

PETROLEUM INDUSTRY ORAL HISTORY PROJECT  
TRANSCRIPT

INTERVIEWEE: Pierre Côté

INTERVIEWER: Nadine Mackenzie

DATE: 1984

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

PC: I was born in Edmonton in 1914, just about the start of the war.

NM: So you are a true Albertan?

PC: Yes, I think so. My father had left his native ???, in Quebec, around the beginning of the century, actually before, around 1895, to go to Ottawa to take his schooling in civil engineering and then ended up in the Alaska Boundary Commission, doing some survey work. Was in Klondike during the rush and headed back along the northern Rocky Mountain Trench, back towards Canada and Edmonton where he settled. He went back to Quebec to meet and bring back with him in the west, his bride, my mother who belonged to an old Quebec City family. With time my father got involved in politics, was a member of local, provincial parliament from 1909-'23 I believe it was, a member from Grouard, became Minister of Mines, he was in the Liberal government, Minister of Mines until the government was defeated in 1921. That's 1918-'21. On that occasion was president of the Alberta Research Council and died a very short while after having been named to the Senate in Ottawa.

NM: And he gave his name to a village, near ???.

PC: Yes, that is right, the village of Jean Côté. Actually there was a mountain called Jean Côté and thereby a creek I believe. These were all names that were assigned to these locations following his death.

NM: So you were educated in Edmonton were you?

PC: Yes, my first day in school was in the convent in St. Alberta. I certainly didn't like that too much because I remember they would use wheelbarrows to carry some garden dirt to the back and then that same wheelbarrow would be coming back as I recall, as a 5 yr. old, coming back with a load of bread. Then the next 6 months I was in convent in Morinville with a brother and following that, grade school in Grandin??? School in Edmonton, where there was both French and English. And then I was very fortunate in that my parents sent me to the Jesuit College in Edmonton, where I took all my schooling for 11 years I believe, in French mainly, but also with some Latin, some Greek and of course, English.

#038 NM: A very classical education.

PC: Yes, the true classical education. I remember the final exam, we had to write a 5 hour dissertation philosophy, all in Latin. Which eventually gave us what they call a BA degree

from Laval University.

NM: What about summer jobs?

PC: The summer jobs at that stage, I wasn't involved then so much as once I started university. I went from the Jesuit College to University of Alberta and started in engineering but there was a huge difference between the classical schooling of the Jesuits and that of the grade schools here in Alberta, particularly, if one switched towards the sciences. So it was difficult and it took me 4 years to do 3 years at the University of Alberta and those summers I worked in the highways 2 summers, and then I worked up in Yellowknife. The first summer in Yellowknife I established an assay office and that was a real toughy because I had just taken this ??? course at university on assaying and then I found myself with a bunch of machinery to set up together. But eventually I got it to work, I sweated blood but I got it to work and work well. I remember running the very first samples of both the Rycon??? Mine at Yellowknife and of the Giant Yellowknife Mine, what became mines, at those times they were just prospects, discoveries.

NM: Can I ask you, why did you choose to study engineering?

PC: I guess, as I recall, this was something that happened, I guess I went through the process of elimination approach rather than the great love approach. My father was an engineer, that may have had an influence, but I eliminated the doctors, I couldn't stand the blood, I eliminated the lawyers, I couldn't stand the talk and it came down to engineering. Mining somehow seemed to appeal, particularly so after spending some time up in the bush up in Yellowknife.

NM: And you spent 4 years at the University of Alberta?

PC: 4 years at the University of Alberta but I went out the back door. That was a very humiliating occasion. I had made too much money the last summer, north of Yellowknife, doing some exploration around Joloff??? Lake, so I had a wonderful time, ??? and whatnot, just a wonderful time but the exams suffered. After this happened I went up to northern Quebec and I worked in the mines and I brooded a lot and I felt pretty badly. A man by the name of Jim Norry, who was involved in several of the Malardic??? Mines, I worked for him rather closely at times, and he sponsored me to go back to school and I went to the Michigan Tech, where there were a good many Canadian students taking mining and completed my last year of mining there. I made up for lost time, at least scholastically by getting my degree cum laude, for which I was rather pleased. I had settled down evidently.

#079 NM: So after you passed your exams, what did you do then?

PC: After I got my degree in Michigan Tech I went back to mining. I was very much enthused with all aspects of mining and my ambition was to push and develop very much along the lines of mechanized mining. So I went back up to the Malardic area, where I had worked before, and I think as I recall, I worked Malardic gold fields, rather than east Malardic where I'd been earlier. After a stage there I went into Hollinger, this was all gold mining and I was there for a fair period, doing just straight underground work and there was nothing mechanized about it at all, I can assure you. Then headed down towards Sudbury, where all good miners much go to school. There things were much more mechanized, did all sorts of underground work and then, because of bad nickel rash, I had to leave the underground work and get involved. . .

NM: Oh, so you developed an allergy?

PC: Yes, a very bad rash. I remember a good friend of mine, Dr. Treffi??? preparing the first sulfafiozole??? ointment. He took sulfafiozole and he powdered it and put it in some ointment so as to get rid of the rash, which eventually worked. Then I worked in the engineering office, doing survey work and other engineering development work. Until, despite the fact that my brother was saying it was much more useful to get some base metals for the arms, I couldn't resist not getting involved in the services. I went to chat to the Navy. 3 of us as a matter of fact, went at the same time, Charlie Treffi, the son of the president of Unico, as I recall, and myself, we went to the Navy. Only one of us was accepted, Charlie Treffi. The other chap went to the Army tank corps as I recall, and I went to the Air Force. They called me down into Lachine for the first time, I was in Lachine 5 or 6 times, and from there we took the various stages that everybody had to go through that wanted to become pilots. Because they had too many pilots. Eventually I got my wings at Camp Borden, 2<sup>nd</sup> stage at Camp Borden, then they sent us out to Charlottetown so as to get some navigation because I was due to join the coastal command overseas. After this they eventually sent us overseas. I didn't make a complete tour there because there were too many crews. I did do partial tour and the war ended. I recall in particular the unfortunate circumstance that 1 day after the war or 2 days after the war had ended, we still had to maintain some flights because all enemy subs were not accounted for. This one plane, the boys on the very last tour which they were proud to be able to complete, came back in and they were 10 miles from the airport when the plane blew up. But that was the war. We were the first, for some unknown reason, the coastal command were the first, and that had some influence in my life too, to be ready to come back home. There was coastal and flying command and the bomber command that the RCAF. We were the first to be ready so we were the first to come home, although as far as assignments were concerned we were supposed to be the last, which would be quite correct. While on the boat, coming back home, I think it was the Louis Pasteur, we heard about the atomic bombing and then about the VJ-Day. But coming back early meant that I could return back to school. My mentor, Jim Norry, whom I had been able to pay back for his sponsorship at university fully, Jim Norry suggested . . . I wanted to go out in the bush and do some exploration and do my own flying, he said, as you well know pilots are a dime a dozen, you better go back to school, catch a bit more geology then we can hire pilots and they'll bring you here, there and everywhere. So I went to McGill and my idea was to just spend a few months to brush up, pick up some geology, maybe half a year, a year, I'm not sure, not write any exams. But within the first 3 months my mentor, Jim Norry, died. I took the first year at school, for reasons too long to explain the MSc degree that I was supposed to take was bypassed and stayed there 3 ½ years and walked away with a PhD. I was the first one of the group.

#145 NM: [That's even better then.]???

PC: Yes, but bypassing a Masters is not normal. But that was beyond my control.

NM: Which year was it when you got your PhD?

PC: In 1948. I stayed on during the summer so as to complete, that's where the 3 ½ comes in. Stayed on in the summer and it was in the late fall, actually, to defend my thesis. The only job offer, here I was a PhD in geology with mining engineer, getting further schooling in geology, the only job that was offered was that of a ventilation engineer in the Sigma Mines in northern Quebec. By the way that's a subsidiary of Dome Mines. That didn't appeal to me too much, and brother Paul, who'd lived all along in Edmonton and who was involved in coal mining, I'd given him a hand with his coal mine at one stage, he paid my ticket for myself and my young wife to come out west and case the joint. This was '48, which would be a year and a half after the Leduc discovery of February 27<sup>th</sup> was it, 1947. Things were starting to really catch fire here and really booming. I went around, talked to people at the University of Alberta and talked to people and then came around, not directly but through Jasper and Banff to resee the country, came around to Calgary. And saw several companies, at times chief geologists, at times other people. The response wasn't that enthusiastic, people I guess, just didn't know where they were going. I remember in particular, this happened in Edmonton before I came down to Calgary, old Doc Rutherford, the University of Alberta, he said, in forgetting that I was born in Edmonton and the Dean, or at least the head of the geology department, John A. Allen was an old friend of my father's, said, Pierre, there are already 150, I'm not too sure, 200 geologists in Alberta now, the market is just swamped, you might as well go back to Quebec from where you came. I didn't particularly appreciate that. In Calgary the response, let's see, who was it I saw, well, 1 or 2 names of people I can remember seeing was Ernie Shaw, Imperial, Hugh Beech, Texaco, an old college associate let's say, and Bob Brown. Rather interesting, Bob Brown, he wasn't at that time directly involved with Home, he was the agent in Canada for the Bendix Washer and Dryer. The day that I dropped in there, there was a new legislation had come out of Ottawa that put a tariff on the import of such home appliances. That day he was scratching his head wondering what he was going to do. Of course, everybody knows that Bob Brown has been, not the father, the son of the father, but the one who really built up the second Home Oil. So one of the people I saw, and this was I guess, in response to an advertisement, was old Doc Link, Theodore Link. I saw him at the Palliser Hotel. He was interviewing for Bear Oil, which was a subsidiary or affiliate of Pacific Petroleums, in association with Tidewater Oil and another company as I recall. The first thing that Ted Link asked me, why the devil didn't you come for an interview when I was at McGill. I told him, I was taking hard rock geology, it doesn't make sense for a hard rock man to get involved in soft rock and in all events I wasn't ready to answer because I still had to complete my thesis and present it. We talked around for awhile and he hired me I guess, on the spot. And he asked me to show up in Edmonton as soon as I could. I had to defend the thesis in McGill, so I headed back in a rush to Montreal, with my young wife who was able to there go and visit her family before coming back west. She was at that stage about 8 months gone. I reported as I recall, around early September, in Edmonton, to Bear Oil, with Lorne Faulkner, who had just left Imperial the same as Ted Link had left Imperial just a short while earlier. Then Art Noss came in, about the same time as myself, and then there was John Downing and Ian Cook, Jack O'Brien, and Jack Browning came in a little later. I might mention that

Muriel Ryans was one of the secretaries there.

#229 NM: So what were you doing, what was exactly your first job?

PC: Well my first assignment was to head on up to Fort McMurray. I recall that the day before we had to go out to the Leduc field, close to Atlantic 3, to look at one of the Pacific geological shacks there, to see what condition it was in. Drove out with the brother and my wife, this was after the Atlantic 3 blowout. There had been snow and the ground was frozen, everywhere it was frozen solid except not around Atlantic 3, because of the oil which was below the ice and we got stuck there. Probably because of the commotion, my wife being so far advanced, her first daughter was born 24 hours later. The visit of this geological shack was to do with work to be undertaken up in the vicinity of Fort McMurray a short while later. We'll come to that later. But I headed up to McMurray the next morning, after this car push incident due to start a short field season and then got a phone call to the effect, my wife had entered the hospital. Lorne Faulkner was a wee bit unhappy to see me back in Edmonton so soon. But within 2 days I was back out in the bush. I might mention that my wife had left Quebec City and Montreal to come out west and she was completely on her own, a new bride, having a baby, pretty well on her own.

#258 NM: And a husband in the bush.

PC: And a husband in the bush. Luckily I had 1 or 2 brothers in Edmonton who were particularly kind and also some friends of the family. But I was back in the bush and my first assignment was to look at the Cretaceous and the Devonian in the vicinity of McMurray, that's at Waterways and downstream. Here I was a hard rock type, working for the first time in the field of soft rock, which as you well know, hard rock is supposed to be reasonably complicated and soft rock being just strictly for the birds, it's so simple. Then I got to see that soft rock isn't that easy. Art Noss had asked me to go up there and map out the stratigraphy of the Basal Cretaceous sands, that's the tar sands. And also the stratigraphy and structure of the Devonian. Well, I pounded my head against the outcrops of tar sands and particularly where the tarring didn't mask too much of the structure and had one devil of a time. To me, on a rapid job, there certainly weren't very evident marker beds. What I recall particularly was being able to see, within 1 set of bedding, 3 generations of cross bedding. This would repeat itself. Because of that I found it. . .well, they're absolutely impossible, without palaeontology, to carry out correlations in that immediate area of the lower Cretaceous. Certainly, in a matter of a week or so. The Devonian though, heading downstream on the Athabasca from McMurray, had more success. There I was able to, in the Devonian Waterways formation, I was able to recognize things that seemed to match. I had the M-1's and the M-2's and the M-3's and the M-4's and the N's and O's. I carried this on, I think I went as far as Farbag??? Creek or River. That part went reasonably well. I don't know whether you'd be able to tie those ends in with the detailed stratigraphy that has occurred of the Beaver Hill Lake today, which is the equivalent of the Waterways, but that worked fine. And it was a good basis to do structural work, but on the structural I hit another snag. There the periodic folding was, say, along distances of 2,000, maybe 2,500 let's say, feet, centres. But the

fool river was about 4-5 thousand feet across. So you just could not correlate the ups and downs on one side and the ups and downs on the other side. There I realized that of the 3 tasks that I had been given, 2 were impossible to complete. But that was for me, a very good started and I was very pleased to have the opportunity. That winter, I was asked to do 2 small assignments in the Fort McMurray area. The first was to go out and locate the Bear-Biltmore??? well to be drilled by Bear Oils. As you recall, the acreage that was held was called the necklace acreage and it was picked up along the idea developed, which made a devil lot of sense, of Ted Link.

NM: This is the end of the tape.

### Tape 1 Side 2

PC: Leduc had been discover, what, a year and a half earlier. I believe that the Ghostmont reef was known as was the Redwater reef and I'm not sure if the discovery had been made at Redwater. However the general idea was, it was known that the Devonian was eroded away and that there were the tar sands to the north and the idea being, there must be, downdip from these huge tar sands, there must be some source of these sands within the Devonian that was subcropping below the Cretaceous. So Bear and Pacific picked up what was called the necklace acreage that followed the Athabasca downstream from around Athabasca, to McMurray and then, came back towards Edmonton along the lines of the Northern Alberta Rail line, which my father by the way was involved in years earlier. So now, the question of making the location of the Biltmore well landed in McMurray in the evening and I had to get myself a pair of moccasins which were prepared by an Indian person there, the sister of a man that worked with me the previous fall. And next day we headed out in the bush with a young guy who astounded us. We had 22 miles to go in the bush and he was in much better shape than we were but he had his rifle with him and he'd pick up partridge and rabbits here and there, dig a hole in the snow and put them in there. Dig a hole in the snow a little further, put no markers whatsoever. . .

#023 NM: And he ??? rifle?

PC: Coming back next day he'd just spot them as if they were nothing. As a matter of fact, one spot he stopped and there were 2 trees, twin trees, and he said, my god, the squirrel that used to be in that tree over there to the left has moved and is now living in the tree to the right. He knew individual trees. Anyway, we got out there, made the location, slept, pretty tired the first night and then walked back. There was a trail to follow of sorts, walked back with the guide. I remember that night we stopped 1 mile from McMurray to see a friend of a friend or something. We sat down in the living room, had a drink of water or soda or something, I'm not sure what, but when it came to getting up again, those 43 miles at that stage were in our legs and they had to literally pull us off our chairs so that we could walk the final mile to McMurray. The other assignment was that of sitting the Bear-Rodeo well #1. I think there was 2 Rodeos. It was located right withing the town site of McMurray and very close to an older well which the Alberta Research

Council had drilled in search of salt. The point that to me, was particularly interesting in drilling this Rodeo 1 is that we were looking for the salt and particularly for the carbonates that could be involved below the salt. We found that the Alberta Research Council well had been stopped something of the order of 10 metres, or 10' maybe, short of its objective. If they'd gone further they would have hit the salt that they were looking for. As you will recall, Madame Mackenzie, the salt was being, or became exploited at Waterways, which was the first place where it was I guess, drilled for. The reason why they located it there was that there were some salt springs along the Athabasca, which I visited a little later. I may say a word about it. Not along the Athabasca, along the Clearwater. With time, we all got to know, it would have been much simpler for them to drill for that salt because of the real problem of supplying the markets in eastern Canada if they'd have gone along the Alberta-Saskatchewan border. Because that salt pan, the edge of which was caught in Waterways, extends from more than 1,000 miles in the United States, the northern end of the Williston basin, across southern Saskatchewan and through up to north westernmost Alberta. The core of this salt pan of course, is, I mean the core, the centre of gravity so to speak, is in Saskatoon where these potash mines are today located. However, to return to Rodeo, we drilled this well, which was I think, the first of the whole group to be drilled, a total of 8 wells were eventually drilled. Not drilled in the normal sense, these were all core holes, full cores taken all the way down. Because of the salt that was across, in taking these cores they frequently had to . . . well, they had to load the drilling water with salt. I remember the company plane at Beaver, as I recall, when they got to drilling Biltmore they were just going back and forth from the Waterways salt plant to Biltmore, just carrying loads of salt.

#070 The following summer my assignment was one of going up with 2 other junior geologists and a junior engineer to carry on a survey well upstream of the Clearwater and down to its mouth and down the Athabasca. This was an alidade survey. We started, I'm not too sure, how far from the Alberta boundary and came on down without too many difficulties. I remember one day we had to put the tents down and stand on them because there was a tornado or near tornado, a land squall actually, because it hit Edmonton the same day, that hit us there. We got going quite well, and as far as I'm concerned, the first big snag I hit was at just above the Messy??? Falls, where there's a beautiful outcrop of Messy or Presquile??? Dolomite. I had a look around at it, there was no overburden on it at all, but it was quite rugged. It had been cut up, section stages let's say of cartification???. I walked around it and then I became quite convinced that this was a reef but I couldn't prove it. We walked back and forth, this thing was a hard Dolomite, just as hard as the proverbial heart of these ??? you hear about. And we used hammers here, there and everywhere. Eventually we found one spot where we could recognize some fossils and we broke away at them and broke and hammered. This one chap, the instrument man, he loved hammering away and he spent a full day and came out maybe, with 3 or 4, barely useable fossils. I walked, cross walked, and eventually, just at the corner of the area, almost under a bush, I think ??? cavern like outcrop. I went inside there and all of a sudden I hit a bunch of honeycombed, badly weathered Correlene forms. I'm not a palaeontologist and I can't give you exact names but they were Correlene forms and to

me, that was finally the proof that this whole mass of hard Dolomite, with by the way, virtually no porosity to speak of, was a reef. Reminiscences of that survey was that after... we worked with running shoes because of safety and better footing, safety in case a canoe overturned, you wouldn't have something lugging you to the bottom of the creek, we'd be doing a fair amount of portaging back and forth with the running shoes on, and at night, we had a different camp every night, we'd be sitting around eating and all of a sudden one man would get a horrible charlie horse and the others would be all laughing and then the second man would get one and then the third man. It was quite funny. I remember once there was a pilot that was with us and he couldn't understand himself why we were all having these pains and he got one himself, so there, we were even. Still another little  
#120 experience we had there was, we found, just below the Messy Falls that the river was flowing uphill. So we decided that there was something wrong with the alidade and we spent a full day cross checking back and forth until we made the necessary corrections and we were able to carry our survey successfully down to the mouth of the Clearwater and then down the Athabasca for a way. I don't recall anything particular that came out of this survey. Oh yes, there is one point, I believe it was downstream from the Messy reef I referred to, we went north of the Clearwater a ways and saw, I was very fortunate to see an outcrop of the McMurray sands, untarred, that is without any tar. I spent a fair amount of time poking around there to see if the sedimentary features looked similar to those of the tarred one. I don't remember the details of it but what I do recall quite vividly is that the sand was quite coarse. Years later, in visiting the Alsand plant, I just could not believe my eyes when I saw that the pond where they were bringing in the detarred sand, the processed sand, out to settle out, that they were having such trouble with flockulence???. The very fine, extremely fine, material within the McMurray tar sands. There wasn't any evidence of that at all in the area that where I was able to see the untarred sand. Further downstream, in the middle Devonian Dolomites I came across an outcrop where there were several, we were very fortunate, quite large Brachiopods. I'd say that the diameter would have been between 5 and 6 inches. But also, quite flat. To this day I query the determination that was given for them. These were called the [strigocephalus bertini]???. By the way if I use this name, that's the only fossil name in the world that I know. But if it had been a bertini, the thing should have been at least 4" thick. All 3 examples, I still think that it was not a bertini. And I'd be curious to see what these fossils were. They may be resting at the University of Alberta today, I'm not sure. Coming back to what I mentioned a little earlier, that I wasn't too sure as to what came out of this report, I remember that Imperial people and others worked the area. I tried to advance the terminology of the Messy Dolomite but I guess, with time, that died. The trip itself was very useful for me and I guess it helped establish, for Bear Oil, some further background to their necklace studies that were carried out through the drilling of these 8 or 10 core holes. The  
#172 following summer I was involved in sitting, not the following summer but I guess, in between season, in sitting on wells. The very first well I sat was Pacific Hardisty. That I sat with someone else, I wasn't on my own there. One thing I recall of that quite vividly was after hitting one crew, the clastics of the Cretaceous, we hit some carbonate. So,



better turn around, go down in there and core. Went in and cored. I don't recall that we got very much carbonate to stop but we got some unconsolidated sand and then a wee bit of carbonate below that. That was about it. Evidently what we hit, I recalled as Wabamun but that doesn't fit in with maps so it must have been some Devonian lower than Wabamun, Carst??? topography, a thin wedge of it, and within the Carst there was some sand, a Cretaceous sand that got itself deposited within the holes of the Carst and of course, protected from consolidation. I haven't heard very often since then, although I've now been away for years from the Alberta exploration, of Carsting and unconsolidated sand within Carst topography in Alberta but there must have been many, many other cases of it. The other well that I sat was, I think it was called Bear-Villa. It was off Lesser Slave Lake, towards the west end, close to a village which I think is named Inulda???. We first had to locate the well. I remember being on a survey or helping the surveyor from the location. The location of course, was a dark location, there wasn't any seismic there at the time. And tying it in to a benchmark along the railroad. Then I had the assignment to go and find out what that benchmark was. Went in to the NAR, the Northern Alberta Railroad offices in Edmonton, and they gave me a roll, railway surveys are all terribly long and terribly narrow, they gave me a big roll and I found the spot. Then I had got the location of the benchmark and then I had to find the name of the person who'd prepared the map and lo and behold if it wasn't my father. My father followed his work of surveying

#216 by having a survey office in Edmonton with several partners. Now to get back to the well itself, the one thing I do recall and I've never had the opportunity to go back and check to see if this applies to several wells in the area. I remember that in the Viking we hit the Viking sand, and there we got a bit of a gas blow, something, as I recall, in the order of 1 million cubic feet. I'll just go back if I may, to the McMurray area for a minute. There was a rather interesting little experiment that we got involved in. It didn't lead to anything but it was rather interesting. As you all know, in electro-logs, the basal sands of the Cretaceous show a big gamma ray kick. When I was in the field, particularly that outcrop that we referred to a little earlier, we were thinking back of the origin of these McMurray sands untarred and tarred and it's fairly common knowledge that they are derived from uppermost pre-Cambrian, I guess something close to the ??? series, veneer sands that's covering much of the pre-Cambrian in northern Saskatchewan. And they're the same sands that in those days, were producing uranium from the Beaver Lodge, I think the name of the unit is the Beaver Lodge unit, but at least in Beaver Lodge, in north westernmost Saskatchewan. So because of tying in the gas kick and the uranium up yonder we thought, we'll take a little trip out and just run some checks. I remember going with the company plane and Jack Browning and a few others and heading into Peter Pond Lake. We had a Geiger counter of course with us, and we used this counter and tried to see what . . . went to several outcrops, but unfortunately we got completely negative Geiger counter kicking. The point of course, as we see it today, in hindsight, it would have paid Pacific Petroleum very handsomely if they'd have had us go out and spend, instead of just one day, spend one full summer or 2 summers or 3 summers developing that same idea. Then Pacific Petroleums, and I guess today it would be Petro Canada,

would be owning some of these huge concentrations of uranium that are being mined by I believe, Imperial and ??? and others in northern Saskatchewan today. One other little point that I might mention of my days during Bear Oil in Edmonton, this happened very shortly after the announcement of the discovery of the famous Golden Spike reef. I guess a good many

#270 must have told you Madame Mackenzie that the Golden Spike name isn't that original name of that reef. Gulf used to name the wells according to the farmers and Imperial named the wells that they were going to drill after the name of the closest post office. But when they came to this funny little anomaly that they had, very small aerially, they said, Golden Spike, we cannot use such a name, it is too promotional. So Imperial, rather than calling the well that they were going to drill Golden Spike, they called it Imperial Shepp #1. When they did hit the famous Golden Spike they turned around and renamed the well. However, to get back to my little incident, it was suggested, or I don't know if I did this on my own, on Sunday afternoon I went driving out with my wife and young daughter and we came to the location and there was nobody around. I remember this tent and you could see signs of oil all over the place but I went close to this tent, nobody around it and I poked inside and I saw a bunch of core boxes. I'm sorry to admit to the public today that I put my hand down and I grabbed one 4-5" piece of core. The Golden Spike, as a lot of you know, is one of the few reefs that is not dolomitized and it had beautiful Correlene structure, reminiscent of those I referred to a little earlier up the Clearwater. I guess you'd call the major assignment I had with Bear Oil was to carry out a field survey down the Peace River, from Peace River town say, right down to its mouth. As you recall, the Peace joins with the Roshie??? River to form the Slave River and after the Slave River becomes the Mackenzie. This again, as I recall, was an alidade survey, we had 2 canoes and of course, we slept every night at a different spot. One of the interesting points was that the flies were pretty bad and the big thing was to get away from the flies. The person who could get away from the flies first was the cook. So what we'd do at first, we'd have 2 tents, we'd set up one tent and with it's fly bar, and put in a stove that had already been lit, one of the Coleman stoves inside it. Then the cook would move in with the food and get the food going while we were setting up the other tents and getting the sleeping bags and sleeping beds ready for the others. Then while the others were fighting the flies, the cook of the night was fighting the food. We went on down the river, starting from I guess it was a little bit upstream of Peace River town, close to the very spot where I believe, Imperial lost a geologist in a very similar survey a few years earlier.

NM: This is the end of the tape.

### Tape 2 Side 1

PC: We headed down from Peace River town and of course, visited the old wells that had been drilled in I guess, the second decade of the century. Some of which we were able to light with a flare. And we saw some of the outcrops of shales that would auto-combust in the heat of the summer. But generally speaking, the geology of the Cretaceous left me a bit cold, although it had me from time to time, sit up on the side of the hill and try to

figure out exactly what happened. But on the whole I think we did reasonably well. We had a bit of a scare one day. We were being supplied by the boats that carried supplies to the lower town, I guess the boats don't exist anymore now. I believe that these boats were with NTCL, the Northern Transportation. We boarded the boat to pick up the supply and somehow the pilot, we had boarded with our canoes and one of the boys stayed in the canoes and somehow the damn pilot got hot feet and put his barge in full speed ahead. Our canoe flipped of course, under that condition, particularly with a man at the rear and he ended in the water, with his heavy boots on. to this day I feel badly that I didn't take my boots off and dive in. But I guess if we'd done that we'd have had to, the barge would have had to go after 2 different people.

NM: You had your boots on too.

PC: No, but I would have taken them off, but my swimming, it's not as good as ??? I'm afraid. I think we'd have left maybe 2 bodies, but luckily we didn't leave any. Binney???, we went around and got hold of him, pulled him in, went ashore as fast as we could after getting our supplies and bawling the pilot out and we had some good medicine in camp. We pulled the bottle out and this was certainly the time to use it. We were terribly pleased to have our young Binney with us. Further down the river there was this outcrop at the top of the Buffalo Head Hills, which are quite a feature in the area, and which have been reported frequently as representing an anticlinal feature. It was impossible to consider bringing the alidade survey all the way up there, but what we thought we might do is just take an elevation. So we set up the alidade at a spot where you could see the outcrop and I headed out in the bush and I guess I headed up around early afternoon. I guess that's right, I headed up early afternoon, I got there just about sundown and was able to put some strips of toilet paper at 5' intervals, vertical intervals, horizontal strips, as the rod, because I certainly didn't carry one, he wouldn't have been able to read it anyway, for the instrument man. He was able to locate and figure out the elevation of the outcrop, which was something of the order of 3-4 or 5 miles away from him. I didn't get back to camp until next morning around 7 or 8 o'clock. I guess it was long summer days, yes, it must have been. There was a fire that started in that vicinity just about that time and apparently I was accused of being the one who set that fire. A small forest fire, but I never did light a match all the time I was there. It may have been some of this auto-combustion that I referred to earlier. A little further downstream, I think it was Buffalo Head Landing or Prairie, that we were getting the canoes out ready to set up camp. It was a beautiful spot for a camp, when some of the local, there were some sects of Hutterites I believe, they came over to us and they saw the bread that we had. I guess the same bread from the time that was delivered to us at the Binney incident. There was more green on it than there was white and they were a bit horrified to see that we had such terrible bread to eat and he felt sorry for us and he drove home and asked his wife and the wife was able to cook a new batch of bread for these geologists that were going by. I remember, these fellows, they weren't very orthodox, they drove jeeps across the prairie, they drank beer and smoked cigars.

#060 NM: Hutterites?

PC: That's right. Maybe this isn't for publication but some of those boys did, I remember that very distinctly. Anyway, we didn't carry beer with us and there was beer there. They were very, very kind to us. A little beyond that landing, as I recall, I saw a gas seep that I didn't recognize as such as I recall, and which I've always wondered about. We were going down on a very clear summer day, in the middle of the Peace, at one point where it was going due east, and we were in the middle of it and it was as if there was heavy rain hitting the water. Actually, it was bubbles coming up from down below. I guess I wasn't indoctrinated enough in the petroleum business to put the 4 wheel brakes on and try to locate this precisely and do something about it. I've always felt that I'd like to return, locate the thing, particularly in view of the fact that there have been some shows in that general area, some shows of gas. And I believe more recently, one mustn't forget that I have not been involved in the western Canada exploration for the last, I guess close on to 20 years now, so I'm not too sure what has been found there in the area. The next stop on the survey was the Fort Vermillion Hotel. That's the famous hotel that has the 2 tiered 3 holer, which is renowned throughout northern Alberta. So we for once, spent the night other than under tent. I'm not too sure which was better. But there I met Bill Clemis, and I can't recall what had brought him up to the Fort Vermillion Hotel at the time that we hit it. Bill had just left Imperial and he was with a new company and I don't recall which. We spent quite some time that evening discussing various things and I sort of got involved in talking the geology of the Devonian as I saw it and telling him how I just wished I was sure that what I thought I knew was right. My version as to which was the seaward side, which was the landward side of the Devonian sedimentation, the old shore line. We chatted back and forth and the thing to me that astounds me to this day is that Bill talked me that night into joining the company that he had left. Across the river from Fort Vermillion the geology started getting interesting about that point because we were getting involved in Devonian. Came across an outcrop, pure??? Carbonate, that looked very, very much like some of the ??? that you might find around the sulphur springs of Banff. I worried for quite some time as to whether this was outcrop or due to recent seepage and I still don't know. A little further downstream, we came across another outcrop of quite some interest. It looked like a whole bunch of stacked cannonballs. This was on the south shore in part and on the island just opposite from this outcrop. There you could see the cannonballs imbedded into the Carbonates. This I eventually, these cannonballs of course, I believe, were a group of stromtoperoids???. I personally correlated this outcropping with the D-2 equivalent sub-outcrop. Further downstream, quite a ways, we hit the head of the famous Gypsum Cliffs. And just at the point where the river turns temporarily to the south, across from some of these hoo-does, we, at the foot of a quite thick shale bed, came across brachiopods by the jillion. I'm afraid that this is the point where Pierre Côté lost his religion. These brachiopods, it was the fresh crop of brachiopods since the last set of geologists had gone by. These things had been washed down by weathering and rains and then cleaned and you could just pick them up. We filled I don't know how many sample bags of these beautiful little brachiopods. The reason why I lost my religion is that I consider this like a symmetry??? of brachiopods that goes back several million years ago and I just could not see one supreme being that

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would be interested in those individual little brachiopods and that kept pace with them and kept pace with all the forms of life that developed over the millions of years since then and today, was keeping pace with each individual human being. That was a turning point in my life, that particular outcrop. And from there we headed down, through the Gypsum Cliffs and I got to realize that this was a misnomer, the famous Alberta Gypsum Cliffs are really not gypsum cliffs, they're anhydrite cliffs. The anhydrite has become watered and once it picks up the water then it's gypsum. What you have is anhydrite coated by weathering, with gypsum. We were able to satisfy ourselves that this was the case by using our hammers. You'd start with a big chunk of anhydrite and you'd start hammering at it, and it's a thud, thud, thud, until you get closer to the centre and then it starts clinging. Then when you hit it at the core, it clings. Anhydrite in German, is called clink stone. So that to me was proof, just through the noise, that you're dealing with weathered anhydrite rather than gypsum. We headed on down and we saw the famous Peace River anticline. This is a thing, everything is going fairly flat and all of a sudden you've got a ??? anticline, that may be 15 metres across, maybe 10-15 metres high, something of that order, all by its lonesome. I forget the name of the head of the Geological Survey who figured that this feature was due to the watering of anhydrite, or anhydrite becoming gypsum and gypsum having greater volume it caused this feature. I'm afraid that I don't belong to this school of thought. I still don't know what caused it but certainly not watering of anhydrite to gypsum. I guess the last thing I recall about the outcrops of that survey is that we joined the Rossi??? River, north of Lake Athabasca and headed northward on what was now called the upper waters of Slave River. We saw an outcrop of the Prestile??? Dolomite, not spectacular by any means, fairly thin, but there were some fossils there and I don't know that they were diagnostic. We were able to pick quite a few, I don't know if they were diagnostic. But there were also some sulphur springs. Now these sulphur springs, they extend all the way from about this point, maybe somewhat further north, along the Slave River, right along the whole of the glint??? line. They call the glint line the edge, it's

#174 a so-called topographic feature, marking the edge of the Paleozoics and the pre-Cambrian. And they'll extend down, I mentioned them a little earlier I believe, on the Clearwater, and they go on right on through to Lake Winnipegosis. You can imagine how much salt water is rising up from the middle Devonian in the subsurface and hitting the edge of the pre-Cambrian in a year's time. From about this last outcrop a plane picked us up and lo and behold, from the tent life that I'd been involved in for the last 2 or 3 months, the next night I was sleeping in the Banff Springs Hotel. True, the room was way up in the attic but it was still the Banff Springs Hotel and somewhat better than the tents. This was a convention of the CSPG as I recall. This is where I first had contact with members of Imperial Oil since the first time I'd met Ernie Shaw in 1948. Doc Landis was there and Waldo Wearing was there also and Waldo sort of brought me to Doc Landis and Doc Landis gave me a big song and dance. I remember his specifically saying, we have a lot of greenbacks Pierre. He left it at that and we chatted generally and we went through the convention and headed back to Edmonton and worked on my report covering this Peace River survey, which I think may have had more to offer than the one up the Clearwater. In

as much, particularly the subcrop maps that I was able to prepare, the extension of the subcrop maps from south across the northern Peace. I worked on that report. I guess it must have been in early February I asked for a day off and I took my car and headed down to Calgary. I went to see Doc Landis, I guess I must have made an appointment with him and I told him I was interested in joining Imperial. From the heat of the reception in the Banff Springs to his office, I found him cold as a cucumber. We chatted and when he saw I was serious he went over to see his boss, the exploration manager, Doc was the assistant exploration manager, who was the famous Ray Walters of Imperial. He went to see him 2 or 3 times and finally, he came to the conclusion, we do not want to be accused of stealing anybody, because as you realize, people had been stealing Imperial employees right and left, ever since the Leduc discovery.

#221 NM: It was a good training ground.

PC: No, it wasn't so much that Imperial was a training ground as Imperial had been the one that had worked through the west. True, it was a training ground but they were the ones that had the knowledge of the geology of the west. And after the Leduc discovery then jillions of companies came in, they were looking for people that had some knowledge of the area and of course. . .

NM: And of course, Imperial was it.

PC: And Imperial was really done in rather badly. So they decided what they would do, I asked them for time to get back to Edmonton and advise my people in Edmonton. The next morning they would phone Frank McMahon and tell him that Pierre Côté, of the Pacific Petroleum Edmonton office had offered his services and they were pleased to accept. And that is the way that I joined Imperial. I remember it was on February 28<sup>th</sup>, I was due to join Imperial the 1<sup>st</sup> of March so February 28<sup>th</sup> I was stretched out in bed with a terrible case of flu. The doctor told me to stay in bed for another 2 or 3 days. I got up that evening, we decided the best time to travel was in the evening, got up that evening, put our things in the car and I guess, 2 children the best time with them was the night, 2 children, took off with a plant and took off in that 2 door Studebaker, with the airplane nose and headed down the highway. We hit the Palliser Hotel at 2:00 in the morning and it was about 25-30 below Fahrenheit, it was terribly cold. But the trip was uneventful, except we forgot the fool plant in the car. Next morning I was in the Imperial offices and started working with them.

#252 NM: So what did you do for Imperial?

PC: My first assignment with Imperial, I guess it was called the exploration research section. It was headed by Waldo Wearing, who answered to the chief geologist at the time, who was Doug Layer. Waldo and I worked pretty closely, he was quite a reef man, and he was quite a man. As a matter of fact, he's quite an unforgettable character. He was very active mentally and forever dreaming ahead. He had been in South America, he was born in Pittsburgh I believe, across the border somewhere and he was down in South America and he was involved with the running of some of the first electro-logs down there, which were run with a hand driven reel. And of course, very elementary units. But that kept him

close, that background of the e-logs kept him close to the e-logs and he worked with them tremendously. He was trying to correlate with them a great deal. His work of course, was related and my work also, was very closely related to looking for clues that would indicate where there might be proximity of additional reefs. After the discovery of Golden Spike of course, and the finding of the Cooking Lake platform on which evidently, reefs were built, everybody was looking all over the place for other Golden Spikes. And with little success. Nobody in those days ever dreamed that the next Golden Spike they would find would be, eventually, way up north in the Rainbow, middle Devonian. And subsequent to that, that they would have other baby Golden Spikes forming on a Nisku or Winterburn platform way off to the southwest of Edmonton. I might mention that contrary to what possibly some individuals within Imperial seem to think I joined Imperial, not to learn, to be schooled, but I went there with a personal commitment that I would stay a minimum of 5 years, come hell or high water. And that if I was unhappy after 5 years, then I would consider leaving. Actually I stayed with the Jersey organization for 20. I soon found out, after joining, that my concepts with respect to the Devonian geology, Devonian sedimentation, Devonian reefs, wasn't that far behind.

#308 I don't think I had developed the idea, or was up to the idea of Cooking Lake platforms, as much as Waldo had it. But I had a good concept of the overall Devonian geology and the general line-up and formation of reefs. Very shortly after joining Imperial Doug Layer came to me one day. Waldo had had to leave in a hurry because of the sudden death of his father and Doug said that Waldo was due to make a presentation of some paper that he had not quite completed in a few days time and he wondered if I would be good enough to complete it for him. Which I did, and without too much difficulty. Then Doug mentioned that maybe I should be the one to present it. He told me that it would be on Monday morning at such a time in the Palliser Hotel. I rehearsed for the thing, not knowing what the audience was, and I was quite surprised, getting into the Palliser, to find out that we were in a medium sized reception hall, a bunch of chesterfields lined up in front and then chairs in the back. Normally for technical presentations you've got a whole bunch of chairs, no chesterfields. I think that was the very day that Don Mackenzie was named as the new producing manager of Imperial.

NM: This is the end of the tape.

#### Tape 2 Side 2

PC: Eventually it was my turn to make the presentation, I got up front in front of these people sitting on chesterfields and made, I think, a credible presentation. Had a bit more difficulty in answering all the questions but Doug was there to give a hand where I had difficulties. And it's only after I had completed all of this that I was informed that the main audience was made up of the chairman and chief executive officer of Standard Oil of New Jersey, New York and his buddies.

NM: That was very impressive.

PC: Well, probably a good thing that I didn't know ahead of time. To get back to the reef

exploration, at that stage, I mentioned the Cooking Lake platform and the search for the Devonian. I think that we were getting into the idea that there could be and that there were indications of underlying reefs. As a matter of fact, I'm quite sure of Beaver Hill Lake reefs. But we didn't know what the configuration was. As far as I'm personally concerned, particularly because of the field work that I'd done up the Clearwater and down the Peace, I still kept a keen interest in the middle Devonian Messy or Prestile type of reef for northern Alberta. I believe that is the age of the production of Norman Wells, which would be from a Prestile equivalent if I'm not mistaken. This interest is what brought a group of us to drive out, I think from Regina, where we were visiting to Lake Winnipegosis. I believe Gordon Darling was in the group, there was Waldo and Jim Shouldice. To me, I guess the thing that struck me the most about the outcrop, which were not that spectacular, because the topography was controlled by this salt water seepage I referred to earlier. The salt water seepage had caused the topography to be eroded and dissolve to base level, which is the level of the lake. So the outcrops were really pretty flat things, they weren't things that you could put your nose to unless you got on your hands and knees. But that again, sort of kept me alive on the thoughts of middle Devonian production. On the way back from this trip, towards Regina, I was map reading and we went through an Indian reservation that looked like the real model Indian reservation. The local natives were stripped to the chest, beautiful specimens and driving tractors. Somebody said, my god, I guess we're going through an Indian reserve, Pierre, you're the map reader, what's the name of the Indian reserve. I looked it up and lo and behold, it was called the Côté Indian Reserve, accents and all. I sure got a ribbing on that one. My next main assignment within Imperial research group was to upgrade and bring to full fruition, the basin study maps covering western Canada that had been initiated by Don McGregor, who later spent several years with Imperial in the Toronto office. I went back and repicked something like 90 or 100 wells across western Canada, to use them as the type wells, the basis for the study and worked the thing up from the whole set of isopacs and lithological maps. Working for Cambrian, Ordovician, Silurian, through the middle, lower, upper, middle upper Devonian, Mississippian, and through the Cretaceous to the Tertiary. Then prepared a set, and that I think was worthwhile, a set of paleo-geographic maps accompanying each horizon. This brings to mind a little incident that occurred when I was right in the midst of this. Imperial Oil has, the same as Jersey does, was in western Canada every 2 or 3 years, an exploration meeting held at various regions. There was this one in Banff and Ray Walters addressed the crowd to present to us an ex-RCMP who became security officer for Imperial. He said, the reason that we've hired Inspector so and so is that we've just heard that across the border, some of Imperial's seismic work, and Pierre Côté's basin studies are being sold to whoever may be interested. Which of course, floored me. I went up to see Ray Walters immediately after and he said, don't worry Pierre, we've looked you over from all sides, your hands are clean. From that day on to this day I've sort of been very conscious of security.

#041 #068 NM: So somebody stole your papers?

PC: Apparently somehow copies were made of that and of some seismic interpretations and



they were available across the border to whoever might want to buy them. I don't know how many copies were made and how many copies were bought, but this was before the finalization of the thing.

NM: That's very unpleasant.

PC: This study is something very, very similar to the one, but not at all as detailed, to the one that was presented by the ASPG, I believe around 1968 and reprinted in '69 and '71 or something. But the same idea. I remember that Doc Landis, a little later, thought that Pierre Côté should get a wee bit more oil in his head. I guess he knew that I'd sat on some wells but he felt that I should probably work in the field, where there's some actual oil. You know, get the smell, have it in your hair. So I went and spent the summer, my family went out east, spent the summer in Camrose. There Dick Proctor, who was the local production geologist showed me around and showed me how one picked the top of the Viking sands, through the first black ??? pebbles, coming up on the shell shaker. I was given the job of looking after 3 or 4 drilling wells, development wells. The summer was very fruitful, although at the time I felt that maybe I'd had enough well site, this really added to my background and I'm very thankful that I was given this assignment. I might mention that I went to Camrose with an uncompleted job on this western Canada basin study and it is there that I dictated the text to accompany the isopacs, lithologic maps and paleo-geographic maps. I might mention an experience that I had earlier in joining Imperial. I don't think I mentioned that John Poyen joined about the same day as I had. Neither of us were used to the way things were done in large organizations and of course, Imperial of Jersey, it's the Jersey type training, neither of us had it. He came to me one day when Doc Landis was away, as well as Doug Layer, he was the head contracts man and he had a proposal for Imperial to get involved in a play that would involve Beaver Hill Lake in the deep basin. What eventually turned out to be Beaver Hill Lake. I think there were indicators then that there would be Beaver Hill Lake. I looked at it and I liked it very much. So we decided to present it to management. The next meeting Ray Walters was there, Doug Layer back from the trip and Doc Landis. He made his presentation, I made my geological background to it, but we left people terribly cold. They had not been forewarned. When Ray Walters turned to Doc Landis and said, Doc, what do you think of it, he said, frankly I don't know anything about it. They weren't forewarned and they were cold and the thing got a negative answer. If both John and myself had had the old Jersey experience we would have known that you should never do that. That you always present it to the person ahead of time to get his reaction. When you've got a decision to be made, get his reaction ahead of time, forewarn him so he can think about it and then you can fill him in. I think it's partly because of that very presentation that day that Imperial may not have got involved into the deep basin, Beaver Hill Lake type of thing sooner than it did. I'd been with Imperial some 2-2 1/2 years when Peter White, who I guess he was a geophysical type and was involved, I didn't see too much of him in Calgary, he was transferred to Peace River as assistant exploration manager. That's assistant to George Shouldice. He asked for me to come up as district geologist, which I was pleased to have the opportunity to do. Went up, I had a look at the place and decided that I'd build a house. The decision of this was based on geology. As you know, Madame Mackenzie,

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there's a Peace River high that is rimmed with reef, the same reef as that of Leduc and Redwater. Everything is tilted up so, and Redwater, which is a huge affair, not as big as the one in Peace River, it's only the updip end of it that has oil in it. Now the updip end of the reef that's rimming the Peace River Arch, which is called the Normanville reef, had not been tested. I was sure that they'd find oil and I said, I'm going to build a house and once things get booming, we'll be able to sell the house like hotcakes. So we built the house, the first house built and the last one built because too many mistakes were made. I went before, my wife joined me with the youngsters as the house was being completed and we started the anomol work, which in this case was not research type, it was operational geology. I'd like to mention some of the names of the people that I was associated with in Peace River. They were quite a crowd. We had quite some wild parties, some of the people would come into our house at about 2:00 in the morning and we'd be up till 6 the next morning and have to go back to work. It was wild at times but they were people that worked very hard. I remember keeping people up, several of our geologists, myself of course, I was there, till 4:00 in the morning to finish some given project in the office. So there was give and take. Just to name a few people that I had the good fortune of being associated with in Peace River, I might just mention Doug Lavoie, Al Rudken, Gordon Wells, Oscar Friesen, Bob Fitzer, George McCollum, Roy Bay, Murray Macdonald and

#166 later, Jack Armitage, ???McRae, Tom Parks. Also good associates were Gordon Wiser on the geophysical side Jack Underhill and Harvey Hewittson. Also of course, he was on the geological side, he and Doug Lavoie were the types to wake people up early in the morning was Jack Hickle. At the time that I went to Peace River, Imperial was involved in let's say, the second phase of exploration. The first phase, which had lasted probably 4-5 years and I guess was run in part from Edmonton, and in part from Peace River town office, was the exploration of a broad band of acreage that it held at the latitude of Peace River, extending from Spirit River on the west side to Grouard, if not further east than that. A broad belt in there. There were really a good many wells drilled which preceded my time, they called them the Spirit River, the Hinds Creek, the Falare, etc., all drilled by Imperial without success. Which brought the comment from some highly placed people that they would drink any oil that might be found associated with the Peace River Arch, Normanville reef. Actually, in those days they would not have had very much to drink. There haven't been millions of barrels found associated with it, but enough to give someone a stomach ache. But that was more recently found. Next, the stage in which we were involved more was the exploration of the area further to the north. Imperial had acreage from almost the northern boundary working southwards, as well as acreage within the Northwest Territories. The acreage working southward extended, let's say, 1/2 to 2/3 down to the Peace River Arch. This is the main area in which we were involved. The play there was basically that of the Prestile Dolomite and the middle Devonian reefs that I've spoken of for some time now. I suppose that I had reasonable training in the way of being prepared to think middle Devonian. We drilled Trout Lake well way up north, and some others further south, including the Rainbow #1. Rainbow #1 had a relatively thick Carbonate and it had a show of oil. This got us very much enthused,

- particularly in the
- #218 Peace River office. Question, what do we do. You've got oil, you've got what appears to be a thin reef, as if it's a toe of a reef, are you going to drill another similar feature or are you going to drill close by. We decided on drilling close by and hit a dud, salt water. To this day I don't recall whether the two were tied or not, the Carbonates. Came down to Calgary and got ourselves talked in to a third well and there we got criticism for not having stepped out much further on the second one. I'd come down with my little bottle and put it on the table and Don Mackenzie said, Pierre, okay, but find some oil. We got a third well and it was a dud, I've forgotten the name and I came down to Calgary once more. Don said, Pierre, okay, but this is your last chance. You had one strike, two strikes, three strikes and we'll have to play somewhere else. The last one was the Black Creek well and the geophysical interpretation, I think one of the geophysical interpretations was a dandy. The only thing is that nobody dreamed in those days and was prepared to dream in terms of finding some small little ??? reefs, the same as those of the Silurian of western Ontario. We missed the boat and started working at other things. It was decided that the Rainbow play apparently would not give and that we would start surrendering acreage in that area. To the north there had been some fairly major gas found, associated with the Prestile, but that of course, was of no interest at that stage, particularly with Imperial which was never too strong on gas. I might mention that a real heartbreaker, later when I was in France, I put on the plane the geologist from France of Aquitaine, who came to Calgary, to fund, with zero cents, the ??? allowance dollars of Aquitaine's, fund the drilling of the first Rainbow success. I was always rather close with Peter White. I remember several instances of him. I remember walking into his office and finding him just gazing out of the window time and time again. Rather than writing away. There I got to realize that he was very much of a thinker and a dreamer and thinking ahead his problems.
- #270 I remember spending hours with him, working out, chiselling in the French sense of ???, working down to the fine point the text of unoperated acreage reports. I remember spending several days in the conference room there, just to get those words down as sentences as short as possible, brief paragraphs, and have every word count. Peter, having been brought up in England, was a bit of a master at it and I gained from that experience I'm sure. It's Peter that a little later, just about the time that he was leaving, had started drumming up Imperial to pick up acreage in a substantial way in northeastern B.C. This eventually took the form of a large and in those days, probably one of the largest farm-ins undertaken in western Canada I believe. It was a \$9 million farm-in from Pacific Petroleum. It involved their acreage in the vicinity of Dawson Creek and heading north around Fort St. John. I believe that not included, was certain known structures that had been drilled and had discoveries of either gas and oil. And then the acreage extended by spatters say, towards the north and in the north around Fort Nelson there was a huge acreage position of Clark Lake. I guess I was fairly instrumental in helping George Shouldice in pushing from our side in Peace River, the completion of this farm-in, which of course, was completed in Calgary, through John Poyen group etc. I recall there were huge documents involved in this complex affair. And it was shortly thereafter, after the

farm-in was signed that Harvey Hewittson started working on the geophysical maps in the vicinity of Boundary Lake. As I recall, he couldn't get adequate structure. I guess he used lateral velocity variations in combination with I think, an isopac, although that doesn't seem to work. But it was a bit of an unusual map, using lateral velocity variations, which he derived. . .the map that was used to sput the discovery as I recall, of the Boundary Lake field. Now, I'm not sure, having left Canada not so long after, I'm not sure what the ultimate produceability of the field turned out to be, but I think it wasn't too far from 100 million barrels, which made our farm-in from Pacific well, well worthwhile.

NM: This is the end of the tape.

### Tape 3 Side 1

PC: On the other hand, and here I've always felt a bit badly, the exploration way up north, similar to that that I referred to of Trout Lake and Northwest Territories, the exploration way up north of the Clark Lake area, a bit costly, ahead of its time, although it might be quite rewarding I think I did not help George Shouldice as much as I should have in trying to pound on the table to ensure that our interest acquired from Pacific on the Clark Lake area was not maintained. It was thus that we eventually surrendered that interest, which is unfortunate. In the latter part of my stay in Peace River, Don Mackenzie was visiting and suggested that I might come out to Toronto, to replace Ernie Shaw, who was then the local geological representative of western Canada in the Toronto office, during his absence on holidays. I went out there and unfortunately, could not bring my family with me. And had an interesting experience working in the Toronto office, which was radically different than Peace River. But one day I was called out, I was asked to go down to Washington to interview a young geologist who had just graduated from school and was looking for a job. I headed down to Washington in the morning I guess and very consciously left that evening, but while in Washington I thought I'll go have lunch in the Mayflower. The young man that I interviewed, it was a very agreeable interview I had and he later spoke to me how much he was impressed with the setting of the interview, which maybe had something to do with his joining us. He joined Imperial and I worked with him 1 ½ years. The young gentleman was Bill Hopper. I was later in Calgary, acting as chief geologist when the class of geologists to whom Hopper belonged, completed their first year training and he was chosen the valedictorian of that group. And I still laugh at the jokes that he had to make at that presentation in my home attended by several of the management personnel of the Calgary office. Going back to the Peace River office, I remember that we used to have to fly down to Calgary for various meetings, quite frequently and sometimes on very, very short notice. This might be with the company  
#040 Otter or it might be by commercial airline. Just to give you an idea how frequent some of these trips might be, I remember that for a presentation that I had to make on the Peace River Arch to one of the Jersey exploration meetings in Houston, there were 4 separate trips related to reviewing the view graphs for my presentation. Now there were 2 of these trips at least were related to other matters but 2 of them were specifically to review the view graphs and text. This gives an idea of how much importance Imperial, and this is

something that was inherited I understand, from Theodore Link, how much importance Imperial put to the format of presentations. And it turned out that the presentation that I made in Houston was one of the highlights of the meeting. With the big farm-in of the acreage in northeastern British Columbia, it was decided, in part for political reasons and in part to satisfy the horror of some of our visiting firemen, particularly those from New York, who were horrified at the state of the streets in Peace River town, which for all the time that we were there went unpaved, with parking signs, 24 hours parking only, that were being photographed by many of the visitors. And our offices were all eventually too small and they were being heated with oil that came not from Imperial but from Gulf Oil, decided to move the office to either Dawson Creek or Fort St. John. That caused quite a bit of back talk for awhile, a lot of people would have preferred St. John or Dawson. Eventually the decision was made, lord know where, that it would be Dawson Creek. Quite a large block of acreage was set aside, it was called the Athletic grounds, for the Imperial office and housing for Imperial personnel. People went out, had a look around, bought a whole batch of lots and of course, there was one place that was reserved for the office. The thing that was unfortunate was the houses were onlooking the office where you did all your work. So you looked at your work at night so that you would be looking at your work at night. I picked up a lot, pie-shaped, which I never did use, because just as the move occurred I was transferred back to Calgary. I sold the lot for what I bought it, \$500. I did have the occasion though, to visit the very fine offices of Dawson Creek and spend some time there once I was transferred to Calgary. I appreciated that the overall set-up in Dawson Creek turned out to be a marvellous thing. It is unfortunate that some people did not feel that they could afford to move, because they didn't have the necessary monies to pay for housing and this caused us to lose some personnel.

NM: This is the end of the first interview with Pierre Côté.

Tape 4 Side 1

NM: This is Nadine Mackenzie speaking. This is the second interview with Pierre Côté.

PC: As I mentioned earlier, shortly after it was decided to move the Peace River district office from the town of Peace River to that of Dawson Creek I was transferred to Calgary to take the position which in effect, was that of chief geologist, although as I recall that was not the official name or the official title given to the job. The set-up in Calgary as far as management personnel there, was I believe, Don Mackenzie, earlier the producing manager, had some time earlier been transferred to Toronto and become the director representing producing. And was replaced in Calgary by Vern Hunter who was the producing manager and who had as his assistant Doug Armstrong. Doug Layer was the regional exploration manager and Peter White was his assistant. Tip Maroney was the production manager and Bob Welsh was his assistant. In my work as chief geologist I believe that Hank Kuntz first was my assistant and later replaced by Joe Marsh. The responsibilities of the so-called chief geologist was in part an administrative responsibility to oversee all headquarters type administration of the geologists wherever they may be located. That is in large part to do with salaries and performance. But there

was no line responsibility for these personnel, strictly a functional responsibility. This applied not only to the individuals but to the district offices. The district geologist for example, or division geologist, would answer in line to his manager and had a functional relationship with the so-called regional chief geologist. The work involved frequent visits to by then, they were only divisional offices, to review on a one to one basis the work undertaken by individual geologists and to also review at headquarters or in the divisions, the plays that were worked up and that were being presented for, either new acreage or new drilling. We were also involved in reviewing all the technical reports coming out from the divisions. Hank Kuntz had a tendency to look over administrative matters, plus the foothills district whereas I tended to concentrate on the technical aspects, in particular the western plains including northeastern British Columbia. One of the finest presentation performances that I can recall hearing in my stages in Calgary was that of Keith Huff coming down one day from Edmonton. There was question of surrendering acreage in the general Virginia-Swan Hills area. Keith showed as I recall, a beautiful exhibition of fishing. He put the bait out in such a beautiful way and when it was cooked he just angled that rod awfully fast. The acreage was maintained, maybe not wholly but in large part, which proved to be

#050 invaluable. The only technical material that he had at hand were some magnometric??? interpretations, which showed, in that area, a crossing of trends. Most of us in those days, and I don't know that there's been necessarily a change today, certainly did not put too much credibility into the magnetic interpretations. However that acreage was maintained. This brings on what I've always considered as a personal error on my part. The drilling which occurred approximately at that time, I'm not too sure whether it was earlier or later, of the Virginia Hills well by Imperial. This well showed at the bottom part of the Beaver Hill Lake formation, very definite evidence of a reef toll. It was a clear indicator of a play in the region. As chief geologist I received piles of history logs of various wells drilled in various divisions and I went through them so as to familiarize myself with the wells and with the format and the results. I'm sorry to say to this day that when I went through the pile that contained the Virginia Hills well that I did not spot this so evident clue, which opened up the play. I'm told that the well site geologist, in his well site report, which somehow I don't think filtered to us, or if it did, I don't not recall seeing it, had pointed out to the importance of this reef development at the base of the Beaver Hill Lake. During that stage, or shortly after the drilling of the well, Home Oil started picking up acreage, as I recall, southeast of Lesser Slave in what became the Swan Hills region. If I remember correctly we were sort of wondering why this concentration and shortly thereafter, they drilled the Swan Hills well, which was a discovery of this rather important reef trend in that vicinity. Luckily through the acreage that had been maintained, Imperial did have the Virginia Hills field, which itself was a very important field. I am not in a position to mention reserves, and this is a thing to remember throughout reading or listening to this presentation, that I have been away from western Canada geology for over 20 years now. but Judy Creek was a godsend to Imperial on this play. In that respect I might just mention a point of interest is, after the discovery of Virginia and the scramble and the big rush that occurs following the discovery of a major trend Imperial made its

own discovery of Judy Creek, and then, after having to surrender some acreage there was some important acreage up for sale. And the security that was attached to the drilling of those wells was even surprising to us. When the cores were being taken from the Imperial wells the drilling contractor was asked to remove all of his crew from the well site, off the derrick floor, completely away to a building some distance away. An Imperial crew of 2 or 3 and I query that the geologist was allowed on the floor, a crew of 2 or 3 drilling personnel took over the job of getting the core barrel out, laying the core on the floor, putting it in boxes unwashed, nailing the boxes down, bringing the boxes into a helicopter. The helicopter would fly across to the main highway several miles away and then it was driven in to

#109 Edmonton. I think there was an instance, if I'm not mistaken, where a scout using a truck, tried successfully or not, I'm not sure, to get the Imperial truck into the ditch so that they could open some of those core boxes. Anyway, the core would come in to Edmonton and there they'd put it into a locked room, and George McCollum, with or without an assistant, did the log analysis in great detail. The results of his analysis were passed on to Jim Wood who was the division geologist, who then reviewed it and with or without discussion with one principal in Calgary, passed it on to Doug Layer, the regional exploration manager and then to Vern Taylor, the producing manager and then to Don Mackenzie in Toronto. Bypassing several other people who were a bit surprised at the tightness of the security. A detail that I remember of the office work in Calgary, and this was not really office work, it was a question of a heavy discussion that I had one day with Hank Kuntz in respect to personnel. There had been a fight in a field party and that of course, is dynamite. Hank and I disagreed as to the action that should be taken. We discussed this for days on end it seemed. Finally I gave in to Hank who just stood to his point like a real terrier and it proved that Hank was right. This man in question has proven to be one of the top explorationists, both with the company and outside the company for years thereafter. Aside from Judy Creek, those years as I recall, had been really quite lean for Imperial. That is, in the way of new discoveries. The exploration staff, and I think this was pushed a great deal by Peter White, decided that they should take the senior personnel, technical personnel, professionals if you prefer and put them together in a group. The group was called an exploration advisory group, responsible directly to the exploration manager. As a matter of fact each man in the group was called an assistant to the exploration manager. The responsibility of this group was to check rather closely on all plays brought in and also, to brainstorm new ideas and new plays. The formation of the group meant the doing away with the functions of chief geologist and his assistant and chief geophysicist and his assistant and grouping these personnel with others in this advisory group. Members involved were such people as George DeMille, Hank Kuntz, Harvey Hewittson, Don McIvor, Jim Murphy, Carl Chapman, probably 1 or 2 others and myself. The normal administrative functions of the chief geologist, as I mentioned, were

#161 done away with and this lasted for awhile. But shortly it was realized that there was too much of a void. Carl Chapman returned to his earlier function and Barney Clair was brought in, I think from Regina, to take over the administrative functions on the

geological side. This advisory group rapidly got the name of the egghead group. I do not know how it made out on the long run but it is evident that it became a holding tank, in addition to its function of supplying new ideas and checking on technical matters, it became a holding tank for senior personnel, from which were drawn several people. For example, Harvey Hewittson, who I think went to Peace River as an exploration manager if I'm not wrong, and of course, the case of Don McIvor, who pierced right up to the top. Personally, I was not overly happy in the group, missing my earlier assignment and I may have shown it overly. Eventually, in the very early part of 1961 an Esso rep in France passed around a request for someone who could work in their offices and handle the French language. I jumped at the opportunity and by the 1<sup>st</sup> of April 1961 I was heading over to France with my wife and 3 young daughters, who had lost their French on 2 prior occasions. This move proved to be a major change to the future of the whole family. When we arrived in Bordeaux, my wife took one look at the house that had been set aside as being something that might be appropriate for these young visitors and my wife said, if this is the house where we're going to live I won't be here more than 6 months. We did look a bit further and eventually found something that was quite satisfactory. Very satisfactory in fact, so much so that Esso reps kept it on hand for years after our departure and the family stayed overseas for something close to 12 years as a result. The function of Bordeaux was one of assessing all acreage not held by Esso rep throughout France. This proved to be quite challenging and very interesting. There was a small group of us geologists and it was rather interesting to work with them and see how their thinking and their way of writing reports in particular, was really was different from our own. I particularly recall one job that we had there. There was a land sale coming up in the ??? de Leon, that is south of

#213 Marseilles, the offshore area, between Italy and Spain. There was a deadline on this and we decided that if we should make a report on this offshore area that similar reports, so as to allow us to make adequate comparisons, should be made for the offshore area off Aquitaine, Bay of Biscay??? and that which we referred to as the French Sleeve, the English Channel. So I remember we worked very hard to get all 3 reports out in good time and a thing which was anathema in France, we had a whole crew of geologists and draftsmen working on the ???, which I was almost never forgiven for. The part that was very unfortunate was, rather than someone deciding it wasn't necessary to send a Telex that these reports were being sent down and they were rushed, they were received eventually in New York and about 2 months later there was a letter sent back to the effect that there was really not too much interest in the acreage in the ??? de Leon, but the deadline had passed by about that amount of time. While in Bordeaux I had the opportunity of hiring back within the Esso fold, a young German geologist that had been hired by Imperial, Dietrich Rhoder???. He proved to be quite an able artistic structural interpreter for the Rocky Mountains and we thought that it might prove useful to have him do similar work in the Pyrenees, right from the Atlantic over to the Mediterranean. That is, from the Basque country right over to the Capitan??? country to the east. Similarly he did structural cross sections in the Alps, starting down towards the southern Alps, around Glace, and heading up all the way around into the ski world through past



Geneva. We also had the opportunity, speaking of structural geology, to have old Dr. Booker come and visit us. Dr. Booker, this famous world structural specialist, a great believer in the gravity interpretation for mountain building. Dr. Booker, we had him visit the western Pyrenees in a trip different in form but very similar to the one that I had arranged and organized for him years earlier with Imperial, up and down and across the Rocky Mountains, from the area south of Calgary up to Peace River and beyond. We also had, in Geneva, the visit of

#267 Doc Landis, to whom we had the opportunity to show the general geology of the area, mainly that area bordering the south and the eastern side of the Aquitaine basin. The stage in France lasted something of the order of 3 ½ years and Esso Exploration offered me to go to Geneva Esso Exploration, a new subsidiary recently formed of what has become Exxon, the new name for Esso or Standard Oil of New Jersey. The job was that of what they called district geologist, looking after a study group of about 5 professionals located within Esso Mediterranean offices and responsible for working up plays, recommending the acquisition of acreage in a rather vast area, extending from a line say, France to Great Britain, southward to Cape Town, or the cape of South Africa. But exclusive of course, of the North Sea, but it is, I might mention, this office that the North Sea studies in, which brought on such successful production to Esso and Shell, was first carried out. Exclusive of the North Sea, of France, of Libya and some other crown jewels. It is from this office that such acreage was acquired and explored as that offshore Exxon or Esso Exploration's acreage off Morocco, off Mauritania, off Senegal, off Guinea Bissow???, that is the second round of Guinea Bissow, and the Ivory Coast, where the only actual discovery was made. Eventually from this office or that in Barcelona later, acreage was also acquired in the Red Sea and off Madagascar. In late 1967 the Geneva study group office was moved to Barcelona. The reason for the move was two-fold. Geneva of course, was very handy for communication purposes but Barcelona had an office all set up, that of Esso???, which had carried out the exploration throughout Spain. But the acreage there was being released. They had these wonderful office, plus all of the necessary staff. On top of that, Spain did not have the work permit restrictions that existed in Geneva and as a result we were in a position to boost the staff to about 12 professionals eventually.

NM: This is the end of the tape.

#### Tape 4 Side 2

NM: When you were in Geneva you had the visit of Ernie Shaw?

PC: Yes, that is right, I'm sorry, I forgot to mention that before heading down south to Barcelona. Yes, we felt that in as much as Switzerland and Austria were areas that needed discoveries, as a matter of fact no oil or gas had been found in Switzerland. Some has been found rather recently but it's some marginal gas as I recall, that anything we could do there might prove to be quite beneficial. So Ernie with his vast knowledge of the Rocky Mountain structures came out with us and we together, with groups replacing one another, we ran a whole batch of visual cross sections across the Alps, from Geneva right through to Vienna. I guess the main thing that came out of this visit and this structural

work was the fact that we all got to realize that here in western Canada, whereas you have beds that are recognizable by fossil if not otherwise, by thrust of older beds over younger beds, that the thrusting involving the Triassic, particularly in the eastern Alps, involves a whole batch of Dolomitized Triassic beds that to this day, people have not been able to differentiate palaeontologically. If you cannot tell those beds apart, then you damn well cannot work out the details of the complicated, complex overthrusting.

#027 NM: Let us go back to Barcelona now, which year was it when you moved?

PC: As I recall it was in late '67. I moved the winter of '67. I moved there before my family because I had a daughter that had to complete her ??? in Switzerland. Another daughter came to live with me there in an apartment which I had for several months, and then eventually we did find a house. I might mention in passing that houses in Barcelona are more rare than hen's teeth. They were extremely rare, we were very fortunate to find what we did find, as screwball as it may have been. But it turned out to be a good place to be. Apartments there can have 5, 6 bedrooms but no houses. The work that was done in Barcelona was quite similar to that of Geneva, except that we had an expanded staff and we were able to have geologists and geophysicists working on plays in various countries, whether these be related to the offshore Red Sea, to Somalia, Mozambique, Madagascar. We did do some work offshore Namibia, and then worked pretty well all the way up the coast and around through to Morocco. We also did some work in the inner Chad basins. As mentioned I think earlier, we did pick up some acreage off Madagascar, it was in the Red Sea, the latter one with Mobil, the earlier on in part with a French company and in part with ????. In the Barcelona office we did oversee the work of the principals in this farm-in, who were the operators. It was a most interesting, and I think, worthwhile experience. It was a beautiful set-up, there was a swimming pool and in the summer time we would go to work from 7 in the morning till 2 in the afternoon, children and wives not allowed in the office. But at 2:00 the doors would open and people would jump in the pool. 1 or 2 people were kept on duty to be able to answer phone calls from New York or elsewhere because of difference in. . . Towards the latter part of our stay there is when I heard of this famous purge that had hit Imperial. At the time we had some visitors from New York and I made it a point to mention to them how I was horrified how people who'd been with the company 15, 20, 25 years were let go rather than to turn around and make the jobs befit the person, rather than put them out on the street after they'd spent a career with the company. The man, I think his name was Bays, told me rather curtly that he was sorry, but every other subsidiary of Jersey had had its blood letting at some time or other and it was high time that there be some blood let with Imperial. Shortly thereafter, there was a Côté blood let. While in Houston making a presentation I was called in to be told that the Barcelona office would be merged with that of Walton??? on Thames and that my personal services were no longer required. I was never told reasons why but I was given 6 month pay in lieu of notice. That to me, was the hardest blow I've ever had in my life. After taking my breath for a few weeks in Barcelona I started traipsing back home, stopping off to look at opportunities and possibilities in Paris and in London, in Ottawa and in Calgary. As I recall things in the oil business weren't on a high in those days. I

#081

decided, rightly or wrongly, to join the government in Ottawa. And within a relatively short time I was able to join the Department of Indian and Northern Affairs as an advisor on petroleum matters. I spent most of my time looking after the government interests in Pan Arctic. There I spent a great deal of time discussing and overseeing the new yearly agreements that were being signed for new funding between the government, Pan Arctic and the other shareholders of Pan Arctic. My main contact on this was Dick Matthews, with whom I spent a great deal of time, most agreeable time. While with the Department of Indian Affairs, and by the way, my immediate boss there was Digby Hunt, I had the occasion peripherally to be involved to some extent, a minor extent, in the discussions and talks and involved with the formulation of a national oil company, whose name it didn't receive till towards the end of the discussions and immediately before the legislation, that is Petro Canada. I was always terribly proud as a Canadian, to see that this was going to come to be. I had seen the work of national oil companies in several other countries and I was, as I say, very pleased to see that this would be happening in Canada. One must recall that in those days the oil business in Canada was something of the order of 93% foreign controlled. A little later I was more directly, quite directly involved in the selling of the government's shares in Pan Arctic Oils to Petro Canada. This involved a fair amount of discussions back and forth, even some pre-Cabinet meetings in which some of the ministers weren't necessarily overly happy at the sale price. It was decided that the sale price should be the actual purchase price some years earlier, rather than upgrading or downgrading this. And it is shortly after this sale had been arranged that I was asked to join Petro Canada. That was, as I recall, in September '76, which would make it about 4 years after having joined the government. When I joined Petro Canada it was to be located in the Ottawa office at least for a period and my function there was to serve say, as office manager and to some extent, contact with some of the government departments in Ottawa, particularly E, M & R. Although as you can well realize, it was necessary, particularly at these early stages of the company, for the president and chairman to keep in very close contact with the department heads or ministers who were more closely allied to this new Crown corporation. About a year and a half later I was asked to come out, to come back to Calgary within Petro Canada to assist in the international department. This was to use my experience in Europe and Africa and maybe apply it to the geology of some other continents. My relation there, I had as an immediate supervisor, at first Bob Menneally???, then Jim Scott after the takeover of Pacific and more recently Fred Rare???. This proved very interesting and one I guess, of the earlier jobs I was involved in was the,

#147 a rather tough one, was to put together the very little that there was relating to the offshore of China. I think that this proved to be a very interesting project. About 2 ½ years or 3 years ago, when it was decided that an arm of Petro Canada should be used to bring on exploration assistance to the lower developed countries of the world, through this new subsidiary called Petro Canada International Assistance Corporation, I spent a fair amount of time in working up the background of the various countries, using several parameters, to find out which countries should be, as far as the technical aspects were concerned, should be selected for various projects by this organization. Which since then,

has developed 18 different projects in something like 16 or 17 different countries. Less than 2 years ago, when there was question of finding an advisor to the Department of Mines and Geology in Senegal relative to a project that was being undertaken there, no French speaking person who had Canadian citizenship and the adequate exploration background was available in Canada, after looking the scene over my wife and I decided to volunteer for this project. And we spent 1 ½ years in Senegal. We came back in late July and a few weeks later, on August 12<sup>th</sup>, 1984, I took my retirement from Petro Canada, at the age of 70.

#176 NM: Can you compare the training of oil people in your time to what it is now?

PC: I might say that first of all, I don't know that I'm really in a position to answer this. I have seen some amount of training such as has occurred within Petro Canada and I recall, to some extent, the training that was given to young geologists in Imperial. I think that in the Imperial days young geologists were taken aside and given a full year of training, which some of it was not necessarily on the job. Then after that, the courses that they were called on to attend were rather poorly distributed, or let's say, there wasn't the extent to that training that there may be today. What I have seen of late, and this may not apply to other oil companies, is that the first training, the man just out of school, may not be given within some companies, a full year of learning. On the other hand, people are called on to attend courses of various types throughout their stage and despite of the years of seniority, they are expected to attend these courses. I think these courses may be more advanced and better organized than they were years ago.

NM: Who were the most influential persons in your career?

PC: I think that's a real difficult one to pull out. I suppose that the first one I should mention is my wife. Wherever we might go, through hell or high water, she was always there and I'm sure she assisted me in ways unbeknown. Always willing to help, to this day. Going back to the days of Bear Oil, frankly I cannot pick on individuals. Within the Imperial days, I think that I should single out Waldo Wearing, more particularly and Peter White. Then we get involved into the European stage and then it's people that may not be known here in particular in western Canada.

#218 NM: What do you consider your achievements?

PC: I'm afraid that my achievements are very few and far between. I would consider mainly, and I referred to them in my notes earlier, as 2 major misachievements. I did not discover Rainbow and this burns me no end. I did not spot the Virginia Hills play. I did not insist that the Clark Lake acreage be held. That is on the negative side. On the positive side I think I did have some influence on assisting to bring up for Imperial, a crew of eager geologists who were really very loyal to the company until at least, the days of the purge.

NM: Looking back at your career in the oil patch, what do you think of it?

PC: I'd like to start it all over again. But with a few variances and just cut out some of those mistakes.

NM: Mr. Côté, I've really enjoyed interviewing you, thank you very much.

PC: It's been for me, a great pleasure to participate and I do hope that the few notes that I

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Tape 4 Side 2

passed on to you can be useful.