's there were no great big discoveries except in the east coast in Canada. We were at kind of a dry spot in our exploration. There was no Leducs, no Redwaters, no Swan Hills.

#087 DF: So where was the search in the late 70's?

NM: Well, there was a retrenchment and the search was mostly in Alberta and the southern Territories and northeast B.C.

DF: What have you enjoyed most about your career?

NM: The excitement of it. I was very lucky, I never regretted getting up in the morning and going to work. I always looked forward to it and always enjoyed it because it would be something new that day.

DF: You don't seem like a person that gets very excited, what excited you?

NM: Finding gas in Labrador, finding oil in the Midland Basin. I don't jump up and down very much.

DF: You said the fossil forest aren't very economic right now, what would make them economic?

NM: I don't know. There's amber associated with them but I don't think it's of gem quality. And there was some hope we would get some gold because gold and wood go together in nature but we haven't found any gold. But there's not many people working on them now, there's a large group from the University of Pennsylvania, the Americans are doing work. The tourist ships have gone there and wrecked some of the forests by digging out the stumps and hauling them away. Russian tourist ships, they go in there and don't even tell you they're in there.

DF: Did you ever run into diamonds in the north?

NM: No. I found Kimberlites but never saw any diamonds. It's interesting you ask that question because in the fossil forests probably covered most of Canada at that time and the Kimberlites come from 50 or 100 or 150 kilometers depth and you come up at about 20 kilometres per hour and they're hot and when they hit the surface of the earth they explode and they catch in the dust everything that's living in a circle. The dust covers up wood, clams in the water, fish and it's like Pompeii, it preserves it and we were able to determine the temperature of the air was about 30 degrees Celsius and we're in the process now of making a map of where we found wood and putting it on a map of Canada and extending the forest. Now the Kimberlite is where diamonds occur and they're being exploited and mined north of Yellowknife now. And they have wood in them and we're getting the cooperation of some of the companies to give us some of the wood so we can work on it.

#140 DF: So the wood would be quite close to the surface?

NM: Yes. It's not deeper than. . you see the cores they take are about 7" and so they drill through wood and when the core comes up you can take the wood out.

DF: When did you retire?

NM: I was 68, about 6 years ago. But I still have an office there because I do hobbies like fossil forests. And I do some CSPG work too, but I only go 3 times a week and stay for 3 or 4 hours.

DF: And this is to where?

NM: The Geological Survey of Canada, up by the university.

DF: Do you have any regrets from your career, any things you wish you could have done?

NM: No, I don't. I sometimes wish I'd taken my PhD in Europe because they seem to have a better foundation than in Canada and the U.S. But it's a question of money so it wasn't open to me. We've had a lot of excitement, small excitement. We were doing geology on the Bahama Islands and we rented a PBY aircraft to fly around from island to island and . . . who was Richard Burton's wife, Elizabeth Taylor, it was Elizabeth Taylor's plane. We were stopping and landing and getting out and scuba diving and getting back into the aircraft and once the mechanic didn't close the back door. In a PBY you go in the back doors, it's not on the side it's on the end and we started taking off and the tail went down and wall of water came in just like coming through the door, the door shape, came in and flooded the aircraft to about this level.

DF: Chest level.

NM: Chest level. So the pilot turned around and headed for shore. The engines weren't wet and gunned the motor until we hit shallow water and beached the aircraft but we could have been drowned. Because some of the geologists got frightened and pulled their rip cord to blow up their survival gear and so everybody was all walking around with big arms, bumping into each other and couldn't get out the portals. We spent the night on the aircraft, sleeping on the wings. But that was just a little bit of excitement. It cost us \$125,000 to get the plane fixed up, because she wanted the walnut, there was walnut trimming inside the aircraft and she wanted the walnut replaced because the sea water damaged the old trim.

DF: Did the company pay for that?

NM: Yes. Or insurance. But it was the crew's negligence in failing to see that the door was locked or shut. I spent a lot of time in Newfoundland, it's a great place, people congenial and helpful.

#200 DF: The geology is very interesting too, isn't it?

NM: Yes and the offshore is very interesting.

DF: Did you ever meet Ted Link?

NM: Yes.

DF: What kind of a fellow was he?

NM: He was quieter than you would expect him to be from newspapers. You would think he'd be talkative and outspoken but I found him to be quieter.

DF: Did you ever work with him?

NM: No.

DF: Anything else you'd care to tell us about your career?

NM: I was a distinguished lecturer for the American Association of Petroleum Geologists. I went to 15 universities and gave them a talk on the east coast of Canada. Then I was a distinguished lecturer for the CSPG and went to almost all of the Canadian universities over a period of time. That was a good spin. And I gave talks in France and Romania, Britain.

DF: How did the National Energy Program in 1980 affect your career?

NM: I didn't affect it because at that time I was working on the frontiers and the National Energy Program were favouring frontiers. But it affected a lot of independent geologists

because the rewards that they were getting for the royalties went up and they cheques that they were getting were smaller. But I'm one that thinks that the National Energy Program was not as onerous as the newspapers would say. Because there was more to it than just the oil and gas industry, there was insulation in the houses and other . . . car engines to be made more efficient and all kinds of ramifications and electricity. So it wasn't all bad. My most enjoyable time was working with Aquitaine, the French company. I was a liaison with the labs in France and our work in Calgary and I made many trips to France to their labs and worked with their geologists there and got a different warp on things. Very educational.

DF: Did you learn French?

NM: No. I gave a speech in French but it was a geological talk and using simple words it's easy to do. They understood it anyway. But I can't philosophically talk in French.

DF: What do you think of the future of the CSPG?

NM: ??? they continue as an educational society, training geologists, spreading information. There's always a danger that the American Association of Petroleum Geologists, they get the feeling sometimes that we're a sister organization and could be usurped but they're not back every time. We have over 3,000 members and it's enough to keep a society going.

#269 DF: Any comments on the relationship between the CSPG and APEGGA?

NM: Yes, they're hostile. Because geologists don't like regulations and APEGGA is . . . they're implementing the function of being moderator of Bill 21, I don't know what year, when engineers were going to be monitored. And they've expanded on that, APEGGA has expanded. . . when I was President of the CSPG their staff was two and now it's thirty or so. They've expanded by making themselves bigger when it wasn't necessary. Now they have it, you have to be a member of APEGGA to sign reports, official reports or go to court. But some geologists have embraced them. I don't think I've forgotten any highlight.

DF: Do you attend the past President's dinners?

NM: Yes.

DF: What do you talk about at those?

NM: Well, the President usually gives a talk of what went on during his tenure, and asks for suggestions of how he could have done better or what programs can be implemented. The President elect, the Vice-President is usually there and it's more for his benefit. The CSPG is full of very industrious people, it's amazing.

DF: Well if there's nothing else, I'd like to take this opportunity, on behalf of the CSPG and the Petroleum Industry Oral History Project to thank you so very much for allowing us to come into your home this afternoon and ask you some questions and record your valuable commentary on your career and the time you spent with the CSPG executive. Thank you very much.

NM: You're welcome.

