

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Ray Price

INTERVIEWER: David Finch

DATE: October 2001

DF: Today is the 30th day of October in the year 2001 and we are with Dr. Ray Price in the restaurant at the airport in Calgary but Dr. Price is of course, of Kingston, Ontario and my name is David Finch. Could you start by telling us what interested you in geology?

RP: I was always interested in science and I went to the University of Manitoba intending to do physics or physical chemistry and I had an introductory course which filled in a requirement to round out my program. It was a course in geology and it was given by Professor Ed Leith, who was an outstanding teacher and I became absolutely over enthused about geology. The first summer, after taking a course in geology I was fortunate enough to get a job with the Geological Survey of Canada. My first visit to the mountains was to the Purcell Mountains in 1952. I had the good fortune to work with a man who felt that the Geological Survey had a commitment to educate their assistants and he gave us assignments that challenged our ability. I went back with him a second year and by that time I had decided to do a degree in geology and perhaps come back and do the physics. By the time I graduated I had opportunities to go to 3 grad schools in the U.S. and I chose Princeton and the physics and chemistry became history.

DF: How did you first come to know about the ASPG?

RP: When I was a field assistant, working in the foothills, in about 1955 there was an ASPG field trip. These were highlights of ASPG activities in those days and I sort of tagged along with my field chief and went over part of this field trip. And subsequently participated in most of the annual field excursions that the CSPG held.

DF: What value did the present for a young geologist?

RP: Well, you had a chance to meet all the leaders in the field, in petroleum exploration. Most of them were very active in field work at that time and they would all get together, it was a time for them to get together and talk in an informal matter and discuss the nitty gritty of research. So it was a fascinating experience for a young student to be able to be on the sidelines of something like this.

#027 DF: Who were some of these senior geologists that you had a chance to meet?

RP: Clint Dahlstrom, Gerry Henderson who were with Chevron at that time, Rein de Wit, Andy Baillie. There were many others, I'd have to sit down and sort them out in some detail.

DF: Rein sends his regards by the way, I saw him last week too. Interesting fellow, very interesting. So to what extent did. . . what geology were you interested in, was it specifically the geology that was of interest to the petroleum industry or was it broader?

RP: My fundamental interest was understanding what the Rocky Mountains are and why

they're there. When I was an undergrad I wrote an article in the Arts and Science paper at the University of Manitoba and the title was, Whence the Mountains. So that's been the question of my life, I'm still pursuing that question.

DF: What are some of the other recollections of the early ASPG, how it affected your career for example?

RP: Well, in addition to the annual field excursions, which were the highlight, there was the ASPG Journal, which was a very slim, maybe 10 page publication in the initial stages. But the latest discoveries that were pertinent to the eastern ??? and the Great Plains were there. So this was a very important source of information, when I was a graduate student for example, keeping up to date. And the meetings, the annual meetings of the Society were another. . .but I didn't get to those until after I'd got my PhD.

DF: Right. I can't remember from your resume but were you stationed here in Calgary for a period?

RP: No, I wasn't. I was in Ottawa. When I graduated from Princeton I had a job at Ottawa and the job was to map the Flathead area, close to the U.S. border, straddling the Alberta-B.C. border. I did that out of Ottawa and at that time there was only a corporal's guard here in Calgary, people who were concerned with well cuttings. And it wasn't until the mid to late 60's that a unit was established here, the Institute of Petroleum and Sedimentary Geology was built.

DF: Right. 1967. So how did you do your Flathead Research?

RP: Came out by train. Hired, didn't hire, hooked up with the Geological Survey of Canada pack string, hired a packer and a cook and away we went.

DF: So the GSC had its own horses at that time?

RP: It had horses, yes. Several herds of horses.

DF: Oh really, I didn't know that.

RP: Because there was so much field work going on that in order to have a reliable supply of horses, they invested in them.

#055 DF: What year was this?

RP: This was '57 '56, '58 to about '60 I guess.

DF: So not using any helicopters at this point?

RP: The helicopters came in in the early 60's. I used to watch with envy as the petroleum geologists flew around above me in their helicopters and I trudged through the bush with the horses.

DF: Although yesterday Eric Mountjoy was telling me that he had some helicopter time early in the 50's and that sounded like a real pioneering effort. And he went from that to the horses. But mostly it was horses in the 50's wasn't it?

RP: Well, in the late 50's, about '59, I remember Peter Gordy, who was with Shell working in that area, spotting me working along the ridge southwest of Fernie and coming in with the helicopter to pick me up. And because they weren't supercharged he picked me up in the helicopter and the helicopter moved forward and dropped, in order to pick up momentum in the rotors, and then took off. It was an exhilarating experience.

DF: Any other details of the field work at that time, things that would be different from the

- way field work is done today. Out in the field for several months at a time for example.
- RP: Yes, I would be out for 3 1/2 months at a time. I would guess that when you were working with horses, 1/3 of the time was consumed caring for the horses, finding the horses.
- DF: Even your time as a geologist?
- RP: Everybody, everybody on the crew. We would have a small camp, there was only one man handling the horses and one cook and the rest were field crew. They'd hobble the horses and put bells on them and from dusk until just before dawn the horses would wander around the tents and trip on the ropes and ring the bells. Then at dawn they'd find a clump of willows somewhere and they'd stand absolutely still in those willows and then everybody would have to go out and find the horses.
- DF: They were pretty smart.
- RP: They were.
- DF: Any adventures on horseback?
- RP: Nothing in particular. One little things, we were west of the Flathead Valley and we had a horse die on the trail. It got mired in a bog and I guess its heart failed. So we had to cut a trail around it and redistribute the goods and we went to our camp and about a week later the camper was going out to get supplies and all he had was a 22 rifle with him and here were a herd of grizzlies on this carcass. Somehow he scared them off and he got by it and went into Fernie, picked up the supplies and came back about a day or two later, there was nothing left, the horse was gone.
- DF: Wow, that's amazing. So as a young geologist what would have been some of the ASPG. . . you mentioned the conferences and the field trips, were the publications. . .?
- RP: And the Journal. The Journal was important. The Journal was important because we relied on stratigraphy. I's a structural geologist but stratigraphy is absolutely essential in the conduct of structural geology. And stratigraphy was just being refined at that time, and all the latest refinements would be in the ASPG Journal. So that was very important. But I guess the big development in the ASPG was the Atlas of Western Canada. The large integrating scientific effort, in which Bob McCrossan played a real lead role.
- #094 DF: Now were you involved in that in any way or that was too early for you?
- RP: Not directly no. I wasn't directly involved.
- DF: But a great resource when it came out?
- RP: Yes.
- DF: So how would you use that in your day to day work?
- RP: Well, it gave you a global perspective on the area in which you were working, a perspective that wasn't available until them.
- DF: And how accurate was it?
- RP: It's never completely accurate because no geological map or synthesis like that is accurate but it was a major step forward from what had been available before. What was available before was orders of magnitude below it in terms of detail and was scattered. This brought everything together and culled from the large volume of data that had been worked over by the petroleum industry, all the basic essentials. I mean, they didn't

disclose their proprietary secrets but there was a lot of information that was common in the whole community and could easily be published. So that was published. And this is something, it just occurs to me, that's been very important about the CSPG. Because for me, one of the most important papers published by the CSPG was a paper by Bert Bally, Peter Gordy and a fellow named Stewart whose first name I can't remember. They were all with Shell and they got permission to publish the seismic data that Shell had acquired pertaining to the deep structure under the Rocky Mountains. Prior to the there had been glimpses here and there, people would publish a little bit or they would present something in a talk and not publish it. These folks demonstrated it that the pre-Cambrian basement under Western Canada Basin extends under the Rockies without disruption and that all the thrust faulting and folding in the Rockies is confined to the sediments above this basement. And they showed at what level the basement occurred across the belt and they made palispastic??? reconstructions, that is, take away the effects of the deformation, put all the rocks back to where they were before the mountain belt formed. And that turned out to be a world classic, that publication and it had a profound influence on me.

DF: How would they prove something or how would they do research on something like that?

RP: They were making maps of the Rocky Mountains at the same time as the Geological Survey was. Everybody was making maps. A little aside here, when I worked in the Flathead area people had exploration permits which required them to spend some money on exploration. At one time there were 7 or 8 companies, all in the same area, all trying to get a toehold into what was a developing play because the Waterton field was there. The people from Shell and the people from Chevron and to some degree, Imperial, were far ahead of the crowd. They had a lot of data and they had good mapping. Some of the other folks would go out there and hire a packer and a big pack string and set up a camp and not knowing what to do, they'd spend their time sawing logs into diagonal nice elliptical strips and wood burning signs on them. I remember a sign hung with haywire over the trail, so many miles to Tulsa, so many miles to Calgary. It was really quite amusing and sometimes a little bit exasperating if you think that ultimately, this came out of taxpayers pockets. But Shell was very good, very effective in putting together good maps of the region. Once they had the control on the depth to the basement, this made it possible to draw reliable structural cross sections. And if you have a reliable structural cross section then you can make the reconstruction to the before state. And they did this very effectively.

#138 DF: So because you were in Ottawa working for the GSC and then later at Queens you were away from the Alberta Society physically. What kinds of problems were involved in that?

RP: Well, my contact with the Society was annual field excursions, annual meetings and the Journal. If I happened to be in Calgary and there was some other meeting then I would take advantage of that. So I would miss out on the local monthly meetings. But I don't even remember them in the early days. I remember them say, by the late 60's or 70's in the Westin Hotel but I don't remember them before that. And I think that these activities just became a part of the Society after I'd moved to Queens.

DF: Actually they did, they had them monthly, early on they had them in a dance hall called Penley's.

RP: Oh yes, I remember Penley's.

DF: So they were continuous.

RP: So I missed out on those.

DF: yes. But other than that, the publications were major, then all the big meetings.

RP: Yes.

DF: We're trying to get some analysis here of the role of the ASPG and CSPG. The players in geology in Canada are industry, government through the GSC and then academia another way that the government is involved, then the Society. How did the CSPG fit into that mix?

RP: Well, there's another organization, the Geological Association of Canada that is I guess, 75 + years old now. The ASPG was in Calgary and then in Alberta and then it grew to become national but the focus has always been in the oil patch. When the east coast offshore and the Arctic and the west coast offshore became part of the domain then it expanded. When it expanded it expanded into territory that had previously been occupied, for geologists, by the GAC and by the Canadian Institute of Mining and Metallurgy which had a geological section. The geophysicists had their own organizations as well. There were many of them and they were small and they were of the various kinds, each sub discipline. So in the early stages the Alberta Society was a provincial thing and focussed only on the petroleum industry as it existed in western Canada. But when the exploration expanded the scope of the scientific interest expanded so they then started meeting in other parts of the country, they established the liaison structure and this grew into the kinds of activities we have now where, I think now, it's a powerful influence on Canadian earth science, both in terms of providing a focus for much earth science research and in terms of affecting students. One of the most important things that the Society is doing now is dealing with students and the Student Industry Field Trip is the prime example of that. It does more than just scientific good because it brings students from all across the country into the Calgary environment. They learn about the culture of the oil industry, they learn about other parts of their country and they learn a lot of science.

#181 DF: So when one of those comes back to you at your university. . .

RP: They give a talk. Automatically they give a talk. And aside from the talk they talk it up with their fellow students.

DF: So how does it affect their lives?

RP: I think the individuals who participate, who are chosen to participate have a big boost in terms of scientific insight and experience. They meet all these new people, they are exposed to new technologies here that don't exist in academia, they see the mountains, they learn about the basin. And some of them, seeing the mountains does for them what it did for me, it makes them interested in research on the mountains. So I think it has a very substantial effect.

DF: So when you were at the GSC how did the Society, what was the relationship between the Society and the GSC?

RP: There was no formal relationship but the GSC was obliged to have advice from its clientele, from the stakeholders, from the clients. And the CSPG was a place where you could go to get people who were public spirited enough to devote their energies and time to this sort of thing and wise enough to have the right information to participate in these advisory activities. So when I was Director of the Geological Survey and we were looking for advice, we had a place to go. I was involved with the Canadian Geo-Science Council for a while and the CSPG was the biggest, in terms of numbers, of any of the Canadian Societies, a very powerful one. They came into the Geo-Science Council and played a very important role. I was foreign secretary for it and so I was there for quite awhile, a continuing position and so I was able to observe this, and there were a whole succession of CSPG presidents of ex-presidents who worked their way into the Geo-Science Council. And the Geo-Science Council had the capacity to be a spokesperson for all geo-scientists with the federal government and with the provincial governments. When you mention different domains for earth scientists, the provincial governments are a very important one. Now the sum of all the provincial Geological Surveys I expect is at least as large as the Geological Survey of Canada now.

DF: To what extent did politics enter into these complicated relationships?

RP: Well, politics were always there because. . .

DF: But big P, politics, like the NEP and things like that?

RP: In the Geo-Science Council they were never front and centre. The concern was more the role and capabilities of the geo-science community in Canada. If something was done that impaired the capabilities then there would be a position developed and representations made. But issues that transcended the Society and took in the whole country, they generally backed off because you only have so much power and you want to do the things that are in your mission.

#222 DF: Talk to me about the unique aspects of the Canadian Society of Petroleum Geologists, things that it did that other organizations couldn't do or just didn't do?

RP: If you compare it with the other organizations that existed at the same time, it had the advantage of having much, much more financial and human resources at its disposal. And a centralized membership, most of the members were in Calgary. So that it could embark on projects that were beyond the capabilities of something like the Geological Association of Canada which was dispersed across the whole country. It had an office here, it had a centralized corporate memory that carried it forward, and all of these other organizations, people are elected and they disappear and everything disappears with them. So it was a much more effective scientific organization than any of the others but within a much more restricted domain. The mineral deposits people, mineral exploration people don't feel a part of it and the solid earth geophysicists who are not involved in petroleum exploration don't feel a part of it. So these other organizations still have a very important role to play but they operate with a different mission than the mission of the CSPG.

DF: So part of it's the resources that the CSPG has at its disposal and also part of it's that it's in one geographic area.

RP: Yes, when you can have a luncheon meeting and get 2,000 people to it and you have a

- Society which strains to get 1,500 to an annual meeting, you see what the imbalance is.
- DF: Could you compare the Canadian Society with say, the AAPG and other organizations, differences and similarities.
- RP: They've all evolved over the years. The CSPG has I think, remained closer to the science and the interests of the scientists themselves than the corporations which have their own associations that look after their interests. The AAPG I think, has become much more politicized in the context of politics of the United States or international politics. The scientific aspects have remained more or less static, they've grown but they haven't grown the way the CSPG has. So that's one big difference.
- DF: How about the land ownership situation here in the west and things like cores and so on, that information?
- RP: I guess the CSPG has, I'm sure they've had an influential role in whatever the organization is called now, the Alberta Energy and. . .
- DF: Utilities Board.
- RP: Utilities Board. They certainly must influence decisions that are made there but that structure was create by provincial politicians with foresight a long time ago. I think it's unique in the world in preserving irreplaceable data, not data but sample, cores and cuttings.
- #267 DF: But that didn't come in till the late 30's, that program and the ASPG had already started in '27. And so the geologists were actually there and sharing information even before the Conservation Board was created.
- RP: I'd be convinced that they would have had an influential role in the establishment of this structure. But there were many other jurisdictions where this kind of thing wasn't done, to the detriment of everybody involved. Cores were held by corporations, they don't want them anymore they get abandoned and they become useless. So I think the provincial government made some very wise moves and the CSPG has taken advantage of them. The core conferences that are held regularly for example, are a case in point. The bulk of the membership is here, the resource is here, it's easy to put something like this together and you get a huge impact for a relatively small commitment of financial and human resources.
- DF: Have you seen the corporate support of the CSPG wane over the years? Some of the other people have mentioned that. Many of the past president's talked about the year they were president, they had a lot of support from their companies but the companies have tightened up a lot on those kinds of things. Have you noticed that as an outsider?
- RP: I don't think I've really noticed it but I would expect it because people are being called to account by their company to produce what their company hired them for. Having somebody devote their time to an outsided activity for any length.
- DF: Right. But how would you analyze the change in that. Certainly partly it's economics but I mean, back in the 50's and 60's oil companies wanted to make money too but they saw that having one of their chief geologist being, say 1/3 of their time going to the ASPG was important. Why the change in attitude there by management?
- RP: I don't know, I guess just a change in management culture. I think everybody worked on a

much more loose and informal system than they do now.

DF: Some of the explorationists, the geologists and geophysicists have said, speculated that it's because of the change in the corporate culture with what they call bean counters or those kind of people now running the corporations rather than, I mean in the old days there were geologists that were presidents of oil companies.

RP: Yes, many of them. And that's all gone. And I'm sure they have all the latest fads of the business schools implemented in the corporation and they don't allow room for things like heavy participation in CSPG.

DF: As a professor teaching people who would potentially go into the geological community as petroleum experts, what did you do about the boom and bust cycles, how did you prepare your students for that?

RP: We didn't really prepare them, we just accepted what happened.

DF: Warned them.

RP: Oh yes, it would be talked about. I went back to the Geological Survey in 1981 because of a boom and bust phenomenon. The university was flooded with students whose motivation was fast bucks in Calgary, not to become technically competent, not to be enthusiastic about what they were studying, but to get a piece of paper which allowed them to get a job with big bucks. I got quite disenchanted with teaching at that time because the numbers were large, the enthusiasm was low and you'd work to do something special and it would be circumvented by some stratagem. I went back to the Geological Survey.

#317 DF: That's too bad.

RP: This boom and bust thing has been around for a long time. 20-30 years ago somebody told me, it's the corn and hog cycle.

DF: What's that?

RP: When there's lots of corn, people buy a lot of hogs, they eat up the corn and then there's too much hogs and not enough corn.

DF: I see. Well, it does go back right to the earliest days. Even Ted Link, he was a good joker and he made some jokes about that. Because almost every, I mean, cycles seem to be much quicker now but back, from the 20's through the to 80's anyhow, it was about once every 10-12 years, almost predictable. So that's something we have to examine as well. The regional nature of the Society, has it been a problem do you think?

RP: Well, it's been a challenge. The notion that the Society should become a national Society is a natural outcome of its growth but the implementation of this notion is a big challenge because the bulk of the membership is in Calgary. And they all are committed to the idea, most of them are committed to the idea but implementing it is another question. You have to get a critical mass in each geographic region to generate activities in that region and you never attain the level of the activities in Calgary because nobody is going to come anywhere close to that.

DF: NO. But when the ISPG was set up here in Calgary that gave another closer link between the GSC didn't it, and the Society?

RP: Yes. One of the consequences of that was that there was much more participation by GSC

personnel in the Society. And so there have been a number of presidents that have come out of the ISPG.

DF: How did you as a member of the GSC and an academic, feel about very specifically supporting petroleum research that would then benefit specific oil companies? Any tension there.

RP: No, because I think our policy in the GSC was to be evenhanded and support all of the companies. What you did was supposed to be equally accessible to everybody who had an interest in it. And usually you didn't undertake a project that favoured one company and not the others because this wasn't the way the taxpayers money was supposed to be spent. So I don't think it was every a major problem.

#351 DF: When you first started coming out west did you bump into any of the old geologists, some of those old timers? Did you know Ted Link for example?

RP: No, I knew of him as a student but I never knew him personally, no.

DF: Bill Gallup?

RP: I remember Bill Gallup talking about the history of western Canada in the time of those very early field trips, the field conferences and he used to write a piece, in the 1953 or '54 or '55 guide books, I think in each of them there's a piece by Bill Gallup on the history of western Canada, the history of Turner Valley. So that's my recollection of him.

DF: Any of the other old timers that you remember, any that you were in the field with for example?

RP: Gerry Henderson. Clinton Dahlstrom, Bert Bally.

DF: Okay, sorry, yes, you already mentioned them. The CSPG is 75 years old next year, any suggestions for it, things it might do in the future it hasn't already done?

RP: I think it could concentrate on doing as well as it can, the things it's doing now. I think there's been some dissipation of potential in getting into a lot of things at the expense of doing the main things well. I have some comments that are somewhat critical of the annual meetings, the technical meetings. The number of people from the Society who present at these meetings seems to have been diminishing through the years, so that you go to a CSPG annual meeting and the ratio of attendees to presenters is an order of magnitude below many of the other meetings, except the AAPG which is the same thing. So that people go to the Society for scientific enlightenment but don't necessarily give to the Society that aspect of their resources.

DF: And what would be your analysis of that, why is that happening?

RP: I think they're deeply engaged in their exploration activities, maybe some of it is proprietary, maybe they're working in a culture where the work week is tightly defined. Anybody who's giving papers is going to have to step beyond that and use up some of their family time to do it. And I sense an increasing reluctance to do this and I think the Society is having difficulty recruiting people to fill the many positions that they have to fill each year, the volunteers. I may be wrong but. . .

DF: I think you're right, yes. It is getting to be a bigger and. . . just a very large organization doing a lot of things. They used to do everything with volunteers but now, even its offices run with a larger staff and so on. But it's quite a big corporation now.

RP: Oh yes.

DF: Any other comments?

RP: I don't think of anything offhand.

DF: Okay. Well, on behalf of the Canadian Society of Petroleum Geologists and the Petroleum Industry Oral History Project, I'd like to thank you so much for spending these few minutes with us and sharing some of your observations on the story of the ASPG and the CSPG. Thank you very much.

RP: My pleasure.