

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Roderick McDaniel

INTERVIEWER: Nadine Mackenzie

DATE: December 1984

NM: This is Nadine Mackenzie speaking. I am interviewing Mr. Rod McDaniel. Mr. McDaniel, thank you very much for having accepted to participate in our project. Can you tell me, when and where were you born?

RM: I was born in High River, Alberta. My family were ranchers, west of Cayley about 15 miles out of High River. But at an early age they moved into Calgary and basically I became a Calgarian and was raised in the city.

NM: Were you not the first baby to be born in the hospital in High River?

RM: That is right. It's something, I suppose when one looks back they realize how old they're getting because as I remember the records are that I was the first baby born in that hospital and the hospital is gone and a new one's replaced it.

NM: So your education was first here in Calgary?

RM: Yes, my education when I went to public school and high school in Calgary and then on to the University of Alberta in engineering.

NM: Why did you choose petroleum engineering?

RM: I guess the prime reason was that the oil industry actually did exist in Alberta prior to 1947 in the Turner Valley field. In the early 1940's I started working as a roughneck on the rigs in Turner Valley.

NM: Was it for summer jobs?

RM: Yes, it was a summer job. I broke in roughnecking on one of the north end Home Oil wells. It's interesting that the top push on the rig was my brother-in-law, Harry McMillan and it was a Drilling Contractors rig, which of course, was being run by Ralph Will. He owned and was the President and Manager of Drilling Contractors. So there was quite an experience breaking in to the oil business in that manner and then I worked further there, but in those days you simply worked from well to well, it wasn't any continuous thing. It's much like roughnecking is today, you worked as the work was available and then were. . and we didn't think of it as being laid off, we just thought, that well was finished, we'd have to wait for another one. But in effect, it was the same idea as being laid off. Although I'd worked for Drilling Contractors, I think on two occasions, in between I ended up working for Newell and Chandler in the Princess area and some of the original wells out there. It's interesting, they were Pacific Petroleum wells as I remember. The McMahan brothers were promoting the well. Some interesting things, I think it was John Mackay was the drilling engineer, I'm not too sure if Maurice Paulson was around in those days or not. But in any event we certainly had lots of trials and tribulations drilling the well, we ran into the anhydrite and the mud thickened up and we had a terrible time

with the well. But as a roughneck of course, the longer we had to work on the rig, the more work we had.

#034 NM: So did you live in Turner Valley?

RM: No, I still lived in Calgary at that time but was working out in these various places. Some interesting things on that, I think, minor little sidelights but on that particular job, I guess it was the following year, it would be 1945, that work in Princess, while working for Newell and Chandler there, one little incident that I think is worth noting is that Hye Isenstadt??? or Hye's Restaurant was also a roughneck out there. I think it's fair to say he wasn't the greatest roughneck but he was the best card player. But I think perhaps the work on that rig led to his success because they were moving some pipe, although I wasn't involved, they dropped a sub on his toe and mashed it badly. I don't know whether he lost it or not but he was on Workman's Compensation for about a year and a half after that and I think that gave him time to get his feet wet in the oil business and the restaurant business and get himself going. Kind of a neat thing but he did work out there, he was one of the roughnecks. In those days things were, as we call them, were run on a haywire basis and it wasn't long after that that Newell and Chandler went bankrupt. And this all occurred of course, before the 1947 boom. They just didn't hang on long enough. And interesting thing, Matt Newell is still around, Shorty Chandler died I think, shortly after that or perhaps at that point had already passed away. In any event it was a matter of history thereafter.

NM: So after roughnecking in Turner Valley you went to the University of Alberta?

RM: Yes, I probably did go to the University of Alberta and then the next year, I had finished the first year in University of Alberta and then went to Oklahoma.

NM: Which year did you graduate from the University of Alberta?

RM: Well, I didn't graduate, I was an under graduate from the University of Alberta.

NM: So then you went straight to Oklahoma?

RM: That's right.

NM: And got your B.Sc.?

RM: Yes, in 1947.

NM: And then what did you do?

RM: Well, it was an interesting part of the development in Alberta that I was graduating in the spring of 1947 and I of course, came back up here to see if I could get a job. Mind you this was before Leduc was discovered. The sum total of it was that jobs were very scarce, although I might have gotten on I think, as a roustabout with Chevron, which was Standard of Cal in those days, down at Taber. But with no real promise of anything other than that in the future. . I also talked to Imperial Oil and at that point they didn't have anything. I went back down to Oklahoma, back to school and had some fairly good offers. I think the best offer I got was \$165 a month as a roustabout with Standard of Cal. Then I went back to Oklahoma where I think I had an offer of something like \$305 a month from Humble. Then lo and behold Creole Petroleum came along and made an offer over the Humble offer and I think it was something like \$465 a month. And no income tax, to go to Venezuela. With that, I came back here after graduation, I accepted the job with

Creole, with the sole provision that I wanted to come home and see what was available. Coming back and talking to Imperial Oil at that time, I think firstly they weren't too anxious to interfere with a Creole offer but then secondly, the best they would do was \$175 a month and there was just no comparison. So I think considering the exchange rate and everything else, I was so much better off going to South America, I just couldn't resist it. So I went to work in Venezuela with Creole.

#080 NM: What did you do in Venezuela?

RM: A large part of my work ended up being in the reservoir area, they were very short of reservoir engineers and basically it really hadn't been started as a reservoir group. There were the odd person doing field studies but I was really one of the first people that they had designated at least partly, as a reservoir engineer but considered as part of the production department. It ended up though, because our work was being done in the Marracabo office, that we looked after the field operations out of Marracabo, which was the only land base operations in western Venezuela for Creole. As fate would have it, Tip Maroney had come into Creole at about the same time to manage the land operations for Creole in western Venezuela. So as a result of that I really went to work for him as one of the production, drilling engineers in western Ven. Out of that, of course, there were only about 3 or 4 of us on the staff there and we became good friends and as a result of that friendship, when Maroney left, as I remember in the winter of '47, '48 to come to Alberta to manage the production operation for Imperial and was transferred up here. As a consequence of our friendship when I became ill in Venezuela and I ended up also being transferred here, on the basis of an offer he had made me when he left Venezuela, which in effect was that if I didn't get along too well down there there would be a job up here for me if I would like it. So I ended up coming back home.

NM: Mr. McDaniel, what does exactly a reservoir engineer do?

RM: I think the best description of a reservoir engineer is it is a combination of the science of oil and gas reservoirs, as to their total, overall characteristics as to the production of the fluid within the reservoir, whether its oil or gas. And the science being somewhat involved in the sense of geology and fluid mechanics and related sciences was really, for all intents and purposes a new science that grew out of a combination of these various aspects of doing the job. The end point of course, is to determine the amount of oil or gas that would be recovered out of a reservoir and of course, many things became critical, the amount of drilling that would be required to do it. The net effect of that led to a very in depth economic assessment of what should be done. So that economics became a very close factor in reservoir engineering. So it became a combination of really, fluid mechanics, rock characteristics, geological characteristics and economic circumstances really brought about the term of reservoir engineering. Really the first challenge of reservoir engineering was to determine well spacing, that was really the number one challenge. At that time, say if we go back to '47, it was the standard procedure to drill well in 40 acre spacing. And it was obvious from the technical information that 40 acres certainly wasn't just an automatic, or shouldn't be considered an automatic spacing. And although it was in vogue almost everywhere up until the early 50's, it was soon

demonstrated that in many reservoirs much wider spacing could be employed and would still recover the oil. One of the last reservoirs in Canada to be developed on 40 acre spacing was the Redwater field, and even then a serious attempt was made to make it 80 or 160. I think in looking back that perhaps, if we had gotten to the 160 acre spacing it would have been adequate for that field. Now there may have to have been a certain amount of infill to recover the reserves but it would have done an effective job. But basically that was the last field and really the first one to have good reservoir work being done on it. It also perhaps was one of the first fields in North America in any event, where spacing really became an object study. So it became a leader in that sense and the studies made on that field really were an advance in the reservoir engineering field. Of course, the other side of it was that the reserve determinations up until the early 40's were primarily done by the geological groups and to a certain extent by the reserve groups of engineers, who used declining methods or production techniques to just estimate what the production would be. But there had not been a combined effort by the geologists and the engineers to really roll out definitive type studies of reservoirs. The net effect of this as these two sciences tended to come together and the requirements for such things as spacing and recovery methods and what not, the science of reservoir engineering was born. It came out, as many things are, is necessity is the mother of invention and that's what happened.

#151 NM: That's right. When you started working as a reservoir engineer were there many other reservoir engineers?

RM; No, there were very few. As a matter of fact, when I came back to Imperial, and having had some reservoir engineering experience in Venezuela and having been the only, well, I think there were only two people working on reservoir engineering problems. They didn't call us reservoir engineers, they simply said we were engineers working on reservoir problems. And there were two of us in western Ven and there was one in eastern Venezuela. And it was interesting, the chap that was in eastern Venezuela, Bob McCord, later became a well known consultant in the United States, out of Dallas, D. R. McCord and Associates, which is still around. When I left Venezuela I came back and I think that I had written a resume stating that I was a reservoir engineer, which was presumptuous on my part but I did come back to Imperial and they did put me to work in the reservoir group. The reservoir group at that point was one person, Bob Pott and Bob was a Dutch chap that had worked for Shell before the war and had worked in Indonesia and got out of Indonesia at the time of the Japanese invasion and just got out ahead of it and ended up coming to Canada after the war and instead of going back with Shell he ended up coming to Canada in 1947 I think it was and he ended up with Imperial in I believe it was the summer of 1947, so he hadn't been there very long either. And he again also, was hired to look after reserves and that sort of thing but we still, there wasn't really such a thing as a reservoir engineer. Out of really, the two of us, as the requirements grew and they grew very rapidly, particularly with the advent of the spacing problems, the questions of completion problems, the performance of fields as to what would happen, the science started to develop. And so again, it was a matter of necessity that the science would be

developed or that particular branch of scientific endeavour would start up. It was interesting then, that because of this necessity, that the reservoir engineering group, and it really wasn't even known as that at first, quickly grew. I think there were, I forget how many years, but by 1952 or 3, that in Imperial, there were approximately 30 engineers working on that type of problem, it's quite an interesting thing. Historically I think that the sort of things that propelled it along were these requirements to maximize recoveries, minimize the expense of drilling and of course, I think the other thing it became is to define or be able to plan more definitively. In 1950 I was transferred up to Redwater to get some field experience and worked there for several years, which was a very interesting time. About that point we then had field reservoir engineers and this was basically, the people to gather the fundamental data in the fields and to do small studies there. About that time, I think about 1951 Bob Pott left Imperial Oil to go in and join a consulting firm, Trafford and Associates as their reservoir engineer in the consulting firm. The reservoir section in Imperial, which came under the engineering section I think was headed up by Doug Knowles during that period of time. In 1952 I came back to Imperial to work with that section. It was interesting, I still had no title. I found though, that Humble Oil, in a visit down there in about 1953, that they did have a reservoir engineer, reservoir engineering was recognized as a section of the engineering department and when I came back, through I think a requirement hearing, when I was asked what my position was, generally it was conceded by the engineering group that I was the chief reservoir engineer. And that happened about 1952 or 1953. At that time, then the reservoir engineering group, as a fact of life, started to exist and it was completely adopted throughout the industry. And perhaps some before Imperial, but nevertheless, the science blossomed very quickly. I think a large part of it was because of the rules and regulations that were required by the ARCB. Because the Conservation Board in those days, did require fairly stringent studies to show and demonstrate what was going on in the reservoir so that applications such as spacing etc. could be applied. I think after about 1954 and I think with the advent of the Pembina field was one of the first large fields that were drilled on wide spacing. So it was interesting that it did evolve to that extent and really, quite a lot was accomplished. Because in Pembina going from 40 acre to 80 acre spacing in some parts and in quite a large area, to 160 acre spacing, reduced the investment significantly and perhaps made a very big difference in the economic . . . well, it did make a big difference in the economics of the field and I'm sure in some areas made the difference between in being economic or not economic.

#236 NM: So you always had to do a financial analysis?

RM: Yes, that's right. It's interesting too, that the economic part of it was also taken care of by the same group and when I joined Bob Pott that was one of our, it became one of our chores was to do the budget forecasting of production and revenues and to do economic analysis of the various deals that Imperial was in or getting out of or whatever the case might be. But that was one of the evolutions. After I left Imperial, well, I think even before I left, the economics group split off. . . well, it became a definitive group I think, while I was there, under Keith Wynot. After I left it became a completely separate group

and of course, they went their way. So really that in a sense, is how the economics group evolved. There was one interesting facet, that in about I would think 1952 or 3, and the Harvard Business School had started to evolve the concept of present worth, discounted cash flow analysis to assess projects. This was brought back by one of the Imperial executives who later went in to become President of Standard Oil of New Jersey, but he brought it back, the idea, that we might apply it. And of course, this whole concept was new because up until then the only criteria for investment was the payout time and the amount of cash flow. And it wasn't even considered as cash flow, it was really considered in the sense of profit ratio that you might expect out of a well. The most heavily regarded fact or facet was payout, how fast would it pay out. In any event, we started using the discounted cash flow technique, the present worth technique and I think it was the first time that technique had been used by a major company. I think of any major company. And to my knowledge the first time any oil company had used it as a guide for their investments.

NM: Was it a good technique?

RM: Oh yes. And today it's really the primary technique for examining the value of oil and gas reservoirs or wells. And it's a totally accepted technique, it's a very valid approach to making evaluations. I think the main part about it, it is an excellent measure of the existing economic circumstances and it's proven most applicable in recent years because of fluctuations in interest rates and this sort of thing. In other words unstable conditions make it even more important to examine. It still doesn't rule out the old measures. You still need to know when you're going to get your money back and you still need to know what sort of multiple of a return or a profit ratio you're going to have. But it was interesting that it was. .this chap that brought it back was Mike Hyder??? and he'd actually had taken this course at Harvard and I think he would have taken it in 1951 or 2, in that era, he came back out of that course to be President of Imperial. Perhaps might have been Vice-President at first, when we first got hold of this and then was President. In any event, he more or less thrust this on us to see whether we thought it was a good idea and I can remember the first time I read through it that it took me awhile to really see through it because all I had was the paper that had been written for the Harvard Business School. But it certainly and without too much endeavour, we were able to get into it but a number of the factors, we didn't have things like discount tables to work with or, there were no tools, so we had to really devise all our own. We had to make up our own tables and the whole bit.

#305 NM: So that was really pioneer work.

RM: Oh yes. There's no doubt that's what it was. It's something that has really led to a better measure of economic standards. It was interesting though to be part of it. But it didn't take long though, before the technique was adopted. Although I must say, it was a lot of pain and strain in having it adopted because nobody had used it and so as you used it you had to explain it to everybody to see if you could convince them that it was a good approach.

NM: After presenting the economic report for reservoir engineering, what about primary,

secondary and tertiary recoveries?

RM: I think an interesting thing, particularly in the group that we had in Imperial in those days, it was put together in much the same manner as had been done at Humble Oil and at Carter Oil. We sent people down to, initially Carter and then later it became Humble when that was consolidated, to go to the reservoir engineering school and they . . .

NM: This is the end of the tape.

Tape 1 Side 2

RM: Carter Oil had a research lab in Tulsa and at that lab they used it for experimental purposes and it was one of the really first areas of good reservoir engineering scientific analysis. And perhaps really, one of the founding areas of reservoir engineering. The part that we found, it soon became obvious that we needed to train reservoir engineers and this was throughout the whole Standard organization. And they set up training courses and I think this would have been about 1949 or maybe '50. The first engineer to go down was Don Lougheed, who later became the Chief Reservoir Engineer of Imperial and also became Senior Vice-President of Production. And Don and I had gone to school in Calgary and then in Alberta and were close friends. It was a bit of irony because we followed one another around in Imperial Oil. Interestingly enough, when I had started at Oklahoma, I think the last year I was at Oklahoma, a chap came on board in their engineering school by name of John Calhoun. He was perhaps the first full fledged professor of reservoir engineering at any school. I had the advantage of being there when he gave his first courses, so that if there was a chance to learn reservoir engineering I was one of the first to get it. So that gave me sort of a leg up on the concept of reservoir engineering and of course, that fitted well in Creole and then again, coming to Imperial. And I had studied what he had taught and also dug into whatever I could find in literature. There wasn't much available but it did lead one on to things like well log analysis, which Bob Pott was good at and that was one of his areas of expertise. Although it's nothing to the degree that it's seen today, it still was very good analysis were made out of the existing tools of that day. They're much better than most people would recognize today, we really did get a lot out of them. Some of the interesting sidelights of that would be that techniques were tried that led the logging companies to develop better tools to do jobs. And because of the unique circumstance in Alberta, where we really did have a well regulated industry and good information available and a progressive management that was young and strong and of course, the ARCB wishing to minimize waste and to do everything in a modern manner. But a very fertile setting was available to go into reservoir engineering studies. Some of the studies that we might think of as being, today would be tertiary, were even started at that time, I would think '53 or 1954, when some of the first reservoir simulation work was done. And the first work that I'm aware of that was done in Canada was done by Art Bain???, who's still with Imperial Oil or with Esso. And Art also had gone to Tulsa, had gone to the school down there and he had started some work there and of course, there was quite a number there of good reservoir engineering work. Art brought that back and started work on the Golden Spike field,

which looked like it would be a good place to start a sophisticated recovery technique. Even at that, the concepts of water flooding and flushing by water and the character of recovery mechanisms really started to be delved into. But we were then able, because of the change in the allowable system in that same year, it went from not having a set allowable or an arbitrary allowable based on really, not reservoir factors but somewhat unrelated factors, changed into really a reservoir assessment, to arrive at allowable factors. And of course, the allowable factors determined the economics so that economics was always a part of the equation.

#047 NM: So does each of these recoveries, primary, secondary, tertiary, end up as another science?

RM: No. I think they're truly just part of reservoir engineering. Of course, natural depletion can be under a number of circumstances. It's generally regarded as, in a sense, if one speaks of natural depletion they tend to point towards what is known as solution gas drive, which is a reservoir of constant volume that has no outside or external forces affecting it, the oil reservoir itself, such as a gas cap or a water drive. That type of drive mechanism is relatively inefficient so the name of the game is to get that efficiency up. Where a strong water drive exists it may not be advisable to even concern oneself with trying to improve it, although in some areas, even there, techniques are now being considered to improve recoveries. But a good example of that is the Redwater field, which will be depleted by a natural water drive and although there may be some attempt in the future to gain more oil from that reservoir the recoveries have been very good. We were fortunate here to be able to deal with reservoirs of excellent quality. The fields in Alberta are probably some of the most classical reservoirs there are as to recovery mechanism because they have extremely high recoveries even under the natural reservoir mechanism. But it did lead to good studies and fertile ground for good studies. The one interesting thing I think that in Golden Spike, in the studies of Golden Spike and gravity segregation studies which were being done, that they used the first large computer at MIT, to do those studies on.

NM: I was going to ask you this question because over the years, with new technology, engineering must have changed a lot.

RM: Oh yes. The thing in it is that there's a huge requirement for computer capacity and it's interesting that really, one of the first large computer applications was made on the Golden Spike field. That was done at MIT and Art Bain did that work. And it was quite a struggle because it was an old vacuum tube computer and I can't remember the name of it but it was the forerunner of all the modern computers. It was really quite an innovative thing. I think it had something like a couple of thousand vacuum tubes and it broke down almost consistently with everything else you tried to do but at least it was . . .

#076 NM: A beginning. When you were working for Imperial did you work mostly in Alberta or did you go somewhere else?

RM: No, nearly all our work was in Alberta. Although when I say Alberta, it was western Canada because Saskatchewan opened up and there was a certain amount of work in British Columbia but the majority of the reservoir work was in Alberta. So that that was

the really the start of it. And then there certainly have been further evolvments throughout the whole of Canada as time went on. And we did have an interesting bit of work along with that though, we worked in the Norman Wells field at that time and that was one of the things that we did maintain a reservoir engineer up there. Or started to maintain one, Ed Cupland???, who later became a manager in the company from the reservoir engineering department went to Norman Wells to look after that operation. That field now, there wasn't much requirement for the production for many years but now they're in the process of constructing a pipeline and in putting in a major secondary recovery project. And a very sophisticated one. So it's interesting that that happened. As to the question of primary, secondary and tertiary recovery, we really didn't think in the terms of secondary or tertiary, we lumped them into one.

NM: This came later on.

RM: Yes. No, this happened in those days. Because we in those days, looked at putting in a rich gas mixture into Golden Spike to flush the reservoir. So that it wasn't anything that new and it wasn't long after that that they actually did put a missable??? bank into Golden Spike. So that, the concept of it being tertiary I think, is more of a tax consideration than anything else, or a degree or certainty. I think if we say, it's down the line. Mind you there are things that now seem to categorize themselves better in that, such as CO2, flooding, the viscous fluid. As we get into those more sophisticated areas, they perhaps can be put into a tertiary category, just simply to keep track of them. So we have a better definition of what we're doing. But tertiary in one reservoir might really represent almost, certainly it wouldn't be any more than a secondary concept in another in the sense that if we take a reservoir such as Golden Spike or maybe even Wizard Lake, which is perhaps even a better reservoir or is a better reservoir. Really the concept of putting missable into a field like Wizard Lake is really quite a realistic thing to do, would have been 25 years ago. Although it really hasn't been taken up to that degree, they have innovated even better techniques and improved the method. But some of these things really were started at a very early stage.

#110 NM: You stayed how long with Imperial Oil, 3 years?

RM: I stayed from 1948 to 1955. In 1955 I formed a consulting firm. That was quite a happenstance because Bob Pott was working for Trafford and Associates at that time and I, at that time was Chief Reservoir Engineer at Imperial, but we were good friends. One Saturday night that we were over at Bob's place to play bridge, and when we went out at half time or whatever it was in the card game, he said to me, as of Monday morning they were going to announce that they were going to move out of the consulting business and were going into the oil business for Colorado Oil and Gas, which was the operating oil company of Colorado Interstate??? at that time. So I said, I didn't really know what to make of it. But he said to me, you know there's going to be a real opportunity, there's nobody in the reservoir engineering end of it and the only competition at that time was Sproule and Associates. I knew Cam Sproule a bit but I hadn't really thought about the consulting business at all. That was Saturday, on Sunday I mulled the idea around. I think on Monday I had to go to Saskatchewan and I still really wasn't certain. I think at the time

I talked to Ed Cupland, he happened to be down there and it was just because he was there. I think he thought I'd lost my mind if I even considered it. But in any event I came back on Tuesday and thought some more about it and I guess, being young enough, I shot from the hip and on Wednesday morning I went in and resigned, without having an office or any idea or anything of what I might do. It was interesting, by Wednesday night, I had my first job. More interesting still was that on Monday morning, Imperial hired me to represent them on a pipeline case in Saskatchewan. So I really had a very good break in starting out because there was nobody to take really, Bob Pott's place. And so therefore, I really had a running start, although when I say a running start it was fairly thin and my office space, I'll never forget it, I was about 3 stories up, it was above Pickertys??? on 8th Avenue, between 1st and 2nd Street West. And it was on the 3rd floor and I remember the office rent was \$50 a month. One little thing, I was thinking about Art Bain and that first computer and I think the computer was called the Uni, the Uniac, I think was the name of that computer, it was an interesting thing. Then I really evolved into another area of engineering work. Our work soon ??? the dollars and cents area. The main requirement of reservoir engineering was really the assessment of value and one needed the reservoir background to get into really, assessment of value. And really, that area is what I've followed ever since. Although we've done a lot of engineering studies of various types, most of our work has been tended on the assessment of reserves for projects or economic purposes. But I think the interesting part were those early days. It wasn't uncommon for us to work all night on a project. I think the longest stretch was 72 hours to get a budget out. But that really wasn't unheard of because in the field you might work that long on a well or something. We thought it was a big break in Imperial Oil when we didn't have to work on Saturdays anymore, that was a great concession by the company. But most of us worked every Saturday anyway. But because we didn't have to work, that was quite a concession. Still Saturday's were very much a work day for as long as I was every there. But it's certainly changed a great deal since then.

#164 NM: So Imperial was in fact, your first client when you went into consulting?

RM: They were actually about I thin, my third cleint. I think I had two quick jobs, one of them came through the Royal Bank for one of their clients and I can't remember who the client was but it was somebody they'd directed to me. There was somebody shortly afterwards and it wasn't very long afterwards, I think it may have been that first week taht I got my first job from Home Oil. Interestingly enough, Maurice Paulson, who had been my boss at Imperial at one point, and had left Imperial to go to work for Home Oil several years before, when I got out he came to me with a small problem they had. So I think they perhaps were the second client and then Imperial was probably my third client back again. But right off the bat I was so busy I didn't know what to do with myself. So it was really good. I think those days were interesting too because a number of companies really started in those days. In that early stage, you know, thinking back, I can remember the first well that Bow Valley Industries brought in. Doc Seaman came to my office and he had a well that he drilled with Joe Phillips in Saskatchewan and he'd taken an interest in the well. I don't think Joe Phillips at that point had enough money to carry the well and

Doc had gambled on it, the drilling costs, that it would come in. And they really did find a very good well and I think that was with the Bank of Commerce. I think Joe Phillips and the Seaman Brothers, which later became Bow Valley Industries, really that well was one of their real starts. So just to have seen it and been involved in it was very interesting. And a number of things like that happened. I remember that Ranger Oil had a relatively small operation and I remember Jack Pearce came into my office at one time, there was a Saskatchewan sale coming up and he managed to get a couple of parcels on the basis of a study that we had done for him. And it turned out very well and that was one of their prime projects. And that all started in that 1955 or '56 era and it worked out very well for them. Another client that was there very quickly at the same time was Western Decalta and I'm not sure that they didn't even . . . the came in that first week or two that I'd started up.

#196 NM: So you were in business very, very fast.

RM: Very quickly. In those days of course, you didn't have much to go on and I was afraid I'd starve to death. I think my wife was ready to kill me and of course, at Imperial they thought I'd lost my mind. Because I actually had a pretty good job there and was doing very well and when you have a good job with a big company you don't leave. But it was interesting, some other people had left. Like Jack Gallagher had left and he'd gone on his own with Dome. And I used to see Jack in those days and we did work for them very early in the game too. And there weren't many consultants around, so they didn't really have much choice.

NM: Did you hire people to work for you?

RM: Oh yes. I started out slowly. I guess that I was so cautious of the economic circumstances that having come from a big company where you had, in theory lots of security, in going out in the world where you had none, all the work you got you did as much as you could yourself and then you slowly built staff. It built up fairly quickly after that though. It took me about 6 months before I was willing to venture very far but I soon found I had lots of work to do and could get staff. I, no doubt, didn't expand though, as quickly as I could have. I know that. I could have expanded much more quickly and taken on more clients but I was very cautious.

NM: Did you work all over Canada or in the States?

RM: Well, we've done jobs all over. But really, the main industry has been in Alberta and this is where the majority of the work is, although we do work throughout all of Canada and we've done work all over the world. But basically, because of the tremendous knowledge base that you have to have to work in any area, to do good work, unless you do a lot of background work, you really have to stay in a fairly well defined area. So it's difficult to move out of an area and have good expertise. And I find difficulty in going to other areas and doing what I think would be a really first class job without having all the background. Although we've done some but we've never pressed that area. And up until the last few years at least, we've always had enough to do so we've never really pressed it.

#228 NM: And you've been having this company since 1955?

RM: Right.

NM: Are you planning to retire one day?

RM: I suppose I've worked all my life. I don't know what I'd do if I ever retired. So that if anybody kids me about it, everybody wonders and when they ask where I am on a weekend my wife says that I'm shopping at Eatons and that means that I'm at the office. I'm, I suppose a workaholic in a sense. I like the industry, I like the job, I like working the problems, I'm interested in it, I like the involvement. One of the things is that they're a great group of people in the oil industry.

NM: Hard workers too.

RM: Well, people are very dedicated, they work very hard, they're ambitious, it's a very ethical business on the whole. I mean, there are very few instances that it isn't . . . it's much better than most people would perceive it to be. And it's a great challenge, it's like playing a big game all the time and you're part of it. It really is a challenging area to be in. So I guess my problem will be, I'll be around until I'm pushed out and I'm sure that's going to happen one of these days with the fast evolution of work. I think in our firm, we have done some things, I think we started in the computer work very early, using computers and that was through a member of our firm, Jerry Knutson. He had also worked for Imperial and he had the first computer that Imperial Oil had, it was under his arm. It was what they called an LGP-30, which was a pretty small device. But nevertheless he was able to fashion reservoir engineering problems on it, this would be in the 1950's too.

NM: So it was early.

RM: Yes, very early. And Jerry joined us in 1959 and immediately, right then, we started going in using, started to use computers. So we've been doing it ever since and we develop our own software and whatnot. So we've been at it 25 years now. So it's quite interesting from that point of view. We were the first consulting company, engineering consulting company, to install an IBM-360 series computer. That was about 1965. Then we've progressed on with various machines. But it's been interesting that we were really the first to have one, so that our evolution has really been built on using machines and that sort of thing.

#270 NM: Can you comment on the ups and downs of the oil business, you have been a witness to that?

RM: Yes, I think that the oil industry really relies. . . two factors I think, are prominent, one of course, is the demand for the product as related to the world supply. And as things occur in the world supply, big discoveries are made in certain countries and that supply is available then it tends to impinge on the demand for crude in other areas. But behind it all really becomes what I think one could call, a major trend discoveries or major country discoveries are really behind it, that a major trend of discoveries is made. And that will create a great supply of oil and/or gas and put it on the market and as a result of that gas and oil being developed, it suddenly floods the market and therefore the industry, once that occurs, tends to go into the doldrums. Because they really created. . . a demand has occurred, the demand has been filled, the industry then goes into a lax period. And the history of the oil business is up and down on that basis.

NM: It's like a yo-yo.

RM: Just like a yo-yo. And we've had several, really, trends of the major discoveries. We had the original Leduc or Devonian discoveries in the Leduc trend. That quickly flooded the market, by the time Redwater started to come on the market, the market started to become flooded. By 1955 there was a fair doldrums in the market. Well, from 1952 - '55 it was very quiet. '54, Pembina was discovered. It started also to create a market problem and then in about '57 or '58 the Swan Hills trend was discovered. All these fields quickly created great problems in the demand side. By 1960 we had a very slow time that developed because of the over supply. And that lasted until the late 60's, until about 1970 and then of course, the demand sky rocketed again. And we went through great years of a surplus supply and then again, demand and then the demand picture would look up and away things would go again. Some of these were created on a political basis, some were a fact of straight market supply and demand. But the ups and downs have been part and parcel of the industry. It's certainly a case of world economics and political circumstances that progressively have become a bigger factor in it. But it's interesting that people will say that we've seen the last of our oil discoveries or whatever and I think that if we go back to the middle 1970's everybody said the oil industry is finished from a development point of view, we won't see anymore. A bit of well development went on, particularly as to gas, till about 1980 and then it really looked pretty grim. Even though, and I think that, although people were drilling a lot, the facts were it was thin. And about 1982 we really hit a low, people said, the oil industry is finished, from the point of view of oil production, not necessarily gas because there's certainly a lot of future in gas but they just said we wouldn't find much more oil. Surprisingly enough, a lot of people found a lot of oil in 1982, '83 and '84. It's come back.

NM: So it's cyclic.

RM: Yes, it has. They've done a very good job of exploration. So it becomes a matter of effort, involved as to supply and demand. And if you really take it back, that's the cause and the effect of that.

NM: This is the end of the tape.

Tape 2 Side 1

RM: The ups and downs of the oil industry, there's some unique things but if anyone wanted to know what the health of the industry is, all they'd have to do is ask an iron peddler and I'll explain that later, how things are. As the iron peddler said, if they're good, you knew the industry was good, it was having boom times, if they said they weren't so good, you knew it was mediocre and if they were having a lousy time you knew things were terrible. And we speak of iron, there's a term, iron peddlers, it's a broad term meaning the salesmen and companies that sell heavy equipment. That would be drilling rigs and related equipment, pipelines to a degree also. When things are good of course, the drilling contractors are in good shape and rigs are selling at what you buy them for. When things are bad rigs are selling for maybe 25 cents on the dollar. I can well recollect, I think it's 4 times in my lifetime or my involvement in the industry that I've seen great despair within

the drilling business. I started out when rigs were worth nothing, in the early 1940's, or before the 1947 discoveries and then I think there were several periods of course, in between and we're seeing another one today, there's a real down time in drilling. But in Canada at least, it's starting to come back and that's the best indicator that we have of the ups and downs. But they are dramatic because the price of rigs I think, on the market, has varied probably, as I say, 4 times that I can remember, from 25 cents on the dollar or less, to \$1, to full price.

NM: So the iron is the pulse of the oil patch?

RM: Oh yes, because they're out there selling equipment and it's not a disparaging thing to talk of them as iron peddlers because we all have funny little names for everybody. One thing that people don't realize outside the industry, and many inside the industry don't realize but the oil industry started in farming community areas and the names and descriptions of the work that goes on is related to agricultural terms. And the terms tend to be very simplistic because the people involved were very straight forward, and when I say simple people I don't mean that they weren't intelligent, but their education background was perhaps limited but they were agricultural people, hard working, hard going people that would take the risks and get the job done. But a lot of the names that came into the industry, that's where they came from. So that if one relates back and thinks about the names they're usually very descriptive, as farmers would say things are, if you just think about that way, they're very much to the point.

NM: That's true.

RM: So it's much simpler than people think because they just don't get the feel for it.

#031 NM: Can we talk about the contribution of Alberta to the development of the Canadian oil industry?

RM: I think if we think in Alberta terms that really Alberta has been the core area and of course, what started that was the advent of finding production in the Turner Valley field and gas production up in the northern part of the province, well, south and north, which created a utility system in Alberta to use natural gas. The evolution from Alberta was, I think to a considerable extent that there was a good climate in Alberta from the development of an industry. That we had and I think it might be termed a right wing government but I think, better still, we had a very good work ethic here and the people that fit that work ethic. We had the concept that you worked hard for what you got. It was brought in I think, because we were basically an agricultural community but also the type of people that came here were people that had visions in their eyes and they were willing to work to get them. To go on with that, I think the combination of these circumstances tended to develop an entrepreneurial sort of a concept, although that really is a new term. I don't think anybody thought of themselves as being an entrepreneur. They were willing to take a risk and get into business and Alberta, as an area has been a real up and down area, when things are good they're really good and when they're bad, they're really bad. For instance I don't think any place had a greater boom than we did during the 1920's, when my family did very well and in the 1930's when everybody lost everything, which my family did. And yet it was taken in stride. I mean for the most part people lived

through this and went back at it again. I think with that sort of background, it fits the oil industry, it fits that concept of people willing to take a risk.

NM: The spirit.

RM: Yes, that's right. They would gamble. My father used to have an old saying, when things were bad he'd say, and it was a favourite saying in the farming community, that in Alberta we trusted and in Alberta we busted. And there were a lot of things like that that fit the industry. So the industry naturally fitted into this. So one thing went with the other and people were attracted to it, and they're good people. People I think, that come here, as a whole, they have a glint in their eye and they're out to do something to prove themselves and there's that very up feeling here. Even when things are bad, there's still people that wander around and say, you still find them being up. As bad as they were in the last 2 or 3 years, people still didn't. . it was amazing to me how well they responded individually, people who had really been hurt still put that aside and said, well, I know I've been hurt but that doesn't mean I'm quitting. And they didn't quit, they're back at it and the industry is still alive and still going, it's amazing.

#062 NM: Can we talk about your political affiliations?

RM: Well, I think it's probably a bit of interest, from my personal background and having been raised here and it being a small community. Firstly I went to school with Don Lougheed, who was Peter Lougheed's brother and of course, I knew Peter but it was at Don's younger brother. And Don and I, scholastically, were at about the same level all the way through school and on into university and then into our careers in the oil industry and have been very good friends all through that and still are. But Peter came along and one of the things, I had somewhat stronger athletic inclinations than Don did, although I think in many ways he's a better athlete than I am. But in any event, one thing we started to do, among other things, we played football and when we went to high school we had a funny little high school fraternity that seemed to allude to the athletes. I suppose today they'd be known as the jocks but in those days they were kind of the big time operators. But we did play football and in the early days we ended up that type of sport, in the high schools was eliminated because of the war. As soon as the war came on that was stopped. And there was really no outlet for this. In any event they started up junior football. I think the first time was, I'm not sure whether it was the first or how it worked, but it was the West End Army team or something like this. In any event, and I'm not too good on the history of that but we all started playing football. Laterally, Peter Lougheed started playing football because he was a good athlete and there was a melding of groups there because in the same little high school endeavour that we were in, he became a member of that and although he was several years younger than I am, we all became affiliated with the same athletic endeavour and I think it seemed to fit the mould of the people. We were all out there to do something, bang away at it and that particular group, it had a certain facet that is hard to explain but certain groups of people tend to develop a very close association and they carry that on and amazingly it has carried on right to this day. A lot of us are still very good friends. For instance yesterday I was at a little group that gets together just before Christmas and they talk about the good old days and they were all members of

those original teams and we've all been friends to this date. And it's interesting that's still carrying on. The part with Peter Lougheed though, was that we always used to kid him that he was a great politician and that one day he would be Prime Minister or nothing less than Prime Minister. Anyway, that was a lot of kidding but it ended up when we moved back top Calgary from Redwater that we lived in lower Elboya. And it ended up that when he graduated from school they lived back to back with us and so we got to know them a lot better and saw quite a lot of them. In any event he did that and then he went to work for the Mannix Company for about 5 years and in one way or another, the Mannix family and our family had been friends, so that we saw quite a bit of one another. Then he decided to go into practice which he did and finally, one time . . . and so we started to see quite a bit of them or continued to see quite a bit of them and this same group of fellows, and their wives of course. But one day he came to me and he said, I'm thinking about going into politics. I said, well, I'm not surprised, I'm pleased to hear it. In any event he said something to the effect, he'd talked to several of his friends and wondered if he went if I would help him and I said, sure. I didn't really know what I was getting into. Either that time or later and I think we had several meetings with a number of us and he said, one area we really need to worry about is finance, could you work on that. I gulped and said, sure, you know, it's a team effort, the concept, we'd all get together and he wanted to try it so we'd all be behind him and we'd all do our best. That was about 1965. In any event, at that point he pushed along and he ran for the leadership of the party which he won easily. We thought it was a great victory but I think he would have won it hands down no matter what had happened. Because he really was a very attractive candidate, although at that time, knowing him so well, we knew all his faults, not just his good points. But it evolved from that, that I started working on the finance end of it and have been involved in that ever since. And it's been a great thing of interest and it's been certainly something that he's evolved into the leader he has in the province and is Premier and such a strong individual. You could see all these qualities in him and we used to kid him about it. And he was a very strong person, he really exemplified what I'd mentioned about the vigour that people have. . .

#122 NM: A born politician.

RM: Yes. And he's brought it into the political sphere and some of the interesting things in that is that I think he's brought a lot of spirit of that. People might think of him in some ways being right wing, in other ways being even left of centre in some of the things, in the sense of compassion for the problems of the people. But he does have that strength and conviction. And the concept of team work which he was always part of and these things have been brought out in his politics, I think, to the great advantage of Alberta.

NM: Are you still helping him?

RM: Yes, still involved. One of these days they'll throw me out but it's still fun.

NM: Can you compare the training of oil people in your time to what it is nowadays, it has changed so much?

RM: Well, there have been a great number of changes. I would think the most interesting one is that in the oil industry, like many other industries, they do a great deal of corporate

training, they take individuals out of schools, some out of even high school and train them. There are several unique things in Alberta that really don't exist in other areas, or haven't existed up until recently in other areas. One is, SAIT, which was really the first technical school in North America, one of the first in the world of its type. And few people recognize this. And which really developed to augment the apprentice concept that came from Europe in the early 1900's. We needed a great deal of craftsmen and various types of skills but they weren't here. So SAIT or Southern Alberta Institute was started to supply those people to Alberta. It's an interesting sort of thing.

NM: Yes. I was told they have a very good petroleum course.

RM: Yes, they have some very good courses there and they turn out. . and that's evolved of course, into technologists and whatnot. That area, they have certainly supplied a great number of people to a certain level of the oil industry and as a result, in a lot of field operations and a lot of that type of operations, we have a lot of those graduates who have fitted in and have filled a very necessary segment. So we have a very well rounded scientific group because we have the pure technical people, we have the people who are say, SAIT graduates, we'll call them near technical but in a sense they really do have a skill all their own and fill an important role. And I think that's something that's often not really given much credit. The other thing is that because the science here was at a plane, where we had a good information to work from, we had very a straightforward approach to the problems and very good communication between the entities, it really created an excellent place for people to learn and for corporations to develop people. So the net effect of it is that Canadians have really shown a mark on the world's industry and Calgary has evolved into one of the real technical centres of the world. And if you combine all the learning capacities, the high quality of our graduates, the attractiveness that we've had for people coming in from all over the world. And Calgary I think, is an easier melting pot than say, a Houston or a Dallas or any of the other points, we really have had a very good worldwide sort of attraction. Because it was a place that people could come and learn and do and be a part of it. The net effect of it was I think, we've created a real area of learning and of expertise. And the fact that expertise is here, people learn from it. I don't know whether we can credit our academic area as much for that as we. . really it is part and parcel of the industry development. But it is interesting that it has occurred and is here.

#174 NM: How do you foresee the future of the oil industry, here in Calgary and all over Canada?

RM: I think that we're blessed in Alberta with the largest single hydrocarbon potential in the world. Now there's a comparable one in Venezuela but the fact is that we have huge tar sands deposits here and just through fate, they're not. . if they were maybe under slightly different circumstances they'd be recoverable means, but they're not. The fact that that deposit is here in one of the advanced nations of the world, in one of the secure nations of the world, which Canada has to be considered in, makes it a prime area for the development of that tremendous resource. I think it's something that's going to happen. We certainly have frontier potential yet, we have large natural gas reserves but I think all

of them are miniscule when we compare it to what we do have in the tar sands potential. And that I think over time will become an enormous potential in the world. Now offsetting that of course, are the world markets and the world supplies and we're going to be in the same old up and down industry we've always been in and I think we've been in a very great low and now we appear to be coming out of it and I think we're going to see a large push into these areas and a lot more done, particularly in the insitu recovery. But I don't think I'm naive enough to think that we're not going to have another down time. I think it will still be the old ups and downs but there is a huge potential here and there's a huge potential for people and technical input. So I think on a long term basis there are great opportunities here in that sense. So I think the industry will see a tremendous growth period again, but it will be different. It will be more of a knock them down, hard work push to get it done. I don't think there will be the great flutter in it that there has been.

NM: ??? boom again ???

RM: Well, I don't think it will be. . it's getting tougher all the time. So that it's more difficult to come up with the big things that are going to be really spontaneous in the sense of the magnitude of them. It's unlikely we're going to see that sort of thing again. But nevertheless we'll see, we'll grind it out and there will be a lot of attraction here. And for the size of population we have, I think we'll attract the same hard driving industrious type individual and the entrepreneurial spirit. In a different sense, because I think we'll do it more in a technical sense. So I think a great future but it's a little hard to know when and how.

#213 NM: What do you think of nationalization of oil companies, for example, like Petro Canda?

RM: Well, I guess the first feeling you have on that is it's disaster. In this sense, that I think the motivation was well founded, in that I think most people now, because the country's maturing and we're maturing we'd like to see the ownership in our own hands more and I think that's a natural thing. It's just natural to want that. I think that the politicians were perhaps somewhat naive, in the sense that they thought they could just create it in a simple manner. Now perhaps in the sense that Petro Canada, that they've made an attempt in this regard and maybe it will end up all right. The fear in it though, is that that type of organization will destroy that incentive that the individual has and the concept of entrepreneurial development. It's argued that the big companies have already tended to destroy this and therefore, there's no real difference, it's just a matter of ownership. I don't really agree with that. I think that the government tends to establish a bureaucracy, which is seldom as efficient as the individual or the corporate entity is. I think the happy medium though, is to see the smaller companies do more. And I think they're now leaning that way. So the entrepreneur, wherever he exists, can put it into practice. But still you need the big companies, you need the companies that have the where for all and the technical capability to get in the big projects. And I think we'll tend to see one rise and fall until we get a reasonable balance and that's what we need. The problem with having the government come in, they tend to brush over the whole thing and say, we can do it all.

There's a tendency for that sort of bureaucratic thinking, they're good at everything, why can't they be. And that just simply doesn't work. The fear would be that they would spread down into the areas or expertise, even our own, which in many ways they have. Into areas such as the pipelines and the drilling and this sort of thing and if they get too far into that they tend to destroy it. So that, although we need the large entities and certainly in time we need the Canadian ownership but we just have to be pragmatic about it, what's practical and what isn't. The net effect of it is, until we have sufficient where with all in our own country to do these things we need that help from outside. And I think the fact that some of the large companies have been active here, I think we'll see that they become part and parcel of our world. In other words, I think we'll see that the international companies, as they're starting to call themselves, will start to truly become that. That whatever they have in any one country will be theirs but there will be. . they're start to create their corporate entity on a nationalistic basis. I think that sort of evolution is already occurring and we're seeing it shift around. I think one shift for instance, is to see Shell move to Alberta. Why the others aren't out here I don't know. If most of my business was in one area, most of my profitability was in one area, I'd be there. Why Imperial Oil is in Toronto has always miffed me. I always had one dream, where if I ever got to be President of Imperial, and of course what's the chance of that, I'd move the company here. Because this is where their profitability is. But that sort of thing but I do think we're seeing that evolution, I think it's starting to happen and I think the pushing and pulling that goes on brings the problem to the surface. And maybe petrocan in a sense was a bad thing, in the way it was done and how it was created and the cost of it, but maybe in the long run it will prove to have been not that bad because it will have created an entity that will have served a purpose in pushing that way. So it's a push and pull. But I don't think it's a good thing and I think we've got to guard carefully against it, that we don't take away from the spirit of the individual, particularly that he can create things, whether it's by himself, in a small organization or with a large organization, that he can be rewarded by doing that. And I think that's what it's all about. We just have to have it there and we have to have the financial where for all to do it and Canada's just too young a country to have that. So it has to come in.

#283 NM: Let us go back to your career, who were the most influential persons in your career? Were there several of them or. . . ?

RM: I think that circumstances were more influential on me than anything else. I was brought up in the Depression and I suppose the people reacted in the Depression, your family reacted in that way. My feeling would be that there have been a number of people that had influence on me. Being a product of the Depression in a sense, I think that you have a very stern sort of a base to work from. You realize that it's a hard tough world out there and you've got to work hard. But at the same time be compassionate so it's a different thing than most people think of it. And that you work with your friends. I would say that by far the most important thing to me was that, for whatever reason, I tended to become a team player. I think it's because I wasn't any good at anything so the only way I'd get any mark at all would be to be part of a team so I learned to play on the team. By that I

learned to have a number of friends and I think that the thing that really has been influential in my life is the fact that I've had lots of friends, lots of good friends, very good friends. So you could name many people that have had bits of influence as you go along. You can say there's some marked ones like going to university at the time I did, to Oklahoma when John Calhoun and a few people like him just happened to be coming on the scene then and you picked up something from the. Or that you would run into a Tip Maroney in Venezuela that happened to get shifted around, who was a great person. I've been very fortunate to run into a lot of great people, just from time to time, like a Ralph Will working for Drilling Contractors, you know, that would give me some good advice to go on. And then the fact that I was younger than a lot of my conferers???, a lot of them helped me. An interesting thing was my brother, who was quite a bit older than I was, had a number of very close friends and nearly all of them were in the Forces during the war. He was one of 2 or 3 that was lost in the war and his friends more or less adopted me. They had quite an influence on me because I had good friends in them. So I always felt that I had lots of friends, no shortage of people that I enjoy being around and that we play games with. We have one little unique group that is fun and it's grown out of nothing, it's just fellows that like to play cards and play golf and shoot and maybe ski. Because we've all hung around together for a long time, a number of years ago, somebody tagged us The Rat Pack. And The Rat Pack is infamous in a certain way because there's nothing to it. But we still get together and we've become very close friends through this. I think it's a multitude of friends. And part of that is the way a lot of us were brought up. We were being products of a very difficult time. As I say, you had a dual feature coming out of that, you had a sense that you did have to produce and prove yourself, nothing could be handed to you. And I think that's a criteria here, people don't look to where you came from or what your parents were, they're saying what are you, that's the whole story. And so you were that product and the net effect of it is that you really aren't a product of individuals, you're a product of the people that you're around. I think that it is unique here, I think most people that are involved in the industry would say that it's a great group of people that they're associated with. And you have so many friends, really, I guess one of your problems are that you really don't do justice to them, you don't see them enough.

NM: You don't have the time.

RM: You don't have the time.

End of tape.

Tape 2 Side 2

NM: What were the most exciting experiences in your career?

RM: I haven't thought of that. I've had a lot of exciting things happen. Some of the things because I've not been directly involved in the industry but as being part of the team that saw things happen. Some of the things that may not have been too important in the eyes

of other people but have been important to me, I think, are really the fact that I've been part of that team. I think one of the things that was exciting was in watching Bob Brown in Home Oil as he created and a number of the things that he was able to do there, that brought about an end point. To being given evidence and a certain application for facilities and see them come through and them win. But sometimes it's not great things. Sometimes you look back and they're almost historic things when you look back on them. My involvement in Pacific Western Airlines, to sit in the chambers of the Supreme Court of Canada and watch Jack Major argue the case of the Alberta ownership before that august group and to walk out of there knowing he'd won, without a decision being rendered, to know that he'd done such a superb job. Probably for the many things that I've seen in the legal profession carried on, to see how extremely well it was carried out. And I think to speak to something of the moment, to work with Bill McGillvery??? on a case, a tremendously capable individual. To have worked with many of the really top legal minds in the country, I think here of the Ross McKenny's???, some of the top legal minds in the east, working with them and working through a case and winning it. Sometimes even a draw was great. And to work with a lawyer of Robinette's category in the east, who had fantastic capabilities. I really don't think, any greater than somebody, maybe not as great as a Bill McGillvery. Bill McGillvery is a very deceiving individual, in the sense of his mannerisms and whatnot, extremely good lawyer. But to see some of those things that way have meant a great deal to me. But I think more than that, I feel that it's sometimes the small things, to have good friends and to know that they're well and they're healthy and they're there and to go on a hunting trip or go skiing with them, those things mean a great deal to me. I think that people say, would you not reflect back to some of the successes and I really, I've been I suppose at the time, to be the President of the Petroleum Club or the President of the Chamber of Commerce or something, I guess they were important but I don't think they were as important or meaning as much to me as the people I work with and the world that I live in. And I really feel it has much more meaning to me and therefore I think the fact that you sort of live and I think as the old axion, if you can go through life with your head up high and look at it straight in the eye, that's the important thing, if you can have that. And I guess my own reaction in business, first of all in our business we've never lost a client through financial difficulty. I don't know of any of our clients that have ever gone into bankruptcy. There have been several near but I think they've all survived. So we take great pride in that, maybe we haven't always given them the best advice but it hasn't happened. So I don't know how you measure that. We've seen a lot of our clients being very successful in what they do. And that to me, you like to see. They probably don't even recognize that we even, they even feel we played a part but you know, you like to see them successful. And I think, to see my friends successful has meant a lot to me. You feel that you're part of their world and they're being successful and good things are happening. And if you can, maybe in a little way, see that go along, you stand up and you look out the window and you say, I maybe didn't do much towards that but I did a little. And the little things in life. People say, what single thing perhaps meant more to you. One little thing stands out, when I was still working for Imperial Oil and we lived over in south Calgary, in lower Elboya. Next to it,

there had been a trailer court and it was really a second class effort. Obviously the area was building up to be a good residential area and that trailer court just wasn't fitting to be there. I became, I think, President of the community association because nobody else probably would do it. But it became almost a vendetta with me that I was going to get rid of that thing and the then powers to be, I think, having an interest in it, were going to do everything they could to scupper my attempts. And we won, we got rid of it. And I look at it now, it's Stanley Park, it's got a beautiful development and it's one of those things you say, for the amount of effort I put in it that nobody knows anything about it. And I don't care whether they do or don't I just say to myself, that really gives me a lot of sense. . .

#062 NM: Personal satisfaction.

RM: Yes, it's a great thing to see. In other words, you made that effort, you perceived it as being the right thing to do and it was, obviously the right thing to do. Mind you, not everything you do turns out that well but it's a little thing like that, that amount of effort that at the time you felt very strongly about that you were able to turn into something real. The work with Peter Luhgheed to see him elected, it's a great thrill. That he was a member of the gang, you knew he had the talent, you knew he had the ability, you knew that he'd do a job. And certainly he could be criticized for many things he's done but nevertheless we're still here, we're coming back, it's still going to be a great place to live. It just has a lot going for it. And who's to say that somebody of a lesser ability might have blown the whole thing. Somebody else may have come along and done a much better job, who's to say. But on the other hand you know that you helped facilitate that. So those sort of things. But I don't have any feeling of any particularly great thing I . . . you know, a lot of little things influence your life. But it's I think, really if one takes the general concept, it's a multitude of things that have done it and the fact that when you do give for something that you feel that you've been rewarded personally in some way. I suppose they say some of these things are character builders and certainly a lot of them are. Some things that you may be able to do for people and I guess I have a very strong feeling about this, but I feel that we have a very open and free society here. Things that I have been pleased about is that I've worked with people and whether they be coloured or whatever their race or religion or whatever. But almost all our barriers have been broken down and some of the things I'm pleased about that I've helped break some of those barriers. So you have a good feeling about that. You say, it doesn't make any difference what anybody else knows, I feel I did my part. I guess the thing is I say, because I've never been involved in some of these things, like in politics directly or I was never a great athlete or any kind, in fact, I never even was a good one. But I feel like I've been on a lot of good teams. So you say, sure I was in the back row somewhere but I had the feeling of contributing. And the fact you have lots of good friends and you can hold your head up high, I don't think it goes beyond that. So it's just a multitude of good things. I've been a very fortunate person to have come along when I did and to have seen the things that I have and have enjoyed life from a challenge point of view. I guess perhaps one thing, I never had the drive and probably because my really stringent feelings or really I suppose, the encumbrances of having a background coming out of the Depression, but

that I was far more interested in security than I was in money. And probably dollars didn't mean as much to me as some people. The simple things of life were far more important to me, to have a home, to have it paid for, to have things the way you wanted them, that's more important than anything else. Because I've seen people, no matter how much money they had they could lose it. So money wasn't, I don't think, my great driving force. I'd like to have more but . . .

#104 NM: Before I ask you the last question, is there anything I've forgotten to ask you or anything else you would like to talk about?

RM: No, I think that there could be a lot of things to cover. I suppose the one thing in anything like this and I would fault myself in this, that without having done enough research and relay sit down and go through the records of the players, one thing that tends to be left aside are the people that really were players during the whole interview. And really they may not have been big players but they may have played an important part at some time. And therefore they tend to be forgotten, they're not brought into the picture at all. For instance, I'll give you an example, we talked about iron peddlers which seems almost derogatory and it sort of is in the industry but it's kind of done in jest. And because there's a lot of super people involved. And you say, who was the best iron peddler you ever knew. Like the Don Wilkens' of the world, who was a fabulous character or who's the best salemnsn around in the drilling business, like a Frank Crilley???. Who by the way, made a real contribution in the political scene to Petre Lougheed, he was the Chairman of the first Premier's dinner, nobody would ever remember that. And Frank has been part of the game and yet, he's not a high profile player. But everybody who knows him knows what a great guy he is. A lot of those people have been part of it and tend to be forgotten. And yet they've really been part of the team that developed it, they were part of the drive and the energy that did the whole thing. So they were players. Everybody is a player.

NM: Everybody has a contribution.

RM: I think this is what most people. . I think they great thing about it here is that there are so many players and so many people contributing. And it goes beyond just the almighty dollar. Really, they want to be part of that society and they want to be part of the real society. It's not being given a position in it, they jsut want to be a player. It's interesting but I think that's the way it works.

#131 NM: So here is the last question, looking back at your career in the oil business, what do you think of it?

RM: I think it was great. My father, I think if anything he wanted, with all the rest of that family, none of them becoming ranchers or farmers, I was the last opportunity and when I didn't do it, I think it was a real blow to him. But the fact I did end up in the oil industry I think was a great opportunity, no matter how you go at it I was very fortunate to come into it when I did. It's been great, there's no two ways about it. The people, the whole, the opportunities, the challenges, the struggles, all of it has been a super way to go. I could have been so many other places that would never have equalled it. So it's been a great

opportunity.

NM: Mr. McDaniel, I have really enjoyed interviewing you, thank you very much.

RM: Thank you.