PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Peter Savage

INTERVIEWER: David Finch

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Video: 05:00.42.15

DF: Today is the 28th day of February, in the year 2000 and we are with Mr. Peter Savage at the offices of the Canadian Society of Exploration Geophysicists in Calgary. My name is David Finch. Mr. Savage, could you start by telling us how you first came to be associated with the CSEG?

PS: My boss at the time, John fuller was the Vice-President, I think he was, Program Chairman of the Society and suddenly they needed an editor and he fingered me to be the editor for the CSEG. So I was the first editor of the Society. What had happened was James Gray, the historian and so on had a small publication called the Western Oil Examiner and Mr. Gray gave us unlimited space in the Examiner for anything we wanted to publish. Which was great, it was fabulous and he was a tremendous person to work with. So for about a year we worked with Western Oil Examiner and I was the editor. We taped speeches, Tuzo Wilson, Bullen, the Australian geophysicist from, I think he was in Cambridge at the time. Most of these people spoke to us without notes so we had to tape them. I can remember Tuzo Wilson, taping him, the speech was in the Jubilee Auditorium, it was down in the lower level in what's now the Betty Mitchell Theatre, they had a strange name for the room, now I've forgotten it. Anyway, the tape equipment was all up in the main theatre room, where all the controls were. So I watched the Alberta Ballet and listened to Tuzo Wilson on the tape. And dear Tuzo, he was such a raconteur, he started off his talk by telling us the most incredible story about encounters with a sheriff in Wyoming, that he'd had with a geological field party and used up the whole bloody tape. And I had to tape over it and it just broke my heart, I had to tape over this story of Tuzo's to get the talk that he had come there to give, which I think had to do with the International Geophysical Year, he was very involved with that. He'd been to China and written a book on the subject and so on. Tuzo was quite a guy. So it was an interesting experience. My secretary had as much fun, trying to decipher these talks, especially Keith Bullen's, with his Australian accent. Fortunately we had a monograph that he had written so we could translate the words into useable English.

Video: 05:03.40.28

#028 DF: What year were you editor, more or less?

PS: That was in the 50's sometime. I was President in '62, so if you back off, V.P. in '60, Secretary-Treasurer in '59, probably '57 or something like that.

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DF: And so, how much and what kind of information went into the Western Oil Examiner?

PS: Well, just about everything, all the news, the updates of what was coming, the talks that had been given as best we could transcribe them and a couple of articles that we had written ourselves. At that time the CSEG was doing lectures in the schools on geophysics. We had several very interesting papers on basic geophysics and we published those as well in the Examiner. It was a good program.

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DF: At what level were these given in the school?

PS: They were given at sort of Junior High School level, grade 8, grade 9. You needed a little mathematics to understand it and so on. I've often thought that we really need to go back and do more of. And it's a great way to learn geometry and so on, to get the kids to try and figure out how thick the dirt is in the football field or whatever, that sort of stuff. But that was my first job was the editor.

Video: 05:05.10.05

DF: Great. And after that what did you do?

PS: Then I became Secretary-Treasurer and had the distinction of being the last of the Secretary-Treasurers'. They decided at that point that that was too much of a job for one person. So I take some perverse delight in having been the last of the iron men and did both jobs. Then after that, Vice-President. Normally in those days, the Vice-President always ran for President and because he had been Vice-President, or she, the year before, you always were very high profile and almost invariably you won the election and I thought this was unfair. So I declined the honour of running. That was year Pete Bediz became President. But then it became tradition that the Vice-President ran the year after. He was given a year off and then ran. So I don't know if we gained anything in the process. And then by doing that of course, I ended up being President the year the SEG met here, for the first time they'd ever met outside the U.S.

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#053 DF: Let's talk about that in a minute, but what was Pete Bediz like as a President, we'll be interviewing him, any things we should ask him?

PS: Ask him about his golf. Pete played in the bottom rung of the Doodlebug Golf Tournament and he was a stalwart member of that clan, so to speak. I know the year I was President we gave him a special award at the Doodlebug Golf Tournament, we presented him with a book called Golf is a Four Letter Word, in honour of his succeeding and staying at that level without any variations over the years. The Doodlebug Golf Tournament was and still is, an important part of the. . . But in the early days it was really quite splendid. We had Shelley Winters, the first year, present the prizes, for instance. That was quite a party.

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DF: How was that arranged?

PS: She was there making a movie. And she agreed and came down. We had a big time, the

fellows all had their pictures taken with her and so on. I imagine those are real treasures. When I was President it was the 10th anniversary.

Video: 05:07.52.24
DF: And Don Seaman was the Chair.
PS: Don Seaman was the Chair and that ties into our desire to spend a little money. Because the golfers were getting fed up financing the technical guys. So Don and I conspired to lose substantially on the tournament that year so that the Society could underwrite it and the golfers would get something back. Unfortunately nature played a hand in the whole thing and it snowed 6" of snow the first day and we couldn't play that day. The Golf club refunded us our money for the first day, so we ended up only losing about $500 instead of the considerable amount we had intended to lose.

Video: 05:08.40.02
DF: You tried anyhow.
PS: We tried. We did get out and play with red golf balls too, but they kicked us off the course after three holes.

Video: 05:08.49.21
#077 DF: So this was an unusual snowstorm, what time of the year was this?
PS: September, the first weekend in September. We had. . it was the first time it had snowed for the Doodlebug. Quite often it did snow early in September in those days in Calgary but that was the first time it had actually done it to us. It was a good party anyway.

Video: 05:09.14.01
DF: So Don was the Chair of that, any stories about his and his leadership of that. . .?
PS: Oh, excellent. Excellent Chairman, he was first class. I think our greatest memory is the wind-up party at the end. Which is the one that I think my wife would prefer to forget. It was a party to end all wind-up parties. The tournaments were always very successful and that one was one of the better ones, even with the snow.

Video: 05:09.48.00
DF: So attendance would be all the members plus contractors?
PS: That's right. CSEG membership was open to anybody interested, so it wasn't a technical thing per se, society, it was open to everybody that was interested in the business. The tournament included everybody.

Video: 05:10.13.18
DF: So it was a big social event?
PS: It was a great social event, yes.

Video: 05:10.20.05
DF: The year you were President, there was a special speaker at the Annual General Meeting,

Dr. John C. Hollister.

PS: That's right.

Video: 05:10.32.18

DF: Can you tell us about that?

PS: John Hollister was a professor at the Colorado School of Mines. He was one of the pioneers in the industry, he and Heiland, Carl Augustus Heiland, had created Heiland Exploration Company, which was the first company I had worked for as a matter of fact, contracted to Shell in New Brunswick. But Hollister had left Heiland at that time, Carl Augustus was gone too. But he was one of the original pioneers in the geophysical business and the doodlebug business. Lovely guy, just a marvelous person and a great teacher. He drove an old Mercedes, I'll never forget, beautiful car, it must have been 20 years old when I drove in it with him once. Just a prince of a person. He and his wife both were just lovely and it was a real privilege to know them.

Video #05:11.36.11

#103 DF: So he was up for what purpose in the 60's?

PS: He was President of the SEG. And one of the jobs when you are President of the SEG is to go around to the Annual Meetings of all the various affiliated local societies. I guess they called us local societies in those days. So we were affiliated with them, so he came to speak to us. For which, we were very pleased. He was an excellent speaker and always had something good to say. He was talking about education and the problems, geophysical education in particular. In those days there weren't too many schools teaching geophysics. There was Tuzo Wilson at Toronto and David Keys very briefly at McGill but not . . he went off to atomic energy. So I was very lucky to study with him. But Hollister was a very special person.

Video: 05:12.40.24

DF: The early 60's was a time of downturn in the industry.

PS: Yes, it was.

Video: 05:12.49.03

DF: Why was that?

PS: Golly I can't recall now specifically why that downturn occurred. The early 50's was another downturn, it was my first experience with them. I had just left Shell and gone out on my own as a contractor and bingo, the first downturn arrived on the scene. It was cyclical, it would have to do with OPEC and world supply and that sort of thing, the price of oil. It was always cheaper to bring it into eastern Canada from Venezuela or someplace else, than it was to bring it from Alberta. As I recall a penny a gallon, they had to pay more, at the pump, if they got it from Alberta so they declined the honour of doing so. So it's an up and down business and it was always. I read that in my report too and I puzzled over it a little bit. We were always busy so . . .we started up. . .in '62 I started a company in Australia for. . a branch of the company I was working for. So I was away for about 3

months and towards the end of that winter and John Hodgkinson had to step in and do the Presidential duties, chair the meetings and so on. But it was a pleasant relief too, because I had to do the welcoming speech at the SEG Convention and that preyed heavily on my mind for about a year prior. I don't know if you've experienced going around with a lump of cement in your stomach for months on end. Every time I thought of it anyway.

Video: 05:14.40.17
#134 DF: Why was it so hard?
PS: Well, you were speaking to about 1,200 people. I was 35 years old at the time and not all that great a public speaker, I'd had some practice. And I also had to introduce Ernie Manning and that ratched up the thing a little bit. It was the first time they'd ever met outside the U.S.

Video: 05:15.09.16
DF: Okay, tell us more about that?
PS: Francis Hale had started the movement, oh, about 7 or 8 years before, to get them to come to Calgary to have their convention here. Francis and quite a few others worked on that for quite a period of time. It was a major break for the SEG, they had always, you know, Dallas, Denver, Houston, occasionally Oklahoma City or someplace like that. Once in awhile they'd wander as far off as San Francisco or Los Angeles but they were pretty well home boys, though they were and claimed to be an international society, this was the first time they left the safe and sacred soil. It was a traumatic experience for them. And it was kind of fun. I welcomed them, I spoke French to them in part of the welcoming speech, just to make sure that it wasn't just the funny money that they experienced up here, with of course, a sideways look at Ernie Manning when I said it because of the Social Credit and their funny money. So I gave part of the speech in French. It was the 150th anniversary of the War of 1812 so I wished them better luck this time in their invasion of Canada. It went over very well.

Video: 05:16.51.03
DF: In Harry Carlyle's annual address the next year, he mentions that your bilingual address caused no end of grief for the next few years. Was he just poking fun?
PS: I think he was poking fun. I got accused of being a separatist of course, immediately, since I was born and brought up in Quebec. But it was an interesting conundrum that I put myself in because I wanted to translate what I had said in French, but I didn't want to talk down to the English speaking people in the audience, by implying that they needed it translated. John Hodgkinson was the one that came to my rescue, I was telling him about this conundrum. He said, that's all right, tell them that you're translating it for the French speaking people who couldn't possibly understand your French. So that's what I used and it went over very well.

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#168 DF: Good for you.

PS: I was very pleased John came to my rescue on that one, it was excellent. We had some interesting experiences with that meeting. Sir Charles Wright spoke at the meeting. He was the last survivor of the Scott polar Antarctic expedition. In fact, he was on the rescue group. He was the first one to spot the lumps in the snow that was covering over Scott's tent. We wanted him to talk about his Antarctic experiences. He was in his 80's then. Milt Dobrin and I went down to Suffield, he was down in Suffield doing a big electro-magnetic experiment. We went down there to talk to him about coming up to speak to us at this convention and hell, he was in his jeep out in the field, supervising this . . they were doing a magnetic experiment where they recorded simultaneously on both sides of the world. And they had one in Suffield, Alberta and one in someplace Australia I think. And they were recording the earth's magnetic field simultaneously at both ends. That was this great experiment, this 80 odd year old, white haired terror. We finally found him out in the field and his first question was, that Calgary Cricket Club is coming down to Suffield. Yes, good he said, the bar's going to be open. That was his first concern, it was a Sunday we were down there and the bar normally wasn't going to be open. He was quite a guy, marvelous. He sat beside me at the table at lunch and relieved the pressure on me considerably. It was great.

Video: 05:19.50.19

DF: How was his talk?

PS: His talk was good too. But he didn't talk much about the Antarctic. He wanted to talk about the earth's magnetic field and these experiments that he was doing. We had an interesting geophysical problem with the auditorium too. We used the second floor foyer as a lecture room and to do that we put black plastic over all the windows. The first day of the convention it snowed and the temperature dropped to about 10 above Fahrenheit, which is fairly cool. Our visitors all loved it, they thought this was great. And then the sun came out and it was a bright, absolutely crystal clear day. Well, you can imagine the impact on those windows. It's minus. . whatever 10 above Fahrenheit is below zero, on the outside of the glass, black plastic on the inside, bright sun shining and it just heated up on the inside. And the temperature differential. . I don't know how many of the windows we cracked but it was quite a few. The insurance company was very upset with us. They tried to persuade me that it was the workers hammering up the plastic that had broken the windows, not physics, but I finally won the argument. I don't think they've broken those windows since.

Video #05:21.23.20

#206 DF: The year you were President, the CSEG Annual Public Lecture drew 1,700 people. Who was your speaker and why did so many people come?

PS: I think that was Balford Currie, I'd have to look it up but I suspect it was Currie and he was talking about the aurora and it was a marvelous speech. It was either. . well, we had a number of people, we had an astronomer from a place in Arizona as well. I don't think I

say in the thing. But Currie was one of the first of our public lecture series. He'd been Chairman of the Research Council, the NRC committee on geodessey??? and geophysics and he had a program on television in Saskatoon, whereby he spoke about things scientific and he had these marvelous slides, all sky shots of the aurora, some in colour, some in black and white. They were pictures taken every so often, I've forgotten, every half hour or something like that of the northern sky and this fish eye camera thing that was an all sky lens and you could see the aurora just changing. And on the big screen in the auditorium it was spectacular. He was a great speaker too.

Video: 05:23.01.02

That was the year . . .well, I phoned Harold Urey. Urey was a Nobel Prize winner, he and his crew were the first to synthesize life in a test tube, which you don't hear much about, and we decided if we were going to get these public lectures we should have somebody of that stature. I just phoned La Jolla, California and got his telephone number from the directory and he answered the phone and much to other people's utter astonishment, it seemed quite normal to me at the time, I was fairly ignorant about these things. You don't call one of the world's leading scientists on the phone and get him right away, asked him if he'd come and speak and he said, what day and I told him and he said, that sounds great, good I will. I told my brother about it and Dave said, and what did he charge you and I said, my god, we never even brought the subject up. It was quite funny. In the end we gave him a small, I think 500 bucks of something like that plus the white hat when he arrived, which he was absolutely transported with and a marvelous wood carving that Percy Smith had lined up of a cowboy roping a bronc. And it turns out Urey grew up on a ranch in Wyoming or Montana, one or the other, and he was just totally transported with both the hat and the carving. It was a big carving. So it worked just fine. But the beggar, he wouldn't talk on the origins of the universe of something like that, Ed Fulmer will probably. . have you talked to Ed yet?

Video: 05:24.53.11

#246 DF: I will.

PS: Ask him about Harold Urey too, because Ed was . . I don't know if it was when he was President or Program Chairman, anyway, I tried to get him to talk about the origins of the universe. Oh no, no, what he was working on right now. . it was just like Sir Charles Wright, these guys are just single minded as all get bloody out. He wanted to talk about the chemical composition of meteorites. We had 1,800 people in that audience. You could have heard a pin drop, it was just the most respectful audience, because I mean it was Harold Urey and all the rest of it, Nobel Prize, but he spoke for an hour on the chemical composition of meteorites. Ed had called him a couple of times and I had called him once after the original, to try to persuade him to talk about the origins of the universe. When he walked out on the stage, he took one look at the audience and he turned to me and he said, I can't believe it. I said, well, I told you. So he gave his talk and when it was all over he looked out at the audience and he said, you know, I should have talked about the origins of the universe. You son-of-a-bitch. However, it was an interesting experience. The chemical composition of meteorites ties into the origins of the universe

and the tie in was there for anybody who wanted to make the extrapolation but it wasn't easy.

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DF: Where do you get 1,700 or 1,800 people to come out to a lecture like this, how do you account for that?

PS: Well, we advertised it through the schools, the university of course and just about every physics kid and student at the university was there. I mean to get a chance to listen to Harold Urey talk, there's a one in a lifetime situation. And we had advertised him quite well. Now, we got 1,700 for whoever it was the year I was Chair, whether it was Balford Currie or who it was, I've forgotten. There's an appetite for science when it's done right. You get some terrific, especially these people that really can present and get the photographs and have that where with all. I think the fellow. . .a Dutch name, I can't remember now, the astronomer, had some absolutely incredible photographs of the moon and various planets and things. Incredible at that time, now they'd be old hat.

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Tape 1 Side 2

DF: Okay well, I would like to start back with this Arnie Junger story.

PS: Certainly, Arnie Junger was Technical Program Chairman for the convention in '62. He had been a geophysicist with Shell, he was at the time, and I had a great deal of time for Arnie. His interpretive processes were remarkable, he was just a wizard with those rather ghastly old records that we used to have, especially the foothills records that had to be migrated and all the rest of it. And he is responsible for the location of a discovery well at Jumping Pound. But Arnie. . .also somebody had let our record run out for quite a distance, 4 or 5 seconds, maybe longer, 20 seconds perhaps and he'd seen a very deep reflection in that record. So he got the idea that what we ought to do once a month or so, every seismic crew in the country should run off a deep record, run one off for 20 seconds. It used up a bunch of paper and it was the very devil to develop because they had these little developing pots in the recording trucks, where you had maybe a sheet of paper that long to develop and this went 20 seconds would be 10 times that long almost.

DF: So many feet long?

PS: Many feet long. Anyway it was done. Quite a few of the crews recorded these great long records and picked up these deep reflections. I would guess in hindsight now, they were probably the first time reflections were obtained from the Mahorovachik??? discontinuity, which everyone calls the Moho now. Whether it had been invented even, or discovered at that time, whether it had ever been named. Of course, it's been there forever. It's now a very common reflecting event on the deep profiles that Lithoprobe has run and so on, but these were probably the very first recordings of that reflection and this was done back in '62, a little project the CSEG had.

DF: Can you spell that. . ?

PS: Moho, M-O-H-O, I won't spell Mahorovachik. So many people didn't even dare try to pronounce it so that's why it got

DF: So say it once slowly.

PS: Mahorovachik. And I'm not sure if my Yugoslav is really that great but not many people are going to challenge you if you call it that. But the Moho is what it's generally called and it's a layer that exists all over the world in the crust but very deep.

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#029 DF: How deep?

PS: Oh golly. It varies, it's shallow under the oceans and it's up to maybe 20 kilometres deep under the continents. It would have been something that they were looking for with the Ripple Rock explosion for instance, when we recorded that one. They would be looking for refractions coming from the Moho. Then again, for that we had to crank our records out at great length as well.

DF: Explain to me how that Ripple Rock explosion, which was off the west coast of Vancouver, or B.C., how that would teach you something out here on the plains about. . ?

PS: Well, one of the big things that we didn't know at that time was whether the crust went down under the mountains or came up and was part of the mountain building process. So that we had no idea of how thick the crust was under the mountains. So any long refraction profiles that we could get, now you'll notice on of the best papers of 1962 were the refraction profiles in Southern Cordillera. So we were beginning to look at that sort of

thing thought the oil industry was more interested in the top of the Paleozoic. Every now and again we would run a deep profile to have a look and see how thick the crust was, just to get some idea what was going on. We were beginning to realize that it had some significance to what was happening on the surface. There were still all sorts of wild theories as to how the mountains got built and what they were all about so any information we could gather. So that Ripple Rock explosion gave us quite a profile across the mountains.

#050 DF: And what did it tell you about the . .?

PS: It told us about the thickness, the thickness of the crust and how it thickens materially under the mountains. But you'd have to talk to Ron Close as Lithoprobe about that, or Fred cook at the university. Fred's the local expert.

DF: Tell us a bit about Lithoprobe.

PS: Lithoprobe was a program that started within the universities and government, the university people were the prime movers in it. They got the Geological Survey to support it and NRC. It was designed to create profiles across the interesting parts of Canada, looking at the thickness of the crust and just exactly what the crust was made up of and what it was doing. It was unique in a sense in that it wasn't just geophysics. They tied in geology, geochronology, the whole thing. They did gravity profiles, magnetic profiles, all kinds of electrical profiles and then as much geology as they could possibly tie into it. And had cross disciplinary committees working on this project. It caught fire, we got incredible results the very first profile we ran, which was across Vancouver Island and it showed the subducting crust going down under Vancouver Island, the first time it had ever really been properly shown on a seismic profile. It was really quite a remarkable experience. And it was done with a vibrator crew, an oil company crew that was hired by this group, funded by the federal government at that time, to go out and do this profile. The results were just totally unbelievably spectacular. That of course, was a great start. And they've profiled the whole continent, from offshore Vancouver right to offshore Newfoundland. They've run profiles across the southern Cordillera. Right now they're in the process of dong one from the Northwest Territories, across Yukon, northern Alberta, B.C., right to the coast. And it will be going from the oldest rocks to the youngest rocks in the world. So it will be quite an interesting profile when they get it done. And we've learned a tremendous amount about the crust of the globe actually, but particularly Canada. In one case, in I think it was, northern Manitoba, where they got their results and everything at depth was dipping, I believe it was to the east, and conventional wisdom had everything dipping to the west, they thought at first glance that they'd run the thing backwards. They had done some very serious checking on it and discovered no, where everybody thought the regional dip was to the west, it was no longer that way, it was to the east immediately below the surface. They had never seen below the surface before. And it has led to the miners using seismic in exploration and mining as well. Not as much as they should yet but it's coming. It's had quite an impact in Europe now. They've done a number of profiles there and they call it Europrobe, which is a real tribute to the Lithoprobe. It's like Montreal Expo and there are now Expos all over the world and they

all got their name from the Montreal Expo. Well, these 'Probes' all got their probe from the Lithoprobe, the Canadian operation. The Americans had done seismic profiles but they hadn't tied it into geology and to other geophysical methods. So it was kind of uni-dimensional, whereas ours covered the whole waterfront, the geo-scientific waterfront.

Video #06:10.25.10

#093 DF: And when did Lithoprobe start and when will it end.?

PS: It started what, 10-15 years ago, something like that. And it's scheduled to end sometime in the next year or so.

DF: And it will have accomplished everything you wanted?

PS: It has accomplished so much more than we wanted, than we dared dream of. Because it was so successful we have just expanded it. We've got coverage like you wouldn't believe, it's really extraordinary. But it'll make a great story all on its own.

DF: The boom and bust cycles are never harder on anybody than they are on the geophysicists and several times in our discussions today and with some of the other people, this whole question about universities and industry and tying together and . . even in the short time that I've been an observer of the industry, I know that almost whole departments shut down when the industry goes down and then when it comes back up, there's a scramble to get more earth scientists again. Can you reflect on that and how we can flatten that out or normalize it somehow?

PS: I think there was an overexpansion of the geo-science faculties, after the war and later on all these universities that cropped up, in Ontario in particular, Lakehead and Trent and the one in Sudbury, whatever it's called, I can't even remember the name of it, Brock and so on. And they all had to have their geology department and their geophysics and it just went out of control in a sense. So that the universities in part brought it on themselves. Of course, it's very hard to be a university without being universal, it's implied in the name. So that I guess you can't blame them for starting up their individual departments. So that was part of the problem with the universities. Though I don't know of any universities that have shut their departments down, some of them have gotten pretty small. I know McGill's certainly has been threatened and it's one that shouldn't be shut down. There's a problem with the government funding, of course, as always, as usual, with universities. But one of the great benefits of a university is the graduate school and the research that's done there. And the universities aren't funded by government to do that. They're funded to do undergraduate teaching. If you don't have the undergrads, you don't get the money, if you don't have the money, you can't pay your professors and then your graduate school goes all to pieces. So it's something that governments really need to look at. And you know how lucky you are to get any well educated politician, much less one that's had graduate studies, so they just plain don't understand. The industry itself, some companies are able to withstand the boom and bust and ride it out, they cut their sort of external expenditures down. In the early days they did anyway. Certainly Imperial and Shell and so on were big enough that in '52, the first one that I came across, the majors just sort of cut back their external expenditures. So if you were a contractor you suffered. And contractors had to let most of their people go in the summertime. Winter was when

everybody was busy. But the better clients, like Imperial for instance, would move crews to southern Canada in the summer and back up north in the winter and kept people going. My own company, well, Nance Exploration that I was with, after I went bankrupt, had two crews with Gulf, one went for 6 years, another went for 7 years without a break. We had a crew with Imperial Oil also that went for 8 years, something like that. So we weathered quite a few storms because of these particular clients. Now subsequent busts, they weren't able to carry it on so that people suffered all the way down the line. But with the majors there was the occasional downsizing but I don't know if that really had to do with the booms and busts in the oil prices. They could have been blamed on it, it was always a very useful excuse, but more often than not they would find themselves top heavy with people that weren't all that great and it was a good way to weed out the staff. That's kind of a harsh way of looking at it but that's what happened in a great many cases.

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It was just a purgative that was used. More recently, there was tax advantages, you could pay people lump sums and they wouldn't have to pay income tax on it if you were downsizing. So you downsized and then you waited for awhile before you replaced them. But it was something that they managed to talk the federal government into doing so they could give people a break when they let them go.

#161 DF: On the set of notes there that I gave you, could you read that quote for us. Tell us what this is from and then read it and comment on it.

PS: It's from my annual report. "For several years now I felt that the society had too much money and I take a sort of perverse pleasure in reporting that this year we partly remedied that situation by taking in $2,600 and spending $5,000. Actually the figures are a bit misleading"

Sound back. Video #06:17.39.24

. . .and in hindsight I'm not sure why they are misleading, but the loss was closer to something like $600 when these other factors are taken into consideration. I think primarily, there was always a danger with organization, such as the CSEG and so on, if you get too much money the income tax department is going to start looking at you sideways, you're in the money making business, not in the technical business or whatever. So you have to keep a wary eye on your bank account. And also when you want people to contribute to scholarship funds or so on, if you've got too much money already in the bank, it's very hard to convince your membership that they should pony up for these things. Or contractors should contribute to the Doodlebug Golf Tournament and that was the reason Don Seaman and I were determined to lose money on the golf tournament that year, on the Doodlebug. One because we had too much and two, because the non-technical people were objecting.

DF: What percentage were non-technical?

PS: It would be, I suppose in those days, a third maybe, a quarter to a third, something like that.

DF: What walk of life were they from?

PS: They'd be drilling contractors, surveying contractors, shothole drillers and bull dozer operators, that sort of thing, suppliers, dynamite suppliers and equipment suppliers, of which their were several and they were great supporters of the society. But it seemed a bit unfair that they support all the technical papers and not get anything back. So we tried.

#189 DF: Was the CSEG unique in that aspect, in that it allowed service and supply members?

PS: I think so. In fact, I'm sure we were the only. . .

DF: Because they wouldn't have been a member of APEGGA or CSPG or any of those.

PS: No, they wouldn't have, no.

DF: And why . . .

PS: In fact, I had a tough time getting into the CSPG.

DF: Why?

PS: Even though I had graduated in geology, I was working as a geophysicist and they weren't all that keen on letting me in. It wasn't until Bill Gussow, who . . .Bill was President one year and Bill had worked as Exploration Manager in New Brunswick, when I had started and he wanted to know why the devil I wasn't a member of the CSPG. I said, well, Bill, I tried and they turned me down. I was a fellow of the Geological Association of Canada but I wasn't good enough for the Petroleum Geologists. So Bill straightened them out and I became a member.

DF: So explain to me why, they service and supply people then, were a part of this organization?

PS: Being a doodle bugger, particularly in those days, involved being in the field. Your interpretation was done in the field, your Party Chief was a geophysicist, he had 1, 2, or 3 computors, geophysicists in training, working for him. So as you were working in the field you were working every day, 24 hours a day, you were living and working with these people. With the surveyors and the operators and the catskinners and the shothole drillers and so on and you depended on them. They depended on you and you depended on them. It was a joint operation, there was no separation, you were part of a crew. We just extended that right through to the society. It was literally an extension of what was going on in the field. It was a perfectly natural thing to do as far as we were concerned. At the time I don't think we thought much about it being all that different.

#219 DF: So your place of work in the field crew was much more integrated with those people, than say geologists or some of the other technical people?

PS: That's right. Well, we seldom came in contact with geologists. Once in a blue moon you would have to defend your interpretation. The words that geophysicist love to hear is, that's geologically impossible. That raises the hackles immediately with the geophysicist. It takes . . .we used to take great delight in proving that it wasn't geologically impossible. Sometimes they were right but being a graduate geologist I have a foot in both camps. I was able to talk to both sides of the thing so it wasn't that difficult. But some companies, one company that will remain nameless that I joined at one time, literally took all the

well locations off the geophysical maps so that the geophysicists wouldn't check to see what the geology was. It was unbelievable. It changed very quickly when I joined them. It cost us a fortune to put all those wells back on the maps again but we did. They wanted a geophysical interpretation that was pure, I guess was the idea. But some companies you had a field crew interpreter that would do an interpretation and then you had an interpreter with the company in town that would do an interpretation as well. And then they'd sit down and sort of beat on each other and argue their. . .which was good. . and defend their interpretation and hopefully arrive at a better one in the final analysis.

DF: Was there a logistical reason for having a man in the field. Could the shooting program be affected by what you say one day. . .?

PS: Well, quite often it was, yes. It was very early days and we were desperately looking for things. You found something, you changed your program and tried to develop it immediately and figure out what was going on. So yes, there was a good reason for it. And also you had the records right there so you worked them up immediately and then later sent them into town on the bus or whatever. But normally the idea was to get instantaneous results.

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#252 DF: But these days that's not the way it's done at all is it?

PS: It's got to the point where it's very difficult to do it in the field, though there are some pieces of equipment that will allow them to make sections and so on in the field. Now you've pretty well got to do sections and do all the fancy corrections, it's now easily done in the field. It may get back to it because as time goes on it's going to become easier and easier. As time goes on it requires of course, a level of sophistication. It becomes rather expensive to put that level of sophistication on every crew. Where in those days geophysicist were not extraordinarily well paid.

DF: And the equipment wasn't that expensive either.

PS: Well, that's right. No, you could start off, mortgage your house and get into business, you can't do that now.

DF: Any other stories or any other impressions that you would like to comment on regarding the CSEG and your association with it?

PS: You've got me really looking at the list of people here, I was 35 years old when I was President of this organization and I wonder at the sheer gall of it. A 35 year old you know, and I look at who the rest of the committee was, the CSEG committee. Harold Farney was the Secretary that year, for instance, Gordon Hess was the Treasurer. Gordon Hess is somebody that I'm just so sad that we never did get a recorded interview with. Because Gordie, he had all kinds of experience with Shell and his own contracting firm and so on. Sheldon Gibson was District Representative and we talked to Sheldon the first time around, he was an Imperial Oil hand. And Gene Cook, the Scholarship Chairman and Gene was Chief Geophysicist with Home Oil and I hope he's on our list for somebody that we need to talk to. If you ever talk to Gene Cook, ask him about Federated at all Sylvester Creek. That was a velocity survey to end all velocity surveys. It took us 3 days towing our equipment in behind a cat to get to this particular well site because of the

rains. The rains just came down that spring like you wouldn't believe. The water was coming out of the fields like a continuous Niagra Falls into the ditches. It was just unbelievable. We had the holes drilled ahead of time. With a velocity survey, you shoot at the surface and put a phone down the well so you can figure out how long it takes the sound to get to the various horizons. The shotholes fortunately were drilled ahead of time but the shooters had a terrible time because there was 5' of water over them. So they were in hip waders that didn't do them an awful lot of good and poking around trying to find these holes so they could load them with dynamite. It was a mess. I remember walking into the camp, into the bunkhouse and there was an empty bunk and I just threw myself down on the bunk. Somebody said, you can't sleep there and I said, watch me. I'd been 3 days in a truck, behind a cat. So you can ask Gene Cook about that one.

DF: I'm afraid we're going to have to stop you there. On behalf of the CSEG and the Petroleum Industry Oral History Project, I'd like to thank you so much for taking this time to meet with us today and record your recollections. Thank you very much.

PS: Thank you, it's been my pleasure.