

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: John Downing

INTERVIEWER: David Finch

DATE: July 2001

DF: Today is July 24th in the year 2001 and we are with Mr. John Downing at 68 Eagleview Way, in Cochrane. My name is David Finch. Could you start by. . what would you like to talk about today, you've talked before for the Petroleum Industry Oral History Project, are there any other things that you'd like to tell us about your career? And we'll eventually talk about the CSPG.

JD: Not really David, let's just go by your sheet here.

DF: Okay, tell us about your early days, where did you come from?

JD: Do you mean where was I born and stuff like that?

DF: Right.

JD: I was born in Vernon, B.C., 1916, February the 14th.

DF: What were your parents doing there?

JD: My parents were immigrants from England and Wales and they were working and living and raising a family.

DF: What did your dad do?

JD: My dad was a carpenter and he was also a steam engineer and he earned a living, which during the 20's and 30's was a fairly good accomplishment.

DF: That's right. Tell us about your education and how you got interested in the sciences?

JD: It was sort of by the back door. I first went to the University of B.C. for one year and then I had to do some logging and mining in order to earn money to go back to university. So that lasted until about 1939 and then I went to Montana School of Mines in Butte. Because you were able to work in the mines and earn money when you were going to school. Is this clear?

DF: Yes.

JD: Then of course, I started in 1939, primarily I went to Butte because the miners in B.C. told me, you have to go to Butte in order to be a miner. So I went to Butte. And when I say I came in the back door it means that I came into geology inadvertently. So I graduated, pardon me, then in '39 the war broke out and in '40 I went back to Canada and joined the Air Force and Army and spent the next 5 years in Europe and so forth. And in 1945 went back to Butte to finish my education and I got a bachelor's degree in geological engineering. From there I went prospecting up in the Northwest Territories.

#027 DF: Oh really. For what?

JD: Anything. Gold primarily because Yellowknife at that time was producing quite a bit of gold. Then after that I came south. Mind you, I'd never seen an oil rig. I knew all about

mining and the logging industry on the west coast, I hadn't even seen a drilling rig. So I didn't know what to do.

DF: So you didn't know anything about oil and gas.

JD: No. So I came to Edmonton from Yellowknife and started looking around and I got a job at United Geophysical. Fortunately they were working with a company called Bear Oil and Bear Oil was a mixture of companies or a conglomeration of companies putting in money to try to develop oil reserves between Edmonton and the tar sands. And it was a follow up to the Leduc discovery. One of my mentors was Dr. Ted Link. His idea was that the oil in the tar sands probably came from the Devonian formation and that there probably was a pipeline of reefs between Leduc and the southern reefs, up to the tar sands. Well, this may or may not be true but that started the exploration for Bear Oil Company and they got a tremendous amount of acreage between what is now Athabasca and the tar sands. United Geophysical was contracted to try to determine the geometry of the subsurface in that area. So we did seismic and gravity and during that time, it was only about 2 or 3 months I was with United Geophysical, Lorne Faulkner of Bear Oil Company asked me if I'd like to join Bear Oil as a geologist. Because there was a great shortage of geologists at that time, this was the latter part of 1948. So I joined Bear Oil and spent the next 2 or 3 years doing well site work and surface geology in B.C. and up in the Yukon and so forth.

DF: Were you working with Ted Link?

JD: Yes. We were working, actually Ted Link was sort of the, he was the eminence about everybody.

DF: Was he a part of Bear Oil?

JD: He was one of people who formulated Bear Oil. His contacts with Frank McMahon and Sun Ray Oil in the United States and so forth.

#062 DF: Do you have any stories about Ted Link, what kind of a fellow was he?

JD: He was a tremendously, not amusing but he had an intense desire to distribute his ideas of geology and he did, with his staff particularly. He knew everything about the geology of Alberta at that time, based on the data of those days. So he was probably the most important person in the oil industry in terms of geology at that time. And as he had just been, he resigned from Imperial to form a consulting company, which he did and then he started Bear Oil and then after that he started another consulting company called Link and Nauss. This was Dr. Arthur Nauss, who Ted Link had encouraged Art Nauss to come from Venezuela to Edmonton to be the Chief Geologist and the chief manipulator for Bear Oil Company. And Art Nauss in turn, got a guy by the name of Jack Browning to come from Venezuela and they all worked for the subsidiary of Esso. Now I joined Bear Oil Company in 1949 and there were 2 or 3 other geologists with me, but as I mentioned I never had seen a drilling rig. I think a couple of weeks after I joined the company I was sent to Redwater because Pacific Petroleums had purchased a quarter section offsetting the Redwater oil pool, on the west side. They sent me out there, knowing that I had no experience. They gave me a magnifying glass to look at the samples and I didn't know what a sample was. So I went out there and fortunately the drilling hands and the tool

push were very cooperative because they knew I had absolutely no experience and fortunately, with Imperial, who had made the discovery was a fellow by the name of Rod Morris. And I went to him with my problem and told him I didn't know a damn thing about what was going on and he said, I'll give you a hand and so he did. He told me what to look for and what the reef looked like and all that sort of thing and as it happened, it turned out to be an oil well and everybody was happy. And I learned an awful lot. That was my first introduction to the oil business. After that of course, things became very more familiar and things turned out okay. Now that's my introduction to the oil business.

#100 DF: What did you do during the 50's then, did you stay on with Bear?

JD: No, Bear broke up into its individual parts after that, about 1951 I think it was. Then Ted Link and Art Nauss formed their company, Link and Nauss and they asked several people in Bear Oil to come with them. Don Cook and I joined them, I think that was in 1950 and we became their operating personnel. For the first part we were doing primarily well site work and that included wells in Leduc and Acheson and Morinville, practically all over the parts of Alberta that were being developed at that time. Now mind you, at that point, you have to remember, there weren't many wells drilled in Alberta, maybe, outside of Turner Valley and Brooks and place like that and Medicine Hat, there may be 100 wells at the most, as opposed to now what, 100,000. I'm not sure. I know it's some huge figure. So the amount of data we had available was pretty damn small in so far as the subsurface was concerned. So we learned an awful lot, we learned an awful lot about the geology in a short time. What was your questions?

DF: Just what you were doing in the 50's.

JD: Yes. So after about '51 or '52, we started to branch out a bit from well site work and we started doing evaluations of properties, evaluations of reserves and we relied to a great extent on other engineers who had some reservoir engineering capability, we didn't at the time. But we acquired it in an awful hurry. We did an awful lot of work for that reason. I guess part of the studies that were done for the Trans Canada Pipeline and the West Coast Transmission line were done by our firm, in association with others. So we got an awful lot of experience at that. Now in '53 Don Cook and I . . . I'll just go back a bit. Ted Link and Don Cook and I did an awful lot of short reports for trade magazines, about the oil industry. And then in 1953 we made a synthesis of the reef distribution in Alberta and that was published in the AAPG. Even now, I noticed in this last publication by the CSPG that they have a map in here which more or less is similar to the one we published in 1953. But of course, we had a lot of good information by 1953. There may have been at least 100 wells drilled along that trend of the Leduc, Rimbey, Morinville trend. So what we did at that time, I think it was a pretty good synthesis. Then in 1956, let me back up a bit, I'm going to go to some notes here because I made a list of the dates. Is this okay, is this what you need.

#155 DF: Perfect, yes.

JD: I should have done this earlier. Yes, well Art Nauss was part of Link and Nauss. I think it was in 1950 he started Scurry Oils and the name Scurry comes from Scurry County in

Texas, where a particular reef had been found. So he named his company Scurry because he was aiming for the discovery of reefs, which he did. So he started Scurry Oils and I think he had a capitalization of \$2 million or something like that. One of the first things he did was he discovered, and this was in 1952 he discovered a Leduc reef at Malmo, which was just south of a another discovery by Mobil, what's the name of it, I can't think of it. At any rate, that was the first discovery of 1952. This is the discovery and you can see, I don't know how that old fellow got in, this is Ted Link and that's Spi Langston, he's just a neighbour [laugh]. This is Don Cook and I and that was Art Nauss in the background. I was in charge of the well at the time and it made a good impression because all these big rigs and even the Minister of Mines came out for the opening.

DF: Mr. Tanner?

JD: Tanner, yes, Tanner. To make a good impression I had the crew acidize the well and I got hell because that guy, Spi Langston was part of Scurry and he's an engineer and he said, you should never, ever acidize a well until you give it its first production test. So that was that.

DF: But you did it to show off.

JD: To show off, to show what a good well it was. And it produced about 2,000 barrels a day, something in that order.

DF: Now this work you were trying to do with Link to prove that the oil had migrated through the reefs up to Fort McMurray, did that prove out?

JD: Not yet.

DF: No. But it got there somehow.

JD: Yes. There was various theories as to why it got there and where it came from. The main theory now is it's an in situ proposition, although I understand now that some people are going back to the Devonian origin. So I don't know.

#197 DF: So that's in '52 that well came in.

JD: Yes. This was a long time ago you know David. My memory is not bad I don't think but. . So at any rate, at that point, Art Nauss decided to concentrate of Scurry and so he left the consulting business and so Ted Link, Don Cook and I formed Link, Downing and Cook. We consulted for several years and in 1956 we formed Cree Oil Company Ltd. We started with a capitalization of about \$7 million, about \$2 million in equity and \$5 million in debt. We got that through, and of course, Ted Link is a tremendous asset when you're raising money and we all went to Toronto to visit Gairdner and Company and they said, okay we will raise you \$7 million and they did. So we started exploring and also started buying acreage offsetting oil production. It was quite successful, stock came out at \$4 and it stayed up around \$5-6, something in that order. I should tell you about Scurry, Scurry's stock came out at 20 cents. This was back in about 1950 or so and after that discovery in '52, it was up at \$5. So anybody who bought the stock was. . but I didn't know enough about the stock market in those days to buy stock. So anyway, we started Cree and did an awful lot of exploration. Can we stop for a minute.

DF: Okay. So before we stopped to get our coffee you were talking about Cree Oil and the 1950's, what was going on then. There was a downturn in the 50's, what caused that.

JD: The downturn was caused by markets for oil. I'm trying to remember, when was Trans Canada Pipeline put in, that was about 1960 wasn't it?

DF: Right, yes.

JD: 1960. Well, prior to that time there hadn't been a market for natural gas. And of course, any well that is drilled and found gas only, unless it was a fairly good sized reservoir, we would abandon. On top of that of course, the markets for oil weren't that great either. I just forget, when did Imperial put in that pipeline, '53, '54, '55?

DF: IPL?

JD: IPL, yes, when was that, '55?

246 DF: Yes.

JD: Yes. And before that of course, we didn't have a market for oil. So the price of oil at that time was anywhere from \$2-\$2.50 per barrel and even with the cost of drilling by comparison to today was very, very cheap. In other words, a well in, as a matter of fact, in that time, a well in Manitoba drilled by Chevron would cost probably around \$20,000, whereas today it would be up in the order \$200,000. That was one of the reasons why. . . land wasn't cheap in the 50's, if you were next to a major discovery like Golden Spike you would be paying maybe \$10,000 an acre or something in that order. When we started Cree we paid, I think it was, \$1,000 an acre for land offsetting a Mississippian oil pool, I'm just trying to think of the name but I can't. We paid I think it was, \$360,000 for a half section. And we drilled one well on it and at 10,00' roughly, we encountered the Mississippian, which was the reservoir and we only got 2' of pay. So we were wondering now, what the heck should we do, should we complete it or should we just abandon it. So the engineer and I got together and we said, okay, let's go ahead and try it. So we put casing in, put a huge pump on the well and so far, as of about 1984, that well had produced something like a million and a half barrels. So 2' of pay connected you right to the reservoir. It was a very lucky break as a matter of fact. I haven't had that happen again. We did quite a bit of work in Australia with Cree Oil. We did an awful lot of work in the Pembina area of Alberta, we must have drilled at least 50 wells there, all of them producers incidentally because that was blanket sand pretty well. In that area you'd pay maybe, \$1,000 an acre or so, something like that and you'd complete, depending on the spacing at the time, you'd complete 1 or 2 wells on a half section. And the pay out would be in the order of maybe 3-4 years but it was fairly certain that you'd get a pay out and you made a profit. And that was the reason for a lot of companies drilling those wells. We were wildcatting up north, up in the Northwest Territories. We also acquired quite a bit of acreage up in the Arctic Islands.

#293 DF: This was all in the 50's?

JD: In the 50's, yes, with Cree. As a matter of fact, Dome and ourselves operated together in some respects, in the Arctic. I can't remember the exact acreage but it must have been at least 5 million acres we had there at the time. Along with the 3 million acres we had in Australia we had quite a bit of land. Fortunately, it was all fairly cheap to hold. We got together with Sproule and Associates and they did most of the geological work. Then I

think it was '57, Shell Oil. . I should go back.

DF: You have a list there, on the other page it says Cree Oil, is there anything on there?

JD: Cree Oil worked together with DeKalb from Illinois. They were an agricultural association in Illinois and they wanted to get into the oil business. So they joined us and they were usually 50% in each one of our ventures, particularly in the ventures that were offset by oil and gas production. They didn't particularly like exploration. So one of our shareholders was North Star Oil of Winnipeg and they had a refinery. The President was Frank, I've forgotten his name, I'm sorry. But the President died and because he was the sole owner of North Star and they had about 40% of Cree, when he died the estate put North Star and Cree up for sale and it was purchased by Shell Oil. Shell Oil primarily wanted the refinery to get them into the prairie area with a refinery. So that's what happened. Shell Oil took over, they took over everything we'd refined???. That was in 1957.

#333 DF: So that meant you were out of a job?

JD: I'm sorry 1961, that was in 1961 that Shell took over. So after Shell took over we stayed with them for a month or so and then Don Cook and I and Ted Link formed Link Downing and Cook again.

DF: Are there any records from that corporation?

JD: From Shell.

DF: No, no, from Link, Downing and Cook. Company papers, do you have anything?

JD: I don't have a thing. The chap who was the secretary and kept. . . Don Cook may have some, I'm not sure. But the chap who was the secretary and looked after everything was Barney Middleton and unfortunately he died about 3 years ago. He was also an artist, I wish I had some of his paintings. But after Cree we formed Link, Downing and Cook again.

DF: No, Link, Downing and Cook was a consulting firm.

JD: A consulting firm again, yes.

DF: But you were also doing, like with Bear Oil and Cree Oil, you were doing your own thing as well?

JD: No. Link, Downing and Cook, it was dissolved, it was taken over by Cree Oil. I'm sorry, it was taken over by Cree Oil, that was the start of Cree Oil.

DF: These weren't running concurrently?

JD: No, no. No, there wasn't time for that.

DF: So when you were consulting, who were you consulting to?

JD: The industry.

DF: Like, the majors or. . ?

JD: No, primarily individuals and small companies and new arrivals coming in, particularly from the United States, some from France, some from Europe.

DF: How big a company was Link, Downing and Cook?

JD: It started out at 3 members and then gradually grew to maybe 10, at the most. And then after we had been in business for some time, consulting to the industry, we were approached by Teck Corporation. We had been appraising Canadian Devonian on their

behalf and they made an offer to Canadian Devonian and bought up an awful lot of their shares. So they acquired Canadian Devonian and they asked us to run it, that is, Link, Downing and Cook. Which we did for 2 or 3 years.

#382 DF: Can you explain to us what that means?

JD: We looked after the oil and gas industry in so far as the Teck Corporation was concerned. Teck at that time was strictly gold mining and copper.

DF: But what did this mean for your day to day operations, were you a manager, were you . . . ?

JD: We were managing. I was managing Canadian Devonian for Teck Corporation.

DF: So how much of your annual work would have been geology or was it by this point. . ?

JD: Geology is always there, it's always there. Every day you were working with some geology. The exploration department of course, did most of it. And that was run by Don Cook.

DF: And the production end?

JD: The production end was run by Ralph Atkinson. Ralph Atkinson ran the production department and I'm trying to think of the land department. . . it doesn't matter. So Canadian Devonian did an awful lot of work in Saskatchewan where their main holdings were. I guess they discovered, with Gulf, one major field, the Steelman field in Saskatchewan, which is a large one.

DF: This was in the 1960's?

JD: In the 1960's, yes.

DF: Now before we get too far into the 1960's, would you care to tell us how you came to be associated with the ASPG?

JD: Oh my god, yes. Of course. During the time we were in Edmonton, we didn't do much with the ASPG, we didn't do anything, we didn't even realize it existed. But when we came to Calgary and that was about 1950, Ted Link of course, was a very active member of the ASPG. As a matter of fact, he was one of the ones that started it.

DF: Founder, yes.

JD: So we automatically joined. Because we were geologists and we were very interested in learning more about geology, all of us were. And so we joined, it was a very small organization at that time, maybe 100 members. I'm not sure. As opposed to now, 2,000 plus. And so we became quite active in it. As I mentioned before we wrote papers and all that sort of thing. And then in 1960 was it. . when was I President, 1957, I took my turn in being President. And it was a very enlightening experience because we had a lot of, not a lot, maybe 5 or 6 committees and then trying to get all the committees going, it was a very, very good experience. The personnel were tremendous.

#444 DF: What were the highlights of your year? I went to the Bulletin to try to find your President's report but I couldn't find it.

JD: I couldn't find it either.

DF: Maybe you didn't write one.

JD: Maybe I didn't. But I was talking to a young lady down there yesterday. She was trying to find what you were talking about and there was nothing there.

DF: Well the year before you there's a President's report and the year after, but not for your year.

JD: Yes, I don't know what happened. One of the main things that year was the fact that we raised the fees, from \$3 to \$7.50 and that created quite a fuss. Some were saying we were a non-profit organization and we can't do that sort of thing and all that. But we had just come out, Carl Olsen, who is part of the executive had proposed that we start the Reservoir. I think he came from down south somewhere, I think it was Colorado and he was working for Phillips Petroleum up here and he was a member of the executive. So we started, I think it was that year we started the Reservoir. It was just a small 4 page thing, and he was entirely responsible for it. So there was a cost to it and we needed the extra money. So we said, let's go ahead with it. I can still remember to this day, trying to get a quorum to vote on it and if it hadn't been for some of the other members running around, getting members from the Petroleum Club and so forth, to attend the meeting, we would never have passed it. So that was about, that was the most memorable thing we did. I think at that time we started to talk about the Devonian of the Arctic. That's what started, I think that was what started the, excuse me a sec, this is falling off. . .

End of tape.

Side 2

JD: You know, this is the only thing I've kept of the CSPG.

DF: And what is it?

JD: This is just the 1st International Symposium on Arctic Geology and this was held in 1960. It was a damn good meeting, not because I was the general manager but because it was the first time that the geology of the Arctic had been really thought of in terms of a circular world you know. And we had people from the United States and Russia and all over the world, Norway, come to talk about the Arctic.

DF: Can we go back to 1957 for a few more minutes. Where were you meeting in those days.

JD: The first meeting we had, I think. . .well, it was in the offices of Cree, in terms of the executive. But the meetings were held in Penley's Academy, I don't think it's around now.

DF: No, and why was it called an academy?

JD: They had dances there.

DF: Okay, a dance school.

JD: It was a dance school or you'd go to a dance there. They also had chairs so you could have meetings. The ASPG was still only about, maybe 800 members, even in that time, that was about '57, '58. But they'd been meeting in Penley's Academy since about 1953 because that's where Don Cook and I had to give our paper on the distribution of reefs in Alberta, yes, in '53. And we had to defend it and there was quite a bit of argument about whether or not we were right. And maybe we are, maybe we're not.

DF: So there was discussion, was that after the paper or during it?

JD: After the paper, oh yes.

DF: People held on to their comments until the end?

JD: Oh yes. So where were we, in '57.

DF: Yes, we're trying to figure out what else you did the year you were executive.

JD: I know we were planning the field trip for '58 and we went on a field trip, several of us, just to plot the route. Because we took the route over where the highway connecting Red Deer and Rocky Mountain House, not Rocky Mountain House but Saskatchewan River Crossing in Banff. I've forgotten the name of that highway.

DF: David Thompson.

JD: David Thompson Highway. We went over that prior to it being built, even the big dam hadn't been built there, the Big Horn Dam. And there was just a one track road but it was passable. So that's where the field trip was, or at least part of the field trip was in '58. We planned that for that year. And I can't think of anything else except that we had an awful lot of meetings with the association with regard to various facets of geology. And I shouldn't forget the publications for 1958 and if I'd known it was going to come up I would have got it, I didn't.

#036 DF: What were the social events like in that time period?

JD: They had dances, year end dance, usually at the Palliser Hotel.

DF: And the golf tournament?

JD: Did they have a golf tournament, I don't think so. No. That came later. I'm sure. There was only 1 or 2 golf courses around then. I don't ever remember playing golf. So that's about all I can remember of it David.

DF: Sure, no problem. In the north did you do any of your geology in canoes?

JD: No, we didn't. We did, in 1950, we canoed up the Peace River, up into the canyon, before the dam had been built. And that's all I can remember about it, we were just doing the geology of the rocks in the canyon.

DF: How about in the Northwest Territories, how did you get around?

JD: Usually by helicopter.

DF: So that would be the 60's then?

JD: Yes, the 50's and 60's. We used a helicopter an awful lot in B.C., northeastern B.C., for geology, for doing field work. And we also used horses up in the Yukon and the northeast of B.C. One year we were out for two months, solely with horses. And it was okay.

DF: Are you a horse man yourself?

JD: Not particularly, no.

DF: You always had a wrangler to do that part right?

JD: Oh sure. And a guide as well.

DF: But I'm sure you spent quite a few hours in the saddle.

JD: Yes. I'd much sooner walk, it's a lot easier, a lot less worrisome.

DF: Any bear stories?

JD: Yes, as a matter of fact there was one time in northeastern B.C., in the Beaver River. Don Cook, the one I talked about previously, and I were going up a valley, a very narrow valley and we came to the crest and came to a little pass and looked over and by god, there was a family of grizzlies. So they didn't notice us, and we just high tailed out of

there as fast as we could go. And on the way down we took another route going down and on the way down found some nice Mississippian fossils. But that's the only bear story I've got.

DF: Oh really.

JD: Yes, in terms of geological surveying. I know a lot of people have them but there's not too many bears around. I've been hiking in these mountains for 40 years and I've met 3 or 4 bears maybe, one wolf and that's all.

#070 DF: Can you tell us more about what it was like to be in a business association with Ted Link?

JD: Oh it was excellent. He was a tremendous person to have along with you when you were in a conference because he was able to put everybody at ease and I think he facilitated a number of the decisions that were made by various companies in terms of supporting our efforts of finding oil and gas. So he was a tremendous asset. So was Art Nauss.

DF: Was he a good business man or was he more a good geologist?

JD: He was an excellent geologist. And a good businessman, I suppose so, yes. He made some very good decisions so I guess that's being a good businessman isn't it?

DF: well, but when you've got 3 men in a company, one usually has one kind of a strength and another might have another. But as to the operations of the company, was it a true partnership, a 3 way partnership?

JD: Oh yes, very much so. As a matter of fact, most of the decisions were made by Don and I because Ted more or less had a hands off attitude.

DF: So the two of you were running the company?

JD: Oh yes.

DF: Now do you have any humorous stories to tell about Ted Link?

JD: Not particularly, no.

DF: Because he could be quite a trickster, a prankster.

JD: Oh yes, oh sure he could. I remember he was the godfather to one of my children and at the ceremony and you know, after the ceremony you usually have a cup of tea and stuff like that. So my wife came up to him and offered him some cakes and tea and he said, fine I'll take one but these aren't the tarts like my father used to make. So that broke up the gathering. But that's the only one I've got, other people have lots and lots of them. Now what was after that. We were talking about . . .

DF: Well, I took you back into the 1950's in order to get you talk about the ASPG. But we were already into the 1960's, do you want to check your notes and see where you went after you started the consulting company again.

JD: Yes. And I mentioned that after about 3 years with Teck Corporation we all decided to go our different ways. And Ted Link and Don Cook formed another consulting company and I stayed with Teck for about another year. If you remember that was the flag debate and the word ensign came up quite a bit and I said, god that would be a nice name for a company so I formed the company Ensign Oil Ltd. and got Art Nauss and Roger Ball, this is a new name now coming in, to join me. We each put up money and started Ensign Oils. We first started drilling in Manitoba. I think we completed 10 wells there. Mind you, we

only started with \$225,000 and even in those days, this was in 1965, you could still drill a well in Manitoba for \$20,000. And each of them would produce about maybe 40 or 50 barrels a day, maybe. So we used that as a basis for a new company. We did the same thing, like drilling offset wells in various areas of Alberta and Manitoba and Saskatchewan and then we went down to Montana and took an interest in a well that was offsetting some gas production. This is where some geology comes in, it's very important as a matter of fact, because the dip of the sediments is to the north and so we went to the south of this gas discovery and participated in a gas discovery of quite good volumes of natural gas, very shallow. It's called the Bears paw Field. I guess we must have completed 50 wells there, some of them half section spacing. A curious thing about that field is that we were in an area where there's volcanic intrusions.

#131 DF: What part of Montana is this?

JD: This is in the northern part of Montana, central Montana, near Havre. There's volcanic intrusions there and strangely enough you could drill through 1,000' of volcanics and then penetrate into the gas reservoir. Some of the wells were drilled right alongside the outcrops of volcanics. So that it's rather a complex field and it's something that I wouldn't have thought possible the year before we drilled it, but there it was. Gas is where you find it I guess. Then in Ensign, we also did some work in various areas of Italy and we tried to enter into the oil producing areas of India but were unsuccessful. But we had generally a very . . . we ended up, after about 2 years, with about \$1 million of income per year, which is not too bad. In the meantime, of course, before that and after we had still drilled our first wells, we'd got an underwriting, again, from Gairdner and Company. And that was an underwriting for about \$2 -3 million, which was enough for us at the time. We carried on for about 4 or 5 years and then in 1971 we decided to join with Houston Oils because they had a lot of acreage in the Arctic and also a lot of acreage in the United States and in Canada. So we joined with Houston and that eventually became Bridger, which eventually Home Oil took over.

DF: So what happened to you during this period?

JD: Well, we've missed something. Did I mention the Devonian Symposium on the Arctic?

DF: No.

JD: Didn't I?

DF: Well, just in passing but how did that come to pass?

JD: That was in '57 and '58 we had been talking about a Devonian. . .and this is with the ASPG and the CSPG, we'd been talking about a symposium on the Arctic geology. Because the Arctic Islands were becoming very, very important or they seemed like they were in those days. Some wells had been drilled up there by that time, one or two I think in 1959 and then there was so much acreage involved now, in that area, and Cree had been involved as I mentioned before, and Dome, Chevron and several other companies. One particularly, out of Toronto, I can't think of their name but Hirschorn had a big interest in it and that was the Hirschorn that developed so many mines in Canada. So the need was there for a good synthesis of the geology of the Arctic. So the ASPG put together the symposium and invited people from the United States and Russia and

Norway and all the nations that are surrounding the Arctic, to contribute, which they did. And we had a tremendous program and it lasted 3 days or 4 days and an awful lot was learned from that. Cree was involved very much in it because Cree personnel drafted all the maps and put together an awful lot of the typing and so forth. So it served its purpose for Cree in that it highlighted the Arctic, where we had an awful lot of acreage. So that was the 1st International, the 2nd International was held in San Francisco and that was in 1970, I believe it was, 1971. What's happened since then, I don't know.

#197 DF: What year did you retire or have you retired yet?

JD: Well yes, I've retired. That was about 1998, '97, something like that. But between that and Ensign there was Polaris, Taurus and Sunburst. Are you interested in that?

DF: You bet.

JD: Okay. Well, we started, Roger Ball and I, we started Polaris in 1971 and again, we followed the same procedure of acquiring land and again, this is money put up by myself and Art Nauss, Roger Ball and I and we got people from Montreal and Toronto and Vancouver to put up money and we started with about \$1.5 million and we only had about 4 or 5 shareholders. So we started with the same process of acquiring land offsetting production and drilling and so forth. And we also got an interest in a well in a parcel of land in the North Sea. And that was offset by a company which drilled an oil well and of course, it became very valuable. Within a year another company offered us a fair sum, a fair exchange for all the shares in Polaris and so because it was still a private company, we acquired the consent of all the shareholders and sold in 1972. Then we started Taurus Oil Ltd. Did the same thing there and the same people who were with us as shareholders in Polaris came with us in Taurus. Then we did the same thing in Taurus except that we didn't have any land in the North Sea, it was strictly Alberta. And that was sold to Seagull in 1973. The Roger and I formed Sunburst and that's the company we still have. That was in 1978 we formed Sunburst and we still have it. We worked for various companies, one of the being Lac Minerals. Lac as you know, was one of the senior producers of gold in the country and we did a lot of work in the oil industry for them. They drilled wells in the United States and Canada. That started in 1982 with Lac Minerals, then in '86 Lac Minerals decided to sell off in the oil industry and they sold to a company called Northridge, all their Canadian properties. And they sold their property in the United States to Sunburst. And that was the end of our association with Lac. They sold everything in '86 and so since 1986 to 2000 we've just been fooling around in Canada and producing in the United States. Then I think it was in '93, we sold everything in the United States, which by that time wasn't very much.

#254 DF: You had just started Sunburst when the early 1980's came along. How did the National Energy Program affect your company?

JD: Well, it was a terrible shock to start with. That's one of the reasons why Lac Minerals was working up here quite a bit and then the National Energy Policy came along and so a lot of people moved to the States, including ourselves. We had a big holding in South Dakota, in the Black Hills. And also in Louisiana and Oklahoma and an awful lot of the

money that should have gone into Canada of course, went to the United States. So it was really a disaster at the time for the Canadian oil industry in that it diverted so much investment south, and elsewhere in the world. Because there was absolutely no point in developing anything in Canada with that ??? regime. One of the problems of course, was the fact, I shouldn't say a problem. The National Energy Policy also paid you to drill wells, which was a ridiculous thing. So there was a lot of development went on in the Arctic for no economical reason. And there's no way that you should drill a well without seeing some sort of a payback at some time or other. So there was an awful lot of money spent by the Canadian taxpayer, up in Arctic, which should never, ever have been spent, including Alberta for that matter. Too many wells were drilled, they weren't justified by the economics. Because the government paid for part of it. That was silly as far as I was concerned. We took advantage of it, sure, but no, the National Energy Policy was a disaster, for Alberta particularly and for Canada. However, that's beside the point. But since then we have done very little, that was the end of it practically.

DF: So let's go to some overview questions then, what have you enjoyed most about your career?

JD: It's been a very exciting career really. In particular with regard to people in the geological part of it, the ASPG, the CSPG, my association with them, even though it ended probably around 1975, active participation was extremely interesting and very rewarding. I still keep up those same contacts today, as a matter of fact I'm going to lunch tomorrow with a group of the old people. And I think the ASPG and the CSPG have been very, very instrumental in fostering the oil industry in Alberta, in Canada and world wide for that matter. And it's an excellent, excellent organization. The same can be said of the geophysical end of it, you know, the geophysical association. Also I'll even go so far as to say the Conservation Board has been a great asset to the oil industry. Oh yes, I've enjoyed my professional life in Alberta tremendously, it's been fascinating. Particularly seeing as you can go from here, you can go to England and do things there and go to France and you go to Algeria, when you're in the oil industry it's a worldwide deal and it's great.

#309 DF: Do you consult in South America?

JD: I didn't.

DF: Link did.

JD: Link did, an awful lot. Yes.

DF: Any regrets?

JD: None.

DF: No places you wish you could have gone that you didn't get to?

JD: No. I just wish I'd done more, that's all. No, it's been great. If I could live it over again I'd do some slightly different.

DF: Like what?

JD: Like, I'd start one company and stay with it for 20 years and hopefully make that into an Imperial Oil, who knows.

DF: So why did you keep selling these companies, just the offers were so good?

JD: They were good offers. And the people you had with you were willing to trade. So that's

the reason.

DF: Any major discoveries, any major geological ideas that you were part of?

JD: Nothing really major. There was an awful lot of small ones. No, there was nothing really major about it. Unless you can, I wouldn't even call that gas field in Montana a major discovery. But it was a damn interesting one and it probably had maybe, 500 billion cubic feet of gas in it.

DF: But that was just a step out from other production wasn't it?

JD: It was a step out from another discovery. And at that time people didn't think of big gas fields in that part of Montana. So maybe that was it.

DF: Did you ever do any geology down in Turner Valley?

JD: Oh yes.

DF: Pretty complicated there too isn't it?

JD: Very complicated. As a matter of fact, right now there's a company looking for an oil pool in Turner Valley which is presumably below the faulted sections. Whether they'll succeed or not, I don't know.

DF: What do you think of that geological assumption?

JD: It's possible, it's quite possible. Because there are instances where you get a sole structure and then you get faulting over the structure. So there is a good possibility they'll have an oil pool in the unfaulted Mississippian in Turner Valley. Maybe they will, we'll see very shortly.

#349 DF: And is the assumption there that that's where the oil came from?

JD: Oh no, not necessarily, no. A lot of that stuff came from maybe 10 miles back west from where it is now. No, I wouldn't go as far as to say that.

DF: Anything else you'd like to tell us today?

JD: No, I think that's it David. I've certainly enjoyed my association with the ASPG, I hope it continues for another 5 or 6 years.

DF: Right. Well, if I do find an annual report that you wrote I'll let you know.

JD: Yes, I wish you would.

DF: Because I couldn't find it. But let me take this opportunity on behalf of the CSPG and the Petroleum Industry Oral History Project, to thank you for spending this time with us and giving us some of your recollections, thank you very much.

JD: Well David, I thank you very much for coming.