

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Gordon Williams

INTERVIEWER: David Finch

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DF: Today is the 13th day of August in the year 2001 and we are with Mr. Gordon Williams at 120 Varsity Estates Place N.W. in Calgary. My name is David Finch. Would you start by telling us where you were born?

GW: I was born in Manitoba, a town called Minnedosa, on May 22nd, 1933. It's a town of about 2 1/2 thousand people 30 miles north of Brandon, 140 miles west of Winnipeg.

DF: What were your parents doing?

GW: Dad was a farmer south of town. His parents had moved to the farm in 1914. It was a quarter section farm, just sort of big enough to starve on.

DF: Tell us about your education?

GW: We actually moved around quite a bit. I started school in a country school north of Minnedosa and then during the war, my dad entered the military, entered the Army, and mother and children moved to a small town north of Minnedosa called Erickson and from there we moved to the home quarter south of Minnedosa and I finished my elementary schooling at the local country school. And then went to Minnedosa Collegiate for high school, graduated in '51, taught school for a year as a 6 week wonder. I had applied for a scholarship to go on, I was going to go into agriculture actually at the University of Manitoba. I couldn't afford to go in without a scholarship so in the interim I went to Winnipeg for a 6 week teacher training course and had signed a contract to teach for a year at a little school called Providence, which is north of Sandy Lake on the south side of Riding Mountain National Park. At any rate I had signed a contract to teach at that school and it wasn't until after I had signed a contract that I learned that I'd been accepted at University of Manitoba and I'd won a scholarship. So I forfeited both of those and then during that year, my high school principal talked me into going to Brandon College instead of University of Manitoba and doing a general science degree. So with some assistance from other people I managed to get my scholarship back and went to Brandon, did a 3 year bachelor of science degree at Brandon College, which is now Brandon University, which was affiliated with the University of Manitoba at that time and then I worked for a year in the oil industry for California Standard Company, which is now Chevron Canada Resources. Actually I had worked for California Standard for a summer and part time on weekends while I was at Brandon College. I worked with Cal Standard in Calgary for a year and a half.

#038 DF: Excuse me, the part time work you did for them, what was that?

GW: Photocopying seismic records, washing cutting samples, filing and organizing their cores at Virden, various types of gopher work.

DF: How did you get that job?

GW: It's kind of a long story. While I was at Brandon College I got involved in the Science Club and one of the things that the Science Club did during the year that I was involved was take a trip to the developing oil fields at Virden, in western Manitoba. The district manager at Cal Standard was Dr. Don Allan, who was the son of John A. Allan, the person who established the University of Alberta geology department. He was, as I said, the district superintendent in Brandon and he, through another friend and I, got us to work for his district doing gopher type of things that the geologists didn't have time to do. So I did that during the summer and in the evenings, not so much in the evenings but on weekends. And then when I graduated from Brandon in 1955 the only job offer I had was with Cal Standard to work in Calgary, in the south district. The district superintendent at the south district was John Grey and I remember the district stratigrapher, the chief geologist was a chap by the name of Bob Flowers and we were in the Medical Arts building which is now the sight of the Bank of Montreal towers, right across 6th Ave. from the now boarded up YMCA. So that's where we operated. And then after a year and a half with Cal Standard, during which time I did field work in the southern mountains, in the Crowsnest Pass, spend a summer in the Crowsnest Pass with a horse party. Last horse party I think, second last horse party that Cal Standard ever ran through there. Mapped the Allison Creek anticline between Crowsnest Mountain and the High Rock Range. Allison Creek flows into the Crowsnest River, just west of the town of Coleman and that summer we had the horse party up on Allison Creek, up on Racehorse Creek and the Part Chief was Jerry Henderson, who became President of Chevron later. He was the Party Chief along with Clint Dahlstrom and other people. They took the horse party over Tornado Pass and down into the Elk River and the Fording River and mapped over on the B.C. side. And Jim Law, who passed away a couple or three years ago now, was a consultant in town and I moved down to the Chinook cabin, which is still there, on Highway 3, north of Highway 3, right across from the Revelstoke sawmill, west of Coleman. The sawmill wasn't there at the time, that was an airstrip at the time. Anyway we spent the summer doing structural mapping and measuring sections in that area, both north and south of the Crowsnest River. To try to delineate what was a folded fault situation between Crowsnest Mountain and the High Rock range to the west. Ultimately Chevron drilled a well in there, maybe two wells, I'm not sure which, after I left them. They were both D&A.

#088 DF: D&A standing for?

GW: Dry and abandoned. After that summer I began graduate studies at the University of Alberta. As I mentioned one of the reasons why I became a geologist was Don Allan who encouraged me and gave me my first job. The other reason I became a geologist was the fact that the principal of Brandon College at that time, was a geologist, a palaeontologist by the name of John R. C. Evans. Between the two of them I guess, I didn't have much of a chance, much of a choice. I chose University of Alberta for a number of reasons, not the least of which was the fact that it was where Don Allan's father had established the geology department. In my last year at Brandon I was helping to manage the college hockey team and we took a trip to western Canada and the team played at the University

of Alberta and I had a chance to talk to some of the people at the University of Alberta and that just secured my interest in going there for graduate work, particularly Dr. Charlie Stelck. At this point I guess he's probably the godfather of petroleum geology in western Canada, he's been at it since the early 1940's. He was a professor, he's a micro palaeontologist, palaeontologist. So I started work on my Masters degree in 1956, the fall of '56 and after I'd been there for a year the department Chairman asked me if I'd be interested in going on and doing a PhD because they were interested in starting a PhD program. I guess they liked the looks of my marks, so I transferred from a Masters program into a PhD program and completed my PhD on a subsurface project on the Mannville formation in 1960. I was the first PhD in Geology from the University of Alberta. After graduating from the University of Alberta I went to work for what is now Amoco, or what was Amoco until a year ago. I was hired by the company called Staniland and by the time I went to work for them 6 months later, or 4 months later, it had changed its name and morphed into Pan American Petroleum. By the time I left working for them it had morphed again and become Amoco. So I had three companies without ever changing.

#125 DF: Can you tell us the significance of your PhD work, what were you studying there and what did you learn and what contribution did you make to the geological thought process?

GW: The topic of the dissertation was the Mannville Group in central Alberta. The Mannville Group is a very interesting unit. It includes the equivalence of the McMurray formation from Fort McMurray, it includes the equivalence of the deep basin gas in the foothills, it's intriguing because it sits on an old land surface, erosion surface with several hundred feet of relief in spots, in places. As an old erosion surface the base of the Mannville is very irregular. The McMurray formation at the bottom fills in the hollows and is absent over the hills and ridges. The McMurray formation is mostly fluvial and continental, it becomes transitional at the top and in Alberta, about as far south as Red Deer, the middle part of the Mannville is marine, in the equivalent of the Clearwater formation and the Moose Bar formation of the B.C. foothills, then on top you have continental conditions again. So you have a cycle going from continental through a major marine incursion, back to continental and then finishing off with an erosional episode at the top. So there's a wide range of lithologies and a wide range of depositional environments. Some of the sediment came from the Canadian Shield, some of it came from the Cordillera. Rivers generally flowed northward into an Arctic Sea, opportunity for a tremendous variety of studies to do. I did a bit of micro-palaeontology, mostly it was stratigraphy because the . . . because of the complexity of the units there was a considerable amount of uncertainty as to correlations and depositional environments at the time. So I finished my PhD in 1960 and published on it in the next couple of years, up to 1963 I think, or so, I was still publishing on the Mannville.

DF: There was a general downturn in exploration work in the 60's, do you remember what caused that?

GW: No, I don't. I know there was a downturn in the early 60's, '62, '63. I've never really

been able to figure out exactly why. Oil prices never changed that much at the time. I don't know whether it was a universal downturn or whether it was just something that was local to western Canada. I've never been able to figure that one out.

#168 DF: Because it affected the geophysicists as well, it seemed to be an exploration thing. It might have had to do with access to markets, I'm still trying to puzzle it out myself.

GW: Yes, I don't know. It could have been. I think there were problems in getting the oil, because it was mainly oil at that time, to market. The Trans Canada Pipeline system had not been constructed. It was in the process of being constructed and I think maybe you're right, it may have been access to markets. It's interesting that most of the light oil, something like 85%, 80% of the light oil in western Canada was found in the 20 years immediately after the Leduc discovery. If you look at the reserves discovered per year, you find that there's a fuzzy peak in the early 50's, mid 50's. And then it drops and statistically nothing significant has been found since about 1966 in terms of oil. Even though most of the exploratory drilling has been done in the last 20 years, there's been very little reserves discovered in that period of time. Gas is a different situation. There's basically two peaks in the gas picture, there was one peak in the 50's, 60's and I refer to that as incidental gas because nobody was looking for it at that time, it was just, they were looking for oil and they found gas and a lot of it was shut in. And then there was a decrease in the amount of gas discovered, in parallel to the decrease in the amount of oil that was discovered in the 60's and 70's and it wasn't until gas had a market that there was a second peak in the 70's and 80's. And that more or less parallels the drilling picture. There, that's kind of an aside.

DF: That's good, yes.

GW: By 1962 or '63, I was at the university. I worked for Amoco for a year and a half and then in the fall of 1961 I was offered a teaching position at the University of Alberta. So I went there, took a cut in salary and went to teach at the University of Alberta. I taught there for two years and went to Australia, I left the University of Alberta and went to Australia for two years and I taught at the University of Queensland in Brisbane in the state of Queensland for two years. Teaching petroleum geology basically, introducing petroleum geology. They had just had some major discoveries in central, western Queensland, a place called Moonie, which is sort of in the outback of Queensland. And they were very anxious to establish a petroleum geology school at the University of Queensland, so they recruited me to go and do that. I was there for two years, took another cut in salary to go there from the University of Alberta to the University of Queensland. And then after I'd been there for two years I got a letter from Charlie Stelck saying that the then head of the geology department, Bob Folinsbee had suffered a heart attack and Charlie asked me whether I would be interested in coming back to University of Alberta and helping out with departmental administration. At that time my wife's father was not well, he lived in Saskatchewan and Australia is a heck of a long ways away from Saskatchewan. So because of what I thought was, and was, a very tempting offer to come back to Alberta, and for personal reasons, we left Australia after two years and came back at the beginning

of 1966. I stayed at the University of Alberta from then, until 1985, when I left, I resigned to go to work for Suncor. I was hired by Suncor as district geologist in southern district and sort of a sidebar was to bring the company into the electronic age, into the computing age. My timing was exquisite, in that the oil price fell through the floor within a year and instead of \$38 a barrel oil it was down at \$12 or \$13 a barrel. Suncor had expanded very rapidly in the days of \$30+ barrel of oil, their operations at Fort McMurray were literally a money tree, a license to print money. So they expanded dramatically. Then of course, when the oil price fell, it fell to below the production cost at McMurray and there were some very quick and very drastic reductions in staff. They got rid of about 80% of their exploration staff in a matter of 8 months or so. Being one of the last people in the door, I was one of the first people out. I was one of their early stage releasees, in August of 1986. While I was at the university I had always maintained a small consulting practice because I believed then, and I still do, that the best way to be relevant and have valid advice for your students was to be part of the industry that most of them would go into. So I'd always had a small consulting company and so I simply activated that for a few years. Then in 1990 I accepted a position as Dean of Science and Technology at Mount Royal College and I was there for 5 years. Left in 1995 and I've been consulting ever since.

#255 DF: Let me take you back to that decision to go from industry where you were rather well paid to the University of Alberta. You mentioned that you took a cut in pay to go to Edmonton and then a further cut to go to Queensland. How does one make that decision?

GW: With a lot of soul searching I guess. The attraction of the university was an opportunity to choose to a large extent, what you were going to be interested in, an opportunity to do research that you were interested in, not necessarily what your company was interested in at the time. It was a difficult decision, there's no question about it. And I guess I've always had a bent towards teaching, I enjoy teaching, I enjoy being in the classroom, I enjoy being able to transfer information and see the, it sounds corny but see the light come on in people's heads sometimes. Provided a bit of flexibility, provided a bit of independence I guess. I've always been interested in new experiences, in doing different things and that was one of the reasons why I went to Australia. It looked to me as though the Australian oil industry was about to take off and was probably, I went at the end of 1963, so I was there for '64 and '65. It looked as though it was perhaps analogous to the oil industry in western Canada in the mid 1940's. So I thought that was probably a good opportunity. I went there, having severed my ties with the University of Alberta and severed my ties with Canada. It wasn't an exchange situation or anything like that, it was a career move. It turns out that in fact, conditions in Australia were probably equivalent to western Canada in the 1940's, socially and economically. It turns out that the oil industry didn't develop, at least not in Queensland, to the extent that we thought it was going to. Most of the development has taken place offshore, in the northwest shelf and off the south coast. And then when I got the offer to come back to the University of Alberta and help run the department it looked like another good career move. And so I came back and I was Assistant Department Chair, Acting Head, Associate Head for a period of about 4

years.

DF: Is Charlie Stelck still alive?

GW: Charlie is very much alive. He was just this beginning of June, at the AAPG convention in Denver, awarded the AAPG Distinguished Educator Award. He's an honorary member of CSPG and he's an honorary member of APEGGA. Just about anybody who's ever done anything in the oil patch in western Canada has come across, either has met Charlie personally or has come across his tracks and his publications.

#308 DF: Yes, that's how I know him, through his publications.

GW: He's still publishing by the way. As a matter of fact, there's a paper out in the last issue of the Canadian Journal of Earth Sciences, a paper our just very, very recently with George Pemberton.

DF: Now you've been both in industry and on the academic side, when you're teaching students during the middle of a boom and you know that boom's only going to last a year or two, just about the time they get out the thing's going to go bust, how do you get your head around that? Because I know when industry is in peak there's this huge demand, let's put more people through the program but by the time they get out often it's not the best time to hire.

GW: I tried to explain the cyclicity of the industry to my students. I tried to prepare them for the fact that there are peaks and valleys in the demand. About all you can do is to make sure that they don't go out with misapprehensions and try to instill in them the recognition that they have to have more than one string to their bow. They have to be able to be flexible, to change, from petroleum to mining to groundwater to environmental to whatever and try to encourage them to develop skills that provide this flexibility so they don't get over specialized in one area. If necessary, to a large extent, to be a generalist and I guess I consider myself a generalist very much. But also, as a generalist, you have to have enough depth in some field to make yourself valuable to a potential employer. But you have to be general enough to say, okay, it looks like this field is sort of running out of steam, I've got enough broad knowledge in mathematics and palaeontology and geomorphology and ore deposits, that with a little bit of effort I can develop one of these areas that might give me a bit more marketability. I've always had a close attachment to the oil patch and my teaching responsibilities at the University of Alberta were in subjects that were very closely related to the oil patch, stratigraphy, sedimentation. I taught petroleum geology to the geologists and the geophysicists and the engineers. I introduced a course in subsurface geological methods. Tried to give them some idea of drilling and logging and completion and those sorts of techniques that were of value in the oil patch. But you're right, the number of students coming in, in any given year was a function of how the industry was doing. There seemed to be about a 4 or 5 year cycle that operated and about 90 degrees out of phase, supply versus demand. But really what tickles me is that a very large number of the students that I had in my petroleum geology class, my subsurface methods classes, are now in the oil patch, senior people in the patch in Calgary. People like Tako Koning, a whole lot of people. Tako is working for, well, is it Texaco or is it Chevron at the moment. He was with Texaco working in Africa. Just a

tremendous range of people, I wouldn't begin to try to think of all the names.

#379 DF: You mentioned that field party work you did with horses, how does that differ from what a geologist might be doing today?

GW: It's entirely different. Working with a horse party involves a considerable amount of your time being spent on getting from point A to point B. The mechanics, the housekeeping if you wish, of operating on the ground, in the bush, with a herd of horses and people. So you don't get as much area covered by any stretch of the imagination and you spend a lot of time, as I said, getting from point A to point B and surviving. But on the other hand, you physically cover the ground, you are physically on the ground over a much greater proportion of the area that you are mapping than at the present time, when transportation is by helicopter. By helicopter, and I've done that too, you fly past, you look at stuff on the ground but you don't get a chance to get off the horse and lay a hammer on it. A lot of the outcrops that you see from the ground, from horseback or on foot, you never see from the air. Conversely, you get a much better regional overview picture from the air. You get a different perspective from being up a couple of thousand feet. You can see the continuity of outcrops, you can see the continuity of stratigraphy, you can see anomalous situations develop, where you might, on the ground, walk past or ride past something that you don't see. And being on the ground, it's kind of a truism that you don't really see the forest for the trees. And you do need that aerial perspective. Which you tried to get by making use of aerial photographs but it's not the same as being right there and being able to say, wait a minute, turn around, I want to look at what's happening on the other side of that ridge, go over the ridge and let's take a look at the other side and see if that continues through. You can do that with a helicopter. You can't do that easily with a horse party. Horse party work is, to a large extent, much more laid back. I'm really pleased that I had the opportunity to participate in a bit of horse party field work.

#430 DF: Any canoe trip work?

GW: Not really, no.

DF: Never worked for the GSC?

GW: No, I never did.

DF: It seems that everybody who did work for the GSC had some canoe party work in the north.

GW: Yes. No, I never worked for the Survey and never really did any canoe work, any water work at all. All either on horseback, on foot, did field work on trail bikes, 4 wheel drives, helicopters, fixed wing aeroplanes, but never on canoe.

DF: Any bear stories?

GW: Yes. I don't think anybody who's ever done any work in the bush has any shortage of bear stories. I think the one that sticks in my mind, there are two of them but the one that sticks in my mind most was in the summer of '62, I guess it was. I was working for Amoco up in the area between the Pine River and the Peace River, west of the town of Chetwynd in northeastern British Columbia. We were trying to decide whether a preliminary map that had been published by the Geological Survey was, in fact, accurate.

Because if it was it was the biggest bloody folded fault in western Canada, they had Devonian beds with what was mapped as Jurassic in the middle of the structure. Devonian on either side, Jurassic in the middle. And if the bed attitudes that were in the map were correct and the age determinations of the formations were correct it was a monstrous folded fault and therefore was a good prospect for natural gas at least or hopefully oil. And so, we were camped on the Pine Pass highway, west of Chetwynd, we were working both north and south of the Pine River with a helicopter. I was senior assistant, Ian Halliday was the Party Chief and my assistant was Jack Park and we were working north of the Pine River. The first morning we decided that we were going to start at the north end, right overlooking the Pine River and start working our way south. So we flew up to a major ridge on the east side of what was purported to be the folded fault and we wanted to get some structural latitudes at the end and see if we could figure out what the age of the beds were. But there was no place to land the helicopter at the end of the ridge because it dropped off very rapidly and there were some trees, some small scrubby trees that were a little bit too high for the helicopter. So the pilot let us off about half a mile from the end of the ridge, this was some time in early May and Jack and I walked up to the end of the ridge to do our geology. In the course of doing that, there was still snow along the top of the ridge and we walked across 2 or 3 or 4 snow patches, in order to get along to the end of the ridge. So we went out to the end of the ridge, did our geology and we were going to walk back along the crest of the ridge and be picked up by the helicopter at 4:00 that afternoon in a meadow that we had picked out from the aerial photographs. At any rate, in walking back, retracing our steps across the snow field, we noticed that there were other tracks on top of ours and they weren't human, they were humungous big bear tracks. So we thought we were relatively well protected because Amoco had outfitted each field party with a 12 gauge shotgun and loaded us up with SSG pellets and rifled slugs. So we thought we had a fair bit of fire power. Anyway, Jack was carrying the shotgun and we proceeded to work our way along the ridge. The ridge wasn't just straight, there were saddles and higher points on the ridge. We were just going down through a saddle and started up on the other side and I was maybe 15 or 20 yards in front of Jack, starting up the far side of the saddle. I thought I heard Jack say something or cough and I turned around and behind him was a sow grizzly bear and three cubs. And they were going across the ridge and we had just come through the saddle and they were going across the ridge in the saddle. 4 grizzly bears on a ridge and the whole ridge looked to me like it was alive with bears. Jack hadn't said anything, I called to him and I said, Jack, have you ever seen a bear and he said, up close and I said, yes, take a look behind you. That 12 gauge shotgun never looked more like a pea shooter than it did at that time because it was a huge big bear. And I'm sure it got bigger as the years went by.

End of tape.

Side 2

GW: At any rate the mother grizzly and her cubs had been scared out of the valley on one side of the ridge because one of the other oil companies or consulting companies had a helicopter and they were flying up and down the valley, presumably doing the same thing as we were doing. And it scared the grizzly to get out of that valley and go over the ridge into the next one. So that was an interesting experience on the first day out. You could tell where it happened if you look at our map because you can see all our stations and control points, and then there's a great big gap of about 3/4 of a mile where we hightailed along the top of the ridge. So that was the first day out, the second day. . .

DF: So nothing came of that encounter.

GW: Nothing came of it, no, nothing came of it. The grizzly and her cubs kept going across the ridge. We were lucky, we were downwind of the bear, we were south of the bear so the wind was blowing from her and the cubs to us and she probably didn't see us or smell us, she was paying attention to the cubs and trying to get the hell over the ridge. There was nothing up there that you could climb, there were no trees up there, there was scrub spruce and scrub pine but there was nothing taller than maybe 3 or 4 feet. So we would have been in, probably pretty dire straits if she had decided to come after us. That was the first day out. Interestingly enough, the last day out on that field season, that field party, I was working with Murray Larson and we were down on Mount Goodenough, south of the Pine and we were doing some collecting of fossils, measuring sections and collecting some fossils in particularly fossiliferous outcrops along the top of the ridge. We were let off by the helicopter on the top of the ridge, we didn't have to go very far. Murray wasn't feeling very well, he was under the weather with the flu. So we had collected fossils for an hour or two and Murray lay down in the shade of a rock and was resting and I was wrapping the fossils and bagging them and labelling them and putting them into pack sacks. Sitting on the side of the ridge watching I noticed a spot over on the ridge, sort of across the valley and brought the binoculars out and put it on the spot and it was a grizzly bear, a big grizzly bear was digging in the turf. And watched it and decided that it was coming towards us because the wind was blowing from us to him at that point and so I woke Murray up and we kind of got things ready to get out of there if we had to and the grizzly came across and along the side of the creek, came up, started up the ridge towards us and as it did, the wind began to shift around and you could see the bear was working upwind and as the wind shifted he changed. He came part way up the slope to where we were at the top of slope, he obviously couldn't see us and as the wind shifted the bear's trajectory, the bear's path changed and we were sitting up here and the bear just kept on going and eventually went across the next creek over. We watched it disappear over the hill.

#040 DF: So this trajectory, we can't see your hand motion on the tape, but it deflected it . .

GW: It deflected it as the wind changed and he lost our scent and he kept going upwind and as the wind swung around his trajectory swung around and he never did come up to the top of the ridge where we were. But he got up within 100 yards or so from us before he

turned away. And we had virtually no place to go at that point, the helicopter wasn't dur for another hour or so, so we would have had to disappear down into the trees I guess, and try and find something to climb. Because at that time we had carried these weapons with us all summer and they got heavier as the days went on, so last day out, ah, we don't need the shotgun, we'll just go, we're not going to be doing any traversing, we're just going to be sitting on the side of the hill collecting fossils. So bears sort of bookended that field season.

DF: And did you find what you were looking for, was that. . . ?

GW: Oh yes, the fossils were what we went for.

DF: But this big. . .

GW: Oh, overall. We found ultimately that what had been mapped as Jurassic beds in the middle, black shale with little or no fossils. . . there was a very unfossiliferous black shale that looked lithologically, very much like the Fernie. Eventually we came to the conclusion that it wasn't Jurassic, that it was in fact, Devonian, middle Devonian shale, Besa River shales. So the folded fault disappeared.

DF: What was the name of that river?

GW: Besa River shale. It's a middle Devonian off reef shale that sits up in northeastern British Columbia and northwestern Alberta. It's the off reef equivalent of the Rainbow Lake reefs.

DF: So you didn't find an elephant?

GW: No. But it was interesting experience, trying to sort of unmap something that had been mapped. Very difficult to prove that something is wrong when the map has been constructed. It was made even more difficult because the shale was spectacularly unfossiliferous and we did eventually, Amoco did find some mid-Paleozoic micro fossils in some of the samples that we collected. And eventually the Geological Survey reissued the map with the correct age assignment to the shale.

DF: So tell me about your experience on the Nahanni?

GW: Well, it wasn't much of an experience, a field season with Pan American Petroleum, Amoco. We started doing stratigraphic work at Cli Lake, which is west of Camsell Bend on the Mackenzie River in the western Northwest Territories. We worked from there along the first and second ranges of the northern Rockies, as far north as about Redfern Lake, north of the Keele River. Interestingly enough we never encountered any bears up there. Dahl sheep and caribou but never any bears. Our experience on the Nahanni was very brief. I was junior assistant and my senior assistant, the chap that I was working with was Joe Fulop. I think there were about 12 or 13 of us in the party all total, and Joe and I fly camped for about a week above Headless Valley, just northeast of Headless Valley, up on top of the plateau. We never got all the way down into the Nahanni. The cliffs up there, as you probably are aware and we were measuring section. Our camp was on top so we'd work our way down section and then have to hike back up with our pack sacks full of rock. So we didn't go any further down than we had to stratigraphically. But that was the total experience on the Nahanni. We flew over it quite a few times but never got down into the valley.

#097 DF: In your career, you were not in the industry when the NEP came along but how did you experience that from your role as a teacher?

GW: Well, it didn't take long before the enrollment in the classes dropped dramatically. NEP hit when, 1981.

DF: The fall of '80, yes.

GW: The fall of '80, early 1981. Class size started to go down. The main affect that was apparent at the university was that, very shortly afterwards, the oil companies didn't come around interviewing anymore. That translated into fewer jobs, or very few jobs, which eventually translated into the decline in enrollment that resulted, by 1985, 1990, in that range, very, very few people in geology at any university anywhere in Canada. It's, I guess, not surprising that most of the geology graduates in western Canada, at least in the 60's, 70's and 80's, went into the oil patch, whether it was University of British Columbia, University of Saskatchewan, University of Manitoba, most of them went into the oil patch. When there was a chill in the oil patch as was introduced by the NEP then, of course, the geologists froze. That was I think, the major effect. It wasn't until just a few years ago that demand has started to come back up, maybe 5 years ago, something like that. And enrollment has come back up because the demand is there. I guess that's probably the main effect. In the 70's, of course, in the late 70's, anybody who could virtually spell oil and gas was handed money by the banks to go out and look for it. The boom of the late 1970's made the chill of the NEP just that much more obvious. As a result there was a tremendous exodus of people from the oil patch in the 80's and the late 80's.

DF: Which takes us, the mid to late 80's, to your participation in the executive of the CSPG. How did you come to be associated and work into an executive position?

GW: I became a member of the CSPG when I first came to Alberta. I guess what got me interested and intrigued about it was the fact that when I started in '55 with Cal Standard the CSPG was very active and they had meetings very regularly at the old Penley's Dance Hall and we were only a couple of blocks away from it at Cal Standard and everybody went. So when I went to the university, I guess even before I went to the university I became a member. And then I'm not just sure why, probably because I was interested in the oil patch, my thesis had been in the oil patch and while I was at the university I offered courses and presented courses for people in the oil patch. Because Edmonton had a pretty large contingent of oil companies in those days. In the mid 60's many of the exploration companies, Shell for example, had all of their exploration staff in Edmonton. Texaco had a big exploration component in Edmonton, Chevron had a big exploration component in Edmonton, so did Mobil Oil. And so I guess, I'd become relatively well known as somebody who was interested in the oil patch and who was doing something to help and so I was elected as a Director in 1977. So I served on the executive committee in 1977 when Jack McMillan was President. Then I knew many of the people who were on the executive, Bob Orr and other Presidents in the early 1980's. I had done some studies on professional registration and I'd chaired a committee of CSPG and CSEG on professional registration in 1980-'81. I was given an award for my contributions. Then I was nominated as Vice-President and ultimately became President in 1985.

#163 DF: What were the highlights of those years on the executive?

GW: I think one of the main, I mean there are a number of things and I was looking at my annual report just before you came in David. There were a number of issues that the executive had to deal with or dealt with at that time. I have attended all but about one of the past Presidents meetings in the last 15 years and it seems that one of the phrases that I used in my report is as relevant today as it was then, let me just quote it, "in our dynamic environment, it is naive to expect permanent solutions, problems persist, solutions are temporary". And the issues involved enhancing and expanding the international image of the Society, developing effective Society management, including financial management, ensuring that the flow of publications continues, planning for the future and providing a financial basis. Up until that time the Society had never had any kind of strategic plan, it had never made any attempt to balance anticipated income with expenditures. One of its major efforts up until that time had been to put out various series of publications and these were expensive and they were getting more expensive and there was really no firm understanding of where the money was going to come from ultimately, to pay for these things. I think, if there's any one issue that I'm most happy with in terms of accomplishment in the year that I was President was, putting the Society on a reasonably firm financial basis of planning ahead, trying to figure out what the expenditures were going to be on a year by year basis and make some reasonable forecasts. The year that I was President was 1985 and overall we'd had a deficit in 1984 and 1985 as a result of publications commitments.

#202 DF: You were President what year?

GW: 1985.

DF: '85, okay, I have you down as '86.

GW: Well, it started in '85, the Society year ranges from . . . anyway, it's '85-'86. Dom Cook was President in '86. But we attempted to forecast what publications were going to be coming out of the pipe when, what the probability was that they were going to come out this year, next year, the year down the road, what the costs were going to be, what our income was likely to be and trying to balance the two of them up. We did not have any permanent managerial, fiscal, financial people at the Society at that time and typically, the Society didn't know until after the books were closed and audited, whether or not they were in the black or in the red at the end of the year. There was no continuing monitoring of financial performance as the year went on and quite clearly that was not a condition or situation that could continue. So we established onward fiscal planning and forecasting and financial reporting. Now of course, they see the financial results every month, so they know exactly where they are on their budget targets. There wasn't even a budget, what you could call a budget that was used at that time. It was quite clearly fiscal management based on the concept of the lord will provide. That was probably the major issue. Another issue that we attempted to address and is still being addressed is how do you make the C in CSPG, refer to Canada and not Calgary. Probably 85% of the members are in Calgary. That's a fact of life, there's nothing you can do about it. It's very difficult to generate a national presence in Fredericton or Halifax or Regina even, or Edmonton. Various

executives have addressed this with varying amounts of success. We've had a national liaison committee, still have. It's a very, very difficult probably, given the demographics of the membership. That's an ongoing problem, it's going to persist forever as far as I can tell. Another problem was ensuring a revenue flow. During the year that I was President we made considerable steps toward publications management, became an issuing agent of the AAPG publications. We attempted to cut down on the number of copies of publications that were printed. And this is not to belittle that everybody has done on publications but when someone edits a publication they typically have inflated ideas of how many of them will sell. They look at the incremental cost, there's a set up cost for publishing, if you publish one it costs you \$10,000, if you publish 100 it costs you maybe \$12,000 and if you publish 500 it costs you \$15,000. So the incremental cost goes down and people say, if we publish 1,500 of these things it's only going to cost us \$8.75 a copy, we can sell them for \$15 a copy and make money on it. It turns out that you only sell 100 copies and then you are stuck with paying additional money to store the unsellable publications. And this has happened, I think the Society's publication management has become a lot more realistic. The Society has collaborated with other societies in running national conventions. We ran the first major convention out of Calgary, I think it was the year before I was President, I think it was in John Maher's Presidency in 1984. We had our annual convention in Edmonton and then there was a national convention held in St. John's in Newfoundland and those were the first two conventions that were held outside of Calgary. And the attempt was to make the C relevant to Canada. That's an ongoing problem. One of the major problems that has emerged in the last 5 or 10 years, which was beginning to show its head when I was President is the fact that companies are much leaner and as a result it's difficult to get corporate support for volunteer work on the executive. The post of President is the major difficulty because being President of the CSPG takes up between 1/3 and 1/2 of your time probably. Probably not so much now because there is more administrative support with Tim being in place as business manager. We didn't have that. So all of the executive administrative decisions were made by the executive committee, we managed every aspect of the Society. So there was a lot of work involved in that. I think that's probably lessened somewhat now with Tim's presence. But management of the Society in terms of its fiscal health is a major issue, still is. Publications have always been the lifeblood of the Society, everything from the Reservoir to the Bulletin to the special memoirs and various other special publications that come out. And it's always been difficult to try to balance the need to put good basic geological information out for the members and how to pay for it. For years the dues have funded only about, at least when I was President, about 1/3 of the expenditures and so the Society is very dependent on the revenue from publications and particularly from their annual conventions to support the publications. Publications have generally not broken even. The dues pay for about the cost of publishing the Bulletin. The Reservoir is more or less self sufficient at the present time. Other activities are largely funded by the revenue from the annual convention.

#323 DF: What do you think of the future of the CSPG, where do you think it could go and

what it could do?

GW: I think that it is going to have to change. There isn't the same corporate support as I mentioned earlier, that there was in the 70's and 80's.

DF: Why is that?

GW: Largely because the major companies that were able to support the Society for the good of the company, the good of the industry, are no longer major players in western Canada. If you look at who's doing the drilling, who's buying the land, it's not Esso, it's not Texaco, it's not Mobil Oil, it's not Shell, it's not Amoco, it's not the major companies anymore. And the little companies are running so lean and mean that they can't really or they don't see that it's cost effective to have one of their people or some of their people involved in CSPG activities. Because it's very time consuming. And so it's increasingly difficult I would think, to find nominees for the various executive positions, particularly the position of Vice-President. Because that's a very demanding one.

DF: Was that a challenge when you went into it?

GW: When I was elected as Vice-President I was still at the University of Alberta. Even then, my department head told me, that's okay, it's all very nice but don't expect any release from any of your work load. In other words, do it on your own, in your spare time because we're not going to pick up some of the load. And I think that's just the way things are.

DF: How about at Suncor?

GW: Suncor was different. It was different in a way. Vice-President at that time accepted and realized that it was going to take a fair bit of my time, and it did and he supported me. However during the period when things started to tighten up there was a certain amount of animosity that I felt from my colleagues because I wasn't there all the time, I was periodically doing CSPG business. I think that generated a degree of animosity. But from the corporate perspective my district supervisor and my vice-president were very supportive.

#371 DF: How did having a PhD contribute to your career? Obviously in academia it was important.

GW: It was a necessity in academia. I'm not sure it's been much of an asset in the oil patch. At times it has been. When I worked for Amoco, after I got my PhD, I was working in what was basically, the in house consulting group and I think most of the people there had PhD's. So it depends. In the operations area I don't think it's that much of an advantage. In the regional studies and the research arms of the oil companies, it was a considerable asset. And of course, in academia it was absolutely required.

DF: What part or what parts of your career have you enjoyed most?

GW: All parts I think. I think I've had a number of careers. A career in academia I think has been quite successful. I didn't really have a very long career in the oil patch as an employee but I certainly enjoyed that. As a consultant, I've enjoyed being on my own, I've enjoyed the flexibility that it provides.

DF: So you've had many different careers and you've enjoyed them.

GW: I've enjoyed them, I've learned from all of them.

DF: What excites you about the oil industry. You don't have to continue working do you?

GW: No, I guess I don't. I'm 68 but there are lots of things that I haven't done, a lot of intriguing things that I've stumbled over in my work and my careers.

DF: Such as?

GW: There are some interesting, I don't know if it's interesting to anybody else but to me it's interesting, most of the sedimentary wedge in western Canada is shale and shales tend to be ignored because they're not reservoir rocks. They're not ignored by the geo-chemists of course, because they're source rocks but I have kind of a gut feeling that a lot of the clues that relate to the history, the tectonic history and the development of the western Canada sedimentary basin, are hidden in the shales. I suspect that there are many major gaps and breaks, unconformities, disconformities hidden within the various shale sections, particularly in the Cretaceous and in the Jurassic. I have some ideas that I'd like to pursue in terms of trying to see whether there is something that can be gleaned because when you look at the Cretaceous shale, it's shale as above, as above, as above, very little change. The micro-palaeontology isn't sufficiently precise, the palaeontology isn't sufficiently precise, you can't really tell very much about the shales from the subsurface log signatures. At least the way that we typically look at the subsurface logs. We look for the departures from the shales, we look for the sandstones, we look for the limestones, we look for the conglomerates, we look for the things that are not shale because they're the ones that make for potential reservoirs. So that's one of the things that I'd like to do. There are some other ideas in terms of compaction history of western Canada, I don't think that's been entirely sorted out. And those are the kinds of things that interest me at this point. Regional studies. . .

#452 DF: Any regrets?

GW: No, I can't say as I have any regrets.

DF: Okay, anything else you'd like to tell us about your career?

GW: I don't think so. I think that I've been very fortunate that I've had a number of careers, I've been relatively, I've been happy doing them. I've been involved most recently on a volunteer basis with professional licenture, professional registration. I've just come off the executive committee of APEGGA and I've been involved in establishing the Canadian Council of Professional Geo-Scientists. I was one of the originators of that, I was the first Chair of the Board of Directors. I'm still involved with that group and I think that's one of the things that I'm proud of in my career is that I've put something back into the profession in that regard. Helped to make, not made but helped to make, geology and geophysics a recognized profession, hopefully in the same league as lawyers and dentists and doctors and engineers. When I started doing geology in the 1950's, only in Alberta was geology mentioned as a profession. The designation, Professional Geologist, didn't come on to the scene until 1960, even though geologists were mentioned in the Engineering Professions Act prior to that, starting in 1950. So there was really nothing in the way of professional recognition other than the learned societies, like the Geological Association of Canada, the CSEG, the CSPG, Edmonton Geological society and that sort of thing, but there was nothing provincially and there was nothing nationally. At the present time, when you came in, I'm preparing a presentation I'm giving to the CSPG

executive this afternoon on professional licenture in Canada. And at the present time, professional licenture is required in all provinces except Quebec and Nova Scotia, Prince Edward Island and Yukon. Quebec and Nova Scotia are working on it and they will probably have it done this year, so all provinces except PEI, where there are only 2 or 3 geologists, geophysicists, in the whole province and in the Yukon and the Yukon is starting to work on it at the present time. So in the same way as engineers have professional licenture across Canada, I would say, within 2 years geologists and geophysicists will have professional licenture all the way across Canada. That's a C change in the last 10 years. 10 years ago there was only Alberta and Northwest Territories and Newfoundland. And now all the provinces and all the territories will have it in place.

DF: And this national group will recognize all those?

GW: The national group is an umbrella association and the provincial and territorial associations are members of the national group. That's one thing that I'm pleased that I've been able to do. I guess, being at a university and being a consultant gives one the flexibility to get involved in some of these things, like the CSPG and like APEGGA and like the Canadian Council of Professional Geo-Scientists. I think that's one of the advantages. You take a hit financially because you can't charge out to a client the time you spend working for APEGGA and they don't pay you. But it's something that needs to be done. Basically geology has been very good to me over the last 45 years and I feel that there's an obligation to give some of that back in whatever way I can. You can never return to people who do you favours, you can never pay them back individually. That came home to me when we moved to Australia, a colleague at the University of Queensland was from the States and they basically saved our lives when we were in Australia. We were there with three kids, the eldest of whom was 4 or 5. . .

End of tape.