

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: John Maher

INTERVIEWER: David Finch

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DF: Today is April 18th, in the year 2001 and we are with Mr. John Maher of Polaris Resources at 324 - 8th Ave. S.W., in Calgary. My name is David Finch. Can you start out by telling us when and where you were born?

JM: I was born in St. John's, Newfoundland, in September of 1943.

DF: And what were your parents doing there?

JM: My family had been in Newfoundland since about 1780. 1784 is the first record of the great-great-grandfather and that was the first time that the British Crown allowed settlers to stay in Newfoundland over the winter, so to speak, so for a full year. So we've been there for a long time.

DF: What did your dad do?

JM: My grandfather had quite a big fishing firm and my dad was in line to inherit that but he decided not to and he wanted to move from Flat Rock, Newfoundland into St. John's. He became there a detective with the Newfoundland Constabulary and subsequent to that he became Crown Prosecutor with the Department of Finance when Newfoundland joined or when Canada joined Newfoundland in 1949. His job was to collect some of the taxes that were newly introduced when Canada joined Newfoundland.

DF: So tell us about your childhood, your education and so on.

JM: I went to a private school in St. John's called St. Bonaventure's College. My father had gone there and as a young boy I had to walk home past the Geological Survey of Newfoundland. The Chief Geologist was a good friend of my father's, so from about Grade 6 on I was very interested in mineral specimens and geology generally.

DF: Tell us about your university education then.

JM: I went to Memorial University and did pre-engineering there and my wife and I got married while I was doing that. So we had to earn some money so I went to work, B. C. Hydro were building at that time, the Bennett Dam in Hudson Hope, B.C., the largest earth filled dam in the world. So I went there and worked as a technician, doing soil analysis, survey work and installing piezometers???, strain meters and strain gauges in the power house and dam. Basically installed all of those in the dam and quite a few of them in the power house as a sole technician under the direction of an international geological firm, Dolmage and Campbell out of California.

#029 DF: How long did you work on that dam?

JM: 3 1/2 years.

DF: So that was an interesting project.

JM: Yes. Well, it was sort of top flight soils research. I built, under their direction, some

permeameters, to measure permeability and porosity in compacted soils. We did a lot of bedrock testing so it was very, very interesting. I started out really interested in the engineering aspect of it but I ended up really interested in the geology, working for those two gentlemen. So after the Portage Mountain Dam experience I went back to Memorial University and did two degrees in geology there.

DF: And what were those degrees?

JM: An Honours Bachelors degree in Geology and a Masters degree in Geology.

DF: How did you get from hard rock into petroleum?

JM: Well, actually I don't see any difference between what people call hard rock and soft rock. It's just a matter of how much the rock's been heated up. If you look back at the Bennet Dam experience, I was dealing with unconsolidated rocks because it was the fill, for the most part and of course, the sub-dam studies. But the dam itself was all unconsolidated, compacted sandstones, gravels and then at Memorial there was a lot of emphasis on hard rock, volcanic stratigraphy, but I did all the undergraduate courses they offered at Memorial. They didn't offer petroleum geology at that time, it was about the only thing they didn't offer. But they offered lots of good soft rock courses. And actually, by the time I finished my Masters and had done a few summer mining jobs I had decided I was going to quit geology and do law like my father did because the mining company jobs weren't near as appealing as the B.C. Hydro. Although they wanted me to go back and work on the Mica Dam but I thought I'd sort of been there, done that and I thought, maybe I'll do law. So I had actually started to get ready to go to law school and this one professor convinced me to stay in geology, Dr. Brueckner. Warner Brueckner was a Swiss geologist who was at MUN, and he was my Masters supervisor and he convinced me that I would really like working for oil companies.

#054 DF: So how did he convince you to go into oil?

JM: He just said that the oil companies operated differently than mining companies. The mining company attitude at that time, to geologists were Logan boots, anorak and a hammer whereas the oil company geologists did a lot of their work in the offices studying records and some field work of course, but a lot of more professional white collar evaluation work. Most geologist with mining companies were not white collar geologists. At that time, I was thinking, my goal if anything was to be like Dolmage and Campbell, those guys in San Francisco, they were white collar geologists managing projects. So I thought, this doesn't look like I can get into that field so maybe I should do some law. Which I always liked the law because that's what my dad did. He wasn't a lawyer but as Crown Prosecutor I was always involved and used to go to the court house and watch cases and things like that, so it was very intriguing. And the investigative part of it was intriguing to me. But Dr. Brueckner convinced me to talk to Amoco and Chevron so I did and both of them offered me a job. They were going to pay all of our expenses for several months till we moved and got settled. So we thought well, we'd have to try it. And Calgary seemed interesting place so we decided to come to Calgary and try it.

DF: What year was that?

JM: 1971.

DF: Great. So what happened once you got to Calgary?

JM: Dr. Brueckner was right. I took the Amoco job because Amoco offered \$25 a month more than Chevron. It was I think, \$875 a month, versus \$850. And after I'd accepted the Amoco job, the Chevron recruiter was sort of disappointed and said, well, I could have fixed that but it was too late. Amoco was still called Pan American Petroleum at that time, they were just in the process of changing their name. They were operating a large drilling program at that time, on the Grand Banks. They drilled I think it was, a 33 well program out there. So I had met some of the Amoco people in St. John's and that was intriguing that they were drilling on the Grand Banks and I thought the Grand Banks was going to have oil. So that's sort of the reason, plus the \$25. Amoco treated me great. The first thing they did of course, I didn't have a petroleum geology degree per se. Not only me but all the new hires, and Amoco at that time was hiring about 5-10 new geologists a year, there were 110 geologist in the Calgary office - today there's only like 10 - but they don't need as many today either with computers. We have data, we have things. . people are more productive in exploration. But they trained me in every aspect of petroleum geology that I didn't know about, plus economics, plus of course, eventually management of people. And they were just a fabulous company with fabulous courses or out source courses. I worked very hard there to learn all that new stuff because relative to people who had petroleum courses, there was a gap in my knowledge there. But I really enjoyed it, they treated me fantastically and I found some big gas for them. After just a few years they put me on a project to look at northeastern Alberta. We started out working on some heavy oil but my project was to find some gas for a fire flood plant. After about a year of working and help from all the resource people that they had, we. . well, after two years I guess, we made a major discovery up in northeast Alberta called Leismer and the field is about 700 BCF. And then there were some follow up discoveries to that too, as well, that size, Kirby. So we found these big fields and after those discoveries Amoco even treated me better. But some private investors enticed me away. So I had a really great career with Amoco for about 6 1/2 years in Calgary and in Oklahoma. I went down to Tulsa for awhile after that and then came back to Calgary and then ended up leaving the company.

#102 DF: What were you using to find that gas?

JM: Actually what I did was, I just went back and read all of the ancient geological reports, every report available in the company and outside the company, right back to the original mapping done by the Geological Survey in the last century, which was at that time, like in the 1890's. Even in the 1890's those early geologists had mapped out significant elements of the regional geology that weren't really fully appreciated. So I had one of those maps on my office wall here and thought there's a major structural trend there and once I got investigating why was that there and we found out why it was there, that it trapped all these hydrocarbons. So that was very interesting.

DF: Were you using geophysics at that time?

JM: No, no geophysics, just geological mapping.

DF: Straight geology eh?

JM: Yes. The discovery well was drilled in '73, in the winter of '73. So it was a very large

field, one of the largest Amoco had found in the world for 4 or 5 years at that time. And then of course, a second field was found. So that was really interesting. I had lots of help at Amoco from log analysts, of course engineers, economists. So it was a very broadening experience for me and it was very interesting to see management strategy to find and buy the land and then drill the land for an exploration play. So I just sort of learned it right from the ground floor, from experts. So I've been trying to keep doing that ever since.

#121 DF: How many years was it between when you hired on and when you made that find?

JM: It would be about, just under 3 years.

DF: So that was a pretty fast introduction.

JM: Yes. I was very lucky, given the area, given the time, given the resources and it was a really interesting experience.

DF: Any stories from that discovery process, things that stand out?

JM: It was very interesting. I've published a few papers on that discovery. The most interesting thing was in the research of the area, it was just interesting. We found that there were mistakes made, just human error in some survey errors, in some well log analysis, and so it was an investigative thing. When I look back it was like the sort of things that I learned from my father. When he was investigating something, you have to collect all the facts, or try to collect the facts. So exploration is just simply that. It's trying to weed out the fiction from the facts. So actually a criminal lawyer and a geologist to me, an exploration geologist because there are other kinds of geologists, and there's other kind of lawyers, but you're investigating the data. As you are as an historian. You investigate the data and try to find out what are the important elements here or what leads to some new discovery. So that's what it was. I think it was a benefit to me that I came to Amoco realizing that I was weak in petroleum geology. I knew a lot about some things that geologists didn't because I had worked on all the permeability on that dam, so I knew an awful lot about fluid flow etc. But I knew very little about the origins of petroleum and generally nothing about petroleum, I hadn't really studied it. So I started out from scratch and I didn't leave any sort of stone unturned and then I found out there were a whole bunch of other misconceptions about the geology in that area. Even though the correct, very, very astute things had been published they weren't recognized for their potential. So it was just really interesting. It just showed me that sometimes it's something very obvious that everybody misses it. It's too obvious. And that was the structure that, actually Dawson who was one of the great geologist in the Survey published there. He said, there's a large anticline here or probably and nobody had focussed on that, never before and in any of the subsequent literature it was never mentioned. And it was, I'll show you on my wall there, it was just unbelievable. So I keep that map to remind me that it's the most obvious thing that you can not recognize, that's the key. Sometimes it's not hidden at all, it's so obvious that you just miss it.

#154 DF: Now you've mentioned a specific reason that Amoco wanted to find gas in that area, that was for another project?

JM: They had a number of heavy oil projects up there and one of the programs at that time

was at Gregoire Lake, near Fort McMurray, and the concept at that time was that they would fire flood the oil. Now there's water flooding and there's steam injection. But this was a plan where they would start a fire wall and have to inject some methane gas to keep the fire moving to warm up the heavy oil to pump it out. That project never came to fruition but we found 20 times more gas than they even dreamt anyway and it made probably a lot more money on that gas, a few trillions of dollars maybe, getting close to that, relative to the oil in any case. So it became a big, big gas play for them.

DF: Has fire flood ever been used?

JM: I think only experimental. I don't know at the moment, of any active fire flooding of heavy oil fields. But there's been a lot of research work done on it.

DF: Yes, they water flood and steam flood.

JM: Yes.

DF: Great. So where did your career go from there?

JM: After I came back from Tulsa and that northeast Alberta field was recognized, or my work in sort of helping to find it was recognized I had a lot of job offers to become involved in a new oil and gas company. I didn't really want to leave Amoco because they were treating me really good, they were paying me respectably. But I was still just getting into mid-management at that time, I was like an acting area geologist with 6 junior geologists under me. But in any case this prominent Calgary lawyer and a landman, Jim Palmer, and Angus Mackenzie, who had just sold a company called Sunnydale, were going to start a new company. There was Laurie Payne, Angus Mackenzie and Jim Palmer. So they offered me to be like, VP of Exploration, Manager of Geology for this new company, which was a nothing company. I had to buy some stock in the company and then I got some more options in the company. And I didn't know those people at this time really but I checked into them and they seemed to be . . . they had been very successful with their previous companies, in finding hydrocarbons and selling the hydrocarbons. And they did very well for themselves. So they thought I could find some big hydrocarbons for them and I thought, well, if I do find some big hydrocarbons then I'll own some of those hydrocarbons. So instead of working for yourself, you're a partner in the production which looked good. So I decided anyway, to leave Amoco and it was a big decision to leave and go with a nothing company that had basically no resources, just had some promotional owners who had been very successful in the past.

#193 DF: What year?

JM: 1976. The fall of '76. So I went with that company. It was a numbered company, 210693 Resources. They put some more properties into the company, had some big ideas. They'd done very well in the Middle East. They'd found a field in Abu Dhabi that had done very well for them. So they were going to do some more Middle East work and western Canada work and so anyway, we went with them and basically they were paying me a lot more than Amoco was paying me. I had some benefits which were very popular to get at that time, like a company car. So a company car and a significant increase in salary of maybe 50%. Amoco increased my salary but they couldn't get to that level without throwing their system out of whack. This is a problem with the large companies, they

have a system and they have to stick with their system. But in any case, it worked out well with Sceptre and I think we bought some stock in that company for 35 cents a share. We didn't find another big field, we had some close calls but Sceptre became a very large company. 210693 Resources became Sceptre Exploration, became Deca Resources, then became Sceptre Resources, which became a fairly large company. Subsequently it's been sold and bought. But the stock in the first 3 years, from 1976 to 1979, the little company became public, the President got it trading and it was high flyer on the market and it went from 35 cents to about \$14. Then of course, I had a lot more phone calls from people saying, would you come to work with our company. And it wasn't that we did anything great but that was a period when we found a few small things, had a few big disappointments, but the oil prices dramatically increased, from \$4 a barrel to \$13 a barrel. Many small Canadian oil stocks moved up in that period but Sceptre was one of the better ones, for sure. So that was a great experience and then I had a deluge of calls to start a new small company from brokers in Calgary and Vancouver in 1979, when oil stocks just kept going through the roof and there was just a lot of investor interest. And I had done fairly well with my Sceptre so I thought. . and the President of Sceptre quit, he was an excellent guy, he quit and I thought. . and the company needed some financial direction because it was running up debt. So they looked for a new President for quite awhile and they finally found one and then once they found a new President I was the next senior person there, I thought, I'm going to go and do my own thing. Because where's the company going to go, internationally or wherever and I had some good opportunities. So I quit Sceptre and I spent about 4 or 5 months looking at opportunities to start a new company. I bought a set of micro-film and a desk and a few tables and set them up in my garage and I started to work up some new prospects and look for the right kind of financial people, look for someone good because there were all kinds of stories out there of fly-by-night brokers and fly-by-night money and this and that.

#245 DF: Just a sec. How do you account for this. . I mean you start out with a major and within a few years you're working in your own garage, like why do you like to work for yourself?

JM: I'm an independent thinker. I generally believe nothing that I hear, half of what I see. Because I've found that's the way it is. Sometimes, like they say, if you're looking for riches, look in your own backyard. People always look to the greener pastures and in fact, they can be in your own backyard and I find that people overlook their own strengths and their own resources. And companies are really bad at that and the bigger the management gets actually, the more those people totally overlook them. They're always looking for greener pastures. I can work alone really well, I'm really happy to work alone and I was in my garage for 4 months and I was really happy and I could have stayed there. So I had all the resources I needed and I had the time to think, to sit back and just think, what are we looking for here and what are the signs that it may or may not be here. I think all good exploration geologists are creative, like engineers make fun of them, they're like artists but it really is that way almost. It's that you have to see something that other people miss. The data is the same for everyone. People say well, why didn't Esso find that field.

Because they didn't look at the data. You look at a painting, I look at a painting, we can see different things in a Picasso. And scientific data, there's lots of great places to drill wells, that's only one part of it, an important part because you have to find places to drill where you can actually get some land and get the resources together. But then it's a matter of perception of the data, analysing the data and there's lots and lots of what we call in the industry, by passed wells, by passed opportunities, not just wells but. . For many reasons, they may be engineering, they may be economic, people run out of money. But it's just amazing, it's amazing.

#279 DF: So we've got you in your garage, you're looking for oil, what happened next?

JM: I worked up a few sort of general prospects. And in the meantime I was coming downtown, going to Vancouver, going to Toronto, going to New York. Probably made two trips a month at least, or more counting downtown Calgary. Talked to quite a few people and I was trying to figure out what I wanted to do, what kind of exploration program the company would do if we started a company and what sort of people we wanted and what sort of budget I wanted. During the period of time I met a gentleman, Harry Van Rensselaer. Harry Van Rensselaer had moved to Calgary from New York in the 60's and became a permanent resident of Canada in the 70's. He was a partner of Doc Seaman of Bow Valley and they actually started Bow Valley and Harry had actually raised some monies for Doc Seaman to start Bow Valley Exploration. So Harry's family were the major Dutch family that founded New Amsterdam in New York. So the Rensselaer Polytechnical Institute in New York and Van Rensselaer County where Albany is, where they settled in 1610. His father, it's a really interesting story which hasn't been written, his father was the first major bankruptcy in the crash in 1929. His father was one of the richest men in the world. The family had from 1610. He was an only son and his father had a huge personal loan of hundreds of millions of dollars made to Brazil. Harry was born in Brazil, his father did a lot of business in Brazil. And Brazil defaulted and caused the bank crash of '29 and so they went from the richest family in the United States to average citizens. But Harry, due to his upbringing and then his father, after he went bankrupt, he was an advisor to the President of the United States for the rest of his career, so Harry had great connections in New York. I mean, he knew everybody in New York, the family knew everyone. So I met with him and he met my wife and I met his wife and we went down to New York and met some people.

#325 DF: Wait a minute, how would you just meet with him, I mean somebody had to make an introduction?

JM: Yes, I was introduced to him, several people. I was downtown talking to all kinds of brokers. He had actually retired from Bow Valley and retired from the oil business because the oil business had . . . when did he retire from the oil business. In '70 when Peter Lougheed changed the royalties from oil and gas in Alberta, around. . well, that was in the mid '70's, '75, Harry retired from Bow Valley and got out of the oil business and thought the whole thing is a disaster. He had sort of a mercurial personality, it was either the sky is falling or everything is fantastic. There wasn't a lot of modulation sometimes,

probably because of the family history which is really interesting. He's still alive now, I talk to him occasionally, he's retired in Texas, lives in Texas. Out in the country, west of the capital city in Texas, good god, north of San Antonio, Austin, Texas, he's north of Austin.

End of tape.

Tape 1 Side 2

DF: So he was retired?

JM: So he was retired and managing his own affairs and managing some money for some other people, I think in Calgary, as a financial advisor because he was basically a banker by background, he'd worked at the Bank of New York before he came to Calgary and was sort of a fund raiser for Bow Valley. So he thought, I don't remember the first time I met him now, we had a lunch somewhere, anyway he was really interested in looking for big prospects and I had found a big field there and we had discovered a few fairly significant fields with Sceptre as well. We were partners with Czar Resources, Bobby Lamond. Had some good plays and we drilled a few interesting discoveries up in B.C., turned out to be Midwinter and July Lake gas fields up there, quite large fields. But Harry like the big exploration prospects and I was quite confident that we could find some pretty good things and so he said, I'll take you down to New York and introduce you to some people and you give them a show and tell and see if they want to invest in some Canadian oil and gas ventures with us. I had already formed a company, because I knew I was going to do this, although I didn't know how, I thought I might. . . So we came to an arrangement where we would become 50-50 partners. His job was to basically get the money and I had talked to the people from Sceptre and they said, Harry can definitely get the money. I mean, if there are people like you, he can get the money, there's no question he can raise the money. So the question was, I can do the geology, he can get the money, we're off and running. So we went to New York and met some big institutions, great people and they were interested in Canadian oil and gas exploration. So that was the first trip, we established that. So then we came back and put together a more detailed plan and basically thought we better get a few Calgary investors. So Harry said, what about the guys at Sceptre because they were very mad when I left Sceptre, the President was really, really mad. He didn't speak to me actually, for about 4 years after I left. But I said, I don't know, the Chairman of the company, he's an open minded guy, if someone wants to go and do their thing, more power to you. And that was Angus Mackenzie at the time, he was Chairman of the company for quite a number of years. So Harry said, they're going to do due diligence on us, we better find out what Angus' attitude is. So he said, why don't you go and talk to him and see what he's going to say. That was a big day for me. I went over to see Angus, phoned him up, he said, sure come over. So I went over to see him and I said, I think I'm going to get a new company organized with Harry Van Rensselaer and Angus said, well that'll be really interesting, Harry has excellent contacts and it'll be interesting to see how you make out I guess. Because Harry had been his

partner basically, in through the Bow Valley and had sort of retired due to taxation in the oil and gas business. And then I said to Angus, I think he said, is there anything I can do for you, I said, would you be interested in investing in the company. He said, what sort of monies are you raising, I said, well initially we want to put together a million dollars and then we'll probably do some drilling funds but a million dollars of equity in the company. He said, well, I'd like to participate, how much are you interested in. I said, gee, if you took a 10% position in the company, now initially that would be a really big investment. He took out his cheque book and wrote me a cheque for \$100,000. No agreement or anything. So when I went back to see Harry with that cheque of course, it was a big day, really big day. So then we made several more trips to New York, we got some more investors in Calgary, some really good investors. Doc Seaman put some money in and several other prominent people and we went to New York and worked on that for about 4 or 5 months, 6 months. We must have made 6 trips and the New York people did due diligence and they phoned Amoco and phoned everybody. I must say I was really impressed. I learned a

#054 lot, good financiers are like good geologists, they do their homework. They phoned a lot of people, about me and my character and my work. So I guess good people in any field, you have to do your research. In any case, one day - and we were getting exhausted in flying back and forth from New York. Finally one day we went into this one office and Harry knew the people very well and he sort of tried to get a decision out of them and they decided to invest with us. So then within the rest of that week we raised \$10 million for a drilling fund. So that was the start of Polaris Petroleums. We basically raised that money in 1980, that first money. Then we hired some people, a few people, an engineer, an accountant, a geophysicist and started some interesting exploration and made a few significant discoveries in B.C. and Alberta. We found us a few nice fields, no giant field, nothing like Leismer but we found some good fields and within, it took 10 years but we had no debt and we had built up the company and the partnerships had about \$11 million of cash flow, free cash flow, net earnings after 10 years. Then Harry was getting quite on in age, into his 70's so he wanted to - well, our goal was to get the stock from basically zero to \$10. He said, when we get it to \$10 I'm gone, that's it, I'm retired, whatever, it's time to sell it. So that's what we did and when we got to that point we were really just humming then. We had started doing some frontier work, we had started some U.S. work, so we had 3 sub companies. We participated with Petro Canada in the discovery of Banquereau on the Scotia Shelf, a large gas field. We had made a nice discovery up in B.C. at Pesh. And we found a nice little oil field in central Alberta with Pan Continental called Sounding Lake and we had unitized the Jaorcham oil field gas cap. We drilled some wells in there, unitized it, built a gas plant and also expanded the oil field significantly. So we had some really . . . but it took a long time. There were some really bleak years, in '83, when the industry go sick again, we didn't have any exploration funds left at that time and it was survival mode. There were lots of juniors went down in the mid 80's.

#085 DF: Yes, you formed in '80. '80, '81, '82, those were tough times.

JM: Just after we raised the money, it was good for another year and then everything went into the tank. And people who had invested with us then wondered, why did they invest in the oil business because everything looked like the oil business was history. We managed to survive that though.

DF: What were your strategies?

JM: It was tough because our strategy was exploration so we tried to drill up some lower risk things. And then we thought we could get our gas on production in Jaorcham but that took us actually, 6 years, because Esso intervened and we had 6 years of regulatory problems to get that gas on. We had found a little gas field at Ponoka and we got that on production and we got a gas contract, which was impossible to get in those days. An engineer who was sort of an independent engineer came by and said he could get me a gas contract. So we worked with him and he delivered and then we built our own gas plant there and we processed gas for other people through that plant and that plant made us more money than our gas reserves there for a number of years. Because gas plants were in short supply if you could get one tied into a major system. So we actually, it was more like we were a processing company. The auditors said, we're not an oil and gas company, we're a processing company. Because that gas plant, we financed it and a few of our investors put up some money, we got it built and it was a wonderful thing, wonderful thing. Because we were able to charge any fee we wanted and we charged as much as we could. And the gas was selling for bad prices, as low as 65 cents an MCF, but we would charge 50 cents for processing. So the plant made a lot more than the gas. And we had the plant, I think 90%. Because the partners we had in the area, none of them had the funds to participate in the plant or they didn't believe in the plant. So it ended up that we were really, would have 30% in the plant except people had no money or defaulted or didn't like the plant design or something. In any case, we only had one partner with 10% and we had 90. And that got us through the mid 80's crisis, is that gas plant. And then we were trying to build a second gas plant in B.C. and one at Jaorcham, Jaorcham took, we never got it done til '88. And in B.C. we never got that well on production until '91. It was 10 years shut in. We worked with West Coast and we got the first new gas pipeline built in B.C. in 12 years, it was built to Pesh. 10" line and I had to convince them the reserves were there. Subsequently they had to twin that line. So then we had all 3 gas plants working in '92 and that's when the industry got rough again and that's when our stock values looked like we were at our goal and Harry wanted to retire. So it ended up we sold the company. Did reasonably well out of that but we sold it at not a good time really. We didn't get full value for the company but we sold it. We had a subsidiary called Polaris Offshore, which had the interest to offshore Nova Scotia. I bought out the shareholders who didn't want to stay with that but most of them stayed with me. We kept that company and that's what I'm running now, as Polaris Resources. So now we have our Banquereau interest, we have a big interests offshore Newfoundland, exploration acreage and we have nice exploration acreage in B.C. and we have some in the foothills. So we have four big exploration plays in the company right now. Which is what I really like, so we're trying to make progress on those four things.

#128 DF: So thought your love is exploration, the production kept you alive in the 80's?

JM: Oh absolutely. Cash flow is important. The thing is there's a lot more competition for production, close in production, immediate cash flow. The goal was to make the company a major company and major companies like Home Oil or Renaissance that grew here, they have to find a field or a play that's really big and control it and develop it. So our long term goal in Polaris was that. I guess if we'd kept going for another 10 years we'd have had major production out of B.C. Because we built that pipeline, put that first well on. The independent appraisals we had of that property were that it had 1.3 BCF, when we sold it. Today it's produced over 100 BCF, 9 years later, fully developed by others, produced over 100. So we would have been a significant force today. Same with you know, the Jaorcham field, once we got going there, it was ready to be abandoned and then it went up to the highest production it ever had in 40 years. It was almost ready for abandonment. So it's pretty interesting. But in this business or certainly in any business, there's good times and bad times. So if you don't survive the bad times you're not there for the good time, it's simple as that. So this company now, Polaris is worth, basically when we sold the other Polaris, the independent appraisal of this company was like, \$100,000. Today it's worth probably in the double digit millions. But we don't have a lot of resources here so we still have to manage these exploration plays now. But we have a discovery at Banquereau, a discovery in B.C. and two other properties that have tremendous potential, tremendous large structures on them, undrilled. So the goal is to get those drilled and to be around after they are drilled.

#152 DF: Yes, to reap the rewards. So why was it, I don't quite understand from your explanation just now, why did you not stay with the other Polaris?

JM: Oh, we sold the other Polaris.

DF: When Harry wanted out you did too?

JM: Well, we talked a lot about it. It was a matter of I would say, most of the people didn't want out but he wanted out and he was quite a key contact to the major investors. I guess at that time I wasn't sure that . . . you know, the industry was shaky, the forecasts were bleak, bleak, for gas prices. They were ridiculous, I didn't agree with them. I talked to the major investors about it and some of them had the attitude, well, you know, we had a plan, we've done the plan, we haven't found a giant field, Harry wants out, maybe it's time to sell it. Some wanted not to sell it, some asked me, it doesn't matter what they want to do, we've got some good things. But we were very light on management. I didn't have a CFO. We never could seem to get the Board to agree to let me hire a CFO, a young aggressive CFO who could help me build the company. So we were very weak there. And we had a very small team, we had \$11 million of net income per year with 8 people on staff. Over a million dollars of revenue per employee after all costs are in. It was very productive according to all the graphs made by you know, these personnel companies and that, we were in the top 10% of oil and gas companies for productivity and profitability. But I thought, you know, there's a lot of people down there, I don't have a CFO that knows them, I've got to introduce him. And I was still a really key person, putting in a lot of long hours. I had one or two other people who were key, they didn't

own a lot of the company. As we built the company it's very hard to get partners in to own something significant. Once it's formed, it's formed. People will get to the point where they don't want other people. The management of it, how I would manage these investors, who were very big investors, first class New York money we had in the company. And they're in the company today, the same people. We just have a little Board of three now, one lawyer, one excellent person from New York and myself. And we had a lot of money invested, we were just starting to really rake in the big bucks, but the forecasts were bad for gas. That's what Harry didn't like. I didn't believe it because it's hard to find good oil and gas. The prices have got to go up here. And we've got long terms reserves, that wasn't the problem, the reserves are like 20 year life. And of course, I'm a lot younger than him so I'm willing to hang in there and keep going. So we sold it. I could have kept it but it might have been difficult. Aside from his personal contacts with a lot of the New York people, we didn't have the structure of a significant mid-size company to deal with investors. We were private, we weren't public, so there's no liquidity. So if someone wants out how do you deal with them. So there were a lot of things. We just built it as a private company. So it worked out okay and I'm very happy now. We mainly have all those investors for the most part, 9 out of 10 of them are still supportive of this effort that we're doing now, which is basically the same effort. Minimal spending to find large hydrocarbon accumulations. We have some really good prospects now. Our question now is, how do we finance these things, how do we get them drilled. On the east coast we have some, probably, 10 or 15 large structures. Wells are \$20 million apiece, so there's 15 wells at \$20 million apiece, which one do you drill first, how do we get it drilled, do we farm it out. So that's the challenge now. Same in the foothills, we have a big play in the foothills, sour gas, environmental. So it's much more difficult now to get a deep well drilled in Alberta than it was 15 years ago too. 15 years ago you'd just get a well license and drill it. Now you have to have an environmental hearing, do a sour gas study, and it's a different problem, a bigger problem. The stuff we have in northeast B.C. is fairly conventional and the offshore is just expensive drilling. But the offshore is developing really well as Pan Canadian has had new discoveries, Shell, Exxon have Banquereau of the other fields near Banquereau are all on production down there, at 500 million a day of production and they want to double that production. So Exxon is the operator of our parcel there. So it's really interesting. And now the prices are good and the business is booming but three years down the road we could be in the tank again. Things do change and they will change. So these high prices are probably not around forever, because technology, electricity, etc., etc., there's many things can change this scenario. But at the moment it's really exciting to be in the business with some prospects. And at these prices there's a lot more prospects of course, in Alberta that are very small, that are now economic at these prices. So that's where we are today with Polaris.

#231 DF: Great. Can we spend a few minutes talking about the CSPG? How did you first become associated with the CSPG?

JM" I think I joined it in 1971, as soon as we came to Calgary. Amoco paid for their geologists

to join the Society, I think they paid our membership dues and they definitely paid for us to go to the CSPG luncheons to listen to all the talks and to go on field trips. If you were keen to do those things and to learn more, they were keen to help you. So I was very active, I went to every CSPG meeting I could and all the field trips and all the talks. Then I got involved in starting one day field trips, I don't know when that was. I was Chairman of the one day field trip committee and revitalized it and made it into a big event. So I just got involved in the Society a lot. Then I was involved with the membership directory, we computerized that. So then after you get involved for a number of years, working on committees, they're soon asking you to be on the executive and take on more duties. So I think I became Treasurer for a year or two and then Vice-President and then eventually was nominated and elected as President.

DF: But that was the mid 80's, when you were in your own company wasn't it?

JM: Yes. And the President of the CSPG job was a really big job at that time. Especially, prior to that most of the Presidents worked for major companies and had the support of those people. So actually, I took that to my Board of Directors at Polaris, this potential to be nominated for that job and said, we're going to have to devote a secretary to this job and it's going to take a bunch of my time, probably at least 25% of my time. But we were exploring at that time, we were looking into the Middle East and we were looking into the North Sea as well. And the Directors, when I look back, I think they made a wise decision and I made a wise recommendation, they said, if you become President of the Society, that will only help credence in our company in international exploration. You're President of the Canadian Society, so we're willing to give up some of your time. So we took it on but it wasn't long into it when I wanted to do a good job for the CSPG and the CSPG had lots of work to be done and I had a very good secretary work on it but it was an enormous job for a small company, an enormous job to be really active at it. Because the prior President's had been like, the Chief Geologist of Chevron, the Chief Geologist at Amoco and the Chief Geologist at Esso. But it worked out well, I made some great contacts, I think I made a significant contribution. We changed some things in the Society and got some good publications started during that time. Grant Mossop brought his atlas in at that time and that was a very controversial issues. Grant had a very aggressive time frame to do it. It didn't get done in that time but it did get done and he did a priestly like job to get that done. It was unbelievable.

#284 DF: Why was it controversial?

JM: The cost of it. That's the big atlas, I don't know if you've seen it David.

DF: I've seen it, yes.

JM: Grant wanted to do that and I was sort of telling him, we could give you some money but there's no way you'll get it done in two years because at that time the industry was in the tank, the majors were pulling out of the Society and the majors were laying off geologists and making the rest of them work harder. It was tough times for the Society. We were looking at having to do things on our own rather than the majors do them. A lot of the publication before that, the majors put a huge effort into time and effort of people and drafting of these papers and that was sort of slowing down. So we had to get a

commitment out of the government and so that was Grant's job. It ended up, he got the book done and he got a large award I think, for that book but he put in. . he had the ability to put in the hours, working at the Survey and he put in every weekend of his own time for several years, working on that book. It was a monumental effort. So I give him 100% of credit for that. Because the industry was slow to support it and the work wasn't there and the people couldn't put the time on it because the pressure was on them to work at the office, not to work on that book. Especially when they were at the office or even on the weekends, people were working on the weekends rather than writing books on the weekends. But it was a great job. So that started that year. That was probably the most interesting project. But like anything else, it's the people involved, if they want to do it. Grant wanted to do it and he did it and it's a fantastic volume to start out an exploration program from.

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

JM: We changed the accounting system around. I'd have to look back. The biggest thing that year was I was predicting. . . we had tremendous growth, that was the mid 80's, in the early 80's there was tremendous growth in the number of geologist in the Society and it was almost like Hubbard's oil curve, the growth was becoming exponential. When I looked at the discovery rates and the discoveries that were being made in western Canada, this was going to come to an end. You could see that production was going to peak out here, we were at it and we weren't going to make big increases in production. The universities of course, because of all the growth were expanding their geology departments and they had like 50 undergraduates. And I had predicted to them that that was going to come to an end and we were at the end actually. Because the oil had gone over the top and it's just a matter of catch up. So we should say, we're having no more growth in the Society, the Society is peaked in numbers, it's as big as it needs to be to find the oil. Number wise and with technology. And a lot of people didn't like that. And the university, we had a national liaison committee and they were really upset with me about saying that there shouldn't be any more growth in geology departments relative to oil. But in fact, of course, today we have fewer members in the Society than we did then. And we're finding enough oil. And then the economics forced them on to that because through '86 and '87 it got even worse and they couldn't raise the money and no jobs for the students. So if there's no jobs why would you study that subject. So the enrollments did drop off, quite a few of those geology departments fell to the wayside. I sort of predicted it but I had nothing to do with it. Now the good ones have survived and at the moment they're sort of expanding again a bit. But I don't see the numbers of geologists growing, it's not numbers we need. The CSPG has a bit of an aging membership now but the technology is changing too. If you're looking for offshore fields and you're going to find some offshore fields that are huge fields, there's huge resources in the offshore, you don't need probably. . I mean, one person can still do that work on a giant field as can do it on a smaller field. So the industry seems to be leaving some of the smaller stuff to totally independent geologists who do their thing and the companies are looking for larger, more frontier fields. And they don't need a lot of people to do those. They're into a bigger risk situation, they need bigger dollars to drill. But the hydrocarbons, the tar sands

plants are just huge, the reserves are there, it's just a matter of getting them out. So I think the industry, it is changing a lot. The boom days in Alberta of the late 70's and some periods in the 80's and it's booming right now, but mid-size companies have to move to the frontiers, I think.

End of tape.

Tape 2 Side 1

DF: What else do you see in the near future for geologists and the Society?

JM: I think there's just great opportunities for geologists, not only in oil and gas, but like in the last few years in Canada we've discovered that we now have major diamond deposits, they were totally unrecognized 10 years ago. And it was a good piece of work by a geologist, basically working out of his garage, he thought if there's diamonds in Russia why aren't there diamonds in Canada. He researched all of the mapping and sure enough he found them. The evidence was sitting on the ground out there. Definitely people have walked over that evidence before and didn't recognize it. They walked right over the diamonds and didn't see them. So that's the way discoveries are made and that's the kind of geology that I find intriguing. But now we have, on the ocean floors, large amounts of frozen gas, methane, huge reserves, bigger than all of the reserves we've got onshore. So there's no shortage of methane or heavy oils. It's sort of like, that mentality is like, almost in the last century, in the 1800's and 1900's, coal was the thing and they were worried in the United States and in Britain they were going to run out of coal. Well, we never ran out of coal. Oil came in and replaced coal. There's going to be more efficient production of energy than just burning raw oil as we're doing today. But I don't think we'll ever run out of oil and gas. We're going to run out of using it, we're just going to not want it as bad anymore. That's what I see for oil and gas. The challenge today, to find oil and gas, for me or for any company, is to finance it in light of other opportunities that financial money sources have to do other things. To do biotech, to do pharmaceuticals, to do all sorts of interesting things. And what's happened, the computer has led - like, today, in this office, I have more data on Canadian production, this is like 2,000 square feet and I have more data on Canadian oil and gas than Amoco had in the whole Bentall Building in 1975. Now, I just have to use the data. We have every well log in Canada, we have every test ever done on those well logs, we have access through the computer to all the library publications. So I have so much data, I can never. . I have prospects, ideas to drill and work up, I'll never get to them, never in my lifetime. If I work for another 40 years I can't get to them, there's too much work to be done. So there's lots of prospects. We will never run out. It may go up and down in price because if the price isn't high and the returns aren't there the level drops off and supply dwindles. But then if it dwindles too low, below the demand then money comes in and away we go again. We haven't scratched. . I mean if you think about it, the earth is what, 8000 miles in diameter. And we only drill down, if we drill 10,000', like that's 2 miles. So 2 over 8,000 on this side and over on the Asian side, 2, so 4 out of 8,000 is 1%. We're scratching on the surface. So it's like on

your body, if you're just sort of scratching the surface because you're itchy, that's what we're doing drilling. It's nothing. The resources of the earth are unbelievable. How we manage them, that's another problem. How we manage them for pollution and day to day. Yes, in a local area you can abuse anything. If you scratch too hard you'll get yourself bleeding, but the resources are there. It's how to find them economically and produce them and then environmentally in a sound manner, those are the key things. Using them properly. But there's lots of resources, lots of resources of hydrocarbons. And every other metal and mineral and diamonds that you can imagine. So there's just incredible amount of those things and there's an awful lot we don't know about petroleum. We make some assumptions and have some theories and they're not all right, let me assure you, in my mind. There's certainly some bad ones. So if you're open minded about it and look, there's lots. We're just scratching the surface, just scratching the surface.

#045 DF: So you were on the executive in the early 80's, how did the National Energy Program affect what you were doing in the oil patch?

JM: The National Energy Program really didn't . . . it might have helped us. For two reasons, it really hurt people who had debt because it decreased the value of the assets and people went bankrupt. Because the banks then say you're debt to equity ratio is not right. Because it was perceived to be a taxation and a bad thing. We had no debt. So I think one of the lessons is you never want to have too much debt. Because you won't survive the downturns if you have a lot of debt. And we saw that things were tough and we intentionally, Harry and I both agreed, we don't want debt. Especially in an exploration company, you don't want debt because you don't have a cash flow producing asset. So any kind of squiggle in the economy and they're going to put you to bed and take your assets and sell them to someone else. So we had no debt. The other thing that happened was the government of Canada started up PIP grants and we qualified for PIP grants. So that's when we got involved in the award of some acreage on the Scotian shelf and a large piece of the exploration dollars there were covered by the PIP grants. And we discovered there, the Banquereau field, with Petro Canada at the time. And that is now a field that's sort of in the next phase of development and production out there. So that's like 19 years ago. But that's not as long ago as Jack Gallagher went drilling in the Beaufort Sea. But it's been 19 years, we made a discovery, the well flowed 20 million a day from the lower Cretaceous sands. All kinds of interesting other well locations on seismic, so I thought, and that's what we kept in this company, that's why I wouldn't sell it at the appraisal. The appraisal, when we sold the other company the appraisal of that property was \$100,000. So I said, I'm not selling it. I had sort of controlling interest. And they wanted to buy it and I said, I'm not selling it and they persisted and I said, you don't understand, I'm not selling it at any price that you will bid, it's not for sale, I'm keeping it. So I kept it and today that same value, now that's from '92, so 9 years, but it cost nothing to keep it. We spent the money, there's no additional charges, it's just that I have to put it in a file somewhere and maintain the records, maintain the seismic in a filing cabinet. So I did that and today we have an appraisal on that in excess of between \$5 and 10 million. We did nothing, we just sat there and waited till the time was right. But that's exploration

because exploration is like research. You can't put a time limit on it because you don't know what the result will be. You're investing money, you hope you make a discovery, you hope you find a discovery for cancer but if you don't you know you're going to be back looking for more money to go for another 10 years. And oil and gas exploration is that mentality and it isn't for everyone, it isn't for all investors, you had to be patient. You have to be patient. If you're exploring, I don't think - there was a great ad one time that Texaco had in the Oil and Gas Journal, which I used to flash to my investors. Harry would say, don't show that to anyone, they'll never invest. Texaco had this ad, it said that onshore U.S., if we make a new discovery, a true new exploration well, it will take us 6 years to get cash flow. Now that's onshore U.S. With all the resources and a gung ho country and economy. So I'm saying, guys, in Canada that might be 10 years. Well, you know, in some cases, in Jaorcham it took us 8 years and we're next door to Edmonton. But we had regulatory problems, partner problems, no gas pipeline, no gas contract, bad prices. So yes, we made the discovery, the well was fantastic. It tested one of the best Viking gas wells ever tested in Alberta but we couldn't get anything out of it for 8 years. So that's exploration. And a lot of geologists of course, you work on exploration and you might be long gone from the company when the company actually puts your work on production. Which is a terrible thing. I think some geologists find that depressing. I've had many like that too. And some I've been very lucky that have been put on. But I like to sort of stick with them or be involved and see them through. So that's the plan here.

#095 DF: Can we talk a bit more about the CSPG, what were the highlights of your year as President?

JM: I think the highlights of the year were the National Liaison Committee. I actively promoted petroleum geologists in each province to make us truly Canadian. The attitude in Ontario was, it's the Calgary Society of Petroleum Geologists, not the Canadian Society of Petroleum Geologists. So I went out of my way to have regular meetings. Some of the provinces it was the chief geologist but others there were petroleum geologists, B.C., Alberta, Saskatchewan, right down through to Newfoundland and to encourage them to participate in the CSPG, tell us what they would like to see, tell us the programs that we could support in their areas etc. And that's still a problem because Calgary is the dominant area but now there are conventions and oil and gas things in St. John's and Halifax. Of course, B.C. has an active growing industry and they have quite a few petroleum people in Vancouver. But that was the biggest thing and it was really a lot of fun because it was fun to listen to some New Brunswick's attitude say, about oil and gas in Canada. And Newfoundland at that time, and Nova Scotia. Now they had discoveries but they had no production. The most fun I had was I was invited to go down to Halifax to talk to the Chamber of Commerce and that was sort of involved with the Petroleum Communication Foundation. They had just made those discoveries on the Scotian shelf, some of them, Venture and Alma and some of the big fields, and the Premier of Nova Scotia had said that they planned to be a major gas producer in 1988. All this will be tied in and the province will be an oil province by 1988. We had a piece of

Banquereau and I knew it was dead then. Everybody was saying, you're crazy, you blew that money. So in any case I got invited down, Graham Williams from the Bedford asked me, would I like to come speak. Well sure, what do you want me to speak about. He said, you're from the Maritimes, we've got all these Maritime businessmen here, they don't know anything about oil and gas, they've got all these great expectations, the Premier just said we're going to be an oil province in 1988, tell us what you think. So I had put together a paper on the history of economics in venture and particularly I'd read the book on the Tulip Scandal in Holland when tulip bulbs used to sell for \$25,000 apiece. So I gave the talk and the gist of the talk was that there was absolutely no way any of the gas on the Scotian shelf would be on production in 1988, closer to 1998. First of all, there's lots of gas in Calgary, the pipelines are full. If they built another pipeline we could export a lot more gas out of Calgary, we're sitting there with shut in gas, why would anyone want to spend money to tie in gas expensive on the Scotian shelf. That wasn't very popular with the audience because they were all local businessmen, didn't know anything about oil and gas. The one guy threw a bun at me and he said to Graham, where did you get that guy in Calgary, he doesn't know anything. So that was fine. Some of them had lots of good questions and said, we should be careful about borrowing for our business to get ready for the oil because. . . I said, I don't think so, anything can happen but if you ask me my opinion, I'm just giving you my honest opinion as a small participant out there and just what I see in Alberta. So of course, nothing happened out there till 2000, they got it on production. But then about 1993, the year after we sold Polaris, Graham had saw we sold Polaris, I hadn't seen him for about two years and he said, this is Dr. Williams, would you like to come down again and talk to the Chamber of Commerce or do you know anybody who would come. He said, I apologize, I said, don't worry about it, if you ask me I'm going to tell you the way I see it, not necessarily what you want to hear, you told me to tell me what I see. So he said, we're very sorry about that but I've got to tell you this, you know the fellow that threw the bun at you, he said, why don't we get that SOB from Calgary to come back again because he's the only guy that ever told us the truth. So that was my best compliment of the episode. But I didn't go back. But exploration, the average person, I guess it's like in your business David, you're doing a history project, you know it takes a lot of time, a lot of research to get something good, to get something you want. And oil and gas is the same. It sounds like, yes, we can go and do it tomorrow but then you have the regulatory thing, you have the environment, you have finance and you have economics, you have drilling equipment. And yes, it all seems available today but something else changes and all the drilling rigs go to Texas or they all go to Russia or they all go to some other place. So by the time you've got everything ready, they 10,000' rigs have all moved to some other place for 3 years. And you're delayed. That's the funny thing about exploration. A lot of it is luck. I think there's lots of resources, that's not a problem. I can get you lots of prospects but that's not the problem, it's getting the money and the drilling rig and the marketing and all those things together if you want to make a profit of it in the prospect. And any one of those things, which there's probably at least half a dozen can totally blow a project out of the water. Things happen to people, money and time. So it's really lucky if you can. . . I mean the good one

that I've had and the people that have helped and said the right thing at the right time. It could be from a landman or an engineer, it has to be that key little bit of encouragement that says to everybody, let's do it and you just do your work as normal. But it's some other force that seems to be there that brings the stars in line to get it done.

#174 DF: Have you been to any of the past President's dinners, CSPG?

JM: Yes, I missed last years dinner but I go to most all of those dinners.

DF: Any stories that come up at those events?

JM: Every year they're always fun and I think the more controversial they are the better. But it's fantastic to always hear the views of the past President's on what's happening today. So yes, they're just wonderful dinners that I think, if you go as an observer the comments are really, really good, but I think it's quite often the executive who are in the middle of their year, they're very busy, they have the day to day little problems, they don't appreciate the input. I've seen, what I thought was some really good input that could cause some changes and we've done some over time, but they're very good and they're sort of an open meeting where, I mean, some people might take them personal, they're not meant to be, they're meant to be open and honest opinions. And most of the past Presidents, well, most geologists who are active in the Society really are sort of creative people. So they're independent thinkers most of them anyway, so you get independent views. But I like to sit back and listen to independent views and think, well, you might disagree with it or you might really appreciate it or you might get something out of it. I really like those, I like those kind of debating issues where you can see someone else's point of view. I think one of the greatest courses I ever took on that was Napoleon Hill, the Art of Negotiating. When we had a big problem and we had lawyers and we were working on this deal one time, actually related to the Sounding Lake field and I thought, this is unreal. And I had never taken a negotiating course and the most incredible thing that I learned and I never understood a win-win situation, what that meant. Like, having grown up playing a lot of hockey, high school hockey and soccer, like, it's not win-win. You either win or you lose. So what was this win-win and he explained win-win to me in that course to me. He holds up a hand and he says, we're talking about this item here and you're on the other side of the table and he's holding the palm of his hand towards you and he said, now we're negotiating about this item, how many finger nails are on this hand. Well, you can't see any, you're looking at this hand but you don't see any. You can pretend it's some item that you don't really know a lot about. So you say, I don't know, you don't know how many, I might have lost a fingernail and I'm looking here and I've got no fingernails and I'm wishing I had fingernails. So now, all I want out of this deal is I want five fingernails, you don't really care because you're looking at a totally different picture. So you can get what you want out of it, you see what you can get and I can see and get what I want and we both win and it's the same deal. So that's the incredible thing and even with oil and gas companies, they do not want the same thing out of every deal. Because there's people and the people on one side may want to build a pipeline that's 10" in diameter. The people on the other side, may be geologists who want to drill twice as many wells as are already drilled. And that's the real goal in their company, they've

already sort of promised that, we're going to drill 20 more wells. This guy over here has promised, we're going to build a 10" line, not a 20" line, a 10" line and we're going to save all this money. Then they get into a meeting and those issues never really come out but that's what they're negotiating for, two different things, two totally different things. What the CSPG past President's meetings bring up are totally different facets of this management or the future of the Society or the future of geology or whatever we like to bring up there. If you don't sort of listen and sort of think about it, you can miss the whole gist of it, but they're great meetings, they're absolutely great. They should have more of them. More organizations should have more meetings like that, where they call in their past President's or past executives and have just a jam session, here's our direction, here's our problems, what do you guys think about these things. Because some of the problems are the same old problems, generally people problems come back and you could get some really good advice if you really had the meeting and listened. You don't have to follow because you'll get different advice but you'll get some pointers. Oh, we had that problem and we did this or . . . you know. So I find in other organizations I've been involved with, I've been trying to encourage that. But the funny thing about new management wants to do it their way. They could still have some benefits. Companies of course, use their Directors in that manner. They're very good meetings, very successful, I think they're very productive. Some issues keep coming back if people want to bring them back and we eventually pay attention. But they're great get togethers. I think sometimes the executive gets some really good advice.

#247 DF: With the 75th Anniversary coming up, any specific things you would like to say about where the Society could be headed?

JM: I think it's going to be similar in size and there's new issues. I think hydrocarbons, we're going to be using them for a long time, we're getting into deeper ocean things. There's a lot of new recovery techniques onshore for exploitation geology. I think the Society has probably not pushed hard enough for, and I don't know how you do it because like, some people are pushing geology as a science in high school. I don't think geology is a science on its own, geology is an applied science like engineering. If you don't understand physics, chemistry, biology, mathematics, you don't know anything about geology because that's all geology is. Sedimentation is just gravity, rocks fall off the mountain, they roll down, they get into the river, they're eroded, they go into the sea, they get deposited, they get compacted, that's all physics. The fossils, the oil part is all chemistry, bio-chemistry. Then the analysis of it all is mathematics, so geology, I'm not a big supporter of teaching it in schools. I think they should maybe teach more natural history or . . . I think it's bad to call it geology because geology is like teaching engineering in Grade 1. It's the same thing to say teach geology if they don't know physics, chemistry, biology and math they're not going to be good geologists. You have to have that background, the basics because you have to draw on all those things. You put them all together and you've got some kind of a geological theory. But it would be nice if the public. . . like the public has. . . well, it's gaining a lot, I mean, it's changing. People have a better appreciation of the environment, protect the environment. You know, our

immediate environment where we live, if we pave it all and turn it into a parking lot we don't have. . .and then the park policies, very complex issues. But geologists could play a bigger role in that because the preservation, the collection of fossils and issues like that could be in some places, more liberal. What's happening in many areas of the world now is you can't collect fossils or seashells or anything because, it's just that there wasn't a good collection policy established so they went totalitarian and said, no collection. Which is ludicrous, there's probably millions of fossils that children and people could collect and use for display. So we go too far on some of these issues. Everybody in the Society is committed and employed in finding oil and gas and to get involved in the political decisions on geology. [I think the tape stopped here for a moment]

#294 DF: Go ahead. So the decisions around how the public is involved.

JM: Yes, I think we could. I mean we've debated it many times, it's very complex. And then how do you represent, some people, if they want to represent an item they would just as soon make their own personal representation. But we can't give up our local knowledge to have just political decisions made on it. We have to be proactive. So we haven't been very proactive but we are meant to be. . .the other argument is we're strictly a scientific Society so the social and economic issues we don't want to get involved with. And that's how some people see them.

DF: It's too late isn't it?

JM: Well, no, it's not.

DF: They affect you, those issues always affect you.

JM: Oh big time. And we have made progress. I worked hard to get geologists recognized in APEGGA, when I was on. . I got involved in the APEGGA thing and we got the APEGGA act changed to be engineers, geologists and geophysicists. So I was very active in that. It was very difficult to get that changed, a big fight. But we did get it changed. It's fairly good now. There are people that don't want geologists registered but today as a professional, responsible for big projects, you have play that role. And the act isn't perfect in that regard because we're sort of overwhelmed with engineers in the society in Alberta but it works reasonably well. APEGGA is a great outfit, we need it and so we're more active in that now, since those laws were changed there in the 80's, the mid 80's we got those changed. So I think geologists together, we have to accept some social responsibility. We're finding these hydrocarbons and mineral deposits and whatever and society is using them so we should stay involved in how they're used too, make sure they're used correctly. A lot of geologists are very environmentally conscious. You talk to maybe some farmer and he thinks, this geologist, they just find oil and spill oil but a lot of geologists are in the Blue Jay Society and ride bicycles and environmentally very conscious. We really appreciate the environment, especially to do field work. But we have to get that image across to the public that even though. . I mean, I think everybody wants hydrocarbons too, I don't want to give up hydrocarbons but we should use them properly. So we have to be responsible. But it's time demands on people. So we've tried to do some of those things, expand it nationally, and be involved locally and be involved in different things. Like that year, in '88 I worked on keeping the Mount Allen name and I

had a plaque done of John Allen who the first provincial geologist and I did a write up on him and we had those cast in bronze. Al Fisher, who was on the Olympic Committee, a geologist with Gulf, helped me to make the contacts and we got the Premier to put his name on it. It was Don Getty at the time and we've managed to preserve Mount Allan as a recognized mountain name and put the plaque at the base of the mountain.

#353 DF: What were they going to do to it, change it?

JM: Yes, they had a new name for it. They were going to call it some name. So things like that. It's like this latest thing with Mount Logan, there's a whole book written on that. The parliamentary library in Ottawa discarded their book in Mount Logan and I have it, I picked it up in the discard pile for \$1. So it's no wonder that they don't know William Logan down there, it's incredible.

End of tape.

Tape 2 Side 1

JM: The executive work with the CSPG, you're in the middle of the operations every day. But the most memorable things from the Society to me were the Tracks Awards, I have three Tracks Awards. They gave me one for the one day field trip thing, which we organized, I guess when I was at Amoco. They're little plaques, and I forget, I should know who started the Tracks Awards, I think it was Bill Eyrton. But they're little, have you seen one, it's a cast porcelain or earthenware tracks, meant to represent miniature dinosaur tracks and then they're mounted on a nice walnut board. And I have 3 of those in my office and I just love those things. People come in and they always comment on them. And then I had one for, we did the first computerized membership directory, one for that and one for that Mount Allan plaque, one for the plaque on Mount Allan. So I have 3 of those and they're beautifully done and to me, the Society gives those things out, it gives out many every year, different awards to people but I think people really appreciate a token award. More than a token award, they're a beautiful little award. I tired to get going and as a matter of fact I'm still working on it, as the President every year, when he becomes past President, to give, at the expense of the Society too. . the Society was run basically out of the pockets of the majors for a long time. But when we came to have these smaller companies and people putting in time, no more times than in the past but I think people need recognition. So I've started a program of giving, or reinstigated because I think it had been done occasionally, where the President gave each of the executive a small gift, maybe a mineral specimen or something nice, to thank them for their efforts during the year. Then that sort of slowed down but it's going again now, because I worked on it last year and people really appreciate that and I think the membership. . . so it costs whatever it costs, \$1,000 or something, the executive, most of them put in long, long hours on those things. And all of these other committee members, if they're doing a good job, they need recognition. I think, not everybody probably wants a little token or a mineral specimen but we give them to our guest speakers, something unique. And it's really

appreciated. So I find the Tracks Awards very unique, I just love those. I instigated the pictures of all the past Presidents, in the office, which you might have seen. So we've started that and collected those back. We're still missing one, there's one President, I think his name was Childerhouse and we haven't got a picture of him. And I've tried to track down his family through the AAPG, through the United States, through everything, we've never found his family or we don't have a picture of him. But all the others are in the office now. That's sort of nice I think. History is really interesting. That's how you explore is just looking back through historical documents. You can't find any oil and gas to any degree without all those records, to search.

#037 DF: Just a few general overview questions then before we end. What of your career do you consider to be your most significant contribution?

JM: I would say it was the geology that led to the discovery . . . I discovered a large unconformity in my Master thesis but it's never gotten properly published. That's something I want to do. It was published in the American Journal of Science. But it was a controversial thing. I'd say to me, the most rewarding thing was the mapping that I did for Amoco's discovery of Leismer. It would be the biggest in value, because it's almost a trillion cubic feet of gas. One of the largest pools, probably the largest pool discovered in Alberta since 1970. It hasn't been written up that way but it's one pool. The Clearwater D pool. And it was so much fun at Amoco, to get Amoco to move on that. To get management to believe it and working with the landman and the engineers and the little things we found along the way that pointed to it. The little discoveries of survey work, log analysis, structural analysis. When I look back I had some great experiences trying to sell to management that the thing was a viable play. It took a year, we were going to committee meetings for a year. Finally the president of the company at the time, who was a great exploration guy, John Meeker. .like mid management had lots of problems, like what about the pipeline and what about this and what about that and Meeker looked at this a few times and Chicago people looked at it and I had to change things. Finally he said, we're going to do it and we did it and it was pretty exciting for me. I had been right in the middle of it so I had the well planned out and put the core barrel on. They didn't want to do it from the well and I said, listen, put it on today, do it. The guy was mad and they did it and anyway we drilled a discovery, it came in perfect, a big well. So that was exciting. Like I worked it from scratch, you know, from nothing. From go here and see what you can find to actually drilling the well. Now I've done smaller fields since then but that's such a large field and that really affects my thinking on exploration. And then I've done it on some other fairly significant fields but I think, some of these prospects in this company now, could be a repeat of that. So that's what I want to do, some more big ones. I've probably been involved in 5 or 6 fairly large field discoveries. I don't have any interest in most of them today. I have an interest in a few smaller ones that we did a few years ago.

#072 DF: Do you have any regrets, any things you wish you could have done?

JM: Not really. I have lots of things I want to do. I couldn't have done more than I've done.

Once I get on to something I basically get it done. I try to set goals, I set a goal and I'm going to do that. And then if you can't get to that goal then you may have to quit that project and work on another project and set another goal. But if you make that goal, then okay, what's the next goal. So I have lots of interest in books, I collect books on geology, I probably have 6,000 books on geology and I read some of them. And then I collect books on golf. I've given up hockey because I got my hip broken up and I play golf now and I'm trying to learn to play golf good. So I'm getting reasonable at that and reading a lot of books on golf. If I get involved in something I want to know all about it. That's probably my strength and my weakness. Because I get down to the nitty gritty detail of everything. From a management perspective, I can't stand just blase opinions. I'm not interested in that. What's the detail behind it. So I like the detail, so in golf, I have a large library of golf books and I'm hoping to have the best library of golf books in Canada, is my goal. That's a hobby. That's my only hobby now really, is golf. This past year, I'm blessed with a grandson and that's a pleasure. My two sons are engineers, one's with Schlumberger and one is with Shell. The guy with Shell is working on their new tar sands plant there. He just had a son so it's really fun to see a grandson and I never appreciated that. I don't feel old enough to have one but it's really interesting, you look at a grandson, my wife and I and it's totally different than you see your own kids. It's like President of the CSPG, when you're President it's day to day, everybody's phoning, what do we do about this, what do we do about that, somebody quit, somebody's fired, somebody wants to come. So there's operational day to day things. As past President you can sit back and look at it and say, they should do this. I had a luncheon with the President a week or two ago and I was telling him a few things that I think they should consider. With the grandson it's the same way, you can sit back and you can see him and he's only 10 months old but you see him trying to walk and trying to talk and it's totally different than when you were a parent. Because you're wrapped up in changing their diaper, getting food, going to the store, getting them to school, getting clothes. It's a wonderful thing, you sit back and you can see them and hopefully you can help the parents a little bit. And you appreciate them, at least we do, I'm sure, although they love their boy but you see them in a different light and you appreciate them more because you're not tied up in the day to day operations of it all.

#107 DF: Anything else you'd like to tell us about your career or the CSPG?

JM: No, I think the CSPG is just a wonderful organization. I'm not overly active at the moment in it. I was debating about trying to write a paper or two but I'm too busy with operations to do that. I just love exploration and I don't plan to ever quit it. I have a huge resource of exploration things that I'd like to do whenever the timing is right or whenever I can get to them. I think geology is a wonderful career for anyone if they're interested in it. It broadens into all the sciences as I said, it's an applied science, so you can be interested in it from the point of view of any of those other things, mathematics, physics, chemistry, biology and of course, today on the computer, what you can see and do is just incredible. I try to spend more and more time on the computer. I wish I was a lot better on it. I wish I could type like a really good secretary, that's what I'd like to be able to do.

That's the only thing that slows me down on the computer. But I think where it's going who know, it's really hard to call but there's lots of resources and to discover some that are economic and be involved in that kind of a project, a lot of it is luck and timing. I hope to be getting wells drilled for quite a while.

DF: Good for you. Well, on behalf of the CSPG and the Petroleum Industry Oral History Project, I'd like to take this opportunity to thank you so very much for getting together with us today and sharing some of your recollections and we'll end the formal part of the interview at this time, thank you very much.

JM: Thank you David.