

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Stanley Pearson

INTERVIEWER: Betty Cooper

DATE: June ???

BC: . . .and I'm interviewing Mr. Stan Pearson, it's June 22nd and we're in the Glenbow Alberta Museum. I'd like to start Stan, by getting some of your own background, where you were born, when and a bit about your family. So if perhaps we could start there, when and where were you born?

SP: Okay Betty. I was born and raised in the little town of Pincher Creek in the southwestern part of Alberta, about 30-35 miles northwest of the U.S. border. My mother was an eastern Canadian girl. My father was an immigrant from Lancashire, England, who came over in 1905. I was born in 1917 and educated in Pincher Creek elementary and high school. Then I think it was during my early high school years that probably influenced me in what I finally did in my career. At that time, as a youngster, wandering the canyon west of Pincher Creek I saw rock outcroppings and fossils in the rock outcrops. They were Cretaceous rocks. That sort of intrigued me.

BC: You were finding these fossils from millions of years ago.

SP: Yes, they were Cretaceous fossils. One of them I particularly recall was *Lynechia Oblicata*???, which was a gastropod shell or as people call them, snail shells. And this was one of the first things, I was about 13 or 14 at the time and this intrigued me to occur in the rocks above the swimming hole. So I started delving into that by reading the books of knowledge, which was the only encyclopaedia that we had in our little home at that time, my father was a plumber. From there on, during high school, I read all the scientific books I could find on geology and went on to the University of Alberta and studied geology.

BC: Before we get you into university, could I just go back to your family for a moment. You weren't an only child?

SP: No, I was the eldest of 4 children. I had 2 brothers and a sister younger than me.

BC: And their names?

SP: The one next to me in age was Robert Charles and he was killed abroad during the war, he was a bomber pilot. My younger brother was Donald Henry and he was killed over Pervesa???, Greece, he was on loan to the RAF and killed on a return mission. He was a fighter bomber pilot. The youngest child in the family was my sister Gwyneth Beatrice, who's married to Bill Sloman today, he works for the Alberta Telephones.

BC: And we just have Stan, we haven't got your full name, perhaps we should just get that on.

SP: My full name is a long John Henry, Stanley Gordon Breckenridge Pearson. Gordon from my uncle and Breckenridge from my mother's maiden name.

BC: Let's move then on quickly back into your university. You went to University of Alberta the year of. . .?

SP: I went in as a freshman in 1938 and graduated in 1941 and took one year post graduate study.

#034 BC: Did you have problems going into university at that time? '38 was still in Alberta, Depression years. How did you finance it?

SP: As I explained earlier, my father was a plumber. In order to stay out of debt he had to sell the family car so there was little or no money to send young Stanley to the university when I graduated out of high school in '37, so I had to work a year to save up some money in order to get started in university.

BC: Where did you work, with your father?

SP: I worked part of the time for my father, digging out cess pools in the Peigan Indian Reserve and that satisfied me for a plumbing career. Then I worked, most of the time I worked on highway construction, in various jobs, mostly on the survey party as a chainman.

BC: When you went into geology, did you work during the summer?

SP: Yes. Again, since I'd got started in this highway construction, I worked 4 summers in highway construction, counting the one before I started university. And I worked on every foot of highway between the U.S. border, through Waterton Park and up to Edmonton and from Edmonton east to Lloydminster, every foot of highway during the 4 seasons. Various jobs, surveying, gravel checking, asphalt distributor operator, time keeper, which was the bookkeeper.

BC: When we think of highway construction now, we think of these million dollar per mile macadam covered highways, that isn't exactly what you were constructing prior to the war.

SP: No. Part of the work was in grade construction, the survey work was during grade construction, the dirt work. And at that time, the province was trying to put, this new Social Credit government was trying to put highways through very rapidly and cheaply, but have some kind of asphalt. So they used what they called a blotter coat system, which meant you built the subgrade, just like we do today, and then you spread a penetrating oil on it and then another oil on top of that and then spread a layer of gravel on top of it. The second layer of oil penetrating up through the gravel and what they call a blotter coat. It was about an inch thick, maybe an inch and a half thick and usually went out the second year because of frost heaving and the fact that the asphalt layer was really too thin. But it put through a lot of highway in a hurry and that's essentially what we did, in those late years of the 30's and the very early 40's, was to cram through these blotter coat systems. We also laid the first plant mix highway between Medicine Hat and Redcliff and that was a regular 4" thick layer of macadam and done somewhat similar to what they do today, except we did the mix right on the highway. But most of the work that I was involved with, as an undergraduate student, was highway construction.

BC: As an undergraduate in geology, can you think of any of your professors at the University of Alberta who had particular influence on you as far as the area of geology that you went into, I mean you went in just thinking of the fossils?

SP: Yes. As I said, my interest was originally generated by the aspect of palaeontology that

I'd seen as a youngster. Plus some of the early oil wells that had been drilled in the 30's southwest of Pincher Creek. And as you know, Oil City was drilled about 1901, down in Waterton Park, through the Lewis overthrust. That old history, some of the first early drilling, and the fact that Turner Valley also was drilling fascinated me as well as the fossils. So Dr. Warren, who was the top palaeontology, stratigraphy and elementary geology was a great influence and I liked his subject matter very much. But Dr. Allen, who was head of the department and Dr. Rutherford were also very fine people and encouraged me as well as other geologists in their career. But I'd have to say that probably Colonel Warren was maybe more influence on me than any of the others.

#080 SB: Did he, did Colonel Warren, do any summer work that you could be involved with or extra work that you were able to be involved with?

SP: Not that I was involved. I didn't get involved in doing geology until I had my degree. The summer between my degree and my post graduate study I worked under Con Hague in the Alberta foothills. So most of my undergraduate work was done on highway construction, more engineering work.

BC: You didn't get a chance to apply your geological knowledge at all.

SP: No, not during that.

BC: I want to go back to the Pincher Creek, because besides being your birthplace, it played a very influential part in your career and interesting that it should be as how you'd come from there. But I would like to talk about your summer with Conrad Hague, this would be for the Geological Survey?

SP: Yes. And that as I mentioned, was the first time that I had been exposed to actual, in the field, geological work, under professional supervision and guidance. I had taken the academic work and had my bachelor's degree, but because the money was better working for the highways I had really put myself through school, with a little bit of help from my father, by working on highways. I think I was making about \$100 a month as a time keeper and surveyor in highway construction. After I got a bachelor of science degree and went to . . .

BC: That would be about 1940. . . ?

SP: 1941, the summer of '41, I went to work under Con Hague and I got \$86 a month as a professional geologist with a degree, where in highway construction without a degree, I'd been making up to \$100 a month. That's why I worked on highway construction rather than geology as an undergraduate. But once I got into the work, notwithstanding that it was only \$86 a month, had to supply my own blankets and tobacco, to work under Con Hague was a real inspiration for any young geologist. And I'm sure that I'm not the only young geologist that he inspired. He inspired me not only with his ability as a geologist, particularly as a field geologist, but my great respect for him as a man, a man of great industry, great hard work. He'd work so hard sometimes that at noon sometimes he'd vomit, he'd be that ill from overwork. We were younger, a few years younger than Con and could stand some of the physical gaff a little better possibly, but I never saw a man who was so dedicated to his profession as he was. And I think he demonstrated that all through his career.

BC: Where were you working?

SP: We worked west of Turner Valley, in the Dyson Creek area, mapping the foothills and the first range of the mountains for the early part of the season. With our packer Bob Sharpe from west of Pincher Creek, who Con Hague had known from previous operations. Since I was a horseman from Pincher Creek, I helped Bob a lot with the packing too. Then after we'd finished the work west of Turner Valley, Con needed to finish up some work he'd started west of Cowley and southwest of Pincher Creek at a mountain called Windsor Mountain. Some people down there, the locals call it Castle Mountain. It's a mountain of Devonian rock and the top of it is just littered with brachiopod fossils and fossils corals. We mapped this, measured the Devonian thickness in Windsor Mountain to close the season off and did some mapping in the foothills area. Again, all under the able guidance of Con Hague. The men on the party, in addition to Con as the boss, was Grant Fox, who was second in command and the 2 junior members of the party were myself and Ian Bain, who I've lost track of.

#129 BC: Can you recall any particular incidents of that first time out in the field as a geologist, any anecdotes?

SP: I remember we killed a mountain sheep. We were traversing the Sheep River, west of Turner Valley and there was all kinds of sheep. We scared up a bunch of them one morning and they kept ahead of us. One bend of the creek we had to sort of chin ourselves on a sort of cliff of rock in order to get around the bend and there was a sheep lying right on the ledge. It sprang up and ran off. We then noticed that there was a ewe lagging behind, with a lame lamb. They kept ahead of us for hour after hour but we noticed that the ewe was dragging behind the herd and the lamb was even dragging behind the ewe. Late in the afternoon the ewe had left the lamb and the lamb was up on a ledge of rock alone and up we go and try and rescue the lamb but it ran away. Eventually we found it and had to dispatch it. That was the only sad thing in the whole survey.

BC: In the area that you were surveying, was any of it subsequently, the survey that you did, was any of it in that area, was there oil work done, drilling work done?

SP: Part of the area that we covered in the Dyson Creek area involved the old Indian Oils anticline, where someone in earlier years had drilled a well and had never got down to the Rundle limestone which is the productive sheet. In those days most of the time they didn't get down.

BC: Why didn't they get down?

SP: Because they were using cable tools and they hadn't evolved the rotary rig to that point and to get down below 9,000' with a cable tool you had to have a tapered cable and it was just about physically impossible to go beyond 9 or 10 thousand feet with the old standard rig, which was a cable tool. West of, when we finished the summer that year, west of Cowley, there was a well drilling and Old Man Hunter, a fellow by the name of Hunter had promoted that well for years and years. He started drilling it in 1934 with a cable tool and by 1941 when we were there he was a little over 9,000'. It had taken that many years, from '34 to '41, and he'd go down to the States, generate a little more money, come back, hire a few of the farmers and drill away. He never did reach the Rundle limestone, which

he'd have to go to 11 or 12 thousand feet because the cable tool just didn't have the ability to get that deep. So he never did get down in that Hunter Wells, west of Cowley.

BC: Did someone subsequently go down beyond and find oil?

SP: Yes, we went down in Pincher Creek, just immediately east of this Windsor Mountain that I had mentioned, where we found all the Devonian fossils. Of course, Gulf came in later on, in the mid 40's and we found the Pincher Creek field in the same Rundle limestone at around 12,000'.

#172 BC: But no one's ever gone back to Mr. Hunter's . . . ?

SP: Not to that particular site, no, because. . .

BC: Site, and just see what was down another 3,000'?

SP: No, because I don't believe the subsequent, more sophisticated geophysical surveys that were not available to Mr. Hunter, but were available later to us, signified that where he drilled was really a good spot to drill.

BC: So after that summer with Mr. Hague, you went back to university?

SP: Yes, I took one year post graduate study. Japan came into the war and Pearson got a guilty conscience because he already had 2 younger brothers in the Air Force as pilots and I decided that I should get into the war. So I did not finish my Master's degree, although I had taken all the academic subject matter to take it, I didn't write the thesis which would have taken. . .

BC: And never did finish?

SP: And never did go back. So I joined the Army and went overseas for 3 years.

BC: And who were you with in the Army?

SP: I was with the 3rd Field Regiment, 1st Canadian Division. Served in Sicily, Italy and the northwest theatre, mainly Holland. Came home in 1945 in June, married my good wife Helen just a week after I'd arrived home.

BC: Where was Helen from?

SP: Helen was from Brandon, Manitoba and I had met her when I was qualifying for my 2nd pip as a lieutenant, prior to going overseas.

BC: In Brandon?

SP: I had met her in Brandon. So I came home and got married, Helen and I went on vacation. In part of our vacation we went to Waterton Park and my home town, Pincher Creek and there I found a seismic crew working. And while I was a geologist and not a geophysicist I was still interested in what they were doing. It just so happened that the Party Chief, Gulf's Party Chief, Mike Allen, was boarding with my folks. So he, learning that I was a geologist with a year of post graduate study said, do you want to come on as an assistant geophysicist. He'd already hired George Blunden as an assistant geophysicist but he was ready to take on a second one. So I said, well, let me think about that but I'm a geologist, I better go to Calgary and see if I can find a job as a geologist first but if I can't I'll come back here. I went to Calgary and talked to a couple of oil companies and made the tactical mistake of telling them that I'd already talked to the Gulf people in Pincher Creek and none of them were interested in me because they didn't want to rob Gulf of an employee. There was a high degree of professional integrity amongst companies at that time so they

advised me to go back and take the job with Gulf if I'd already been talking to them. I thought, well, that's probably a good policy. So I went back to Gulf. And there wasn't much going on in the oil industry in mid '45 in Calgary. So I went back to my hometown and told Mike Allen that I was ready to take on his job. And I thought I was just in heaven because he offered me \$200 a month and I had been making \$150 as a lieutenant. So I thought, gee, how can you do better than that.

BC: You forgot, that lieutenant, they also paid your food didn't they?

SP: Oh yes, and uniforms, other than the dress uniforms.

BC: You mentioned Mike Allen, who was your first employer then, could you tell me about him?

SP: Yes. Mike came from Pittsburgh and his family was reasonably well to do. They owned the shops called the Nella Shops, which is Allen spelled backwards. Mike is of Jewish origin and a very fine man. He hired a lot of the first Canadians after Gulf decided to Canadianize the geophysical operations in Canada. He hired Lawrence Diamond, myself, Dick McMurdo, Jack Fraser, the Bowerstock boys, Bob Cochrane, just to name a few.

#229 BC: Gulf actually made that decision in '45 to Canadianize.

SP: That's right.

BC: Just to kind of sidestep from it, what was behind that particular policy? A lot of the others didn't really begin to Canadianize until much later.

SP: I think it was simply just a good citizenship attitude on the part of Gulf. Plus the fact, there was a practicality there, in those early days the American oil companies would stoop to do geophysical work in Canada only in the summer and then scuffle back to the States in the wintertime, where the climate was a little kinder. They recognized that is they were going to work on a year round basis that they probably would have difficulty to get Americans to stay up in the wintertime. So they felt probably, that they would be wiser, from a political standpoint as well as a practicality of work, to get indigenous Canadians involved who would be prepared to stand the rigours of the climate and do the job at the same time. It being a sort of a time when there wasn't much going on in the oil industry we all were tickled to death to find this kind of work. Because it paid a little better than the labouring jobs around Pincher Creek at that time.

BC: And I'm sorry, I had sidestepped from Mr. Allen.

SP: Mike Allen was a geophysicist and I think he'd studied math and physics primarily as a student, at least that's my impression, at the University of Pittsburgh and went to work for Gulf. Worked a few areas in the States prior to coming to Canada as a Party Chief in charge of the seismic crew in Canada, at which that time, Gulf had only one. They had also a gravity party working out of Red Deer at the same time under a man by the name of Wynn Hastings. So there were the 2 geophysical people at that time, Mike Allen, reporting to Pittsburgh, with a sideline to Tulsa. He reported in other words technically to Pittsburgh and for geological information to Tulsa. Wynn Hastings did essentially the same thing on matters pertaining to gravity. Prior to Mike working this geophysical work up in the Pincher Creek area in 1945, Wynn Hastings had done the gravity work over the same area, between 1941 and '44 actually.

BC: How many people would have been on your crew?

SP: 18-20. 18-20 on a seismic crew. Gravity crews usually less, maybe up to a dozen people.

BC: And what was your job as a geologist . . .

SP: As I say, as a geologist I came on a little bit with trepidation because, while my artillery training had kept me in brush with trigonometry and math and physics during the war, as a geologist I sort of felt that going into geophysics was a little bit strange and ideally maybe I thought I should have been involved in geology. But I thought, well, it's probably a good training anyway to have it and since it was a job on the spot for a man just out of the army I was tickled to death to get it. It was also in my home town so that all lent itself to taking that kind of work. And I was called an assistant geophysicist and I was really the second, the junior one of the 2 of us, because George Blunden was hired a month earlier than I was and he was a little older man also, an ex-Wing Commander and he was also an assistant geophysicist. It was under Mike Allen that both George and I first got our initial experience.

#290 BC: What did you have to do as an assistant geophysicist?

SP: Essentially what a geophysical computer does today. We did all the computations and did all the plotting. But because we were both professional men, Mike and the other later Party Chiefs let us get dabbling into interpretation as soon as we could.

BC: You didn't have to move any of the jugs though?

SP: No. I escaped . . .

BC: They were pretty heavy in those days.

SP: Both George and I escaped the field work.

BC: Did you ever have to do any of that?

SP: No. In some ways it would have been good experience to have done it but some of us didn't do that. I was one of them that didn't have to hustle jugs or hustle drill pipe.

BC: Right. How long was Mike Allen with you?

SP: Mike was there for about a year. Then he left and another man took over and I can't quite recall his name now, then Alec McKee came in and took his place. Alec was a good man on refraction and then later, came up to Canada and spent many years working under Harry Carlyle and Carl Niburg, prior to his retirement.

BC: He was just up for the summer at that time was he?

SP: Yes, he was just up for the summer, in summer relief. He taught us quite a bit about refraction, Alec McKee did. Mike went back to Pittsburgh and went into business with his family because his family was well off. Actually Mike's Gulf salary just paid his sort of income tax.

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Tape 1 Side 2

SP: He was a very fine man, George, still is, still alive and a good friend. He did a good job with Gulf and I'm confident that he did a very good job for Home Oil for the many years he was with them as a geophysicist and later on, as an exploration manager.

- BC: Can you remember any incidents that the 2 of you sort of worked through, or lived through, in that first summer?
- SP: Not particularly, except that we both cut our teeth in the refraction technology of Gulf's geophysical seismic method at the time, which we felt, and probably was indeed, more advanced than most other oil companies at that time.
- BC: Could you explain what it was, how it was different?
- SP: Well, it was a refraction method of generating the artificial earthquakes you might say, that seismology involves. And which the detectors are at a great distance, up to 20,000' from the shot, and the waves, instead of travelling down and being reflected back directly up, travel down and along a fast speed marker, such as the Rundle limestone and then deflect back up again. The beauty of the refraction method was that it was handy in foothills and mountain exploration because it was a minimum time path phenomena, whereby the fastest method of refraction travel was down, along the high speed Rundle marker, which was the pay rock and we wanted to identify and so on. In other words, the refraction method not only permitted a rough mapping of the foothills, but it put a name on the Rundle limestone. By that method we were able to map the top of the Rundle, which surface geologists had been unable to do out in the foothills because it wasn't exposed. So structures like Pincher Creek, Waterton, following Turner Valley, were able to be mapped, drilled, and drilled successfully. It was as a result of the refraction method that the Pincher Creek field discovery was made. George Blunden and I, Mike Allen and McKee and others worked on this refraction prior to the drilling of the Pincher Creek well and located the structure. George Blunden was one of the geophysicists that helped map the Pincher Creek structure and I contributed also. But I wouldn't say that I worked as much on the interpretation because I was an understudy to George at that time, as George did.
- BC: When you say Gulf's method was different than others, was Gulf the only one using the refraction method, were the others using gravity?
- SP: That's true. During the 30's a lot of the companies, many of the oil companies in the oil exploration had veered away from the refraction method and adopted the reflection method, which is very useful and very effective in the U.S., in most areas. And in the process, had forgotten refraction technique and had lost or retired the people that knew it. Gulf on the other hand, because of retaining a certain peculiar man, namely Louis Gardner, who was vitally interested in refraction technology and due to his efforts Gulf had kept up on its refraction technique. We felt at that time that Gulf was ahead of the other companies in refraction. And at that time it probably was. I don't say that that is the case today.
- #038 BC: Did other companies follow Gulf in going into the refraction rather than reflection?
- SP: Yes. Later on in the foothills, other companies attempted to come in with refraction and did so, and regained expertise in refraction. But in the early 40's and the mid 40's and maybe up to the early 50's, I would think that Gulf might have been a little ahead. Shell came along and used it very effectively in Waterton.

BC: Was it dependent really, on the area that you were using it in?

SP: Yes, it wouldn't be as effective in the plains as reflection. But it did have the ability, by virtue of the high speed bed that the Rundle is, of identifying the presence of the Rundle and mapping the rough depth of the Rundle. That was the only way we could map the Rundle. Otherwise, with reflection technique, you'd have just had various layers of rock but you wouldn't have known which one was the Rundle. The refraction technique says, it's that one down there that's the Rundle. And you could do this by the very rapid speed of the Rundle, which down in the Pincher Creek area at that time, the refraction speed of the sound in rock was around 20-21 thousand feet per second. While the Cretaceous rocks above it were around 12 thousand feet per second. So with the drastic contrast in velocity you could map this contrast in velocity.

BC: You worked at Pincher Creek for how long?

SP: I worked there in '45 and then in '46 I went off into the foothills doing geology. Then I came back in '48 and did further geophysical work on Pincher.

BC: And when was Pincher #1, when was that discovery well drilled?

SP: That was drilled in 1947 and completed in 1948. I was well site geologist on the discovery well. I had the satisfaction of working on the geophysical work that located the structure, then being well site geologist on the discovery well.

BC: That would be a very exciting time then, so early in your career.

SP: It was an exciting time. And it was nice to be the home town boy in the Pincher Creek area too.

BC: Right. Tell me about the Pincher Creek area and what was significant?

SP: Well, Pincher is one of the older towns in Alberta. It was established shortly after Fort Macleod, which is one of the oldest. Back in the 1870's and 80's. It was essentially ranching country and when I was a boy there was about 999 people in it, when I left home. Until World War II and the discovery of the Pincher Creek gas field, it was just around 1,000 people.

BC: What was most interesting about the gas field, what triggered Gulf's decision to drill?

SP: The trigger was that all of Gulf's effort, ever since it entered Canada in 1941, with Gulf Research and Development Company's first efforts up in here, was to try and trace structures such as the Turner Valley structure southward. So the first work they did was to experimentally, shoot and do gravity work over the Turner Valley field, which they did. Then they worked southward, along the foothills belt, down to the U.S. border, attempting to find another like structure to Turner Valley.

BC: Were they looking for oil or gas?

SP: Oil primarily, although naturally, you know, if you find a structure, it might be oil you hope, and secondly gas. It wasn't until they turned up the Pincher Creek structure that they found a structure that they had satisfactorily mapped that they felt was drillable.

BC: So they had been several years finding somewhere to drill.

SP: Yes. Although, in other words, they had done experimental lines all the way down the foothills, although the only concentrated work they did was in the Pincher Creek area. So I'm not saying they wouldn't have found it somewhere else but they happened to get the land in the Pincher Creek area and so they concentrated their work there and did turn up

the Pincher Creek structure, on the lands that Gulf had acquired and with the refraction technique, had mapped this structure, which looked drillable. And which Pittsburgh thought was drillable and which Tulsa thought was drillable and from there on we were just the workers up here at that time.

#087 BC: How long were you sitting that well, from when you sat. . . ?

SP: Started in the spring of 1947, and sat all through. . . I lived on the well site. In those days the geologist used to live on the well site. I slept in the doghouse. I managed to get home for the birth of our first child but I wasn't there to take the child home, Jack Fraser took her home. I had to get back and sleep on my well site. So I learned to do all the mud tests, Paul Gassett, the drilling superintendent at that time, taught me how to run the mud tests so I helped out in that respect. If the snow storm kept the drillers in so that they couldn't make their shift change and had to stay overnight I did the cooking. It was a lot of fun. Nowadays geologists and engineers wouldn't think of living on the rig site. They all live in camps or motor back into town. In those days we lived right on the site.

BC: Do you think that from a geological or geophysical standpoint, living on the well site had advantages?

SP: I can't really say that, no. It was something we had to do because we didn't have all the transportation methods we have today, you were more isolated. We also wanted to wash the rock and a geologist then didn't expect to be relieved, you worked day and night, week in and week out, you didn't take Saturdays or Sundays off. We didn't have unions, we didn't have all the easy day that they have today, we worked hard and we'd get a little time off after the well was finished. And the well didn't finish until the following March.

BC: So you were there almost a year?

SP: Nearly a year. And then they asked me to go to Pittsburgh and train as a seismologist. In the meantime I'd been doing geology, I'd worked in surface work in the northeastern B.C. foothills, with Oscar Erdman. Oscar incidentally is another man that is as dedicated to hard work and good geology as is Con Hague. Both very similar types of people, both very fine men. But I worked with Oscar in the northeastern B.C. foothills, on what we call Northern Foothills Agreement work.

BC: Yes, I have a note here to ask you about that so I won't let it go by.

SP: We did the first geology on that. The territory that Oscar and I had, in 1946, the summer of '46, was what they call the Monkman Pass area. It involved the areas between the Murray River, a tributary of the Peace and the Wapiti River, another tributary of the Peace. Norm Soul did the geology just north of us, and Charlie Stelck, who they're going to have a roast for here shortly, he's a retiring professor at the University of Alberta, worked to the south of us.

BC: Tell me about your work up there? This is sort of just before your Pincher Creek well sitting wasn't it?

SP: Yes, this was . . . in other words I worked in geophysics in '45 until the spring of '46, then they transferred me to do the foothills work up in the north and they hired Oscar that same spring. They hired Oscar in the spring of '46. Oscar was the Party Chief because he had worked several seasons for the federal government as a geologist, he had a PhD

degree and was a very fine and excellent geologist and a good leader. I was his assistant you might say, in the foothills or northeastern B.C. But before they hired Oscar, they sent me up to get the pack string rolling and get the camp set up in the bush, which I did, with an outfitter by the name of Tommy Wilde. Tommy was to supply everything, horses, tents, everything but our own bedrolls, utensils, shovels, axes, horses, tents and a rifle to shoot game because in those days we were so far from civilization and it was before air support, that the B.C. government would give us a meat license to shoot our own game for meat, otherwise we didn't have meat, after we'd run out of bacon. Tommy was to supply us with a rifle, and Pearson, in his naivete and lack of experience in organizing such parties, didn't insist on the rifle because Tommy had promised that he'd send it in later. So we find ourselves out in the bush and along comes the Party Chief, Dr. Erdman from the east and we have no rifle and we start work. Oscar is an eager beaver on work and I'm just a year off the army and I'm reasonably eager. And we work and we get up to the front range of the mountains, the Wapiti Lake and we'd run out of meat by this time, we were eating string beans and Bullman's canned potatoes and catching the odd fish. No meat, no rifle. Eventually I turned to Oscar one day and I said, Oscar, you know, I've just come out of a war where it was a matter of life and death but you know, we never went hungry. I said, here we are, out on a survey party, which isn't a matter of life and death, important but not a matter of life and death, and we haven't even got meat on the table. He said, I never thought of that, he said, I've gone on 30 day fasts. And he had, Oscar was successful as a faster when he was a youngster and being so dedicated in work it just hadn't entered his mind that maybe we ought to really do something about the rifle that we hadn't got. So he said, oh, I'll send a party in tomorrow. So he sent the packer in the next day on a 5 day trip into the nearest point of civilization and the packer came back with a rifle and from there on we lived on the fat of the land all that summer. We had deer, moose and elk all year, lived great. That shows though, the dedication of one Oscar Erdman to work.

- #161 BC: Yes, it didn't matter what he was eating as long as he was finding what. . .
- SP: As long as he was working at his geology, eating was a great secondary nature. But it wasn't to me, nor the packers.
- BC: In the time that you were working there in the Northern Foothills Agreement, there were several, the other gentlemen that you mentioned, they would be with other companies. This was Gulf's area, what were the other companies.
- SP: Yes, this was Gulf's area. And Charlie Stelck was working with Imperial to the south, he was representing them. Each company of the Northern Foothills Agreement group, of which Gulf, Imperial, Texaco and Shell were the major companies, each one were assigned an area of the foothills to work. Then they were all later coordinated together. But each company said, okay, you work that belt, your geologists, you work that one and you work that one. Norm Soul, he was with Sicony Vacuum at that time, later Mobil, he was working to the north of our area.
- BC: Did you ever touch base with these gentlemen?
- SP: No, not really. Maybe we might have had one visitation from Charlie Stelck, when we

were working right across the Wapiti River to one another.

BC: What were you doing when you. . . ?

SP: Surface mapping, primarily surface mapping. Which in other words, we were trying to locate the surface structures which might imply or infer what the deep structures might be below. We were also studying, at the same time that we were doing this mapping, we were studying the stratigraphy of the rocks to try and well, just put together a total geological picture.

BC: Was it a difficult picture to put together, that area?

SP: Yes, it was for the simple reason that the surface Mesozoic rocks, the slow velocity rocks that I mentioned earlier, are much crumpled above a less crumpled pay rock below, namely the Niconasan??? rocks and/or the Paleozoic rocks below. So it was difficult to infer properly what the deep structures might be from the highly crumpled surface structures, do you follow me. This is why geophysics is so important, it sees through the crumpled mess at the surface and delves down to the less crumpled pay structures at depth. That's why you need to do the surface work to find out the right geological environment in which to do the geophysical work, then the geophysical work in which to detail the deep structures and then the drill to test the geophysical structures. That's how the team works together. The geologist doing the reconnaissance work and finding an appropriate geological environment and doing what he can towards stratigraphy and structure, then bringing in the geophysicist to do the fine detailing on the deep lying structures with his seismic way and then the driller to tet the whole matter.

#201 BC: You are one of the few people I would think, in the petroleum industry, who has had extensive experience in geology and geophysics because so often, you say, this is the team work, it isn't always thought of as team work by. . . how did you . . . ?

SP: No. Peculiarly enough there's often jealousy and antipathy between professions. As the radiologist is to the medical profession, the geophysicist is to the exploration business. He's just that vital. In other words you couldn't do modern medicine today without the assistance of x-ray for instance. That technology, that physical technology, physics applied to medicine and here's physics applied to the structure of the earth. Physics applied to the anatomy of the human, physics applied to the anatomy of the earth, the same analogy. And geophysics applied that very vital element to the geologist who couldn't see the deep bones, often clearly, just like the doctor couldn't see the deep bones.

BC: But who becomes the surgeon in charge?

SP: The surgeon in charge, sometimes, often ends up to be the geologist because he's the initial designer. He says where we're going to work in the first place. And then after the geophysicist has found the structure, often the geologist is deciding, works closely with the engineer on the stratigraphy and whether the pay rock is the right kind and so on. Many geophysicist however, also surmount that gap. Harry Carlyle is one of them. But many of them have done this. Jack Armstrong of Imperial Oil is a geophysicist who went beyond geophysics into exploration and on into executive work. But I was one of the

early ones, in the early history of the oil industry in Canada, that was both geologist and geophysicist by training and by practice. And yes, I suppose it gave me a sort of unique advantage at that time and did help me in my career, there's no doubt about it, it certainly did help me. I think at the time, I don't think I'd have got the job as exploration manager without it, which I got.

BC: Because you need to have that understanding of both disciplines?

SP: Yes, I was able to meld the two together pretty well. There's lots of people now can do that and a lot of geologists and geophysicists are properly trained in both disciplines so they can. But in that day, in the late 40's and the early 50's, they called it geophysical coordination and they were trying to breed a cat that had this kind of background in both and I was the first one in Gulf that had that kind of training. And I became the geophysical coordinator in 1950, '51, '52 and then exploration manager at the close of '53.

BC: Let's not jump too far ahead because we need to learn so much more about this part. For instance the Northern Foothills Agreement, where you were working, was there enough data gathered that it eventually was explored further?

SP: Yes. We got enough work out of the foothills in surface mapping and structural and stratigraphic mapping to ascertain that the northeastern B.C. area, the foothills and the adjacent plains, should be very similar to Alberta. And that therefore it should be a good oil province, good oil and/or gas province. And so the Northern Foothills Agreement companies, jointly took out more acreage, some in the foothills, but mostly out in the plains area, attempting to emulate then, Leduc, which had been found out on the plains and Stettler and Westrose and so on. But they recognized that when you get out on the plains there's no outcrops of rocks so there was no roll for the surface geologist, and that's where the geophysicists came in. So most of the acreage that the Northern Foothills Agreement company ended up in, after the initial surface work in '46, was east of the outcrop area and on the plains area where essentially, the mapping was entirely geophysical. And this led to the initial drilling and the subsequent discoveries of Boundary Lake and Nick Creek and all the other gas discoveries that have occurred up there.

#270 BC: But they moved right away from the foothills because of the influence of Leduc?

SP: To a great degree, yes. Now they've moved back to the foothills since then, on some of the acreage and have drilled some of the foothill structures. But I think most of. . .

BC: Successfully drilled?

SP: Yes, Bucking Horse is one of them, although the most successful ones are still in the plains area.

BC: Could we move down to Pincher Creek, after the Pincher Creek discovery well, the first one, then there was an extensive drilling program to determine the extent of the Pincher Creek.

SP: After the Pincher Creek discovery well, which again as I mentioned, was completed in roughly March 1948, then I came back from Pittsburgh after the training as a seismic Party Chief.

BC: How long were you in Pittsburgh then?

SP: That was only 3 months on this special training. But remember I'd worked with Mike Allen and George Blunden there for a year prior to that.

BC: And the Gulf company had a very specific training program did they not?

SP: Yes, I worked on this refraction under this famous Louis Gardener. So I came back quickly so called, trained as a Party Chief, took over Party 4 in Red Deer and worked in Red Deer and Stettler. But every summer, I'd go down to Pincher Creek in the summer of '49, '50 and so on, and do further geophysical work on the Pincher Creek structure, preparing subsequent locations to the Pincher Creek discovery well. So after the Pincher Creek discovery well there was further geophysical work done by the crew that I had, at that time, Party 4, would go down for a month or 2 each summer, for 2 or 3 summers, and do further geophysical work, then we'd drill another well, such as the Walter Marr well. The Walter Mar well was the second well drilled 8 miles northwest of Pincher Creek, on the same Pincher Creek structure, but after subsequent geophysical work. Then from there on there was a whole glut of wells drilled.

BC: When you mention the Walter Mar well, if I could just digress for a moment, many of the Gulf wells were named. . .

SP: After the farmers.

BC: Yes. Was there a specific reason for that, rather than call them Pincher Creek #1,2,3,4?

SP: I guess that Pincher Creek #1 was simply named because it was the first really major exploration venture in the Pincher Creek region, following the Turner Valley days and so it was given the name Pincher Creek, although it was drilled on a farmer's land. From there on they just said, we've named the discovery well the Pincher Creek and the field will be known as the Pincher Creek field, let's name the subsequent development wells after the farmer's one, which they drilled.

BC: Is this the first time Gulf had done that in their drilling program?

SP: No, that's quite common practice.

BC: That is their common practice, or . . . ?

SP: Industry common practice.

BC: Industry common practice? It sort of perpetuates the . . .

SP: You usually name a well after a person's name, the farmer on which you drill or the creek that runs through the well site or the mountains overlooking it, or something of that nature.

BC: Never the name of the drilling superintendent?

SP: No.

End of tape.

Tape 2 Side 1

BC: Before we leave Pincher Creek, as a result of all the seismic work and as a result of the drilling, then plants were designed to go in there and at that time, I think, Gulf felt that they had a very, very big field.

SP: Yes, we misjudged, I think, in retrospect and somewhat in naivete I suppose, we

misjudged the size of the field. Not that we did that deliberately or with any malicious intent. It was the first major discovery in the foothills, other than Turner Valley. And Turner Valley had been a very major discovery, 100 million barrel oil field, still producing gas today. And here was this other Pincher Creek structure that came in with tremendous pressures. Pincher Creek discovery well came in with just frightening pressures, 6,000 pounds per square inch bottom hole pressure. So to drill the Walter Mar well 8 miles away and to find the same thing, set the whole industry off, particularly Gulf, in a feeling of euphoria and so on. And the nature of the rock is such that it's highly fractured, it's not highly porous but it's highly fractured. So the initial pressures and the initial productive rates are very high. But because there's not necessarily real good porosity backing the fractures, there's a tendency after a few years for it to bleed down. Now we didn't anticipate that it would decline as fast as it would. Or that it would cone water as fast as it would. So when we first made the discoveries and where they were just in the initial flush tests, we were all swept up by the high flow rates, the high pressures, and the rather extensive nature of the field. Because by the geophysical work alone we could see that the field could be up to 16 miles long. Even though the first 2 wells were only 8 miles apart we could see. . . and so we computed, with only the 2 wells, the Walter Mar and the Pincher Creek discovery well, on the basis of those 2 wells plus the geophysical, which isn't as accurate as drilling of course, it's good but it's still not as accurate as drilling, we computed that there might be 3 trillion cubic feet of gas in that thing. And at the best of our judgement at that time, felt there ought to be 3 trillion and went and told that to the Conservation Board.

BC: You were one of the people that. . .

SP: And I was one of the witnesses. Floyd Erring, as the engineer and I as the exploration man, was the witness to establish that there were indeed these kind of reserves here and that it was exportable quantities and that we justified building the pipeline.

BC: When was that hearing held, do you remember?

SP: That would be in '52, '52, somewhere in there.

BC: And that would be held in Ottawa?

SP: That was held right here in Alberta. As I recall it was mostly up at the auditorium.

BC: Why did they have these, if you could just explain what the hearing. . .?

SP: The hearings were about, to establish the reserves of the foothills belt to see whether there was justification to build a pipeline. At that time we felt, well, we found Pincher Creek, Turner Valley has been a major contributor in the past, Pincher Creek's been found, Jumping Pound had just been found also and we said, okay, we're just new in the oil business, Leduc's just been found, Pincher Creek's just been found, there's bound to be lots more gas. We've got enough to kick it off with Pincher Creek. And we felt at that time, mind you, we were estimating reserves with too meagre information, only 2 wells and geophysical information. But we said, okay, we think there could be 3 trillion there. Now it turned out that there's a little less than probably a trillion, maybe 900 million cubic feet. So we overestimated. But in a peculiar way, it was a good thing, because, while it was a slight overestimation for that particular field, it was not an overestimation for what the potential of the total foothills belt was. Because as you know, along has

come Waterton, which is much bigger anyway, so there's all kinds of gas for the pipeline. But by saying we had the gas in Pincher Creek to justify it was a good thing because it kicked off the pipeline.

#048 BC: This was the Trans Canada Pipeline, which needed something to kick it off.

SP: The Trans Canada Pipeline, because we said there was enough reserve there. Now while actually there wasn't really, at Pincher Creek, as it's turned out, it didn't matter because other fields have been found that filled the gap anyway.

BC: Did that ever come back to haunt you or the other gentleman, what did you say his. . . ?

SP: Floyd Erring.

BC: Floyd Erring?

SP: No. We at that time were technical men, said, look we've got to put together a picture of what we think the reserves are. And we thought the reserves were that good at that time. Because we didn't have the performance of the wells, to decide that oh, that's going to blow down quicker than we thought. We simply had 2 wells that had production tested only, no long production tests, and the geophysical data. So we said, well, the field could be this big and it could and the wells could produce like this for many years. Well, they didn't produce like that, they started declining after a few years.

BC: You also, Gulf itself was going to build 2 plants down there.

SP: Well, we also found one field called Lookout Butte, south of Pincher Creek, which we thought might justify its own plant but then we decided to pipe the Lookout Butte structure, which is right down in Waterton Park, immediately east of Waterton Park, decided to use the Pincher Creek plant for that. But Gulf put about \$50 million in the Pincher Creek plant and built really a bigger plant. . . we thought the reserves. . . you see, we wouldn't have put \$50 million into a plant if we didn't. . . the company doesn't spend money. . . we actually believe the reserves were there in those early days. We didn't have the knowledge to know that the reserves weren't there after we saw the performance. But in retrospect.

BC: Was the field still the same size, or did you suddenly find that the field, boom, wasn't. . . ?

SP: No, it didn't turn out to be 16 miles long.

BC: How did you find out the end of it?

SP: By drilling.

BC: How long was it?

SP: Oh, the field, you see came, as I mentioned, the discovery well was completed in March, around the spring of 1948, and it was 1956 or '57 when the field came on stream. So there was a lot of delay time there which . . .

BC: But how big, where you thought it was 16 miles long, how long is it actually?

SP: I forget the exact dimensions of it now, it could be. . .

BC: About half?

SP: No, it would be 8 or 10 miles long, about 10 or 12 miles long I'd guess. But it wasn't 16, I know that. And the reserves weren't there because we misjudged the produceability of the rock, that's why.

BC: But it's interesting, if you hadn't done that they probably wouldn't have built the pipeline.

- SP: No, the irony was that if we hadn't fortunately overestimated the reserves they might not have had the guts to build the pipeline at that time, which really was needed because the next day more gas is found which fills it even if Pincher doesn't have. And that's the way it turned out.
- BC: After Pincher Creek, Gulf didn't do a lot of foothills work, they moved off into the plains, was this because of Leduc?
- SP: Yes, because of the euphoria of finding oil. I can remember many of my bosses at that time, god bless them, E. D. Loughney, who I love and respect very much but he was saying, we're not after gas Pearson, we're after oil. Now as you know, the foothills area gas prone, you're more likely to find gas in the foothills than oil. Because nature's cracking process at great depth and heat that rock is down in the foothills, most of the volatiles have been driven off so mostly what you've got left is gas. And most of the oil has already been cracked down to the point, nature's cracking system has already cratered it into gas. So there's oil fields in the foothills and Turner Valley's an example but for every Turner Valley there's 100 gas fields. And Pincher Creek's a gas field, Waterton's a gas field and so on, Jumping Pound's a gas field, all the central foothills areas are gas fields. So in those years, and we were only getting. . .when we produced Pincher Creek, that first pipeline, we only got 9 cents a thousand for it. 9 cents a thousand cubic feet. Now of course, gosh, what is it, 4, 5, 6 dollars a thousand. So gas was a so-called by product that we didn't really want near as much as oil. Oil was much better to find. So there was a sort of, for a period of time, a de-emphasis on the foothills in favour of searching for things, like at Westeros, Five Land??? and so on, others. So much of our effort went back out into the plains then, in the mid 50's and into the 60's. And we found reefs, Swan Hills reefs in the 60's. That was a good trick. And of course, Gulf did retain some foothills work, the Central Foothills, CFA, Central Foothills Agreement, that was one area where we did retain foothills work.
- #101 BC: Yes, we'll perhaps talk about the Central Foothills Agreement later, but I'd like to try to keep it chronological. While Pincher was going on, suddenly there you have Leduc, can you recall hearing about Leduc, where you were, what happened?
- SP: Oh yes. Well, as I say, I was sitting as a well site geologist on the Pincher Creek well, which at that time was still drilling, it wasn't a discovery, when I heard about Leduc coming in, in '47. Oscar wasn't on the Leduc well but by then, Oscar was sitting on wells that we were drilling in central Alberta at that time, in the Stony Plain area for instance, Oscar sat on some of the early wells while Leduc came in. I was sitting on Pincher, he was sitting on Stony Plain, in comes Leduc and the whole world turned upside down and got on fire. Then immediately after that, Redwater. Both reef finds, both Leduc D-3 reefs. The same rock that outcropped at the top of Windsor Mountain that Con Hague and us visited.
- BC: And people hadn't paid much attention to that Devonian at all.
- SP: No. There's other people can tell you the story of the Leduc discovery better because there are other people that you would probably want to interview, Imperial people for instance, that had direct knowledge of that. I have heard grapevine stories that it was one

- of those areas where it was a mistake to go deeper and someone went deeper and look what they found. I don't know whether anyone deliberately thought they were going to find anything in the Devonian. Maybe some geologists might now claim he had some thoughts there but a lot of the rumours at the time were that it was just made by mistake. But in any event it showed a new geological horizon, highly productive in reefs and that these things also occurred in Canada as well as in the States.
- BC: Interesting for you too, having been to the top of Windsor Mountain and being able to see that, what's in the Devonian and see the depth of it. When you were looking at that in the Geological Survey, with Mr. Hague, did you feel at that time that this could be oil bearing?
- SP: Yes, we felt that those rocks are the kind that could be reservoir rocks. Although the Devonian at that time was deeper than the Rundle. We were thinking more of the Rundle, which was shallower but yes, it looked like . . . it was full of corals. Corals and what we call brachiopods, they're an extinct shellfish type of animal. But the mountain, you could just kick them like that and scuff 20 of them, kick 20 of those little brachiopods like that and they'd rattle off.
- BC: It would be quite exciting, your very first look at the bowels of the earth almost.
- SP: Yes, and to work under Con Hague, you just couldn't help but get inspired.
- BC: Now, with Leduc, this would certainly very quickly call for an expansion of Gulf's personnel, but when you say you were here and Oscar was there. . .
- SP: Oscar and I both worked under an exploration manager by the name of Bob Lockwood. And Bob Lockwood was in charge of the exploration in Canada.
- BC: And the 3 of you made up the exploration department?
- SP: The geological end of it, yes. In the meantime there was the geophysical end of it of course, with L. I. Brockway you know. But Bob was in charge of the geology work you see, and was the so called exploration manager also, if you want to say that at that time, with 3 people, you could grace the job with an exploration managers name. But Bob and Jack Bevell, Jack Bevell was the business manager at the time, he was the general agent for the company. And they took acreage out, Bob and Jack, in the Stettler region. Stettler, Nevis, Big Valley. Also Jack Bevell took out all that CPR acreage up through, around, all the way from Gull Lake, down through Sylvan Lake and all that country.
- #153 BC: At that time you could take out a great deal of acreage.
- SP: Yes, and companies were able to go to CPR, and other companies like that, and make big sweeping deals by paying rentals and doing a little work. And Gulf made a big deal with the CPR. Primarily Jack Bevell and I think Bob Lockwood had something to do with it too. But I think Bevell did most of that CPR deal, which was a very valuable thing to Gulf. Bevell turned out to be a crook but he did do some good.
- BC: Do you remember Bevell as a manager?
- SP: Yes. Bevell was a gifted man. He could get the brass up from Pittsburgh and they'd eat out of his hand. He was one of these charmers that would lay on the right kind of club work and banquets and he could get them so interested in golf that they wouldn't ask technical questions. He'd take them to Banff and wine them and dine them and get us

geologists to tell them about the rocks on the way and they'd be so fascinated they'd forget to ask him what the bottom line said. He was that kind of a . . . he was a gifted entrepreneurial man who unfortunately, didn't have good scruples. And he went a little haywire when he decided to get into sideline businesses and put them to work on some of Gulf's projects. Bob Lockwood was honest and clear all the way through, he had nothing to do with Bevell's escapades. But I think that Bob suspected that Bevell was doing some of these crooked things. Oscar and I and Brockway and others on the sidelines who were lower down, we weren't privy to it but we also suspected some of them were but we didn't really know. One of the core drill outfits that kept cropping up a lot, we didn't learn toll afterwards that Bevell had an interest in it. But he kept pushing them, you know, he kept asking us to hire them and we kept wondering why. It turned out to be one of the trip stones of him.

BC: Was he discovered by the Gulf people or had he gone on to . . . ?

SP: I think Bob Lockwood suspected that he was doing some funny shenanigans and finally some of us did too. But I think it was probably the Tulsa office themselves caught on to some of this and recognized that he was pulling some shandies. Phil Bowhart then, the man in charge at Tulsa, and Jack's boss, came up and looked into it and I guess, nailed him to the cross and fired him right there. Made a speech to us and told us that right was going to prevail, not crookedness and that was that, that was the end of Bevell.

BC: Was this a shock to you and how did . . . ?

SP: Not by then. By then I'd been talking it up with Bob Lockwood, Oscar and I had, that you know, Bob wouldn't bare his whole soul to us, all of his worries, because we were kids compared to him. But we suspected from the innuendoes and the remarks of Bob that Jack was a shady character, at least in Bob's eyes and we knew that Bob wasn't shady. So we had to assume that Jack was likely to get caught doing something wrong but we didn't know what. And when it did finally occur, we said, well, it looks like Bob was right, Jack was haywire.

#195 BC: What caught him, what caught him up, was there a specific thing that he did?

SP: I don't know, I think it was some of the core drill work. And maybe some of the sideline land deals that I never did learn about.

BC: How was the announcement made, a memo going around?

SP: All I remember, no, I don't remember that, I remember he got us all in the Crystal Ballroom of the Palliser Hotel and made a speech to us and told us that we were going to get new management, Ed Loughney and that Jack Bevell was gone and out, that he'd been found wanting and not in the degree of integrity that was required and that when such things happen the ax falls. Words sort of like that and that we were all good people that didn't deserve to have anything but good management and Mr. Loughney was coming up to make sure that we did have good management.

BC: Would this be in the early 50's?

SP: Yes, this was '51, '52.

BC: So the company had expanded by then?

SP: Oh yes. And we had made the Pincher Creek discovery by then, which was the most

important gas discovery outside of Turner Valley, we had made the Stettler discovery by then and we were about to make the Fenn, in fact we might have made the Fenn-Big Valley discoveries too. I worked on the geophysics of those fields too.

BC: Did you find, did this impede Gulf's progress at that time, were people a little . . . ?

SP: Not particularly, no.

BC: Like when Mr. Loughney came up, did this flamboyant sort of exploration atmosphere become. . . ?

SP: It might have gone a little slower for awhile because we had a new man who wasn't familiar with the country and hadn't been in on the wheeling and dealing days, of big deals with the CPR and so on. And I'll admit that Loughney and the rest of us, had the benefit of Jack's big deal with the CPR. If Jack had remained an honest man he'd have been an excellent leader because he was sort of a Jack Gallagher in his day. He was a great growth guy, you know, he'd have run the country if he could. And he was going to make Gulf big, big, big, quick, quick, quick.

BC: And he went quite quickly too.

SP: He went quickly and he had a lot of ability. He had great salesmanship. He was like Jack Gallagher in many respects except that Jack Gallagher is honest and Bevell wasn't you see. But they both had many of the same salesman, they could generate funds and generate executive enthusiasm from their superiors.

BC: This has to be part of the oil patch too, doesn't it, because oil, you have to put a lot of money in before you get it back?

SP: That's right.

BC: You mentioned Bob Lockwood, could you give me some recollections of him?

SP: Yes, he was the man in charge of the geology here and you could say was an exploration manager until about 1952, when Ed Baltrasitus came up. By then Bob was. . . Bob was primarily technically oriented in geology and I guess the company wanted to put in a man that was a little more business oriented than just purely geology. So they moved up Ed Baltrasitus from the States to take Bob's place and moved Bob into an advisory job under Loughney, but not a line job. You know what I mean, the difference between line and advisory. I don't know whether Bob liked that too much but that's the way Tulsa. . . we were all working out of Tulsa then. So they designed it. Ed then became Oscar's boss and my boss and Andy Baillie's boss. I guess it was under Ed Baltrasitus that we hired Andy Baillie. But Ed did a good job for us too. But he got itchy feet and moved on, but he was a good man.

#253 BC: When you talk about Tulsa and Pittsburgh, was there a bit of a competition between those two people that you had to somehow balance up here in Gulf Canada?

SP: A little bit yes. Simply because, from the standpoint of our geological work and our drilling work, we report to Tulsa and we were part of the Tulsa division, operationally. But in the very early days, before we became Canadian Gulf Oil Company, the geophysical work was all done by Gulf Research and Development Company, which was the research organization of Gulf Oil Corporation. Now Gulf Oil Corporation had several

operating divisions, the Houston division and the Fort Worth division and the Tulsa division. The Tulsa division took care of the Midwest and Canada. The Los Angeles division took care of the Rocky Mountain Region of the U.S. and the Houston division took care of the Gulf Coast and the Fort Worth took care of part of the mid-continent region. Tulsa operationally, was in charge of all of the great plains, north of Tulsa to the Canadian border and on up to the Arctic. And it came under a Vice-President. But all of Gulf's geophysical work in those days was done by Gulf Research and Development Company. So even before Tulsa got involved in Canada and was assigned responsibility for Canada, the first acreage was taken out by Gulf Research and Development Company. So actually, the company operated up here as Gulf Research and Development Company, then it came under the wing of the Tulsa division for operational reasons, geology and drilling, although the geophysics was still done by Gulf Research. Then they created Canadian Gulf Oil Company, in about I don't know, '47, '48.

BC: And who did it report to?

SP: And it reported to the Tulsa division. But we kept geophysical reports going back and forth to Pittsburgh all the time. Because Pittsburgh did geophysics for all the divisions, including Tulsa, Fort Worth, Houston.

BC: And as geophysics became very important after the Leduc discovery, you would really be having 2 bosses that would be. . .

SP: Yes, we had to satisfy Dr. Peters at Pittsburgh as far as geophysical matters were concerned, as to our training in geophysics and if you took training, like I went down to Pittsburgh, I was under Peters at Pittsburgh to become a geophysicist and get trained. And when I came back as a Party Chief, I did all my technical reporting to Pittsburgh but I sent a copy of my maps and interpretation reports to Tulsa. But they were simply interested in what geology I came up with. But whether I changed my jug distances or whether I drilled deeper shotholes, or whether I interpreted this way with refraction or reflection and whether I used this type of formula or computation, that was all between Pittsburgh and me, the Party Chief. Tulsa I simply sent a copy of the maps so that their geologists could mull over where to drill the next well.

#308 BC: When did all this 3 party system stop? Or did it?

SP: It eventually stopped once we formed the 1954 and around there, Gulf decided to decentralize their geophysical operations. Instead of doing all of their worldwide geophysical operations by the Harmerville group at Pittsburgh, they decided they would send out the geophysicists from Pittsburgh to the various operating divisions and that each operating division would do its own. And that therefore we wouldn't have to send maps back and forth to Pittsburgh all the time, we'd just do our own. In a way it was a bad thing because geophysics is inexact enough that it's good to have 2 interpreters looking. One is looking at this record and another is looking at the identical record. This guy does it this way, this guy does it slightly different. If they both do it together, you're very confident that that's the picture. If they both do it slightly different you'd say, well, both you fellows go back and take another look at it. Because you're both. . .

BC: Particularly with geophysics, where depending on who is doing it, and who's in charge,

it's whether they like the nice flowing line, pretty soon your interpretation can get pretty hazy.

SP: So in other words, geophysics, like geology, is an inexact enough science that a multiple hypothesis approach to solving the problem is the best approach. So the 2 interpretations, both Pittsburgh and the field interpretation was I thought, and always have thought, was a good system. But in '54 they decided to decentralize Pittsburgh and that each division would take on its own share of all the geologists that were housed in Pittsburgh and you'd do them here. So I was an exploration manager by this time, in '54. . .

BC: Right. You became exploration manager in '54, did you or was it a little earlier than that?

SP: No, in January '54. When Ed Baltrasitus resigned.

BC: Yes.

SP: In late '53, I was geophysical coordinator at the time. They called me in and said I was going to be an exploration manager.

BC: How did you feel about that change?

SP: I felt stunned because Oscar was a little older than I was and he had a PhD degree. Can I talk like this.

BC: Oh, of course.

SP: And I felt Oscar should have this job. He'd been my boss in the Northern Foothills Agreement, he had a PhD degree, he was 3 years older than I was and in the office, under Bob Lockwood, he'd always been considered as senior to me and I'd always thought of him as senior. So that when they told me I was it I rang the bell and I said, Ed Loughney, can I come down and talk to you. So I went down and I said, Ed, I'm flattered that you want to give me this job but I said, I don't feel right about it, what about Oscar. He's the guy that should have got this job. He said, no. . .

End of tape.

Tape 2 Side 2

SP: . . . in this peculiar mixture position of being geologist and geophysicist both. They felt at that time that they probably needed someone that had this, because we were using geophysics so much at this time in our history, that they probably felt that they needed someone at the helm that had a reasonable command of both things. That's the only thing I could rationalize.

BC: Because of this background of geophysics in this corner and geologists in this corner, this to make a smooth working. . .

SP: Hopefully this kind of guy, that had the kind of background that I had, should bring these teams together a little more harmoniously and maybe more effectively. That was the concept at that era, in the early 50's, in the mid 50's. It was quite a . . . various companies were trying this so-called geophysical coordinator route you see. And I had been the only one in the company, the only geophysical coordinator who tried to marry the 2 disciplines.

BC: At this time you were still Gulf Oil, you hadn't become BA.

SP: That's right, we were Canadian Gulf Oil Company.

- BC: We sort of jumped over some of your other discoveries. After the Leduc and some of these other areas that you were working on up to '54.
- SP: Well, as I say, we did the seismic work on the Pincher Creek and we did the surface work up north. Then I worked on geophysical work in the Stettler-Fenn-Big Valley areas, helping locate the structures on which we subsequently drilled wildcat discoveries in Stettler, Fenn and Big Valley.
- BC: Were you actually out in the field then?
- SP: Oh yes, I was still Party Chief when we located the Fenn structure, for instance, I did the shooting over the Fenn structure that located, and did the first interpretation on the structure.
- BC: When you were sitting the well at Pincher, you were living in the doghouse as you said, by this time things were a little more habitable.
- SP: Right, we usually stayed in a hotel then.
- BC: Was your wife with you or did your family have to, for instance when you were Party Chief out at Stettler, did she travel with you then?
- SP: Oh yes, she was with me there, oh yes. We lived in a farmhouse half a mile from Stettler.
- BC: What was it like in those days?
- SP: Highly nomadic. 2 or 3 months. Let's see, I was about 9 or 10 months in Red Deer, then down 2 or 3 months in Pincher Creek, she followed me all these places, then back in Stettler for a winter, then back to Pincher Creek for 2 or 3 months, then back to Stettler. Then she was pregnant with the 3rd child by then and I sent her home because I was going up north of Peace River. I'd volunteered to take the first north bush crew. After we'd finished seismic work around the Stettler-Fenn-Big Valley area, the company wanted to go up north.
- BC: And where was north at this time?
- SP: North of Edmonton.
- BC: And what year would that be, about '51.
- SP: That would be the winter of '49, '50 and I was still a seismic Party Chief. I felt real good. My job satisfaction was great as a seismic Party Chief. I wasn't a very good geophysicist because I lacked the electronics training that guys like Harry Carlyle have and so on, I wasn't a good practical geophysicist. I was a geologist cum geophysicist really, and did all right in the interpretation end of it but when it came to the field end of it I was sort of lacking and depended on good men. Fortunately had good men. The first year that I was a Party Chief, I remember, we worked under the Tulsa division operationally, although technically we were part of the Pittsburgh, I had the lowest cost per seismic mile and the highest production of the entire Tulsa division and we were working in Canada, with the rigours of a northern climate, versus what Texas and Oklahoma was working. I've never been as proud of anything as I was that little job of being a Party Chief, in a line of work that I wasn't really the best trained in. But as I say, my artillery training helped me a lot there.
- #045 BC: Yes. You mentioned this before we started to tape but I think it's something to actually record, is your Army training.

- SP: When I was abroad as an Army officer, as a ???, I was involved in field artillery. That's the 25 pounders in that day and era. We used to haul these around with 4 wheel drive gun tractors and trailers. We were fighting mud in Sicily and Italy all the time. It was a logistical problem, supplying men for the machines, keeping the machines busy, fighting the enemy and getting from one mudhole to another. And you know, getting around geophysical through farmers fields was exactly the same as deploying a field gun into a farmers field in Italy, with a war on, except in the seismic work you had to ask the farmers permission to go on his field and on war time you simply go on the field and worry about whether it's mined or not. But the same logistics, the same kind of machinery and the same kind of men were really used. Same philosophies of getting around, doing things and getting it done under bad conditions.
- BC: And this would be when you went north of Edmonton?
- SP: When I went north of Edmonton, remember I had worked in the northern foothills as a geologist by then, I could see the light that the north had to get opened up, that the geological environment was proper. I also knew that as a geophysicist, if I was ever going to get out of the bush, because I knew the bush was coming, the north bush, because it had to get opened up. I also knew that the first guy out of the bush might be the first man into the bush. So I volunteered to take the first crews up into the bush on a year round basis, to pioneer these tracked vehicles and so on. Recognizing that I'm not talented in mechanics, I decided that I'd hire a good man and I hired Ross Davis, who's a good diesel mechanic from Stettler. He's now of course, in charge of our Gulf building. I hired him to be the mechanic to take up north with me because I knew that with my lack of talent, I needed to hire good talent. And he certainly did a good job for us, he kept our equipment rolling in sub zero weather that just amazed me.
- BC: And did you have jus the one crew up there?
- SP: That's right.
- BC: And how far north of Edmonton did you venture?
- SP: We were about 60 miles north of Edmonton and in the winter of '49, '50, we were the furthest north crew that Gulf had. Don Walker had a crew right in Peace River. And we were both reporting to L. I. Brockway.
- BC: What was it like in the north in the winter of '49?
- SP: Terrible. It was a very cold January, it never got any warmer than about 50 degrees below zero, 40-50, somewhere in there, one of the coldest we've ever experienced. And we had to take this seismic crew out. We started in Christmas week to take it out. So here we were going out into this frozen wilderness. I remember when we got out there, it was 55 degrees below zero and we tried to set up tents and work, we didn't have proper trailer camps. We slapped together a sort of a trailer camp but we didn't have anything to put machinery together in, we just put up a tent. Those young men just worked day and night in the most terrible conditions. The first month, we only got 2 miles of production because it was just so cold we couldn't work.
- BC: How many men would you have on your crew, about 20?
- SP: We had between 20 and 30 men, because we had to hire these extra mechanics and cooks that we didn't need on a crew down in civilization you see. So we had cooks, cooks

helper and I think we had to have a truck man to haul equipment back and forth from Peace River town.

#086 BC: And you were living in tents?

SP: No, we were living in trailers, but we didn't have sophisticated modern trailers like we have now.

BC: Who built your trailer camp?

SP: We got United Trailer to build it.

BC: Was this their first experience with camps?

SP: One of their first early jobs of building camps, yes. They were one of the first, this was before Atco got going in their camps.

BC: How did you move these in, on bulldozers?

SP: We bulldozed them in, hauled them in with trucks and dozers. And worked on the frost all winter, then come spring, we had to try and adapt these Bombardier snowmobiles. And we used the actual Bombardier snowmobiles at first, and cats. We hadn't evolved all this modern sophisticated Nodwell equipment and the modern type of Bombardier equipment. Bombardier now makes specialized equipment just for seismic work. At that time we simply used a snowmobile with tracks on it and ran it over the muskegs dry. And I used to run around on a horse to supervise the crew. As I say, I wasn't must of a supervisor but when I did get out to look at the crew it was on horseback.

BC: In the middle of winter, that must have been. . .

SP: Well, I didn't use a horse in the middle of winter. No, you could always get around on the frost on a truck you see.

BC: But you said you went up all year did you, or did you have to pull out?

SP: Yes, you see, up till then there had been a little work in the wintertime but they'd never attempted to do anything in the muskeg in the summertime. But we recognized that eventually we were going to have to learn to do seismic operations on a year round basis up there. I figured that the first guy in would be the first man out so I had volunteered to go up there and do it.

BC: What things did you discover in that first year that you could or could not do?

SP: We found out that you really couldn't do anything in the springtime for one thing. And you found that below 40 below zero in the wintertime that you couldn't do very much neither. Metal was very brittle at those temperatures, even the hoses for your gasoline are brittle and would crack. And furthermore the men were more interested in existing beyond 40 below, than doing much work. You had to keep your vehicles running all the time to keep them going, day and night and that wore them out quicker. You had to have good welders around to keep things patched up. In the summertime muskeg was your problem and we lacked flotation, we knew we had to evolve new equipment. So we challenged Bombardier and Nodwell and people like that, who came up with the kinds of equipment that eventually were effective in reducing the crawler weight so that they could crawl over these floating, quaking bogs you see.

BC: Harry Carlyle did a lot of work towards that.

SP: Harry came along just after my era on that you see. And he, being mechanically apt, made

great contributions to getting around in the bush with these new fangled mechanical contraptions that he was very appropriate in, being a good engineer, he was helpful in designing some of those things. I got out of that bush, fortunately early, and . . .

BC: When you say early, how long were you in?

SP: I was only in there until the spring of '50, I was only in a year, less than a year actually. And then they brought me out as a staff geophysicist to Calgary and I was the first staff geophysicist reporting to Brockway, the only other geophysicist in the office was Brockway. Then the next year they created this title called geophysical coordination, to try and marry the two so called, warring factions together. And who was there to do that but the guy that had worked on both kinds of work.

#129 BC: Yes. So that was really quite fortunate for Gulf and fortunate for you.

SP: Well, I don't know whether it was fortunate for Gulf or not but it was certainly fortunate for me because I happened to be the only guy that had both worked and training in both and first hand knowledge of both and I think it was that that gave me the break to get the exploration manager's job in early '54 when it occurred.

BC: By this time, you say when you came in you were the only geophysical assistant but very quickly the geophysical department of Gulf Oil really expanded.

SP: Oh yes. In the field, as I say, I was the only geophysicist helping Brockway in the office, but he had Copeland in the field, running the field end of it, he had Carlyle out in the field and he had 4 or 5 other Party Chief's elsewhere and some contract crews. We had 12 seismic crews going, so the geophysical operation was a very big operation under L. I. Brockway.

BC: And the fact that you had your own crews out in the field, this was a little different too.

SP: We had our own crews, as well as contact crew, both.

BC: What do you feel was the advantages, disadvantages, of having your own and having contract?

SP: There's an advantage to both. It's in some way regrettable that Gulf hasn't got any of its own crews. It's one of your best ways of monitoring whether the contractor is gypping you or not. At the same time, it's just like the drilling industry, the contractor works in environments all over the world for different oil companies and therefore he's got the pooled brains of the industry. So the contractor becomes an expert in geophysical work, because not only does he know Gulf's techniques from working for Gulf, but he knows Imperial's techniques for working Imperial and Shell's techniques from working under Shell and so on. So the geophysical contractor eventually ends up being a better geophysicist from an operational standpoint than someone who is cloistered under the skirts of one company only. Do you follow me? At the same time, it's nice to have one of your own or 2 or 3 of your own so that you can keep your own training program going, so that you can be training your own geophysicists to come along, so that you'll have the intelligence to hire a good contractor. In other words there's the advantage of having your own crew to help monitor the effectiveness of the contractor and to train your own people in geophysics, but I do have to admit that probably you get, in the overall picture, in both drilling and geophysics, better expertise from the contractor who is a real expert and who

- can bring to bear more talent than you can usually bring.
- BC: Do you think too, with the complexity and the progress that's been made in the geophysical area, as an example, you need your geophysicists, do more specific jobs so they don't need the overall picture, what it's like to survive?
- SP: Right, that's true.
- BC: Although they might have more sympathy if everybody had to have one year in the bush.
- SP: Most companies have a good squad of geophysicists working in their head offices to do the interpretation of the raw data that the contractor turns in. The contractor is more efficient generally, in the field, in getting the data, because he's got this melded experience of working for various companies and he's got specialized equipment. The same with the drilling people, it doesn't usually pay to do your own drilling. It's nice to have one of your own drilling rigs to train your own drillers, so that you've got a cadre of experts coming along, and the same with geophysics.
- #177 BC: With the geophysical interpretation, was Gulf's interpretation different. It seems to me there's a phrase I've heard, Jack Way used it when I was talking to him, feducho??? method, was that something you did in geophysics or was that something he did with velocity?
- SP: I'm not sure what he's talking about there. I don't know whether Gulf. . . I think in the early days, in the 40's. . .in the 30's, 40's and early 50's, Gulf was probably, was probably, ahead of most of the rest of industry in the refraction technique. But that's about the only place I can say that Gulf was maybe ahead of the industry. I think that in the rest of the geophysical technology, a) subsequent refraction work, in other words I think that the rest of the industry has caught up to Gulf in refraction since then, and I think in reflection I think Gulf as good but no better than a lot of the other industry.
- BC: You are a native born Canadian and by 1954, not having been in the company, not 10 years, you were in the managerial level. Not the usual picture for a lot of the oil companies in Canada at that time. I'm thinking of foreign owned.
- SP: Yes, I know what you're saying there. I guess I was lucky because I was on the ground floor of Gulf's entry into Canada. Following George Blunden I was the 2nd professional man hired, 2nd Canadian hired by Gulf in Canada, following George. I was the first geologist hired by Gulf because I was hired a little ahead of Oscar Erdman, who's the most senior other geologist. And having worked in both geology and geophysics, I had the breaks. So I had the breaks of being early in the scene and being both geologist and geophysicist.
- BC: Did you find that being a Canadian with a . . .well, I will say foreign owned company, had its problems at all for you, in the managerial area?
- SP: No, I would not say so. Not a bit. I don't feel that Canadians were held down in any respect with Gulf in that respect. I might have been if I was working in the States, I don't know. But certainly internationally, I'll come to the international part of my career later on, but from that and from my work in Canada, no, I can't complain at all. Or I can't see how any Canadian could complain with the way Gulf treated their. . .they brought their Canadian management along very rapidly. I can remember, in the 40's, the average

Canadian was considered. . .the average bachelor's degree Canadian was considered to have a little better education than the average bachelor's degree American at that time. And I think our education system and our ethic of work at that time was respected by Americans, contrary to what it is today.

#221 BC: So your bachelor's would almost be a Masters to them?

SP: Maybe not quite but close to it. And I do know that from, when I went down to Pittsburgh, they felt that we were every bit as well or maybe slightly better educated in the equivalent time spent in the American university. I don't say that that prevails today.

BC: Mr. Loughney came up as the manager to take over from Mr. Bevell. . .

SP; Take over Bevell, in 1951 I believe it was.

BC: Have you any recollections of his early days?

SP: Yes. He was an accountant by background and had been in charge of the accounting in the Tulsa division, worked under Phil Bowhart, the Vice-President and was much trusted by Phil Bowhart, the man in charge of the Tulsa division. So when Bevell went out it was logical to put a very sound, conservative businessman in charge of the Canadian operations where there had been some skullduggery going on, right. So they sent up this very strict, straight, honest, capable businessman, Ed Loughney. While he was far more conservative than Jack, he did a very fine job. He was an excellent man in my opinion, Loughney. Not everyone understood him, not everyone liked Loughney.

BC: Why would they not like him?

SP: He was a tough, hard headed businessman. There was no nonsense.

BC: Have you an example of the way he might behave in a situation, can you think of an example?

SP: I can remember him saving \$100,000 for Gulf by just sitting silently and never saying a word while the rest of the Central Foothills Agreement stewed and fretted and finally gave in, simply because that stubborn, tough businessman at the head of the Gulf table there was not prepared to move an inch. And they finally gave in. They didn't have to. But it was just his straight, tough, tough business line. He wasn't any more right than they were but he was just tougher and they finally gave in. He was the kind of a man, that if you went into his office and you had done your homework and you knew the answers that he would ask and gave them clear and simple everything went fine. But if you went in and tried to kid him that you knew something, he'd read through that immediately and he would grind you right down. Because then he'd find out you really didn't know and he'd rub it in, make it tough. So it was all right if you went in and talked to him and he asked you a question and you said, Ed, I'm sorry, I don't know the answer but I'll go back and delve into it and I'll let you know. If you said that, no problem. But if you said, well, Ed, I think it's this way and stumbled around, guessing at what the answer might be, he'd nail you.

BC: How long was he up here?

SP: He was up here until . . .when did he leave, at the merger time, when Gulf merged in 1956, wasn't it, with BA. He went down . . . did he go down. . .he went down under Charlie Hay at that time.

BC: Down to Toronto?

SP: Yes, at that time. Went down as an executive to Toronto, at the time of merger. So he was here from '51 to '56.

BC: You mentioned he was an accountant.

SP: By background.

#279 BC: Yes. Would this have an affect, a conservative accountant, would this have an affect at all on Gulf's exploration program?

SP: Not particularly. I don't say he inhibited it all. He wouldn't have maybe, spurred it as fast as Bevell might have. Do you know what I mean? Bevell would have gone out and said, if you exploration men aren't going to make the land deals I'll make them for you and would probably have gone out and taken all of Canada, you know. And then we'd have had to hire more geologists to try and figure out what Bevell had done. No, Loughney wasn't that kind of a man. He would allow us to make the plays and generate them. He wouldn't spur us to do anymore than we thought we could do. But I wouldn't say that he in any way, inhibited us. He actually was a good man to work for as an exploration because he didn't profess to know exploration. He was an accountant by background and he didn't try to play the geologist or the geophysicist. On the other hand he didn't push us to do more than we maybe felt capable of doing neither. So we were on a more conservative era, we grew and continued to grow but not quite as fast as we'd maybe grown under Bevell.

BC: Do you think the fact that you had that CPR land made you perhaps, less conservative than you might have been because you had the land and so you would work it?

SP: Yes, we worked it and the benefit of that is still falling heir to us. That was a great land deal.

BC: Right. Whereas if you'd had to go out and acquire something. . .

SP: That would have been difficult, yes. At that stage. In retrospect it was lucky that Bevell did make that deal.

End of tape.

Tape 3 Side 1

BC: As we start our interviewing today, Stan, I thought we could just pretty well pick up where we left off, in 1954, when you became the exploration manager. What did that entail for you here, under Gulf?

SP: As exploration manager I was responsible for the entire search for oil and gas in Canada for Gulf at that time, Canadian Gulf Oil Company. And that involved the general direction of all the geological work, the geophysical work and of the land functions and scouting functions. And leading up to and including the drilling of the wildcat wells. Although the production department did the physical work, the wildcat wells were budgeted in the exploration department and we selected the wells. The budgets in those years, back in the mid 50's, were anywhere from about 15-25 million dollars per year for exploration.

- BC: And how many wells would you hope to be able to drill out of that money?
- SP: Net wells, we'd maybe drill 15 or 20 net wells, we might be up to 40 gross wells.
- BC: How would that compare with budgets of today and how much. . .?
- SP: The budgets today for this kind of thing would be 3 and 4 times the amount, maybe 6 times the amount. Because the cost of wildcat wells have gone up drastically. Not only because of inflation but because we're now drilling wildcat wells in much more expensive and hostile environments. In those days we were drilling mostly in the central plains of Alberta, which is reasonably civilized and easy to drill to and 5-8 thousand feet in depth. Our most expensive wells were wells in the foothills, and they would cost around a million dollars a well. Now we're drilling wells in the offshore regions that are costing \$50 million for maybe 1 well.
- BC: What was your ratio in those days of dry holes to discovery wells?
- SP: It varied but often it was around 30%. Sometimes we'd be lucky and have up to 50%, sometimes as low as 20% and then we'd be running scared.
- BC: I've heard people say that there is only 1 good producer well out of every 10 drilled, is that exaggeration?
- SP: 1 in 10 is a fairly statistical type of success ratio. On the general industry average, when you consider that there's a lot of companies drilling without very much sophisticated help and sometimes the success ratios aren't too great. And on a basis of a general industry average, 1 in 10 is not a bad figure. And maybe 1 in 50 to be economic and 1 in 500 to be real bonanzas.
- #033 BC: When you were drilling in the plains area, in '54, what were some of the areas that you were working in?
- SP: Some of the areas that I was involved in, just prior to becoming exploration manager, while I was the geophysical coordinator I had noted the Lookout Butte structure, down near the U.S. border, south of the Pincher Creek structure and just east of Waterton Park. And had managed to convince the company to take out the C & E acreage there. So one of the areas that we worked in the early years was this Lookout Butte area, following up the Pincher Creek structure. I also was involved in the development of the Pincher Creek structure and the exploitation of that structure during the same time. The Lookout Butte discovery occurred in 1959 and that was made by then, Gulf, transferred now to BA. The Gulf-BA transfer occurred in 1956. I was fortunate enough to be in the larger company of the two that merged and continued as exploration manager in that company as well.
- BC: Right. I don't want to hop ahead but I would like to discuss that whole business of the Gulf and BA merger. At Lookout Butte, because of it being so close to the Pincher Creek area, were you looking for further gas or were you hoping for oil?
- SP: We were always remotely hoping and praying for oil but realistically, we knew we had to expect to find gas at great depths in those types of foothills structures. When you get into the Paleozoics in the foothills, it's only rare that you find oil, such as at Turner Valley. Most of time, you're going to find gas because at that depth, nature, by heat and pressure has usually cracked it to the point where the heavier hydrocarbons are cracked down to lighter volatile constituents.

- BC: At this point, in 1953, '54, had you determined that the Pincher Creek discovery wasn't as expansive that you'd hoped and so by looking at Lookout Butte, were you hoping to perhaps find an adjunct gas. . . ?
- SP: Frankly we still didn't know the proper extent in 1954, of the Pincher Creek structure. We still thought it was a pretty good size although we were beginning to have some suspicions that it wasn't quite as big as we'd thought in the earlier days and we were certainly glad to have Lookout Butte to come along and help. Incidentally, Lookout Butte was produced and is being produced through the Pincher Creek gas plant.
- BC: It was successful?
- SP: Yes, we made a successful discovery in 1959.
- BC: Was it highly successful?
- SP: Yes, a very, very good well. Not as big as the Pincher Creek field. But I remember I used to go down to visit that well, because I was a manager that had to get around and do it. Doug Lockie, one of the geologists that's now a consultant was our well site geologist at that time, I hired Doug Lockie. Oscar Erdman of course, was our chief geologist at that time, or manager of geology if you will. He was active, Andy Baillie was active as a regional geologist then, John Wanfer.
- BC: Was Andy Baillie involved in Lookout?
- SP: No, he really had very little to do with that. That was a geophysical type discovery and it was before Andy had that much to do with our regional work. Andy did very valuable regional work in reef studies out in the plains area and some in the mountain regions in the north but he didn't have anything really to do, with the Pincher Creek or Lookout Butte structures. Oscar was quite active in those areas though.
- #078 BC: Right. We haven't really talked about these different people to any extent. Would you like to talk about them now or should we wait and sort of put that at the end, sort of go through different names?
- SP: We can cover some of them as we go. I think I mentioned that I worked with Oscar Erdman in the Norther Foothills Agreement in 1946 when we were both the first 2 geologists hired by Gulf in Canada. I guess I was the very first and he was the second. He at that time, was my boss actually. I didn't become his boss until I became exploration manager in 1954. I've always been a very close friend of Oscar's. I think he and Con Hague are the epitome of geology to me. They are both very hard working, dedicated, geologist's geologists. And they're far better geologists than I ever was. I was lucky enough to get along in the company fairly well but I was never the geologist that Oscar was, or is.
- BC: Do you think that it is difficult for someone who is as you say, the geologist's geologist, obviously a scientific man, to move up in the corporate structure in the big oil companies because of the fact that they are more into the scientific side than the administrative?
- SP: It isn't necessarily inhibiting. Because if a man has a strong desire to be an executive and has the abilities to be so he can sufficiently sublimate his professionalism to become what he wishes to become. On the other hand, many people who have a high degree of training such as a PhD like Oscar has and like Andy Baillie has, have devoted so much of their

time and their career, to their expertise, that there is a reluctance to branch beyond it, or to go into other areas. I've heard it said that there's a lot of leadership lost to expertise. In other words, some of these men could have probably made very good executives if they hadn't been so wrapped up in the high degree of professional science that they were involved in that they worked to the exclusion of other things. And I would have to guess that men like Oscar and Andy could have been anything they wanted to be but I think they were fundamentally dedicated scientists. And they are the salt of the earth and what the oil industry needs. Without them we couldn't have got anywhere. I'm not saying that management isn't important too but I think that every bit as important is the top level technical people, scientists and engineers that were involved in the evolution of the oil industry, geophysicist, geologists, engineers. Every bit as important as any manager.

BC: Mr. Erdman was a practising geologist, he wasn't a research geologist though, with Gulf, was he?

SP: No, he did field work, he did well site work like I did. Then he did supervision of geological work. No, I can't say that he did really, any research. Andy Baillie did more that type of work and John Wanfer. Oscar was mainly a field geologist and a manager of geology, and a good one.

#118 BC: Can you think of any anecdotes of times that you worked together, special stories of special times.

SP: I remember Oscar told me one day he went on a fast for 30 days, I think I mentioned that day.

BC: I think you did, yes.

SP: And that led to a funny little escapade in the northeastern B.C. foothills, whereby we went out without a rifle for quite a time. He was like Can Hague, a dedicated, hard working geologist. Hard to keep up to in the field because he was just a hard working man.

BC: Moved his feet as fast as his head moved too eh?

SP: Yes. And in those early days, I think Harry Carlyle was hired somewhere around '53, '54, in there too. He was in the geophysical work though and stayed in that work until he became manager of exploration after Oscar.

BC: By that time, when Harry Carlyle was hired, then you were already exploration manger, then did you hire him?

SP: I'm not sure whether I was exploration manager or geophysical coordinator at the time he was hired.

BC: Did you hire him?

SP: If he was hired in '53, which might be the time he was hired, I'm not sure, '53, '54, I think it was then anyway, well then, I'd have been geophysical coordinator. If it was in '54 he was hired, well, then I was manager of exploration. But I think it was prior to me being exploration manager that he was hired.

BC: But you would have been instrumental in his hiring because of the position?

SP: Not necessarily so. If it was before I was manager of exploration, that would hae been up to the geophysical people to hire him.

BC: Did you, well, obviously you worked very closely with Mr. Carlyle through the years.

- SP: Oh yes, all through the years. I've had a great respect for him. He is a perfect example of a man with a high degree of professional expertise, an excellent geophysicist, very well educated man. He doesn't have his PhD but he has a Masters degree in engineering physics, which is an extremely difficult discipline that requires a high level of education and good marks. He has certainly an excellence of mind that has been able to not only be a fine professional but also a very excellent executive and I consider him one of the top executives in the industry and one of the best that Gulf's ever produced.
- BC: He, right from the beginning, sort of demonstrated the many facets to his make-up. He not only worked in the scientific side but it seemed to me he was always mending your geophones and things like that, he was a very practical man out in the field was he not?
- SP: Yes, you see, Harry, in contrast to me where I was really a geologist clothed in geophysical pants for awhile and fortunately escaped back into management, he always was a thorough complete geophysicist. One who was not only capable of twisting wires competently but doing abstract mathematics also. So he was the complete geophysicist and a very, very good one. But he also is one that had this ability and presumably the desire because he is a top flight executive today.
- BC: Did you work with Mr. Carlyle in helping to design your northern vehicles?
- SP: To some degree yes, because I was the first geophysicist that volunteered to take a Gulf seismic party into the north bush.

#165 BC: Yes, I remember. What did you take them in on?

- SP: I took them in at that time, the best thing we could figure out to do at that time was to go down to the corn belt in the U.S., whereby they attempted to avoid compacting the mulch of the soil too much, by using wide growers, or wide pad D-2's and D-4 cats. So we went up in 1949, '50, with our first escapade into the country north of Peace River with wide pad D-4's and D-2's. A wide pad D-4 was used to haul our drills around, skid mounted drills, skid mounted water tanks. And a wide growsered D-2 was for hauling the instruments around, again on a skid. That same season in the spring, we got a Bombardier snowmobile, a conventional Bombardier snowmobile with skis on the front and tracks on the back, and used it as a sort of personnel carrier to get men back and forth to the field.
- BC: How well did it work as it was?
- SP: We could see the potential there.
- BC: Did it sink though?
- SP: The modifications to that Bombardier snowmobile were what we probably needed. In the next phase, in the spring we had also evolved to get a little Fordson tractor with a bogey wheel and a track around the bogey wheel and the big hind wheel of the tractor. And we used that for surveying and light jobs such as that.
- BC: How successful was it on that. . . ?
- SP: It worked to some degree but we could see that something with an all track arrangement, a la Bombardier or the Nodwell system was what we ultimately needed.
- BC: I'm sorry for interrupting but what was wrong with, I'm going to say corn huskers but it really wasn't, your corn belt equipment?
- SP: Nothing wrong with in broad principal because any wide track reduces the weight

enough. On the other had they were pretty heavy, there was a lot of steel in those machines. It was more machine than we really needed to do a lot of the jobs and it was still fairly heavy. We could see that with a little lighter structured, engineered material or machine, with good wide tracks, we could sort of float over these muskegs even easier than the wide growsered D-2's and D-4's and still have enough machine to do the light work that is required for geophysical work. It was on that premise that the thing evolved from the first attempts with the wide growsered D-2, D-4 cats, to the Fordson tractor to the Bombardier snowmobile modified down to a tracked arrangement. And then ultimately on to these Nodwell machines which are a similar type of tracked equipment. Now I left the field just as they were starting to think about modifying the Bombardier machines and came into the office and went in as geophysical coordinator. So I didn't have that much to do with the field work or the design of these machines. Nor would I have had really the talents to design them. I knew we needed such a machine. Harry Carlyle was the kind of man that could greatly take over this and coming in around, when I left in '50, '51 the field, he came in around that same time, maybe '52, '53, and carried on with the real engineering that led to the very fine, low flotation, machines that are used in the geophysical industry today. And he had a lot to do with that, in the early days. Along with many other geophysicists in industry, Ralph Copeland and others. And many other contractors.

- #217 BC: Was Gulf a pioneer in this field. . . you were pioneers into the north altogether.
- SP: Yes, we were pioneers. I can't say that there weren't other geophysical in there. . but we were some of the early ones yes, we were pioneers but we weren't the only pioneers.
- BC: Did you feel, in your early years there with Gulf Oil, in the exploration department, some companies are quick to forge ahead and others are the type that . . .
- SP: Follow.
- BC: Yes. Where would Gulf Oil have been?
- SP: Gulf in the early days was an aggressive company and always has been reasonably aggressive. It's always been a reasonable leader. In the early days we were leaders in the foothills, notwithstanding we lost out at the Waterton field. Shell was more aggressive than we were I would have to say, in the foothills and ultimately more successful. Although in the early days we were successful.
- BC: Do you feel that sometimes the success, for instance, when you say Shell being successful in the early days in the foothills, did part of that rest on the fact, that's where their leases were? Whereas perhaps, Gulf got leases in the plains.
- SP: No, we could have got the same leases that Shell got. They had sufficient interest in the deeper foothills and were willing to pay the cost to explore in the deeper foothills and the first ranges of the mountains. Whereby the rest of the oil companies, including Gulf, didn't have the so called intestinal fortitude to lay out that kind of money to do that kind of geophysics, at that era of the game, at that time.
- BC: That's very interesting to have into the record I think because certainly you hear people say that the reason Shell was into the foothills rather than the plains is because Shell were conservative and didn't get off the mark fast enough to get good land and so that's really

where they had to go.

SP: There's some truth to that but that's not really the full, complete story. I guess Shell sold their baby carriage prior to Leduc all right. They were disappointed in much of what they had been doing in the plains area and pulled out. But being a big company, a big international company, after Leduc and Redwater was discovered, it took a fair while for the Shell machine to get reversed and to come back into Canada. In the meantime, much of the good Leduc, Stettler, reef type acreage in the plains had been taken up by many other oil companies. So Shell had to come back in a little bit late into that play. But the foothills had been neglected by all of these people because they were looking for reefs. Gulf was the only company in the foothills and in the plains both. So Shell could sweep into the foothills and Shell, having a good group of geologists and geophysicists could see the potential in the foothills. And having come in late into the plains, not because they didn't appreciate the plains but because they didn't have the first land position, they did sweep into the foothills. But the foothills was a very expensive, highly technological area and it took the kind of long range, patient money, a high degree of technology viewpoint that a major like Shell had to get into the foothills and stick with it like they did and it's paid off in spades for them with these huge discoveries starting at Waterton Lakes and on through . . . well, not only starting at Waterton but Jumping Pound, Waterton, and on up the central foothills area, Hunter Valley, Burnt Timber and so on. And it's paid off for them. Gulf was good in the foothills in the initial stages but petered out to some degree in the end. I can remember when we were considering what Shell was doing down there in the inner foothills, west of Pincher Creek because we had discovered Pincher Creek and you'd think, why weren't we the ones that took out the Shell. I can remember in a conference that we had, Gulf at that time considered that it was too expensive to go into those deep foothills because the seismic work would maybe be \$1,000 or \$2,000 a mile to do the seismic work and that was considered prohibitively expensive. Obviously Shell didn't consider it too expensive and they went in and did it and found Pincher Creek. We didn't have, I guess, either the vision or foresight or something to say, okay, so it's going to be a lot more costly, let's do it anyway. The costs scared us off at that time, it shouldn't have but it did.

#293 BC: Particularly when you had a good land position in the plains, the decision was easier for you to make wasn't it?

SP: Well, it was easier for us to say, let's not do the expensive thing in the foothills because we've got a good plains area. And we did have, we were finding lots of oil in Stettler, Fenn, Big Valley and so on.

BC: You had a lot of CPR leaseholds?

SP: Yes, I mentioned that before, that Jack Bevell you know, devil and all that he might have been, did some good for the company but getting out that CPR acreage for us, which is still doing us a lot of good.

BC: At one point and if we could just jump to that and then come back, in about 1964, you had to, the CPR sort of came alive and decided they wanted to, either you had to get working on that or . . .

- SP: Yes, we had to perform, but Gulf wasn't bad in that respect because we had been pretty good performers anyway.
- BC: Would that have had an influence on what you had to do at that time because suddenly CPR was saying, all right, you've to go. . .
- SP: It stepped up the tempo of our work with the CPR and made us surrender some lands that maybe we wouldn't have done but no, it wasn't a major affect on our program.
- BC: Did it have an affect on the people of upping employment or getting crews out?
- SP: No, not really.
- BC: You still had your own crews at that time.
- SP: Yes, we had our own crews. In those days we were employing up to 12 seismic crews and we'd maybe have 6 of our own and 6 contact crews, that type of thing.
- BC: Gulf continued to have their own crews, long after.
- SP: Longer than some companies, yes.
- BC: Why was that?
- SP: That was because geophysics in Canada was much influenced by the relationship to many of us that had, with Gulf Research and Development Company and we always did believe in a fair degree of technical expertise and that having our own crews was a good training ground to bring along our own geophysicists. Even though we know that a lot of the ultimate field work would be done by contract parties, we felt that owning our own crew was a good monitoring system to have and a good training ground for our own geophysicists. And we stuck with that for quite awhile. We had some techniques that were fairly unique in the early days, the refraction technique of Louis Gardner. I left you the impression that refraction is all important I think, in my previous discussion of the foothills. I really, in retrospect, shouldn't have left you with that impression. Refraction was important to us in isolating the outer foothills structures, which were covered by thick layers of slow speed Mesozoic rock. I'd say that one you got a little bit of well control to tie it to, that then I think reflection control probably is more important, particularly the inner foothills areas.
- BC: So refraction in the early days and then. . .
- SP: Refraction in the early days and in the outer foothills area was a valuable tool to help you decide where the Mississippian limestone was. But once you got exploration advanced along so there was some wells to tie to and so on, then I think reflection, and I think that probably reflection is what's been used, much more than refraction. I was personally in the early refraction so naturally I had a bit of hip on it. But thinking about it the other day I think I maybe left you the impression that it was more important than it really is.

End of tape

Tape 3 Side 2

- SP: The Pincher Creek was a refraction discovery and Lookout Butte, partially refraction and partially reflection. Some of the work, the initial work that we did in the central foothills area, in Lovvit River, Stoburg, Brown Creek and so on, we did some backbone refraction

work, although I think that most of the discoveries were made with subsequent reflection work. Some of the discoveries that I was involved with as a manager of exploration, would you like to know some?

BC: Yes indeed, that's what I was going to ask. We sort of detoured a litter here.

SP: I'd like to say that when you're a manager you are simply the chairman of a team you might say, and the team really should get the credit. There's many geologists, geophysicists, landmen, clerks, you name it, that all come into the picture to help a company make discoveries and no one person can really make much of a claim on anything. You can simply say that a geophysicists was involved in a discovery or a manager might have been involved in the management of the team at the time. But he alone didn't do it, nor did I in any instance. Once in awhile I might have had a spark of initiative that did something that got the team working but most of the time I was simply the manager of the team and the company made the discoveries and I shouldn't think that it would be right for me to say that I did.

BC: Do you think that as a manager of the team though, there's a very special role and that is, that you had to sell to the upper management to invest the money.

SP: An exploration manager has to be a salesman because he's selling something pretty nebulous with a high degree of risk so there's a big sales pitch naturally, to get your wares across. And that was my role, to try and do that and to try and create a climate that was conducive to the productivity of the scientists, the geologists, the geophysicists and so on. But some of the discoveries that I was involved with, like in Saskatchewan, I'll just give you some examples, I won't name all of the. There was the Steelman field and the Wilmar field.

BC: Don't go too quickly now, if we could see where they were I think this would be very important.

SP: They're both in extreme southeastern Saskatchewan. And I think it was around 1954, '54, '55, in there when those discoveries were made. Boundary Lake and Mig Creek in northeastern B.C., where I did initial geological work in '46, subsequent geophysical work and. . .

BC: What date would that discovery have taken place? I think it's always important because, as you mentioned, you were working there in '46 so the initial work begins many years before.

SP: I can't name the date, I've just forgotten the exact date.

BC: But it would be after '54 obviously.

SP: Oh yes. Then there was Goose River, which was '63.

#038 BC: Where is Goose River?

SP: Goose River is southwest of Lesser Slave Lake, Swan Hills area. Then there's Kabob, which was 1957 and Medicine River, which is 1961 and Mequap, which is 1965.

BC: And where is it?

SP: It's up in central northern Alberta. And Swan Hills south, 1959, Sylvan Lake '53, ??? 1966, west Drumheller, that would be in the 50's somewhere, '53. I was still geophysical coordinator on that one. Zama, 1966 to '68, there were several discoveries there. That

was on a farm out from Hudson Bay incidentally. They had the land but we made the discovery and they kept most of the land, so they turned out better than we did on Zama.

BC: How did you happen to get that farm out, do you remember?

SP: We realized, we'd had that acreage at one time and given it all up, then Hudson Bay took it out. Then in subsequent scientific work, done by our geophysicists mainly, but also helped by the regional geologists such as Andy Baillie, it was realized that the reef phenomena in that part of the country was different than it was in the Leduc reefs. So we applied the new technique that we learned about the reef and decided that there was prospects here that were being missed. We then realized that we shouldn't have given up the acreage and we then realized also, that Hudson's Bay had the acreage. So Jim Manning and I, Jim Manning was our manager of exploration for the northern region, I was the overall exploration manager and he and I went up, went and talked to the Hudson Bay Company, to Bert Hamilton of Hudson Bay, he was the manager at that time, of exploration and Lindy Richards. Talked to them and said, look, we'll give you a sweet farm out if you'll give us some of that acreage to drill on and if it succeeds you've still got all kinds of acreage that you can drill. We'd have liked to have got more acreage but they smelled that we were on to something. They gave us a farm out and we made the discovery of Zama. But as I say, they had more land around there than we had. So we had to come in and do it on their land.

BC: How come you let it go, how long before that had you let it go?

SP: That must have been 5 or 6 years before that, we let it go because we didn't see Leduc reef type structures. We just didn't see through it all at that time.

BC: Isn't that an interesting point too, Mr. Pearson, because before Leduc people didn't see the Devonian structure in quite the same way, did they?

SP: No, that's right. And you had to get into that Rainbow, remember when Aquitaine and others discovered Rainbow, along with Banff Oil and so on. That triggered, made us all rethink that whole region up there. It was as a result of their discoveries that we decided to swing back on Zama.

BC: So this is one of the idiosyncrasies of the oil path, is that whatever is in now people sometimes forget all the rest in the verve.

SP: Yes.

BC: Which happened in foothills, everybody was over here and Shell went in there, the long term.

SP: Our profession is often very humbling, as you can often find out that you missed something yesterday that you shouldn't have missed at all. But our seeing eye is very dim you know, when you've only got things at remote depth, 10,000' down at best. You may be trying to put 100% picture together out of only maybe 10% of the total facts. So it lends itself to a multiple hypothesis approach. There's no one solution is unique in other words. There's several solutions. With the meagre facts you've got you could say, well, that's the stairway to heaven, that's the stairway and that's the one over there. Any one of them would fit the facts, any one of them is a satisfactory stairway based on the facts, but you might for some obvious intuitive reason prefer another one. Well often our exploration was just that much art, that much intuition and that much science. I guess it's

said that if you want to have a good scientist or a lucky one, get a lucky one.

- #096 BC: Just for the record, I wonder if you could just point out the difference between what was beneath the surface in Leduc, which they discovered as against the Rainbow and Zama, which was a different reef that you were looking for.
- SP: Well, they were deeper reefs, they were older rock and the velocity contrasts were essentially different. That's the main reason why we saw a different picture.
- BC: And you weren't going that deep before?
- SP: No, but that's because we didn't realize the velocity problems is why we didn't see the wheat from the chaff, didn't interpret the velocity problems properly.
- BC: Would the fact that the science of geophysics has progressed so much, would that give better records so that these things suddenly became. . .
- SP: Oh yes, all of this was improving all of the time and that's why they're still making new discoveries today, is because not only are we getting better field data from the field by the geophysicists, but with digital computers and so on we're able to present the data in a more interpretable form so the both geophysicists and geologists, even the geologists can follow a lot of the geophysical stuff now, providing the geophysicist lays it out for him. So you can see much more. And you can reprocess it to bring out certain aspects, much more so than we could then. They do 3-D dimension seismic now but you'll have to get a seismologist to talk to you about that. Some of the other discoveries were Belus, I forget the date of that one, Brazeau, that was in the 50's and early 60's, Fox Creek. Home Glen, Rimbey, that's a gas discovery, that was 1961. Lookout Butte I mentioned earlier, 1959.
- BC: Obviously a very successful time.
- SP: Yes, there was a lot of discoveries being made. Berland River, that would be about the same time there, '59, '60.
- BC: The latest date you have on those that you mentioned to me was '66. Is that because you went out into a different area in '66 or did things peter off, I think you . . .
- SP: No, to some degree things slowed down too. You see, some of the Zama, was one of the latest, last major discoveries. The major discoveries were the Leduc reefs in the 40's and 50's and the Swan Hills reefs in the late 50's and the early 60's and the Zama up to '66, '68, Rainbow and Zama. There was quite a quiescent period after that for awhile, without any real major discoveries.
- BC: Why would that be do you think?
- SP: Just because it goes in cycles. We ran through a lot of Devonian reef complexes there, the Leduc reefs, the D-3 Leduc reefs, and then these deeper reefs you see, the Swan Hill reefs. Below that there hasn't been any real major discoveries made. I don't know whether there will be. There's been subsequent discoveries, west of Pembina, in the D-2, the Nisku. But they're since my time as an exploration manager. There's another important thing that occurred in and around 1954. We put together the Central Foothills Agreement acreage. Which involved Sun and Triad, which is now BP, and Gulf and Mobil. Gulf is still very active, a lot of the other companies dropped a lot of their acreage in the Central Foothills but Gulf is still active and is building a gas plant up there at Robb now that is exploiting some of those gas fields. But the work that we did there was both

refraction and reflection work and the initial operators were Gulf and Triad. Mr. Loughney, Ed Loughney put that deal together as an executive with me sort of acting as his exploration recommender. He was the executive that had the power to make the deal and I went to all the meetings with him acting as a sort of exploration advisor on the matter. And that led to numerous gas discoveries, some of which are finally being exploited now. There was Stoberg, Robb, Lovitt River, Coldspur, Mountain Park, Brown Creek and others will come along as a result of that work there.

#159 BC: Mr. Loughney was quite aggressive then, as far as exploration was concerned?

SP: He's always been a good supporter of exploration. His background was accounting and he never professed to be an exploration man, nor a production man but he's always a very good executive. A very tough one, no nonsense but a very fair man and he always supported exploration very well.

BC: When you say tough. . .?

SP: Well, he didn't allow any nonsense. You couldn't be a pretender with him at all. You had to have done your homework and if you had done your homework you got along great with him. But if you hadn't done your homework and pretended to know something when you knew you didn't, he could spot it and trip you up and he could be pretty brutal then. But as long as you knew that you didn't behave that way, if you behaved properly he was a good man. He was a no nonsense manager.

BC: He would have a difficult role because he came in having to straighten up the company.

SP: From the Bevell mess.

BC: Yes.

SP: But he did that with great ease I'd say, because he was a very honest man himself or is a very honest man himself and a most competent executive. Being firm though and tough was what we really needed after the Bevell era, right.

BC: That's right.

SP: He wasn't always the most popular man in town, Ed Loughney, because he was known as the rock by a lot of people, sometimes within the company and sometimes out of the company. But I can only say this, is that he was the most competent executive and I think the world of him.

BC: What about the purse strings, were they tightened up in the Loughney regime?

SP: No, I can't say that, can't say that. Not as far as exploration was concerned, no. If you had something worthwhile he was right there, but there was no nonsense. In other words he didn't have a loose purse for nonsense but if you had a good project you got the money for it.

BC: Sometimes for exploration managers like yourself, you'd perhaps prefer to have someone who was a businessman and could see, rather than. . .

SP: Someone who'd be breathing over my shoulder geologically.

BC: Yes.

SP: Very much. You've hit the nail right on the head. That's often the truth because someone who's a manager who's got a past expertise sometimes can't help but lean over and try

and pretend he's still a geologist, when really, he's getting a little out of touch with the profession and should leave that to the professional people and he should attend to his management. Management is advancing corporate purpose through people and you should be managing people and not trying to do geology, geophysics and so on, that can be better done by your own experts. So I was lucky as an exploration manager in having an executive, tough and all that he was, but as fair and as competent as he was. So I was just a lucky guy that's all and I think very highly of Ed Loughney.

BC: Did you learn from him, because you were a scientist and then you went into management, did you learn from him not to breathe over the shoulder?

SP: To some degree I think I did, yes. I tried anyway, not to breathe over their shoulders, I tried to let. . .

202 BC: It's a very difficult role.

SP: It is yes, to some degree, but I was never the complete geologist as I explained anyway. So it wasn't as difficult for me as somebody who's a real dedicated scientist you know. I, in honesty wasn't that dedicated towards it. Another thing that is maybe worth mentioning here is that, this is one area where I did have specific initiative. I'll lead up to that. Gulf used to have worldwide get togethers of all their exploration manager all over the world. Hollis Hedberg, Dr. H. D. Hedberg used to chair these meetings and get all the various exploration leaders of the various divisions of Gulf, from all over the world together at a place such as Houston and there we'd compare notes on what our problems are in Canada versus what they are in Taiwan or Singapore and so on. Or Venezuela. And one of our meetings was down in Louisiana, at New Orleans. While down there we visited the Gulf Coast offshore, Louisiana, Mississippi Delta operation of Gulf. It became very obvious that these deltas were very important oil producing regions. This was in 1957. In 1957 I came back very much thinking about deltas. Back to Canada, after attending this conference down there. When I came back I thought to myself, where have we got a delta. And I thought about the Mackenzie Delta and I looked at the maps and saw no one there yet. No oil company had gone up there. So I talked to Oscar and Andy and I said, what's wrong with us getting into the Mackenzie Delta. They said, nothing. I said, look, here's Shell and Imperial already up around Norman Wells, they're edging northward all the time. Tomorrow they'll be at the delta if we don't do it. So I instructed our people to go down to Ottawa and file on the Mackenzie Delta, 3 million acres and we got it. Due to budget restrictions and the fact that we couldn't do heavy oil, they were also starting to think about heavy oil too, we just had to cut back a little. So the 3 million acres had to be reduced to about 1.3 million acres. But that led to our Parsons Lake gas discoveries that haven't been exploited yet but are sitting up there in the delta. We filed on the acreage in 1958 I think it was, and we did seismic work and used air drilling incidentally, for our shotholes, one of the first times that air drilling was used in western Canada.

#250 BC: Air drilling, you mean you had an air ship up there or a helicopter?

SP: No, instead of using drilling mud to bring up the cuttings from the bore hole we blew the

cuttings up with compressed air. Expanding gas of course, or air, it creates a cold so in the permafrost, it kept the permafrost frozen. The expanding gas kept it frozen and we could blow out the chips of frozen muck very nicely and it worked real well.

BC: Where did you come upon that method?

SP: Harry Carlyle's genius. Well, air drilling was a known phenomena at that time but not used much by the industry in western Canada. I would have to say that our geophysicists engineered that one and I think, probably Harry was front and foremost in it. I was exploration manager and as I say, not involved with the details at that time. But when we drilled our first well there in 1965, I also took the initiative to acquire, for Gulf, the acreage offshore in the Beaufort, which today is being exploited on discoveries that are being made by Harry Carlyle and others. This acreage, I remember, I looked at the map when we decided to drill on the onshore delta and thought, well, we better get some offshore protection while we're drilling this well because if it comes in, there will be a boom on and everybody will grab all the acreage around, including the offshore.

BC: This would be from your delta investigation in the Gulf of Mexico, it's the same sort of thing.

SP: Yes, all of this is all part of that concept. Although we had our own impetus by this time. In looking over the map though, for offshore acreage, I noted that Imperial had been ahead of us there. While we had been the first onshore and had led the play, Imperial had filed onshore and then also filed offshore. So the acreage from zero water depth to 60' roughly had been taken up by Imperial. So that left us, I said, look, let's file on the acreage from the edge of Imperial's land at roughly 60' water depth down to about 150' water depth and go that far out. And we filed on that acreage and that's the core of Gulf's acreage today up in the Beaufort Sea.

BC: How successful was the Imperial acreage?

SP: The Imperial acreage has been good but I don't think it's going to work quite as well as the deeper stuff. In other words, they had the first choice and you'd think the shallower water stuff would be the best but I think right now, the water that Gulf's got, roughly the 60-150 foot water depth is going to be some of the best. At least it appears that way at the moment.

BC: I'm going to just stop this.

Tape 4 Side 1

SP: I've got my notes here that I keep coming back to so I can make sure that we don't miss anything.

BC: Well, that's very good. We were back into exploration manager and about 2 years into exploration manager is when you merged into BA, some people say engulfed BA but you became BA.

SP: Yes, we became BA because, while we were the larger, you see BA had a very small exploration and production situation and we had a fairly large and successful one, Gulf had. BA on the other hand had a large and successful marketing and manufacturing system in Canada and Gulf had none. Gulf also bought controlling interest in BA, Gulf

Corp. did. So it put them in the control. So it was obvious that the 2 companies should be merged in Canada so that you had an integrated company. Canadian Gulf Oil supplying exploration and production properties and personnel and BA supplying, adding to that, there was Jerome??? Cedric and Jim Manning and others, all very good men, but small compared to Gulf, right, small in numbers.

BC: Oh, I think there were 4 geophysicists and 4 roomfuls of geophysicists, I think was about ...

SP: Yes. So we had a large organization and a successful one and BA had a small organization and not unsuccessful but not nearly as large as ours. So in that respect they were engulfed by Gulf. On the other hand, Gulf in merging with BA, acquired a major position in marketing in Canada that they didn't have up to this point. It did leave us that had been with Canadian Gulf sort of in the drivers seat. Ed Loughney carried on, I carried on as exploration manager, George May carried on as production manager and so on. So it was a sort of a break for those of us that were with Gulf. Some of the people with BA were happy to stay with the merged situation. Some of those that felt engulfed and you couldn't help but some of them feel that way, they left. Jim Manning stayed for awhile, Jim was an excellent exploration manager, still is I guess. He's with Husky now, an executive with them. He could have done the job just as good as I could have, every bit as good as I could have. I just happened to belong to the bigger entity of the companies at the time of merger. But Jim was every bit as good a man as I was, I can assure you.

BC: This must cause a lot of problems, the merging. Now today, it's done before you turn around, someone has taken over a company and for I think, quite different reasons sometimes. But in those days there weren't so many companies doing this were there?

SP: No, it just wasn't the habit then. Of course, the oil industry was younger and there was lots of land available. We could file on land then, you know, any company could start up without, you didn't have to merge, you could just put your name on it and go up and file for nothing on acreage in the provinces. It didn't cost you anything to get in. Like a Siebens got into the oil business by just filing on acreage and then peddling it to the oil industry. They didn't need to worry about any mergers.

#038 BC: That's interesting. So you could really get into the oil business for very little money, if you went for the land.

SP: Oh in the early days yes, in the 50's and 60's, yes. Because you see, a land sale, there may be 100 parcels posted for sale. Maybe 90 of those parcels would be bid on and bought by sophisticated oil companies. There would be 9 or 10 parcels though, that no one thought valuable enough to bid on at all. Now small little land companies and some of those companies were small at that time, they're now big companies, would go and file on these acreages for just the filing fee, \$250 or whatever it was. Some nominal little fee. And they could have this acreage and then they'd turn right around and let, with little or no work on it farm it out to some oil company that yesterday, wasn't ready to bid on it at all but tomorrow was ready to do some work on it.

BC: These lands would be adjacent to proven lands sometimes?

SP: Sometimes, but most of the time these filed on acreages were rank wildcats. But off an on

- trend with a play. Maybe 50 miles north of some trend that's developing. 3 years later it's gone up to that, that acreage is hot when today it was cold.
- BC: How long could you keep, in those days. . . ?
- SP: A lot of those companies also went up into the north country, into the Arctic Islands and got acreage.
- BC: I remember someone saying that someone they knew, I mean it's always someone who knew someone who knew someone, that had made a couple of million dollars almost by just filing on so much of the north and then for very little, then just turning around and selling it.
- SP: A lot of companies got started that way, particularly those that were initiated by landmen that, they just said, I'll just pick up the acreage, it will eventually come into play. Often they were right because the geologists don't know all the answers, it's a very inexact science and a geologist says no to an acreage today, 5 years later it's a hot play.
- BC: Is there much of that land left for the adventurous today would you say, Mr. Pearson?
- SP: Not as much then, no, by any means. And it's tighter held now and the government regulations are more strict as to performance on the acreage. You've got to work now, you've got to pay higher rentals now and you've got to show some kind of program of work. And your lease tenure is much shorter and stricter.
- BC: What would it have been in those days?
- SP: You could hold a lease then, you could get 5 year exploration permits and get extensions, free extensions on them by just saying, well, I couldn't get out because the muskeg was tough or it was a bad winter and will you give me a free year's extension. They'd give you a free year extension, the government.
- BC: And what would they do today?
- SP: Today they wouldn't give you the extension, they'd kick you off the acreage probably.
- BC: And would you get as long a time before you had to do the work?
- SP: I'm a little out of date now, I'm retired and been away from some time but I understand that the lease tenure is much stricter and shorter than it used to be.
- BC: Is that important for the good of the oil industry, do you think, to have had those changes?
- SP: I think the lease easygoing thing that we had in the early days was too easy for the oil companies and companies would sit on acreage for years and do nothing with it. I think that the government was quite justified in tightening it up. But I can't complain too much with what the government's done in their lease tenure. I do think the governments have gone too far in charging high royalties and I think that the Alberta government has recently made some royalty modifications which are in the right direction. But they even need to make more of them. I think the Saskatchewan, Alberta and B.C. royalties have been one of the crippling things of the oil industry, along with federal government bad policy. But if the provinces have failed it's in charging too much royalty. The rest of the thing that's wrong is all federal problems. It's not just federal. I blame to some degree, the provinces by virtue of the high royalties that they've been squeezing out of the oil industry. I was very pleased to see the recent changes made by the Alberta government, which helped the royalty situation but I'd say that there's still room for more improvement on oil.

#087 BC: When you say that some of the companies could file on great expanses of land and just sit on the, did Gulf do much of that when you were exploration manager?

SP: Not with the intent of sitting on it, no. We again, most of the sophisticated oil companies, when they filed on something, they were usually sincerely interested in using their dollars wisely and in working on it. We'd file on tremendous tracts but it was with the sincere intent or working it. And usually we would have budgeted the money for it and carefully thought it out and so on. We didn't acquire acreage in those early days with the idea of acquiring it and then farming it out to someone else to do the work. We did farming out and farming in but our general intent was to work the acreage ourselves in those early days. That's not quite the same today but in those days most of the larger oil companies got acreage that they intended to work. Now in the process or working it they found out that some of it wasn't as good as they thought and they'd try and farm that out.

BC: A little different procedure.

SP: Right.

BC: One of the things that we didn't quite finish with on the transfer of the power from, although it was BA into the larger company, what was the major problem that you had to face as exploration manager in such a big merger?

SP: I think as I recall, there was nothing but good news about that because it was nice to have the whole thing. Being an old Gulf man, very conscious of the Gulf man and since Gulf was ending up the major shareholders, I sometimes puzzled as to why they chose the name to carry on as BA. On the other hand I rationalized that one, along with how it was explained to me, that it was the marketing arm. BA had a marketing system across Canada, it was well known, the British American sign was across the country. So that it was more Canadiana for us to operate under that sign than it was to operate under the Gulf sign. Now, as it turns out, Gulf has since changed back to the Gulf name and I had a little bit to do with that. After I got into the Vice-President's position in Toronto and so on, while I can't claim any direct credit for it, I do remember asking the executive down there, Charlie Hay was in the saddle at the time, I said, I'm an old Gulf man and it's bothered me that we are marketing under the name of BA in Canada and we have been since the merger in '56. Now this was about '58 or '59 when I first mentioned this to them. I felt that there were strategic advantages for Gulf's name to be present in Canada. For instance all of the huge international advertising that Gulf, a multi-national company, was doing around the world was to no avail to BA. Because the Louisiana Gulf man would not recognize BA at all, he'd recognize a Shell sign or a Texaco sign. He's more likely to go to them in Canada than he would this stranger called British American. Also British American to me had nationalistic connotations which were bad I thought. If you were an American you wouldn't like the term British. If you were British you wouldn't like necessarily the term American. And neither one of them were necessarily popular in Canada, those nationalistic connotations. While the term Gulf was an innocuous, harmless, international term that had no nationalistic connotations whatsoever. Therefore I thought, and I think the company has subsequently also thought, a lot of merit in having a name that had the benefit of worldwide advertising and also had no nationalistic connotations and had the advantages of brevity, G-U-L-F. And it had no bad taste foreign

wise, there wasn't some nation that said that meant defecation or something like that. It could have been the Gulf of St. Lawrence, the Gulf of Mexico, you name it. And the company finally did change back to the Gulf term. Now to me, being an old Gulf man, that was all good sense. To some of the old BA people, that might have been regretful, I don't know.

- #144 BC: But the interesting thing I think, for BA, is that it bought out Union Oil in Canada and changed Union to BA. So there would be all the old Union people who were in BA that then would become Gulf. So it wasn't quite as nationalistic a name perhaps, as some people at one point thought.
- SP: Yes, it could be.
- BC: Because I can remember when it was Union 76 out at the coast. Then Union went away and suddenly we had this, British American, who are they coming in here, and yet a very Canadian company. So perhaps you were not very far wrong with your initial reaction that Gulf was the better one.
- SP: I don't know anything about Union.
- BC: That was earlier I guess, it was I think, in the late 40's, early 50's. It was after the war.
- SP: I wasn't aware that Gulf had anything to do with Union.
- BC: Not Gulf, BA did.
- SP: Did they?
- BC: Yes, they bought out all their . . .
- SP: Oh, service stations. Because Union today is operating in Canada.
- BC: Yes, they came back in, they could come back after 5 years.
- SP: Oh yes, I see, okay.
- BC: So anyway, let us carry on with your work in production. How long did you work as, you were the exploration manager for how long before you became the production manager?
- SP: I became general manager of exploration and production in 1966. In this position I reported to the Vice-President of Production, Eddie Gallagher. But I was actually. . .
- BC: He would be in Toronto?
- SP: No, he was here in Calgary. I was a general manager reporting directly to him. It was sort of a nonsense thing but that's the way it was done. I was responsible for the general management of all exploration and development of oil and gas.
- BC: And what was Mr. Gallagher's position?
- SP: He was the executive leader you might say. I was the operational manager you might say, he was the executive in charge.
- BC: Was this an awkward position?
- SP: Yes, it was because you didn't need two men. You know, you didn't need a one over one type of thing here. You could have had. . . he could have been his own general manager or I could have been the Vice-President. It was a one man job, not a two man job. I think they did it as a training program, to try me out, to see whether I was coming along all right. Eddie was already proven, he was an older man and had been in the job for some time. But he at one time had been this same general manager too you see.

#180 BC: What can you tell me about Mr. Gallagher?

SP: He was a very fine man. He was a production man by background. He wasn't, to a great degree, exploration oriented. I think that the production man that I ran into the most exploration oriented was George May. He was the production manager following Eddie. Eddie was promoted upwards George May became production manager and he was a great support to me when I was exploration manager. Like getting that Mackenzie Delta acreage, he gave me all kinds of. . .you know, he said, have at it Stan. A lot of production people are very conservative and concerned with saving money, not spending money, exploration people have to spend money and often don't have anything to show for it. He had, I thought George had great vision. Eddie was a very good executive, he wasn't as exploration oriented as George was but I think he was a good through production man. And a very nice man, a fine gentleman.

BC: How long did you work under his management?

SP: About a year and a half, nearly two years. And then, let's see, what did we do there. . . I guess the budgets for exploration and production at that time were running up to around \$60 million a year. It was in 1967, about the second year of this job as production, there hadn't been too much going on, as I said, there was a quiescent period there. In the earlier years, in the early 60's, I'd worked in the Calling Lake area with the Mill City group, when I was exploration manager. And I got to know the Mill City group. New Continental Oil was one of the subsidiaries of Mill City. Mill City was run by Clive and Frank Brown and Archie Newell. Archie Newell was their landman, he was an officer of the company. The 2 principal officers were Clive and Frank Brown. Al Swanson was their engineer, he was a mining engineer by background. In '67 they came to me because of their previous experience with me in the Calling Lake area where I had acquired acreage from them as a small land company farming out to a major. They came to me and they said they had 30 million acres of uranium prospect in northern Saskatchewan and that they were running out of money. They'd done a scintillometer survey, that's the initial geophysical survey but they required a large company with the money and dollars a large company has got and the expertise to carry on, and was Gulf interested. Well, I took a look at it, along with Andy Baillie, Oscar Erdman, Harry Carlyle, and we felt there was merit in the play. I recommended it to the executive and Eddie let me push it on through to Charlie Hay at the top of the company. Charlie turned it down on the basis that we weren't ready for it, or he didn't think we were ready for it. I asked Charlie if I could give the play to the Gulf Corp. Minerals people in Denver. Jim Early was the Vice-President there in charge of that and I knew him quite well so I called him up and offered the play to him. I said, Gulf Canada, or BA at that time, isn't interested in this uranium play that the New Continental Company of Mill City group are prepared to farm out to us, do you want it. And I sent the dope down to him and he said, no, we're not interested. So I had to phone back Al Swanson, this mining engineer at the Mill City group and tell him that neither British American in Canada nor Gulf in the States, seemed to be interested in the play and I regretted to have to tell him this. I said, you'll have to find another farmee. It was Christmas time, '67. He said, too bad I'll have to find another farmee. In the meantime he said, I've got to go to lease and reduce the thing from 30 million acres to

around 3 million acres. I forget now, he had to reduce it drastically from the 30 million acres to some smaller amount of acreage to go to lease on it. That meant he had to give up the majority of the acreage. During Christmas holidays they did this. During Christmas holidays all the sophisticated uranium companies in the world jumped in on the acreage that they'd dropped. This became newsworthy and Denver, who had turned their nose up at it when I first offered it to them, now became interested because they saw these other sophisticated uranium companies jumping in. They phoned me back, Jim Early did, the day after New Year's and said, can we still get in on that play. I said, well, I'll phone up and find out. I phoned up Al, he said, you're lucky, during the Christmas break I didn't get out and find another farm. So that's the way Gulf got in to the Walliston Lake, Rabbit Lake uranium play in northern Saskatchewan.

#265 BC: That's a little bit off the oil exploration that you had been organizing and doing.

SP: That's right but they're interrelated aren't they? It's exploration of a type. At the same time that this was occurring I was called into Eddie Gallagher's office and asked to go to Toronto and there, Charlie Hay and the other executives down there, principally Gerry McAfee, told me they wanted me to go to Toronto as a Vice-President of mineral development. So I went down there on that job.

BC: How did you feel about changing from the petroleum to the broader concept of minerals, which takes in many more things.

SP: I had a lot of trepidation about it because I really only knew the oil industry, I didn't know much about mining, notwithstanding that I'd recommended a uranium play. But I did feel as a geologist that there was a lot of mining potential in Canada but I didn't know very much about it. I think that Gulf was at that time, since Gulf Minerals in Denver was establishing a uranium sort of company, I think Gulf Canada or BA, was thinking that they'd maybe better start putting out a feeler in that direction and they brought me down there on that intent. Also I think it was a way to get a look at me because I'd been Eddie Gallagher's general manager for a year and a half or nearly two years and I think they said, where does he go from there.

BC: Obviously you were successful in the training ground, although you didn't know it was, quote, training ground.

SP: Well, in many ways I would have been happy to stay on here because it was comfortable to carry on in oil and gas, which I knew about. I was a little uncomfortable in taking over as a so-called Vice-President of nothing you might say, because they didn't have any acreages or anything. I was used to running a big budget of \$60 million, with all kinds of geologists and geophysicists at my beck and call to do my work for me. Remember, a manager accomplishes corporate purpose through people, he doesn't do the work himself. I was used to that kind of phenomenon, I wasn't used to going back and digging in the files and doing the work myself anymore.

BC: Is this what had to happen when . . .

SP: And I had to get back and start being geologist, geophysicist and landman all over again, and Vice-President all at the same time. Unfortunately, while the company was interested in taking a look at minerals they weren't interested in getting any money. While as a

general manager I'd had \$60 million to play with and 50 and 60 geophysicists at my beck and call and 70 engineers to help me with all of my problems, I landed down in Toronto as a Vice-President with a promotion and they said, well, we might give you a quarter of a million dollars. To a man that had been used to exploring with millions, to be reduced to.

#317 BC: Was this a shock to you?

SP: I was pleased with the added money they gave me because I had a promotion so to speak, the so-called prestige. I was very disappointed in their initial attempted thrust. In other words, their money wasn't where their mouth was. I made that very plain. I even told them after I'd been there a few months that I was disappointed and I told Charlie Hay, you know, my hand shakes when I sign my pay cheque. Because you're paying me here as a Vice-President and I'm not really doing anything, you're not giving me enough scope to do anything, no money. In the meantime I'd also hinted to Gulf Corp., to the top exploration guy in Gulf Corp. who I was friendly with that I wasn't too pleased with my lot there, notwithstanding that I didn't mind getting a new title, I didn't like the work I was doing, I was n't given much scope. I went down in January to Toronto as a Vice-President of mineral development and in late May, Mel Hill, the top exploration man for Gulf Corp. in Pittsburgh called me up and said, how would you like to go to London, England as exploration manager for Gulf, Eastern Hemisphere.

BC: Wow, you didn't turn that down.

SP: I never even hesitated, I said, when do I go. He said, the end of June. I phoned up Helen and said, do you mind going to London, England, rather than Toronto, because I had her packing ready to go to Toronto as soon as the kids were out of school in June. I said, you've got the house up for sale anyway, we'll just sell it. I said, we've now bought a house in Toronto, I'll sell it here, you sell the one in Calgary, I'll sell the one in Toronto and we'll both, instead of moving to Toronto, we'll move to London. And that's what we did. And I had the best 5 years of my life in London.

BC: So what made you decide to take the mineral Vice-Presidency, did you have a choice really?

SP: I don't know how I could have refused it, they were offering me a promotion, Eddie Gallagher was still not retired as Vice-President of exploration and production, where was I to go? If he wasn't ready to step down what were they going to do with me. I'd been 12 years as an exploration manager. So they had to do something with me, they could have let me sith there and take over from Eddie when he retired but that was sort of silly too. So I guess they said, let's try him on for size and take a look at him. Unfortunately the company was. . .

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Tape 4 Side 2

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Tape 5 Side 1

#093 SP: . . . [in mid sentence] was negotiate a land trade arrangement, farm outs, with the National Coal Board, a 100% British government owned company and Continental Oil company, which happened to be an aggressive company in the North Sea. By virtue of that arrangement, whereby it was Gulf 1/3, Continental 1/3, and the National Coal Board 1/3, with Continental as the operator incidentally, the fact that those 3 companies were together, was an advantage in acquiring acreage from the British, UK government, which at that time was rather nationalistic. By virtue of having as our partner, 100% British Crown company, I think we, this is my own personal thought, but I have thought personally that it was partly due to that, due to getting the 3 companies together. And the presence of a British Crown company that made it possible for Gulf to get a good acreage position in the oil play that subsequently followed in the North Sea. I always felt that during the 5 years that I was there, that this was some considerable progress that the company made.

BC: You were there as the international Gulf, not Canadian Gulf of course.

SP: Oh yes, I was working for Gulf Oil Corporation. It was good 5 years, just a great 5 years. When I went over I didn't know whether I was going over for 2 years, 3 years or 5 years or 10 years. But after 5 years, I'd been very thrilled with the assignment, in many ways I wouldn't have minded staying on there. On the other hand I had an itchy foot to get back home too. I had my farm back here and all my relatives. And my children were peeling off and coming back home, except for the youngest one. So there was a strong desire to come home after 5 years abroad, notwithstanding our love for England. Fortunately an opportunity occurred. George Relf, the then Vice-President of exploration and production for Gulf Canada wished to retire. Incidentally, he had preceded me in England, in charge of exploration. So when he retired I was fortunate enough to be asked to return to Canada and take over as Vice-President of exploration and production of Gulf Canada. So I returned to Canada in July 1973.

#127 BC: Before we get you back into Canada, I'd like to go into a little more detail on the work that you did while you were overseas. For instance the work, let's look at the various countries. Look first at the North Sea, what differences did you find there, in the exploration area, from what you had been doing in Canada?

SP: At that time in Canada we had done very little marine seismic work for instance. The industry had done very little marine seismic work, particularly Gulf had done very little. This was a great opportunity for me to be introduce to marine geophysical operations in the North Sea because nearly all of the important production is offshore in the North Sea, both the gas, which occurs in the southern part of the North Sea. The North Sea is divided into 2 basins sort of, by a ridge called the mid-North Sea High. The southern North Sea is a shallow sea, about up to 150' deep in water. Very rough sea. The northern part is into deeper water, up to 600-900' deep and it's in the northern deeper waters that we found the oil and in the southern part of the North Sea is where the gas is found. Gulf's early acreage position had been very poor acreage in the southern part, in the gas prone area but

Gulf hadn't been successful. So we managed to trade off some of the poor acreage and get in with Continental and the Coal Board and acquired good acreage in the deeper basins of the north, where the oil play occurred and that succeeded. The geology was very interesting and it's somewhat similar to what is now turning up in Hibernia, that type of geology. Jurassic and Cretaceous sands production. It was very lush production in the North Sea, close to the Middle East type of thing. And large faults, some anticlines. Due to the British Isles partially breaking away, in what they call continental drifting, away from Europe and then never did drift very far away, but broke away far enough that it formed a basin. And these faults dropped down and it's on these drop down faults in this continental dividing that the oil and gas occurs in the North Sea. The other thing that was interesting for an exploration man, we were exploring of course, in the UK, in Norway, Denmark, Holland. We had a little bit in Germany too for a short time. But most of our success occurred in Denmark and the UK.

BC: Denmark was not offshore?

SP: Yes, it was.

BC: Oh, it was all offshore.

SP: We did some exploration onshore, we had a concession onshore with the Danish underground consortium. But our production that we found that was some success, was offshore. In the chalks, the same chalks which are mystrician??? in age, and danian??? in age, and they're the same chalks that occur in the chalk cliffs of Dover. They outcrop in the chalk cliffs of Dover, where they're well known and they're buried 9,000' below the sea bottom, offshore Denmark and offshore Norway. The great Frig field of Norway, Echofisk???, of Norway, is in this same chalk. And a chalk with very, very high porosity, up to 36-40% porosity. Where they are also highly fractured they produce very prolifically, particularly in the Echofisk area where there's a lot of fracturing. And these same chalks produce in Denmark too. Much of the other production occurs in the Jurassic and Cretaceous and Tertiary sands offshore the UK. The other aspect of exploration that was somewhat different than I'd experienced in Canada was the political situation and the method of handling leasing and permits and so on.

#190 BC: How was it different?

SP: Well, it was more politically oriented. It wasn't a straight cash bid arrangement. You had to go in and impress the government with your financial accountability, and your technical ability, to explore appropriately the acreage. And you would present to them an exploration plan. You'd first tell them what you thought the prospects were, what you thought of the geology, how you intended to explore, geologically, geophysically and how many wildcats you would promise to drill them. And even probably where you would promise to drill them.

BC: How could you do this not having done any exploration?

SP: Well, often we did a little exploration on spec beforehand.

BC: You were allowed that were you?

SP: And we were allowed to do some of that, what we called group seismic shoots. And several companies in the industry would pool their resources and go out and shoot a broad

stretch of the ocean and then hope and pray that the government would eventually put up the land and you'd be able by some of. . . It was usually just reconnaissance seismic work that was done but it was enough to give you the framework of a country and to show some of the major structures, so that you could have some intelligence about where the good ones were. Then it became highly competitive because everyone wanted some of the better parcels. Naturally if you had some British government presence in your group it gave you, I feel, some advantage. Other people could differ with me on that one. There are companies that did quite well didn't have that. My impression though was, if you were BP, you were a little more likely to get some of the better acreage than if you were just a straight American company without some British partner. And I think it did help Gulf to have the National Coal Board as a partner. It also helped Gulf to have Continental as a partner because Continental was a good aggressive explorer, which I think was a good thing to have alongside of you.

BC: Would you class Gulf as an aggressive explorer?

SP: Generally speaking Gulf is an aggressive explorer. In the North Sea, because Gulf had had a bad start, back in the early 60's, '64, '65, where they had acquired on their own, 100% Gulf acreage, had acquired some rather poor acreage in the southern gas prone part of the North Sea, and were a little disillusioned. And therefore not as aggressive as they might have been otherwise. So when we did team up with the National Coal Board and with Continental, I felt, as the exploration manager that that was a shot in the arm that Gulf needed because of its so called reluctance from its bad experience in the early 60's.

BC: Did they team up after you came into the picture?

SP: Yes, and I had played a role in that.

BC: How would you get these companies to come in with you, what did you have, you didn't have any acreage to offer obviously?

SP: Yes, we did have some of this poor acreage in the south. And Continental was very interested in picking up any acreage, because they didn't have hardly any acreage at all. So we managed to farm out some of the so called poorer acreage to Continental and they were aggressive. In other words, they were even willing to pick up some of our bad acreage in a farm out arrangement. And we were unaggressive enough to consider farming it out in other words you see. But once we got in bed with them, so to speak, the two of us gained momentum, partly due to their aggressiveness. And I was tickled to death because I wanted to see the company get more aggressive because I felt they'd been in the doldrums with this poorer acreage, which we had farmed out to Continental.

#248 BC: Your background is as an aggressive exploration. . .

SP: Yes, because Gulf had been an aggressive company in Canada. And I didn't like to see them in the North Sea as reluctant as they were. However, they gained steam once we got with the Coal Board and Continental.

BC: How did you get with the Coal Board because we call it the National Coal Board and it would be a public utility?

SP: Yes. I just forget now how we worked in with that but somebody knew them, I think it might have been Norman Lewis, one of our principal landmen, he was an English boy. I

think he had quite an influence in suggesting them as a partner. It became pretty obvious to a lot of us that it would be wise and some of our people got to know them. I dealt a lot with Continental and I got to know the Coal Board people quite well. But I can't claim much credit for getting the Coal Board because I didn't know them, I was in favour of getting a British company but it wasn't me that knew them. But I knew the Continental people.

BC: You mentioned that it gave you a chance to look at marine seismic which not too many people knew about at that time, the companies didn't know much about.

SP: Well, at least the Canadians didn't know much about.

BC: Yes. What is the principal difference between marine seismic work and the onshore seismic work?

SP: The seismic work onshore, you lay out your geophones in a fixed position and then you shoot from shotpoints in fixed positions and record them. And the costs vary from sort of \$500 a mile to \$5 or 6 thousand a mile to shoot. In the offshore it's a continuous operation and they create an artificial explosion, usually a gas explosion or a thumper or an air gun or something of this nature.

BC: In the water or. . . ?

SP: Yes, in the water, right into the water. It's an airgun, like a pop gun, popping. And it's continuous, every few seconds this pop gun goes off and the geophones are moving all the time. So there's a lot of navigation involved. But because it's a constantly moving thing and the airguns and so on, once you set up you can shoot for a small fraction. You can shoot thousands of miles where you could only shoot hundreds of miles on land. It goes very fast and it's cheap. And quite effective.

BC: What are you in, a boat?

SP: Yes, ships. These seismic vessels. They take small transport ships and make seismic specialized vessels. Full of computers and recorders and so on you know. And geophone cables and airguns. Some of them had a propane, oxygen mix, a small explosion from a propane, oxygen mix. Although I think a lot of them went to airguns. Didn't kill any fish neither, that way. Just a boom into the water sort of. And it was quite effective. The North Sea had picture book seismic. And it was just a dream for the geophysicists. Therefore the geophysicists made great contribution to the . . . Archie Armstrong was one of our top geophysicists over there and Harry Shelabere. Both of which, well, Harry's an American citizen, and Archie is a Canadian citizen now becoming an American citizen. Both of them have worked for Gulf Corp. for a long time. Although both of them worked for Gulf Canada too.

#309 BC: Out here in the west?

SP: Yes, both of them have, in the past. But they both did a very fine job. J. P. Hewey is now retired, my old boss in London. Another fellow that was a boss, J. P. Hewey's and my boss and the other executives was Dr. Jesse Wiley, who's now retired. He's one of the Gulf Corporations top scientists for many years and he was also one of the top executives for Gulf Eastern Hemisphere.

BC: Did you work under him or did you see much of him?

- SP: I saw him maybe once a week. But J. P. Hewey I'd see every day for instance.
- BC: Do you have any special stories that you can remember of your experiences in the North Sea while you were. . .?
- SP: Nothing particular, no. Except the general interest of looking at the whole play develop. I don't have any particular anecdotes to remember.
- BC: The crews would live, would they live on the ship much the way the camp. . .?
- SP: That's right. And I didn't see an awful lot of the geophysical operations. I see the geophysical results but we were just too busy with 24 countries and budgets to worry about and so on.
- BC: How big would your budget be?
- SP: It would be \$50-60 million for exploration. Which doesn't seem much in today's lights because of inflation but it was quite a bit of money then.
- BC: Yes, it would go a long way in some of the African countries.
- SP: Yes. Some of those little African countries, we might be only drilling one or two exploration wells in a whole year you know. And maybe we'd be doing primarily geophysical work, which isn't that costly. And we might have one manager, one geophysicist and one geologist and a clerk or two maybe in some country like Cameroon for instance. Maybe one geophysicist, 2 geologists and a few clerks and a manager and that's all there would be.
- BC: Where would these people be recruited from, that were in 24 countries?
- SP: We had to be very careful. In Italy, Gulf Italia, Dr. Morrow Beltrandy was our manager there and a very good scientist, an excellent geologist, one of the best. He was an Italian and had a doctor's degree and a very excellent geologist. Most of his crew were Italians. He spent a lot of his time in London, between Rome and London. In fact, I think he could avoid submitting an Italian income tax return by virtue of the time he spent in London.

End of tape.

Tape 5 Side 2

- SP: In many of the other countries, we were very active in west Africa. If it wasn't British, French was usually the language. Such as in Zaire, Braza Congo, Gibbon, Cameroon, French was the most valuable language and most of those countries we were exploring in. Even Reamuni???, which is an old ex-Spanish territory, Fernandopo???, Spanish. But usually you could get by with French in a lot of these countries. So our managers in Gibbon and Cameroon generally speaking, were French speaking. Usually geologists that we would recruit from France. And always somebody, sometimes it would be an Italian who was multi-language fluent. Gus Cordicini for instance, was a manager for awhile in Cameroon and he was fluent in English, Spanish, French, you name it. He's now in Houston. Manuel Riga is another Italian who is a very good geologist and is in an executive role with Gulf now in worldwide exploration. He served in west Africa also, partly again, because of his knowledge of French, but mainly because he was also a very good geologist. Paul Rabbini was another Frenchman, who was in charge of our operation

in Cabinda???) for awhile, the exploration operation in Cabinda, and in Gibbon. So we had to be very careful about, usually it was an Italian that we had in Mozambique too, who was able to speak Portuguese.

BC: What about the people from that country, where would you try to employ them because I'm sure that you would have a certain feeling about. . . ?

SP: By virtue of the government edicts we always had to employ native help as much as we could. But when you'd go to Gibbon you knew that there wasn't even the President, President Bongo was practically illiterate. We took several of his relatives and attempted to give them secondary education and college education but a college degree in those countries is like high school here. Very few of them would qualify for our own university entrance, so if you took a high school student from Gibbon or Cameroon or places like that you usually had to take them for 2 years and give them a secondary education auxiliary build-up to get them into college entrance.

BC: Did you do any of that while you were there?

SP: Oh yes. In Gibbon we rented the President's beach house and put our manager in it. And President Bongo phoned up every month to make sure he was getting his rent. He phoned our manager every month, he wouldn't take it for granted that the rent would be coming automatically, he phoned in. Is the rent coming, oh, yes, it would be coming. So naturally there was very few of them professional. In Nigeria there were a few professional geologists coming along and they were brought into the company. I can't honestly say that they made major contributions to the technical management of engineering or geology, although some of the Nigerians did very well in human relations management. And some of them did rather well in the legal end of the work, one of them was top man in legal and one of them was top man in land in Nigeria.

#047 BC: Would that be part of your mandate, to try to move them into management positions?

SP: It wasn't just necessarily my mandate, it was the mandate of the company to try and move them along if they showed ability. It was good politics to do that too. You couldn't do it as much as you'd like to do it simply because they didn't have the educational level and experience level that was required for sophisticated business.

BC: Which certainly, by this time. . .

SP: It's the same problem up north with out Inuit people and Indian people, where the educational levels are often substandard. There's a problem of integrating them into the business overnight. It will eventually be done, in skilled, semi-skilled jobs, they're coming along fine. In the professions it's a little slower, again, because of the lack of education.

BC: Not too many people with all the advantages want to take maths and physics.

SP: That's right.

BC: So it isn't something that people will jump into easily?

SP: No, that's true. You take a lot of, like the Japanese nation, it's away ahead of us, in technology and I think in IQ. They claim that the Japanese are smarter than we are, and maybe they are.

BC: They certainly apply themselves very well don't them and have shown it in this post-war period.

SP: This post-war period seems to be the proof of the pudding doesn't it?

BC: You did offshore in northern Europe, when you were down for instance, in Nigeria, was that offshore work too.

SP: As far as Gulf is concerned, Shell and other companies, Exxon had a lot of acreage onshore, Gulf had very little acreage onshore and all of. . .

BC: Anywhere, in . . .

SP: In Nigeria. And all of Gulf's success was offshore. As a result in the Biafran revolution, I used to go down there and have a rifle stuck in my ribs every time I'd go in the airport because, did I talk about this before?

BC: No, haven't at all.

SP: Well there's 3 principle tribes in Nigeria. The Ebu???, which were Christian essentially, by virtue of Christian missionaries and are on the eastern part of the Niger Delta and go on into the western part of Cameroon, the Victoria district of Cameroon, the English speaking part of Cameroon. By virtue of the Christian influence and the normal attitude of Christians to go in for education, the Ebu tended to be well educated and therefore occupied a lot of the civil servants jobs and had a lot of the better businesses in the city. The Howza???, which is the majority tribe of Nigeria, are essentially Mohammedan and of course, it's typical of the Mohammedans to not emphasize academia to the same degree as Christians right. So the huge mass of the people who had the poorest jobs and were often destitute in the desert part in the north, were essentially Mohammedan. But they were the numerous ones. Then there were the Euruba, who are animists, they were simply primitive . . . I wouldn't say the people were primitive but I would say the religious attitudes were, to our minds, probably primitive. They had their own little gods, the old native gods. And they sat on the sidelines during that whole war. The people who won the war essentially, were the majority group. Now they had the odd pretty smart person. General Gawon was a Sandhurst, U.K. trained Army officer who became a general and was the successful general. And incidentally, a good man to deal with as far as we were concerned in Gulf. The war, while it was a serious one onshore as far as the people were concerned, it didn't materially affect the whites as long as you stayed clear of it and minded your business and so on. Most of the oil companies that had production onshore Niger Delta, had to shut down their operation because of the ravages of the war and all the other things. But the war was not sophisticated enough to have a naval aspect to it. I think they had one gunboat. The Howza, which was the government army had one gunboat. They had a naval admiral, I've forgotten his name, because we used to bring him naval books from Britain, just as a good will gesture. I think he had one gunboat. I don't think the Ebu, the Biafrans, had any. So the war didn't get offshore. Now all of Gulf's production was offshore. So therefore we continued to produce all during the war. We were the only major company that was able to produce during the war, simply because all of our production was offshore. Since then, since the war, some of the other companies have found production offshore too, such as Mobil for instance.

#110 BC: Where would the production go that you were. . . ?

SP: It went to a tank battery right onshore, but it was just onshore you know. And it was at the extreme southern end of the Niger Delta. I think we got strafed or bombed once and it started one of our tank battery tanks on fire and we put it out in an hour, our people put it out in an hour I should say. So there was no serious damage to Gulf during that war and from the tank battery, the oil was sent out, back from the tank battery. It was collected, sent into the tank battery, then sent out by another line to a floating buoy, where the ships would load it offshore. So the oil was all exported anyway, to Europe and. . .

BC: So they didn't have to come in to port at all?

SP: No, not the tankers that were loading it.

BC: Is that a normal way to. . . ?

SP: Yes, it's done that way in Cabinda also, and in many places it's done that way. And parts of the Persian Gulf is somewhat similar too, offshore loading facilities.

BC: Is that because of the shoreline, which makes it difficult. . . ?

SP: Yes, often the shores are not, they're too shallow, don't lend themselves to big marine vessels. So you have to take something offshore, you either build a long jetty out or you build a pipeline out and put a floating buoy. And the ships pull up to the buoy and load that way.

BC: Politically, what was the position of Gulf at that time, could they stay neutral?

SP: Yes. By virtue of the fact that we took the attitude that the government in power is the government and you do business with that government. If the Ebu's had won we would hope and pray that we would do business with them likewise. All we could do was to say, we have no sides, we don't have any preferences but you are the recognized government and this is what the world says is the government. You happen to be in power, in seat, and until someone else takes over we deal with you. We took that attitude, it's a very delicate one, you've got to be very careful that you don't take sides so to speak. And yet you've got to be very careful that the government in power recognizes you as a friend and not an enemy too.

BC: So you have to almost take sides but not overtly.

SP: Right. I guess that's a way of putting it. You can't express disapproval to the winning side, so the fact that you're doing business with them and are currying their favour, does mean to some extent that you're certainly not opposing them I guess.

#142 BC: I can remember, at the time of that war, there was comment, certainly in North America, that the oil companies, all except for France I think, all were backing the one government. France was backing the Ebu's hoping that they would get the oil concessions if they won. How much of that was just rumour?

SP: I think there was some grounding to that. Most of the oil companies were getting along very well with General Gawon, who was the Howza, Sandhurst trained, British general down there. He was a black man who was well educated, and while many of his countrymen weren't he was and he was a good, at that time at least, a good administrator as far as we oil men were concerned and was dealing reasonably well. There was an awful lot of red tape you had to go through to get anything done. You had to go through a

thousand civil servants to drill a development well, which should have been pretty routine. But on the other hand, he was a known factor that you could deal with. We didn't know what would happen if we got the other government in there. I think the French were interested because they didn't have much of an oil position and in any new government, they were likely to get a break, particularly if they were supporting it. In other words, if the French supported Ebu had won, France would have benefited by getting the best oil concessions, offshore and any that might remain onshore. So I think they were playing a game too. The French companies didn't have a very good position in Nigeria so supporting Ebu was their way to say, look, we can't seem to break in to the existing government, which has given all the goodies to these American oil companies and other companies. We better support the Ebu on the remote hope that they might win and therefore we'll get a good position from them.

BC: There was also, some people said that the oil companies really were, if not directly, but indirectly involved in the war. Would you say that . . . ?

SP: No, I honestly can't say that that is the case. I think our company tread very carefully in that way, to make no support at all. We'd give the odd book to the admiral, what was his name. . . it wasn't May, it was some simple, short name. But at any rate, I can't honestly say that we supported them. You might say that it was odd, that the general oil industry, with the exception of the French companies, supported the so-called, Mohammedan group and not the Christian group. But the reality was, they were the government. And the reality was, we were in business with the government that was in reality at the helm. And that's the way you've got to go in any foreign operation. You've got to recognize that you've got to do business with the government in power. It might be nationalistic, it might be a different religion than you but religion doesn't come into it.

#184 BC: In the area that you were in for those 5 years, the eastern oil patch, you really had much more of this political treading carefully to do I would think, because of all the . . .

SP: This is what I said, that was a new thing to me as an exploration man, coming from Canada which had been an essentially politically stable country, comparatively speaking. To a very geo-political type of situation, where one country was different than another country and their rules and regulations were different. There might be a straight dictatorship, some of them were highly socialistic, some of them were tending towards communism, and all very different and the political risks were just about as high as the geological risks. In Canada your main risk is geological, although I'll have to admit that they last 4 or 5 years, the politics in Canada have become a bad risk too. And you can see the evacuation of so much investment capital out of Canada shows that there's political risk now in Canada too, where the world doesn't trust the stability of the Canadian scene, anymore than we used to trust some of these foreign areas. We used to have sort of a saying, when we were talking about countries like Nigeria, that you've got to get your bait back in about 7 years. Most of the countries that are undeveloped and have very little wealth want to see oil development because it's a source of wealth. So they're often very generous in their initial concessions to the oil business. And the oil companies know that

they've got to go in and get their money back and a little bit of profit back because many of these oil companies, while they want foreigners to come in and find the oil for them, they really don't want you in the long pull. They want you out as soon as you've found it. So you know that, because some of them are socialistic and nationalistic in their attitudes, that they're likely to nationalize the industry. And in many instances they do. Gulf was kicked out of Bolivia and just got the money it had invested in, and didn't get anything for the oil it had found. This occurs so you go into a country like this saying, here are the geological risks, which maybe are better than most countries. Virgin territory, very attractive geology, but there's a political risk that we don't have in the U.S. or Britain. So that's a factor in your risk analysis of your economics. We just had that saying, get your bait back in 7 years. Because, after you've found production, usually in the first 4 or 5 years and then start exploiting it in the last 2 or 3, and the revenue starts coming in and they start feeling fat and rich, they'll say, okay, we can take that business over now, you found it for us, we don't need you anymore and that's when things get tough and you start getting crowded out. By then usually, it's 7-10 years gone by and you're likely to get kicked out if you don't get shoved out.

BC: In that kind of an atmosphere, for instance right now in the United States and Canada, because of a better market situation, they are going back, your exploration people are going back and looking further, things that were not attractive 10 years ago are attractive now. Whereas in these countries, what they have is what they've got then. They would not necessarily, once you've nationalized, would there not be a danger of companies not coming back in to explore for the next level?

SP: Yes, unless some of the countries of course, have picked up some of the expertise that they learned from the foreigners and are able to carry on the next level of exploration themselves.

#243 BC: Can they?

SP: I would say that some of the Arab countries have developed some of their own expertise now. I would say Nigeria has developed some of its own expertise, I would say Gibbon hasn't yet developed any, I would say that Angola hasn't developed any without outside help. Most of them, to get anywhere very fast, are going to require outside help. Britain certainly doesn't need American help anymore, Britain can well do their own work just as well as Americans can now. And yet, in the early 60's, I think that Britain needed American help and there was all kinds of Americans went over there. I was one of the so-called Canadian-Americans that ended up over there in a type of expertise you see. They don't need us now to do their second generation of exploration. But I would say that if oil started to decline and was hard to find, they might need a little outside help in places like Nigeria, maybe in the Middle East, I don't know. Although there could be enough expertise, they could do their own. Certainly they can in the North Sea. In other words, we aren't gods over here, the rest of the world is learning the game also. I think Americans and Canadians were some of the pioneers of the oil industry but there's lots of experts now. The French have come a long way and companies that are French controlled, such as Gibbon, are going to see all kinds of French influence, Aquitaine, Elf

and other companies are very sophisticated oil companies, quite competitive with U.S. companies.

BC: Today, you wouldn't be able to go over and do the same kind of job then, that you did when you went over in '68?

SP: No, it's tougher to do business today, I would think, over there. Because of a more nationalistic spirit, the general economy of the world is bad right now. And more oil has been found, therefore there's less to find. It's a depleting resource. Some of the blush has gone off the rose or whatever you call it. The flush early production has been found in many parts of the world and it's now leaner pickings, harder to find, so it won't be quite as easy and as pleasant as it was. Also the politics are tougher.

BC: Was this happening, you know, you said in 5 years you decided you'd like to come back, but did you see some of this already happening in '73 when you came back?

SP: Oh yes. The tendency was starting to be there. Most of the toughness started occurring after I got back though. Although that wasn't the case in Bolivia, Gulf had lost much of Bolivia during that same time. In South America I didn't have. . . my visits to South America and Gulf's operations there, in Venezuela, Ecuador, and Columbia and Bolivia were simply experience broadening trips that Gulf sent me on to give a Canadian a broader feel of the oil industry than just being in Canada. I went to these countries before I went abroad to England.

#296 BC: But they were not part of your. . .

SP: They were not part of where I was in charge of anything. I was simply an observer in their operations. But it was good to see them because I went down there and they opened their books to us, gave us lectures on the geology, geophysics and all their problems. So it was very educational to see how Gulf did business in Venezuela, Columbia, Ecuador and Bolivia. It was just shortly after we'd been to Bolivia in 1967 that Gulf lost its interest in Bolivia.

BC: In dealing with some of these emerging governments during your tenure overseas, can you think of any particular instances which could perhaps demonstrate what it was like, for instance trying to get a lease. Trying to get a lease in Nigeria, was it a problem, or in Gibbon?

SP: Well, yes, in Gibbon we were interested in expanding some of our leases offshore into the deeper waters, the deeper part of the Continental Shelf and out on to the upper reaches of the Continental Slope. The Shelf and the Slope and then you have the ocean abyss down here, and the land surface up here, here's the Shelf. At that time we had the deal with the Gibbonese Ministers of Mines and so on. They couldn't speak any English, the spoke French and they had no technological knowledge of the oil business at all. But by virtue of their close affiliation with France, through old Colonial days, they were still very friendly with France. And each Gibbonese portfolio minister had French, Parisian advisers, who were sophisticated in the particular field of that portfolio. So when we went to request further concessions in offshore Gibbon we had to deal first with the French advisor from Paris to convince him that what we were proposing was sensible and okay. Then we also had to deal with the Minister himself, through the Frenchman, who would

sit in the meetings with us and act as a sort of interpreter and also, at the same time, whisper advice to the Minister, who was the black African. Since we had already rented the President's beach house for our manager to live in, the Minister of Mines, I forget whether the offshore came under the Minister of Mines there but anyway, the Minister in charge of the exploration operations and resources insisted on us renting a building that he wanted to build for one of our geologists that we would be bringing in. So we ended up, in order to get that concession, renting from ministers, several homes for our technical people. At rather high rental rates, which we thought were high at that time. They would be \$1,000-\$1,500 a month. Maybe that doesn't sound much in today's lights but back in '68, '69, '70, that was pretty high.

End of tape.

Tape 6 Side 1

- SP: I don't remember any overt, I know that in subsequent years there was quite a bit of publicity in other parts of the world. Some of the so-called ??? payola business. I know nothing of it and I can't recall of any where there was actual cash changed hands. You could say that we were scratching their back a bit when the minister insisted that we rent his house rather than somebody else's house. The odd thing was, it was a backwards country and we were tickled to death to rent his house because we needed such accommodation for our technical people and if he hadn't offered to build a building we'd have probably had to build out ourselves for our people. Or ask someone to build it and rent it to us. So while we might have paid a little bit excess rent, it was in many ways, a legitimate thing, except that it was something that the minister had requested that we do it that way. I think it made possible to get some of the concessions, I don't think we'd have gotten them at all if we hadn't played ball so to speak, with the ministers simple little request to rent his house.
- BC: In some of the other countries, now you were doing offshore there, but you were doing onshore exploration in, you mentioned Zululand.
- SP: Yes, Zululand in South Africa.
- BC: That would be a little different than . . . ?
- SP: Yes, that's sophisticated because you're talking about South Africans who have a good degree of education.
- BC: What was it like, the exploration in those lands?
- SP: That was essentially a geophysical operation. It was relatively flat lying, close to the sea but not right on the sea. It was gentle dipping Cretaceous rocks and we couldn't find a structure. We just found gentle regional dip to the sea. So we couldn't find a structure, so we didn't drill. It was disappointing to the South African government that we didn't wish to drill because they would have liked to have seen some activity. Their sophisticated in mining, really South Africa is mining country. It's one of god's gifts to mining. Great mining rock, the right kind of geological environment for mining, not really a good

environment for oil. Now offshore Mozambique there's some good oil prospects. Gulf explored there, we spent \$14 million in Mozambique, onshore and offshore. I still think there's good prospects offshore in Mozambique. But it's now a new country under nationalistic control. Portugal was in charge when I was there and I'd usually go down once or twice a year to visit. We found a little bit of gas in a field onshore but not enough to write home about. I think it was about 1/4 trillion cubic feet reserve.

- #034 BC: Africa, to many people, in like the Canadian north is to many others, to people who do not know, a hostile land, certainly geographically speaking. In the areas that you were involved in, of the 24 countries, a certain number of course would be, most of them would be in the African area, what was the land like as far as being able to get through, was it as hostile as our north?
- SP: No, I wouldn't say so, no, not nearly so. The jungles in Gibbon and Cameroon were expensive, just about as expensive as shooting in our northern Alberta foothills. The climate was better though, because it was a year round tropical. But you had to bulldoze down jungle giants, just like we have to bulldoze down the forest here. But while we have the climate there, we've got bad winter climate here. So I would say that the seismic costs were comparable in the jungle to what it is in the north country of Canada, bushland country of Canada. West Africa, like Gibbon, Cameroon, Reamuni, and the southern part of Nigeria, all densely jungle, except that Nigeria is so heavily populated. There must be 65-70 million people in Nigeria, it's the most part of the whole of Africa and it's a rather well administered country. So they've cut down a lot of the jungle. But there's still a lot of virgin jungle in Gibbon. And the native people can live on a subsistence existence still there, is they wish to. Pulling a banana off the tree and killing a deer and so on, run in the jungle. It's rather pleasant, but dense jungle. But no major difficulties getting around. You fly a helicopter, air and river transportation and so on.
- BC: For many people they'd conjure up the jungle with the swamps and the mosquitos and. . .
- SP: And there is, but modern man, with all his protection today, will his houseboats and camps, with all the mosquito netting and all the pills for malaria and so on, and boiled water. I never got malaria once, I was off and on malaria pills, month in and month out. Paliadrine??? was the one that Gulf used to prefer. But I never found anything very serious. I thought South Africa was a Garden of Eden. I'd love to live in that country but I would never live in it because it's not for white men. I think that it's black country, it's ultimately got to be black, they're outbreeding the whites 4 or 5 times as fast and there's just a high, high proportion of blacks and it just didn't look like a country for white men and I'm sure that they're going to have lots of problems there.
- BC: How much of the time, when you were stationed in London, were you actually in London and how much of the time were you out?
- SP: I don't know. A lot of my work was coordinating the various exploration managers, coordinating their work. And some of it could be done by the telephone, by telegrams and letters and so on. And often I'd get them to come so it didn't always require travel to these countries. Because we would be often in daily conversation on the telephone with them. I'd get to these various countries maybe, twice a year.

#079 BC: Were you able to take your family with you to any of them?

SP: Many of the African countries didn't really lend it. Going down on business, there wasn't that much to do in a lot of them. You were going into a place in the jungle, where there's an oil camp and what does your wife do when she's there. Now when we went to Iran, like Tehran or places like that, in the Middle East where there's more sophisticated cities, my wife went with me to Iran when I went on a 10 day junket there one time. She stayed in Tehran and had a wonderful time, she enjoyed that but I didn't take her to Africa. My trips there weren't that really interesting, they were business trips, into the jungle where it wasn't that pleasant.

BC: In the 5 years that you spent in this position before you came back to Canada, what would you think of as the highlight of the work you did there, is there a specific?

SP: I'd say that main contribution I think, of our team while we were there was getting the Coal Board, Continental and Gulf together so that we were able to acquire the excellent land position for the oil play in the northern part of the North Sea, which is now coming into production. That's the most important thing I think. There were other less important things, finding oil in Denmark and increasing production in Nigeria and Cabinda, finding a little bit of production offshore Zaire and a little bit of oil off of Gibbon. Those were important but not nearly as important. They contributed but I think the most important thing was. . . I guess some people might say that improving production in Nigeria and Cabinda was also equally important but from my standpoint, I think that the first thing I mentioned was the more important thing.

BC: And then you came back, could we just take you from there, in 1973?

SP: Yes, I mentioned that George Relf, who had preceded me in London. . . he was Vice-President of exploration and production in Canada prior to my return.

BC: And he retired?

SP: He retired and I took over in his capacity as Vice-President of exploration and production in charge of all of Gulf's exploration and production in Canada. So therefore I was back under Gulf Canada. Gerry McAfee was President of the company at that time.

BC: Did you live in Toronto then?

SP: No, I lived in Calgary. Which was the logical place to have the man in charge of exploration and production because the scene of action for the oil industry is in the west here, not the east. I eventually ended up in Toronto, much to my chagrin but that's later on in the story.

BC: Now when you came back, you'd been away from the Canadian exploration scene for 5 years, were they significant years to be away, had there been much change?

SP: Yes, there was important developments had taken place, that George Relf and his team of men like Carlyle and Erdman and others had accomplished. I mentioned that due to some of my initiatives we'd acquired a good acreage position in the Mackenzie Delta and the Beaufort Sea. By virtue of the strength of our position there, we were able to farm out some of that, or trade some of the, with Mobil for a like position in Mobil's acreage on the east coast of Canada. So by virtue of that trade, that was the major thing that took place in the 5 years that I was gone, in the Canadian scene as far as Gulf was concerned.

#129 BC: Why was that important to get that foothold in the east coast?

SP: Because it was an area that was emerging at that time, as a potential exploration play similar to the North Sea. We've since found Hibernia on some of that acreage. So it was important to say to ourselves, yes, we've got a strong position in the northern Arctic basin, called the Mackenzie Delta and the Beaufort Sea and that's critical and that's a future oil province. And we've got a beautiful 100% Gulf land position there but maybe we'd be better off if we would trade some of that position, not all of it but some of it for an acreage position on the east coast, on the premise that it's better to have a little bit of everything than 100% of something with a very small area, right. In other words it's better to be represented in all of the basins and not just one of the basins. So it was an opportunity to expand Gulf's interest. And it was the leverage that we had up in that area that gave us, Mobil wanted a position up there, we wanted a position where Mobil had a position. So it was a nice way to do that, by making a trade.

BC: So did you combine your operations in both those areas then or did you . . . ?

SP: Yes. And the 2 companies simply made an acreage trade and Gulf had an interest in Mobil's acreage and Mobil had an interest in Gulf's acreage. It was a good move and I think it was the most important thing that was done while I was gone.

BC: Doing that, particularly in these 2 areas where development is very expensive, would this be another reason why it was good to combine with other people, whereas at one time you would just go alone and you wouldn't want partners?

SP: That's certainly true. There's no doubt about it that offshore exploration and particularly, offshore exploitation, is so expensive and so involved that usually one company can't handle it alone. You have to go to consortiums of banks to help you finance it and you usually need partners of your own ilk to come in and share the load with you. And generally speaking you find, in such remote areas now, that nearly all of it is done in a partnership way. No one company goes it alone, not even Petro Canada.

BC: Do you think that this has had a marked effect on the oil patch and on the companies, the fact that at one time it was each company going and now it's not quite a socializing of them but they're certainly. . . ?

SP: It's the big consortiums.

BC: Yes.

SP: I think it's inevitable because it's so expensive and such a huge endeavour. You're involving billions of dollars, not millions or not hundreds of thousands. You used to be able to start a little independent oil company in the prairies of Alberta with \$100,000. Now, to go offshore, you can't think of exploiting anything, even if you did find it, without billions. Well, no one company alone can do it. Some of them even have to ask government to help them. You're seeing projects now that even the private enterprise companies are hesitant to go unless the government's prepared to back it in some form or other. The sheer size and magnitude of the projects lend themselves to a multi company approach, sometimes aided and abetted by government.

#175 BC: What has this done to the oil patch then?

SP: It has made it difficult for the little man to be offshore on these very big expensive

offshore plays, because it's difficult for them to come up with the dollars, unless they happen to have a lot of cash flow. Dome made it by parlaying it all the way up to the top. You know, Dome wasn't always a big company. I met Jack Gallagher in 1947 when it was a very small company and much credit is due him for the way he's brought that company to the largest company in Canada I guess it is. He's done it mostly from an exploration approach. And merging various companies, but it's always been with the idea that Canada has got lots of resource and that Dome ought to be right at the front. He's had the kind of aggressive approach. I know there's a lot of criticism by virtue of the fact that they're in debt and maybe they swallowed a pill larger than they could swallow in recent years, it's quite conceivable. I can't say anything about that but there's also great credit due him for building a company up from practically nothing to what it is today.

BC: So when you came back after 5 years, they were really entering into the mega type of investments.

SP: Projects. Yes, both offshore up north and east coast.

BC: So this would make a difference as to your approach to the exploration.

SP: Well, not so much because we had already assumed the mega approach in the offshore in the North Sea, right. Where we'd got Continental, the Coal Board and Gulf together.

BC: You had. Canada Gulf had not perhaps but you had had that experience.

SP: Yes, I had had that experience. But Gulf Canada at the same time was evolving in the same way. Because they were doing the same thing you see and could see it. Since then Gulf's entry and many other companies entry into the Arctic Islands has been the same way, a consortium approach, no one company staying alone.

BC: So did you find this a different kind of a challenge then when you came back.

SP: Not terribly different because it was in many ways quite similar to what we were doing offshore U.K. A little more iceberg that's all, and ice, otherwise very similar. Some of the geology up in the Arctic is not too different than some of the stuff off of Nigeria too, from a geological standpoint.

BC: Did you find this exciting, to come back and find, having gone out, to come back to this?

SP: Yes, I was intrigued with it and I was glad to be home. But by then I was past 55 also. And as I pointed out to you earlier, I think that I'm primarily an exploration man. By now I'm in charge of exploration and production as a Vice-President. I don't think that I did as good a job at that as I did at pure exploration. I also think that some of my youthful initial enthusiasm started to dim after I'd come out of England. I think I was going full steam all the time I was over there but coming back home, I was tickled to death to come home but it seemed to be on a downhill pull too.

BC: What did you find, with the production, this is the marketing end of it too, would you have to be involved with all that?

SP: No, no. No, exploration involves the geology, geophysics, land work and the wildcat drilling. Production involves all of the development work and the exploitation of it, to the pipeline but not the pipelining. It doesn't involve the transportation or the marketing or the refining. It involves all the gas plants and it involves all the gathering systems in the field for the oil and bringing it to the Alberta border you might say, or giving it to Alberta Gas Trunk Line really. But once the oil is gathered in the tank batteries, from there on it

was another responsibility. So my job as exploration and production was up to the tank battery you might say, up to and including the tank battery for oil and up to and including the gas plant for gas. From there on it was a pipeline business which was handled out of Toronto.

#237 BC: Now, when you were here, in this, was this at the point at which Gulf started to split up into smaller companies or was that after you. . .

SP: No, it was after I retired. While I was here I was recommending all the time to the Gulf executive that . . . you see, from '73 to when I retired in '79, the revenue and the profits from exploration and production was about 80% of the total company's profit. Yet all they had was me, a simple little Vice-President running something that was producing 80% of the company's profit. The President, the executive Vice-President and all of the other big shots down east were not part of what was really giving the profit to the company. So I used to complain, not because I wanted a bigger title. In fact I told them, look, I'm not the right man, I'm ready to retire. I was near 60 then. I said, get the right person in here but give proper credit to the part of the company, namely exploration and production, that is furnishing your major profit and is also your greatest outlook for future profits and where most of the game is, where the oil business is. I tried to encourage them to increase the stature of the whole department. It wasn't unfortunately, until I retired, that they did what I recommended.

BC: And then it was split up into how many parts?

SP: They asked me to go to Toronto as a senior Vice-President in charge of exploration and production in a sort of a titular way of recognizing what I'd been recommending. I explained to them that, while I appreciated the little bit of a promotion, it was the wrong thing to ask me to go to Toronto, to try and deal with the action end of the business at arm's length. If they wanted to make me a senior Vice-President or President of a new subsidiary, I should stay out here. They said, look, we want you to try it because Imperial's got a man down here and Shell's got a man down here. Incidentally they've all moved out here too, they were all doing the wrong thing. So the President, the Chairman of the Board and the other officers all twisted my arm. I knew I was only going to be another 2 or 3 years to retirement anyway. So I talked it over with Helen and I said, I don't like it, I'm against it and I've told them that I don't think it's the best thing. I think the best thing is to leave me or if not me, some other good officer out here in charge of exploration and production. But they convinced me to try it so I said, okay, I'll go down and try it. But I made it very clear to them that I didn't think it was the wisest thing but I was willing to play the game because they wanted me to try it. So I went down and tried it for a year, it lasted about a year. I went down in the late fall of '77 and was there through '78 and in February '79 I retired. My replacement was called a President of Gulf Canada Resources and he was immediately sent out here to Calgary.

#298 BC: Who was your replacement?

SP: A very fine fellow and a very good executive, Harry Carlyle's boss and the boss of the production executive also and that's Keith McWalter, K. S. McWalter. He's a very fine

guy. He's mainly a refiner by background but he had had a little bit of production experience prior to that too. So they gave him the job after I retired. Now he's a younger man and I think that he's the right guy, I think there was nothing wrong with that. It was just. . .

BC: You took an early retirement though?

SP: I took an early retirement to permit this to take place?

BC: Did they suggest to you that you could stay and they would make this, or did you not give them an option?

SP: No, we discussed it and I decided that the best thing to do was retire. I clearly recognized and I believe they did too, that I wasn't in line for the presidency and that I had gone as far as I could go. Any future presidential candidate that I was getting, E & P because 80% of the profits were there. Since I recognized that I wasn't presidential material and too old also. At least I thought I was.

BC: I think people would put a big question mark by that, either the fact that you were not presidential material or that you were too old.

SP: Well, I didn't think I was and I think they didn't think I was. It was a mutually satisfactory conversation to say, look, my question to them was, I said, look, I know I'm not headed for the presidency, have you got somebody. . .my question to Clarence Shepherd and John Stork???, Clarence was the Chairman of the Board and John was the President, when we were discussing I said look, who have you got in mind to put into this job who has presidential material. They said, you've asked the key question, they said, we think it would be Keith McWalter. I said, fine, I'd like to retire then, because I think that's a good move. Now, I think Keith's a very fine officer but I guess I better say what I honestly think, I think Carlyle's the best guy. Of all of these guys out here.

BC: I think that people from here, the oil patch, the majority would agree with you.

SP: I think so too.

BC: On his oil background. . .

SP: I don't want to take anything away from Keith, he's a very competent man, a very fine man and a good executive but I think Carlyle is outstanding.

BC: Do you think there's a problem in the fact that Carlyle has done everything out here and hasn't been in head office?

SP; I think that could pose a problem. Whereas Keith is well known in head office and has come up through the refinery hierarchy, which seems to be the dominant one in Gulf.

BC: Certainly back east.

SP: You tend to be better off if you're a refiner. Notwithstanding, they don't make much money, we make the money. And it's one of the peculiar ironies of Gulf and I guess if there's any bitterness at all in my feelings about the company, and to be honest with you I have very little bitterness, because I've had a good career and a happy one, is that it has been, up to this point, definitely a refinery oriented company from the top. . .

End of tape.

- SP: . . . [in mid sentence] September. I was a junior assistant geophysicist at that time and George was an assistant geophysicist, working for Mike Allen.
- BC: And how many geophysicists were there under Mike Allen?
- SP: There was just George and myself as the 2 assistants, and Mike himself as the Party Chief, was his own geophysicist, Party Chief and geophysicist.
- BC: So this was the very beginning of post war Gulf?
- SP: The very beginning. And it was the only Gulf crew in Canada at that time and it was a Gulf Research and Development Company crew, under the management of Mike Allen. George was the first Canadian of account and as you know, George went on to do big things, not only with Gulf as a Party Chief but became exploration manager at Home Oil and so on and made quite a lot of contributions to the oil industry. Another man that came in. . .
- BC: I don't want to go to quickly over these. Can you tell me a little about Mike Allen to start with?
- SP: Yes. Mike is of Jewish extraction, comes from Pittsburgh. He comes from a very wealthy family, they own the Nella shops, which is Allen spelt backwards, ladies wear and so on. Really, all Mike did was help pay his income tax by the salary that he got from Gulf. While he'd worked for Gulf for several years and was a very good geophysicist, we knew that he wasn't likely to stay too long because of the family fortunes back home in the east. And indeed, he left in late 1945 or early '46 and A. D. Gilchrist took over from him, who was a non-professional geophysicist. Had been a party manager type and was not a geophysicist per se, but was capable of managing the crew.
- BC: In your first contact with Mr. Allen and George Blunden, can you remember that particular event or any anecdote of. . . ?
- SP: Yes, I remember meeting them both when Mike hired me. I'd been hunting for a job in Calgary, there wasn't much going on in 1945. It was pre Leduc and I was just, in fact, I was still in the uniform, I hadn't quite got out, I got out till Sept. 11th. And although they started me in early September, I was about 2 weeks overlap, working for both King George and Gulf. I was on my honeymoon at this time, just got married at the first of July and I didn't own a car, you know, how people didn't in those days.
- BC: There weren't any cars to own.
- SP: But Mike had a nice convertible. Being a rich man it was a very flashy car. But he happened to be living, boarding with my mom and dad. So when he heard that I was at home, visiting my folks, and didn't even have a car and on a honeymoon, he offered me his private convertible, because he had a company car anyway, and I had the use of his convertible for Waterton Lakes and all the resort area down there. George Blunden gave me the big laugh of course. George was a very athletic man and a very, very competent man, as I explained earlier, he was an ex-Wing commander in the Air Force, so you can imagine that he had a lot of ability to have done what he did. He was about a decade older than most of the rest of us and was the first Canadian to go down to Gulf Research and Development Company and receive a formal geophysical training with emphasis on seismology. I followed him down there in 1948. After Mike Allen left to go back to the family fortunes, and he's still back there, although he dabbles in the oil business in a

small way still, taking over as geophysicist under A. D. Gilchrist, the Party Manager, was a man by the name of Alec McKee. Alec was an older man, but a very fine geophysicist and was a very good man on refraction at that time. He taught me and George some of the refraction techniques that were used, and he helped map some of the Pincher Creek structures that George and I finally finished mapping later on.

#043 BC: Do you remember any little stories about Mr. McKee?

SP: Not particularly, except that he was a fine fellow and a great photographer in those days. A little ahead of his time in photography as I would recall. He didn't have Mildred with him at that time, he came up on a single status to take care of that assignment. Then as soon as George finished his formal training at Pittsburgh, George came back as the geophysicist and I continued as the assistant geophysicist and Alec McKee went back home. Until finally, I recaptured him in 1954 and brought him back up to Canada.

BC: How did you manage to get him to come back up?

SP: At that time, Gulf decided to decentralize. Prior to '54 our geophysics had been fairly centralized. The crews worked in the field but we sent a lot, always a duplicate set of records to GR&DC in Pittsburgh for a dual interpretation and much of the top level supervision and management of the geophysics came out of Pittsburgh. Corporate wise Gulf decided that they should decentralize this in around 1954, '53, '54, but it culminated in '54 and they said, look, we're going to send all these geophysicists that we've got down in Harmerville, out to the field where you people can manage them and if you want to do a dual interpretation out in your own district and divisions go ahead and do it but the geophysicists are yours. We're going to do research only in Pittsburgh, not duplicate routine geophysical interpretations. So they said, all of you exploration managers, come down here and fight for your share of these quality geophysicists. So I went down, Loughney sent me down, I'll talk about Loughney later but he sent me down and said, okay go down and get your share. I had just been promoted to exploration manager and was a green exploration manager. So I went down and got Hayfer and McKee and that crowd of guys.

BC: Sounds sort of like the football pool.

SP: And Harry McGrew. Harry came up as the sort of senior of that group there.

BC: So this was a certain step in Gulf then, a certain number of these American geophysicists came up to augment your staff.

SP: Yes. And at the same time we were expanding and we knew that we had to do all of our own interpretations instead of Pittsburgh doing it for us. So we needed our share of these geophysicists that had so called, been doing our work for us. Because by that time, we had close to 12 geophysical crews working in 1954, so we needed about a dozen geophysicists. So I got nearly a dozen and hired a few others locally. But that was how that came about. Of the people who were non-professional geophysicists, there were a lot of Pincher Creek Canadians that came on in 1945, in as much as in 1945 Gulf decided that they were going to stay on a year round basis. Heretofore they only worked the summers and went back to the States for the winter and used entirely American crews. Come 1945 they said, we're going to Canadianize and keep only a skeleton American

proportion here, just of those who were expert, that we couldn't fill in with Canadians. So they said, all the labour and the semi-skilled, we're going to hire as Canadians. So some of the people that were hired were Alec and Dick McMurdo, Dick has just retired as a scout for Gulf. Alec is still working on the Pincher Creek plant. Mike Chutskof, who was a seismic shothole driller, now retired in Stettler. Lawrence Diamond, a landman for Gulf, now dead, Jack Fraser who came on then and is now one of the tax managers, just retired from Gulf in Toronto. Les Bowersock who died, who was on our land department in Gulf here and now dead, Bill Bowersock, his brother, who's still working at the Pincher Creek plant and Bob Cochrane, one of the my old childhood buddies, who is still a landman with Gulf. He was one of the first Canadians hired by Gulf in Canada, by Gulf Research and Development Company. In fact, he was hired in 1944, ahead of the main group.

#090 BC: And he was a landman from that time?

SP: No, he worked in geophysics and became an assistant party manager by 1950 and then, around '51, '52, he was brought into Calgary and has worked in the land department ever since then and he's been a landman. And he still is working as a landman and I would suspect he'll stay till he retired in a year or two. But he's had 38 years with the company already. In 1946 I met Oscar Erdman, I was the first geologist hired by the company, although I was classified as an assistant geophysicist, I was really a geologist. And in 1946, I transferred from geophysics, back to geology, working under Oscar Erdman, who was the Party Chief of a geological party.

BC: And he had just come into Gulf?

SP: And he had just come in, he came in in the spring of '46, I think it was June and Bob Lockwood hired him. Bob Lockwood was the senior exploration man in Canada, he was a one man exploration manager you might say. But Oscar and I both reported to him.

BC: You and Oscar Erdman worked together in the Peace River area, did you not?

SP: Yes, in the Peace River block and all of that Northern Foothills Agreement acreage, west of the Alaska highway and east of the front ranges of the mountains in northeastern B.C.

BC: I don't know if we ever went into any sort of anecdotes of your time up there, did we?

SP: Yes, I think I mentioned how Oscar and I went out into the bush there and he was so used to going on fasts that we went without food for quite awhile, till the crew complained and I finally complained and Oscar says, oh yes, food's important, I'll send for the rifle. Then we got the rifle and started living off the fat of the land, because we had a special license from the B.C. government to shoot our own meat. But until Oscar insisted on getting the rifle we were short of meat. Bob Lockwood was the principal exploration man but the principal company agent, at that time, they called him a company agent, was Jack Bevell. He had taken over from Henry Bedford, who was a very fine gentleman that retired and went back to the States. I'd say in 1945, '44, '45, Henry Bedford had been the general agent, I think Bevell came in around '45 as the general agent. He was a very capable man, with a lot of ability, but unscrupulous unfortunately and it came to his downfall in 1951 and that's when Ed Loughney came in and took over. In 1947 L. I. Brockway came onto the scene as the geophysical supervisor and eventually manager of geophysics. He brought in Ralph Copeland, as his field supervisor.

BC: Where did they come from?

SP: They both came from the States.

BC: From Gulf in the States?

SP: From Gulf in the States. Ralph Copeland was a very fine field supervisor. He's a non-professional type again. He wasn't a geophysicist as far as interpretation went but he was fully familiar with all of the field operations and was a great help all through Brockway's career, and beyond it in Harry Carlyle's and Nyberg's too.

#130 BC: And he has retired now?

SP: Now Ralph is retired and lives in northwest Calgary.

BC: Can you remember any anecdotes of Mr. Copeland at all?

SP: Well, I remember, he helped me out, I volunteered to take the first seismic crew into the north bush on the principle that the first man into the bush might fortunately be the first man out. But I recognized the ultimate potential of going north that the industry had to go north. So I volunteered to do it, but Helen was pregnant at the time so I sent her back to Brandon where her folks lived, to have the 3rd child, Judith. I was supposed to make that birth, sometime in May I think it was. Yes, Judith was born in May all right, May 7th. But that was spring break-up and we were attempting to work on a year round basis. So good old Cope came up and relieved me as the Party Chief in this north bush operation. We had to build rafts to ford the Caddot River and I remember, he had that nasty job to take over while I was to rush down and try and make the birth of my 3rd child. I didn't make it incidentally. Got there a day late.

BC: The Caddot, that was the first. . .

SP: The first north bush operation that Gulf had north of Peace River. We also had a crew working right out of the town of Peace River but it wasn't in a bush camp, at the same time, run by Don Walker.

BC: How important was that particular, the Caddot operation?

SP: It didn't turn out to be geologically, terribly important. There's a little bit of heavy oil there and I think there's a little bit of gas discovered there but it's not a very important part of the world. But it was important from an operational pioneering standpoint in geophysics. Because that's where we tried these wide growsered D-2's and D-3's and the little bogey wheeled Fordson tractors and so on. And the initial experiments of how to get going in the bush. Also at that time, John Wanford came on to the scene as a well site geologist and Paul Gasset came up from the States in charge of our production work. Max Littlefield entered the scene as a top flight expert carbonate geologists, he was one of the best carbonate geologists in the continent and he worked for Gulf. Because we were exploring in the foothills, which was all carbonate rock he came up to help in the work in the Pincher Creek field exploration and development. Unfortunately, while both of them were excellent men in their own way, he and Bob Lockwood were at loggerheads all the time. Bob was sort of the office geologist and Max was sort of the rock expert you might say. They didn't unfortunately, see eye to eye and one man would say something to Paul Gasset as to what they should be doing pertaining to the geology and the other man would contradict him. And here I was, a young geologist sitting on a well in between the fire of

these two senior men, both enemies.

BC: So what happened, how was it resolved?

SP: Technically, Max Littlefield of course, was right. But he was wrong in trying to buck the office man to the degree that he did. It's one of those unfortunate things where neither one were entirely right and neither one were entirely wrong and they were both stupid to fight.

#176 BC: So did one of them leave?

SP: Max Littlefield eventually went back to the States, because he was sent up on special assignment while Bob Lockwood was assigned in the Canadian scene, as the manager of exploration at that time. Max Littlefield eventually became a manager of exploration in the Gulf operation in the States and he's now dead. Bob Lockwood is also now dead, both of them. In 1947, that's when I first met Jack Gallagher as I recall too, he and I both used to work out at the old gym, down about 2nd St. East, on 9th Ave. I'd see him there every once in awhile, he was sort of a ??? on condition, so was I.

BC: Can you remember any little stories of Jack Gallagher through the years?

SP: Not particularly. I know he worked in South America, for Esso I think it was and he's always very much an entrepreneurial man. A good geologist and a great entrepreneur, he knew all the right people in New York and a genius at being able to generate funds for Dome. I think he's done a great service to Canada and to Dome and to himself. Sure they're in trouble now but much of the opening up of the north country is to the credit of his company. And one or two other men that I'll name in addition to Jack a little later here.

BC: But you both jogged around, this must have been the early days of jogging was it?

SP: Well, it was even pre-jogging. We were mostly doing calisthenics and things of that nature in those days, although I jogged a little, because they had a circular track gym there. The jogging fad hadn't really hit but there were a few of us that were still condition type of guys, that chinned ourselves and did our push-ups and so on. John Wanford came on the scene, Paul Gasset, Max Littlefield. 1948, Des Barton, who's now head of the land department, came on as a computer for my geophysical crew in Red Deer. Until I took the crew over there was a fellow by the name of Dave Kirk, an American working just on a temporary assignment until I got trained, like George Blunden had been trained, down in Pittsburgh. I also met Jack Bowden that year, Jack Bowden is now dead. I guess you know him.

BC: That's when he came to Gulf Oil was it?

SP: Yes, I think it was around then that he came in 1948. Maybe as early as '47 but I believe it was '48. In 1949 I took the crew up north, that's when I volunteered to go into the north bush and I knew I'd need a good mechanic so I hired Ross Davis. Ross Davis is the man in charge of the Gulf building now. He's a very good mechanic and he worked as my mechanic on the seismic crew north of Peace River.

#215 BC: There must have been a few stories there, of trying to keep things going.

SP: It was amazing. The month that we went up there, I think a lot of the American

supervisors didn't think that we could do it. Because they weren't used to the rigours of the Canadian climate, Americans weren't. They gave us the oldest drills because they thought that we'd lose them in the muskeg. Working in such a rigorous climate, in such bad geography, you'd have thought they'd have given us the best of equipment but they gave us the poorest because they didn't think we could succeed anyway, and that if we were going to ruin it all we might as well ruin the old stuff. So they gave us a drill that was hardly serviceable. And they sent us light plants that were old World War II surplus light plants that had sat in a yard in Philadelphia for along time, for 4 or 5 years, then shipped them in an open flat car all the way from Philadelphia to Nampa, near Peace River, and we unloaded them in 55 degrees below zero Fahrenheit and tried to haul these out to our camp. We had never seen these kind of light plants before, they were American war surplus, full of dust, full of smoke grime, full of smoke ashes and we had to try and clean them up and get them going and we only had a tent to put them in. We had no heat because these were our lighting plants to furnish electricity. I remember Ross Davis, in the cold weather, was doing nuts with his bare hands. He worked like a Trojan getting these engines going, in conditions that were just simply horrible, people wouldn't work at it today. I don't think it got any warmer than 40 below zero that whole month of January in 1950, one of the coldest January's I ever recall. Metal fatigue was bad, Ross was constantly busy with a welding torch keeping things going. He'd build up clutches and so on. It was so cold we'd pour propane from one bottle into another, as long as you kept your mitts away from the orifice and didn't breathe on it, you could pour propane from one tank into the other and we didn't lose any. That's how cold it was. Ross Davis kept our equipment going in such horrible conditions. At the same time, Carl Nyberg was the surveyor of my seismic crew, Seismic Party 10. Now of course, Carl is manager of geophysics. In 1951 calamity hit when Jack Bevell, with all his competence, went haywire and unscrupulous and they tripped him up. Gulf found out his escapades and Ed Loughney was sent up here in his place.

BC: Did they ever find out really, what all he did, do you think? Was there ever . . . ?

SP: I don't know the details because I was a junior at that time and not in the inner circles of the management so they didn't divulge. All I know is that he was scalping some way or other. I think he had an interest in some of the core drill companies that were working for Gulf and I think he was manipulating some of the bidding in such a way that the ones that he had an interest in. . . I think. I know there were some peculiar things going on in the core drill, that Bob Lockwood and I and Oscar noticed but we didn't quite understand. I'm pretty sure that some of it had the smell of the core drill business. I think some of it might have had to do with leasing that he had taken part in too, that. . .

#269 BC: It would be, in a position like that, conflict of interest could come about quickly.

SP: Very much so. And Gulf was very fussy about that sort of thing. They felt that if you were working for a major company, you should be working for a major company and not dealing on the side. I think that if Jack Bevell had kept his nose clean, he had the sufficient charisma and executive ability to have gone very far in Gulf. But he had this unfortunate muddle of unscrupulousness and that plowed him of course. I don't think he

realized how much he lost until he lost it. Then he probably realized the fast buck dollars like that aren't really important.

BC: They go as quickly as they come.

SP: That your good name was far more important. Ed Gallagher came in at the same time in charge of production and brought in George May as assistant manager. George May eventually became production manager. In 1952 Bob Lockwood was taken out of the direct line of management and put in as an exploration advisor to Loughney, which was sort of a staff job. In a sense, sort of shelving.

BC: Yes, how did he take that?

SP: Not too well, I don't believe. And Ed Baltrasitus was brought up from the States as exploration manager in place of Lockwood. By then I was geophysical coordinator and I reported direct to Ed Baltrasitus. Oscar, as chief geologist reported to him and Norris Warth, as the head landman reported to him. Along with Ed. . .

BC: How did they pick him, was he from Gulf?

SP: He was from Gulf. Had done a very good job in the Michigan basin and in the Rocky Mountains and was a very fine fellow. Well thought of by Gulf, particularly the Gypsy division, which was run out of Tulsa. I got along very well with Ed and I think he did a very fine job with Gulf. He didn't stay but 2 years, he quit at the end of '53 and I don't really no why. . .

BC: Did he quit and go back or go to another company?

SP: No, he quit and went to work for Forest Oil here. Then he ended up as Dome's exploration manager and was one of the principle men, I said Jack had other men working for him. Much credit goes to Ed Baltrasitus for what Dome has done in the north. Because Ed had a lot of the vision and a lot of the geological knowledge that helped Dome get in there. I think it's worthy that his name be given proper credit as to Dome's aggressiveness in the north. Ed does a little consulting yet, he's now retired and lives during the summertime, out near Seebe in the Kananaskis. He's got children scattered all over the world so he travels in the winter. Floyd Erring, one of our principle engineers, just now retired from Alberta Energy, as a Vice-President with them. He became a Vice-President with Gulf eventually too, but left Gulf and joined Alberta Energy. He was a petroleum engineer by trade and came on at that time and I worked closely with him because I was involved with exploration and exploitation of our fields so I naturally worked. . .

#326 BC: Can you remember any stories of him, any particular stories?

SP: No, nothing particular, except that he was just a very fine engineer. Nick Ediger came on at that time and it was odd. Oscar hired Nick and Nick is now the top man for El Dorado, the big government uranium company. I took Nick down to Toronto to help me when I got Gulf going in uranium. Nick took over from me when I went over to England and then he left eventually and took over El Dorado. But Nick was a geologist that, at that time, in '51, '52 era, we were limited in budget as to how many geologists we could hire but we needed a draftsman. So Nick was hired as a draftsman because he happened to be handy at drafting, but he was really a geologist and he drafted for the first year until we

could eventually change his classification from draftsman to geologist. I'll never forget that, we all joked about it because Nick was a very good geologist, from Manitoba, with a lot of mining training and the poor guy had to come on as a draftsman. Wally Gassick we hired in 1952 also and he's now one of the managers for exploration for Gulf. Some of Gulf's important negotiations were done with Francis Hale of Chevron at that time and I worked a lot with him in working out the Westeros and south Westeros agreements that Gulf now have, where they have the big Rimbey gas plant. 1953 and maybe a little earlier, Carlyle came into the scene but I remember I got to know him better around 1953. I've spoken very highly of Harry, I think he's one of the top executives that Gulf's ever turned out. I don't know as he'll ever make President but he should, in my opinion.

BC: Did you work with Harry Carlyle at all in the field?

SP: No, no, I didn't, I was. . .

End of tape.

Tape 7 Side 1

SP: I don't remember any particular interesting anecdotes about Harry. He was a neighbour of mine of course, up in the Wildwood district there. I just remember him as an outstanding geophysicist, a man of very great intellectual capacity and a very kindly, good man. He lived with his mother up in the Wildwood district. Used to give our kids rides in his antique automobiles, of which he had many. Just a very fine man. In 1954 a very famous world geologist of Gulf's became known to me, I guess I really had met him in '53 but I got to know him better in '54, Dr. Hollis Hedberg. He's a world famous geologist and has always worked for Gulf or as a consultant to Gulf. He's now a consultant to Gulf. But he was partly influential I think, in me becoming exploration manager in January 1953 following Ed Baltrasitus's resignation.

BC: How did you feel when suddenly that was. . .you'd moved ahead really, rather quickly hadn't you?

SP: Yes, Oscar had been my boss you see. Then when I became geophysical coordinator I was sort of roughly level with him but I always felt that he was, he had a PhD degree and I didn't and he'd been my boss in the field as a geologist. I always felt that he was senior to me, even though I had worked a year longer for the company. And when Loughney called me down and said I was it to take Ed Baltrasitus's place I was surprised frankly. I had fully expected that Oscar should get it and would get it. I didn't expect to get it, nor did I think I should get it. After the initial shock of the announcement came off, when I staggered out of his room, I went back an hour later and asked him, I said, Mr. Loughney, I don't feel right about this, I think Oscar should have got this job. Well, he said, not to take away from Oscar, you're the man that's been recommended by Baltrasitus and others in the company and he said, you're it. So that was it. But I felt a little bit bad about that because I had fully thought that Oscar should have got the job.

BC: Isn't that one of the things that happens though in business, not everybody, you don't just move. . .

SP: No. And it's one of those things. Oscar and I made our peace very well, I felt that Oscar might feel bitter about it. If he did he covered it up beautifully. Oscar's a perfect gentleman. I tried my best to work compatibly with him and to give him all the credit that I could in the capacity that he continued in.

#030 BC: As a PhD, he did have as you say, his doctor, he perhaps was, maybe, that would really, in retrospect, be one of the reasons why he would not necessarily be the manager because someone with a PhD is more interested in the scientific side than the management side, aren't they?

SP: Yes, some leadership is lost to expertise. And this could be one of those types of examples. Andy Baillie is another one. Where Andy I think, has a lot of ability but he had so much training and power in his science that his expertise cornered the whole of him and there was very little left of him to become an executive. So he didn't get an opportunity into the executive. And Oscar likewise, was a geologist's geologist, more than he was really an executive. And it turned out that way too. But he's one of the finest gentlemen I've ever known and I consulted with him constantly on everything. When it came to geological matters or the management of geological people I thought he was wonderful. In 1954 of course, Jim Hafer, Harry McGrew and that crew came up, several others, some of whose names I've forgotten. But there was close to 10 or 12 geophysicists that came up on this geophysical decentralization in 1954 and that's when of course, I became exploration manager. 1955 I met one of Gulf's top men, now an executive Vice-President for Gulf, Mel Hill, who was a very good geologist and has been in charge of Gulf's foreign operations.

BC: Where did you meet him, he was up here?

SP: I met him through the meetings that Hollis Hedberg had throughout various parts of the world, to give all of us exploration managers a sort of experience broadening. Every year we'd meet at one place and discuss the geology of that area, say, how do you find oil here, what are your problems, how do you solve them. That would maybe be in Houston, next year it would be in Los Angeles and we'd study the Ventura Basins and so on. And the next year, in 1955, we went down to Caracas, Venezuela. There's where I first met George Relf, he was a geologist at that time, working for Many Grande, Gulf's subsidiary in Venezuela.

BC: This would be quite an experience. Was this unique to Gulf or did some of the other oil companies at that time. . . ?

SP: I'm sure other oil companies must have done it, because it was such an obvious thing to do, to experience broaden people like this. But I know Gulf did it. Much of the credit of this though, went to Hollis Hedberg who insisted that it be done. There was a lot of executive bucking, the cold-blooded executives couldn't see why we scientists needed to meet and exchange thoughts like this. but we all thought it was a very good thing and I think there's a lot of credit due to Hedberg for having done this. I know I got an awful lot out of it and it was as a result of that meeting that I filed on the acreage in the Mackenzie Delta and the Beaufort Sea, it was a result of these meetings that Hedberg had.

#063 BC: Why, what was there in that meeting?

SP: Because I was introduced to geological environments that had never been explored in Canada. We had one of our meetings in Louisiana, in New Orleans, and there I saw Gulf's and other oil companies operations in the delta of the Mississippi and the offshore portion of the Mississippi Delta. And I came back all fired up about why we shouldn't be doing something in the Mackenzie Delta. I discussed it with Erdman and Baillie and they said, maybe there is something there. And that's when we decided to file on it. But a lot of that goes to Dr. Hedberg's meetings and that kind of experience broadening that he gave to us. Mel Hill was one of the men at that time, and equivalent to me but he's gone way ahead of me now, he's a big shot in Gulf. Neil Taylor, Keith Caldwell all came on the scene roughly at that time. Neil Taylor has just left Gulf Minerals, down in Toronto, where he was President of Gulf Minerals Canada and is now back down in the States as a Vice-President of exploration for them. Keith Caldwell is a Vice-President of exploration, working under Carlyle. In '56 BA and Gulf merged. Of course, O. I. Torkelson, who was the chief executive officer for BA at that time, came over to Gulf as Vice-President of exploration and production, replacing Loughney, who went down to Toronto.

BC: By that time they were called managers rather than agents?

SP: Oh yes, yes. They became managers in about 1948 they started using the term manager. And of course, as well as Torkelson, there was Orville Wall, who was the manager of production for BA, who became assistant manager of production under George May. There was Jim Manning who was manager of exploration at that time and he reported to me when he came in. And of course, then there was all the geophysicists, Jack Way, Sid Cooper and George Deebler, who was the manager of geophysics I believe, for British American at that time. It was somewhere around there that Earl Mahaffey joined Gulf too, at that time, maybe a year earlier but somewhere around in there.

BC: What about Mr. Torkelson, he became your boss then?

SP: Yes.

BC: What do you remember of Mr. Torkelson?

SP: He was a very fine guy, Dorothy and Tork. I liked him very much. I remember he gave me, I recommended, my geologists and me, my team, as an exploration manager, Bob Belott was one of the geologists that worked on this project that got us into that big Swan Hills play. Now Tork gave me ultimate executive support for that play and went to bat to get the dollars for us out of Toronto, which he had to fight with Ed Loughney over because Loughney was a big shot then. And I remember, at that time, Bob Lockwood was in Toronto and Bob didn't quite agree with what we were proposing, he was advising Ed. But we finally won out and it was partly due, I'd say, to Tork's support. So Tork gave good exploration support.

BC: Was he a geologist?

SP: He's a geologist by trade although he'd never practised very much as a geologist. I think he worked a little while as an engineer actually, then was an executive. But he understood geology and appreciated it and gave us good support. Jim Manning also was a good man. Orville Wall was a little older but Jim finally left and went, after I went abroad to England he left.

#108 BC: Was Jim your counterpart out of BA?

SP: Yes. I was manager of exploration for Gulf at the merger time, he was manager of BA at the merger time. But since it was a little company coming to a big company, I carried on as manager of exploration. Not because I was any better than Jim, I wasn't. Jim was every bit as good or maybe better than I was but I happened to be in the bigger company and the bigger job. So he. . .

BC: He did not stay in Calgary though, at that time?

SP: No, we gave him the job of manager of our Regina operation you see. And he did a very good job and he and I got along very well. Then we gave him in charge of Edmonton when all that north country started to go boom and he did a good job all the way through. He left the company somewhere, '69, '70. I remember I was in England when he left and I wrote him a nice letter thanking him for staying as long as he had really. Because I'd been a little surprised that he hadn't gone earlier because he had great competence. And he's become a senior executive with Husky in the States and is now retired and back home in Canada.

BC: Is he living in Calgary now?

SP: Yes. He's got a townhouse in what is it, Rideau Towers, and he's got a cabin out at Sylvan Lake. Very fine couple, Jim and Betty. Then there's a period of years where I don't have many names because I guess I just had my nose to the grindstone, was dealing with many of the people that I've already mentioned.

BC: The personnel didn't change too much for several years I guess?

SP: No, there wasn't that much, no. Because we'd merged and we didn't need to hire a lot of people and with the people that we brought together from BA we had a good team of people.

BC: Was it a time that was not necessarily a bountiful time for. . .?

SP: Well, we were continuing to explore for these reefs in the Swan Hills area, that was the main thing that was going on. But it was this same team, Manning, myself, George Deebler and Sid Cooper, all this same group of guys, all working. . .

BC: Do you remember any anecdotes about George Deebler?

SP: No, I didn't know George that well.

#136 BC: What about Mr. Manning, can you think of any anecdotes about Jim Manning?

SP: One. I remember we were drilling an important well in to one of the fields in the Swan Hills area, up in that general region there. We were drilling a well into a parcel of land for which there was going to be a sale the following month. We were timing the drilling of our land so that our well would come in and we'd keep it tight so that no one would know what was going on, so that we would have the information directly opposite the sale parcel and we'd know whether it was a good well or a bad well and we'd then be able to bid. I remember it turned out to be a good booming well. But all of the industry were on to the fact that we were drilling a well into the sale, so to speak, on this parcel adjacent to this very important sale parcel. And therefore the well that Gulf was drilling was the key thing to find out about. So all of the scouts in the industry, the spies, and Triad had a spy

at that time, which is now BP, Triad is owned by BP, had a scout in the field. One or two other companies did too. And we had it all cordoned off so no one could get in, but one of the rig hands noticed that there was a glint of some glasses of someone spying on the well. The lights from the rig shone on the man's glasses. So they ran out and captured this guy, they did a rugby tackle on him and threw him to the ground, it was a Triad scout. There was a subsequent lawsuit on this thing. The well was an exploration well under Jim Manning and Jim Manning of course, reported to me, in Calgary. So the first thing I knew about it was Jim said, we've captured a scout who saw our well come into production. It's therefore critical that he not get out to see what's going on, because we'd be compromised and the competitors would have the information on this well and we might lose our bid on the parcel of land. So he said, the man was stealing our information and we consider him a thief and therefore we have incarcerated him in the doghouse and we've taken his clothes away from him and he's stark naked so he can't run away. I said, I don't know what the legality of that is but certainly the dollars involved here, because we were talking about \$3 million for the sale, are such that I guess we'll just have to risk the legality of it. I told Loughney about it, he was the man I reported to and he said, well, that's part of the oil game. You have scouts and they spy and you capture them and we just didn't worry about the legality of this thing. Jim felt he had to do what he was doing and I agreed with Jim that he had to do. But I guess Triad felt that we were a) blocking them from getting vital information and that we had no right to really imprison a scout who was running through the bush in the north country, simply because he'd had his glasses on our well. So they got to the RCMP at Valleyview and told the RCMP and the RCMP, who really understood what went on in the oil business, knew that there were spies and that there was counter-spying and so on, they knew what was going so they said to us, look, you've got to release that man, you can't really hold him, you have no legal right to hold him because he was simply looking at what you were doing and he was in the bush which is public territory. So we said, okay, we'll let him go. But he was 60 miles away. One or two of our guys had threatened him with a pistol, a toy pistol incidentally, so that he wouldn't go away and made him squat in the mud in nakedness, to sort of humiliate him. Now the guys in the bush, you know what they're like. They gave him blankets to keep him warm and so on, he didn't freeze to death or anything like this but he was a bit humiliated. And it came out in some of the court hearings later that some of our guys had threatened him with a pistol, it turned out to be a toy pistol. But the guy didn't know that. So it was wrong to threaten him with a pistol and it was wrong to make him squat in the mud. So when we offered him freedom, he couldn't walk in because it was 60 miles through mud slogging and by the time he'd walk in the sale would be over anyway. So he just waited till we could take him in. So an hour before the sale, knowing that we wouldn't get him in until about half an hour the sale, to Valleyview, we sent one of our biggest, most muscular truckers in with this prisoner. This was all under Jim Manning's general largesse you see, and I was hearing all this from Jim. And the big trucker goes along the trail towards Valleyview with this prisoner and down lands a helicopter, right in front of the truck, a Triad helicopter, trying to rescue their man. And our trucker wouldn't give him up, our big muscular trucker wouldn't give him up. He

said, I'm taking him to the RCMP who has ordered him to be released to them in Valleyview and that's where he's going. He wouldn't give the Triad man up to the Triad helicopter. So he took him in to Valleyview, in the meantime we bid the \$3 million on the sale and got the parcel. Now Triad was sophisticated enough to know that they wouldn't sue Gulf, because companies do this sort of thing. But they had no objections to their own scout, who felt he'd been illegally incarcerated, suing Gulf, as an individual. So they let him go ahead and do it. He wanted \$25,000 in damages. Now \$25,000 didn't seem to much after a \$3 million that was successful but we still said, look, it wasn't worth \$25,000. We ended up with, I think it was \$2,500 for him inconvenience.

#220 BC: You settled out of court then?

SP: We settled out of court, right.

BC: Could he really have made, maybe the incarceration he could make stick but he was really trespassing, was he?

SP: He was and he wasn't. You see, you have a lease of an acre or two. If he can be. . . he could maybe have said, I was leaning on a tree just outside of the lease. In the bush you don't even survey the lease, you know, the road in is the one road in and it's a dead end road at the well site. So you put a blockade across the road so no cars can come in, assuming that's going to keep illegitimate people away from the rig. But of course, there's nothing to stop a scout parking his vehicle half a mile back, creeping through the woods with his glasses on and just watching the rig. And there's nothing we really can do about that. You can put up a high board fence to try and stop it but all they do is hire a helicopter and hover over your rig, circling it. So there's very little you can do. But we were fortunate enough to catch him because otherwise we probably would have lost that sale bid. But that's a typical example of good old fashioned oil field scouting and what you do to sometimes protect yourself. Jim Manning was. . .

BC: The fellow who saw the glint of the glasses should have got a \$2,500 bonus.

SP: I don't think he did, I don't think he got anything but it was a good piece of action on his part. In 1963 I was named by Loughney to represent the company in the World Petroleum Congress, and they wanted Gulf to furnish a Chairman to one of the sessions in the World Petroleum Congress at Frankfurt, Germany in 1963. Loughney delegated me to be Gulf's man as a chairman at one of those sessions. Naturally they had to give me a chair job that was familiar to my trade so I was a chairman of the geology and geophysics session for one day.

BC: That was quite an honour.

SP: Yes, it was an honour to the company to be asked to furnish a chairman and an honour to me that Loughney selected me to be it. Hollis Hedberg was there giving lectures and I think he was one of the chairmen too. Mel Hill was there as one of the lecturers. And I met an old buddy of mine that I'd known in the war that introduced me to Prince Bernhardt of the Netherlands. Hans Sloos. He was an engineer and he was working for Esso, Exxon, I believe at the time and I met him at this thing and hadn't seen him since the war time. During those same years. . .

#263 BC: How did he introduce you to . . . ?

SP: Prince Bernhardt?

BC: Yes.

SP: Well, I was in 3rd Brigade headquarters in Holland at this time. The Canadian Army's job had been to cross the Rhine and hook back to the Zuider Zee and contain the Germans in Holland. I was supposed to be sent back home being the only remaining son. I was a great friend of the Dutch liaison officer that each government attaches to armies when they are in an occupied territory and Hans Sloos was a Dutchman, a Dutch liaison army officer attached to the Canadian Army brigade headquarters. I was a liaison officer in that brigade headquarters, so I knew him quite well. When I was supposed to go back home he and I went to the Appledorn Officer's Club to celebrate. The cessation of hostilities in northwest Germany, Holland and Denmark were announced while we were having supper so he said, this is a very important event, we'll have to go and see the Royal family. He happened to be a friend of the royal family. So he happened to know, again, because he was a personal friend of the royal family, where they'd be at that hour and place and we went out to Prince Bernhardt's country home and we met him. Spent the evening there drinking frankly, getting drunk. I said, how do I act and he said, just like an officer so I just treated him as a senior officer, but I met him through this Hans Sloos who I eventually saw again in 1963. During those same years I met Fred McKinnon, who is retired now but was in charge of BP.

BC: Can you think of any stories about Mr. McKinnon?

SP: He comes from a very important ranching series of families in around the Calgary area. I see Fred at the Rangeman's Dinner, this is a Rangeman's dinner. He went to university with Oscar and I. I don't remember any particular anecdotes about him, other than the fact that he's an outstandingly good geologist.

BC: Was he going through at the same time you did?

SP: Yes. He, like Oscar, was a year or two ahead of me in university. And we worked a lot with Triad, at that time called Triad, now BP. Because they were part and parcel of this Central Foothills Agreement in the Robb Mountain Park, Stolberg area. Another man that comes to mind of Triad's that we worked a lot with was Dr. T. C. Richards, that Carlyle will well remember and all the geophysicists because he was a crusty, very, very English geophysicist, Dr. T. C. Richards. Very good man, good man on refraction. Not many people outside of Gulf knew a lot about refraction at that time, but T. C. was quite familiar because he'd worked a lot in refraction in the Middle East. In '67 Charles Hay, Clarence Shepherd, Chairman of the Board of Gulf and Gerry McAfee came on the scene in Gulf in the executive team and I got started to know them.

#323 BC: Could you talk a little about them then?

SP: Charlie Hay of course, had been with Royalite and after the Royalite-Gulf merger, Charlie went down to Toronto and became the President and Chief Executive Officer. Clarence Shepherd became his Chairman of the Board. At that time Clarence wasn't Chief Executive Officer.

BC: Can you remember any stories, like how you met them, when you met them, anything like

that, or stories of something that happened that you shared?

SP: No, I just met them in regular routine work. Charles Hay of course, was a well known man in the oil patch in the west. Clarence Shepherd never did really work in the oil patch. He was a Winnipeg lawyer, as he calls himself, a prairie lawyer, who went east and worked in the transport commission for the federal government for some years, did an outstanding job and then joined Gulf as the head of their legal department and in very short time was made Chairman of the Board. I'd say that Clarence Shepherd is a very humane man, a friend to most people, an excellent executive, notwithstanding that he wasn't a so-called, oil field patch type. He was an outstanding Chairman of the Board at Gulf.

BC: Did it pose any problems for you people, having someone who was not really a member of the oil patch at any time during his career?

SP: No, and particularly, Clarence didn't come in as Chief Executive Officer, he was Chairman of the Board and did a wonderful job. But I think he'd have done a wonderful job anyway, even if he'd have been given the Chief Executive portfolio that early. He ended up later on, with the Chief Executive portfolio. When I retired he was the top executive. Gerry McAfee of course, after Charles Hay became the President and Chief Executive Officer, and Clarence carried on as Chairman of the Board.

BC: How was he as the . . . ?

SP: Gerry McAfee was probably the most outstanding oil executive in Canada at the time that he was in the saddle. He outshone, in my humble opinion, he outshone all the rest of the oil executives in the Toronto scene and. . .

End of tape.

Tape 7 Side 2

SP: . . . [mid sentence] as well as Chairman.

BC: Did it make a great deal of difference as these different people came along and took over as leader?

SP: I think that Gerry McAfee's impact was definitely felt. He was a very strong executive as far as the industry and as far as the company was concerned. We made good strides forward, such as the trade-off of the strong acreage position we had in the Beaufort Sea for a position on the east coast. That was good sensible trade made during Gerry McAfee's regime as the President. It was a logical thing to do and Gerry had the vision to agree with George Relf and Oscar Erdman and Harry Carlyle and all the others that proposed it. Gerry as you know, went on to become the Chairman of the Board and Chief Executive Officer of Gulf Corporation. He was the Mr. Clean man that took over from the so-called, Gulf executive that got tarred with the brush of having paid some payola to some people. Now whether that occurred or not I don't know. But poor old Bob Dorsey got the blame for it in any event. Gerry took over from him.

BC: Do you think that when you get to that level of power that that is always something that people have to watch?

SP: I would think so. I think that you can't condone it, it may be that some executives, in the

realities of getting by in some of these third world countries, turned a blind eye on it and said, I don't want to know about what you're doing. I think that's what happened to some extent. I'm not sure, I think that's what happened. And probably does happen with some people in some circumstances. And if the people under you then, abuse the privilege, there can be some important enough payola that eventually could reverberate and rebound on you, right. And it could be that something like that might have happened. I don't think that Bob Dorsey personally would have said, yes, do that. I think though, he may have said, well, there's certain things that you may be doing that you feel you've got to do to get business done and I don't want to know about. I don't say that happened, but that may have happened, I don't know. All I know is that for some reason or other, there seemed to be a lot of news about things like that happening and the Board of Gulf must have decided that he should retire and that Gerry McAfee should be invited in as Mr. Clean. We were sorry to lose him in Canada but knew that he was the right man for that job and that he should go ahead.

BC: This causes great problems, do you feel that he had any problems because of the fact that he is coming in, in a cloudy period. . . ?

SP: There must have been some opposition but he had so much strength backing him from the total Board of the Directors of Gulf that I'm sure that he had all the power he needed to make people tow the mark. If there was anyone against him it wouldn't have counted, because he was such a very outstandingly capable executive that it was staring everyone in the face, that they knew that he was the man to do the job.

BC: Quite often in larger companies, where you can shift people, and I don't mean necessarily right at the very top too, but coming up close to the top, in order to make things "easier", they can sort of manoeuver and move people here and move people there, so that when the person comes in to take over, there aren't any stumbling blocks, at least any that are visible. Did Gulf do much of this during the time that you were moving around, did they ever clear spaces for you do you feel, when you were going to move in somewhere?

SP: No, I don't think so.

#043 BC: Did you ever clear any spaces for other people moving in?

SP: Not that I can recall, no. Not per se. If it was done, it was done unconsciously. When I came back to Canada I was glad to come back. I don't think I'd have been able to come back if George Relf hadn't decided to retire. But I was certainly the logical man to be given the job if he did retire and when he did, they brought me back. But also I wanted to come back. But they didn't force him to retire, he asked to retire. But in the meantime they knew that I was anxious to come back home, I'd made that clear I'd spent enough time abroad and while I loved it in England I knew that I eventually wanted to come back home. Now they didn't have to give it to me but they did and I'm glad they did because it got me back home again. In roughly that same era, 1967, I mentioned earlier that I was instrumental in getting Gulf into the uranium business in northern Saskatchewan. It was through the Mill City Group of companies. Mill City, Dynamic Petroleums, New Continental, which were all subsidiaries of the Mill City company. The men in charge of that company were Frank and Clive Brown. I think Frank is still involved in mining

companies. Archie Newell was their landmen and one of the officers of their company and I believe, a shareholder. I dealt a lot with him in some of the earlier oil plays northeast of Edmonton.

BC: You'd already met him before, you'd had other dealings with him?

SP: Yes, I dealt with Archie quite a bit in the oil business. They were a small company that dealt with us in some of the gas plays northeast of Edmonton. I'd also met, through Archie, Clive and Frank. Then because of our friendly business relationships and they were a big company and we were a little company, they had taken out a lot of acreage in northern Saskatchewan and Al Swanson, their engineer was in charge of it. It was as a result of that whole business that I got to know those people and got Gulf involved in their uranium play. And I've already discussed that uranium business but I just wanted to mention the names of the people. Then going to England, I was transferred in '68 over to the UK as manager of exploration for Gulf Oil Company, Eastern Hemisphere. There I met some of the people that were the top people in Gulf that I hadn't met before, Bob Dorsey, who was then the Chief Executive Officer of Gulf, eventually gave his job up to McAfee. James Lee who's now Chairman and Chief Executive Officer of Gulf Corporation and he was in charge of the London office. Jesse Wiley who was also one of the men while I was there, that was in charge of the London office. Paul Hewey I've mentioned before, who was my immediate boss in London. Norm Lewis who was sort of one of my counterparts, he was in charge of land. Gus Pyre, a very good geologist, an outstanding geologist as a matter of fact. A geologist's geologist, who worked for me in the London office. Archie Armstrong, one of the geophysicists that spent some time in Canada and I brought over to London to help in our geophysical operations.

#084 BC: He was working for Gulf Canada?

SP: He had been working for Gulf Canada, then was working for Gulf Research and Development Company. I knew him as a good geophysicist in Canada, research oriented type of interpreter and I knew that he was doing that kind of work. So I felt that he'd be a good adjunct for the London office and I got him over there. I mentioned Morrow Beltrandy, our Italian manager, Gus Cordicini, Manuel Riga de Rehe, all of these were outstanding European geologists that were working for Gulf in that hemisphere.

BC: Are they still part of Gulf?

SP: They're still part of Gulf, most of them in managerial or officer positions now with Gulf.

BC: There seems to be quite a stable flow of senior and middle management officers.

SP: Yes, they don't lose a lot of their people, it's a good company. It's a good technical company, good exploration company.

BC: What else do you think holds people to Gulf, other than years of service, you get into any company for so long?

SP: Men like Hollis Hedberg, men like Mel Hill, that are great explorationists. Good to work with, good to train under.

BC: And always learning I presume, no matter what you do.

SP: Right.

BC: Were there material benefits, the financial benefits, they did have some sort of a . . . now, I

know Shell had, you know, so much percent and then the company puts in. . .Gulf had something of that kind.

- SP: Yes, we had a savings plan, Gulf Canada had, where you put in a dollar and the company put in 50 cents. That's not as good as Shell's, which was \$1 for \$1 but Gulf Canada's was good. In foreign operations Gulf was as good, I don't know whether they were any better than some of the other companies but they were as good probably. They had cost of living allowance for foreign people, they had hardship pay for foreign people, if it was a hardship area such as the equatorial tropics or so on. They gave you time and a half seniority towards retirement for every year, time and a half. That's one of the reasons. . .well, I didn't need to use it because Gulf was going to give me full retirement anyway but it was possible for me to retire quite early as a result of the time I'd spent abroad. I mentioned Ryman and Patterson, who were Continental executives before, because Gulf made these important farm out arrangements with Continental Oil, then the two of us joined up with the Coal Board. I also ran into a few people that you've already interviewed, W. D. C. Mackenzie I used to see time and again over in London, England.
- BC: Can you remember any of your get togethers? It doesn't necessarily have to be to do with oil but certainly, to meet someone from your past. . .
- SP: No, we usually met at some cocktail party or something like that you know, and exchanged thoughts and views. We'd meet socially once or twice but we weren't close friends. But he's a very fine fellow. In 1973 to '79 I came back home and there again, I renewed my acquaintance with George Relf. Bill Winterton at that time was the head of our law department, he's now Secretary of the company. Andy Janus, who I brought back to Calgary as a general manager out of the mineral company of production. He left after a year and became the senior Vice-President and eventually President of Petro Canada. And then has since left them and has joined Canadian Superior working under Arnie Nielsen.
- #131 BC: Arnie Nielsen is someone that you've known for. . .
- SP: I've known Arnie for many years, he and I have trained one another's kids. I'd hire his kids and he'd hire mine and we'd put them to work in our respective companies. Yes, I've got a great respect for Arnie and he's done a very fine job in the industry also.
- BC: Can you think of any stories about Mr. Nielsen that should be put down?
- SP: One that's sort of semi-personal, I don't know whether I should talk about things like this.
- BC: That's all right, certainly.
- SP: But these are for archives and they're sort of amusing. As I mentioned, in the springtime when his kid would need a job he'd phone me and when my kids needed a job I'd phone him. It just sort of evolved that way. Then eventually we took on a very fine girl geophysicist, or he. . . and I'll tell you how we took her on. He's since I believe, married her. But she was a geophysicist working for his company and when his first wife, he has many children, I just forget how many exactly, but when his first wife died, I think from cancer, Arnie was left alone with this large family. Some way or other he got courting one of his own geophysicists and he was President of the company. That was a little bit untoward he thought, because it could be easily misinterpreted by the staff if they saw him courting her. So he called me up one time and said, can you do me another favour.

He explained this situation to me and said, could you hire her as a geophysicist, then I'm courting somebody else that's not in my own employ. So I talked it over with Harry Carlyle, explained it all to Harry and said, if the girl's actually a good geophysicist, I don't see why we shouldn't do it if you've got a vacancy that you can put her in. So he hired this girl and the courtship continued for some years and now I understand they're married.

BC: Isn't that interesting.

SP: And I hope happily so. Because they're both very fine people, the girl that he married and he is too. Ed Lakusta was one of the top men in production when I came back. He's been sent to the U.S. where he worked in marketing as an experience broadening and left then, to come back and take Andy Janus's job as President of Petro Canada. Left Gulf in the States. And I suspect, I don't know this but I would suspect that he and Andy are close friends. It's quite possible that when Andy left and they said, who should we hire, that he might have even mentioned Ed. I wouldn't say that for sure but I'm just guessing. But they were close enough that that could easily have happened. But certainly Ed Lakusta is another Andy Janus, they're both northeast Edmonton Ukranian background stock and they've known one another for a long time. They're both very competent executives too, incidentally, both of them. Dan Matika is another one, a little junior to Ed but worked under Ed and Dan's one of the Vice-President's of Gulf now. And of course, I've mentioned Harry Carlyle. Keith McWalter took over from me and they elevated him to a President's job because they created a subsidiary company called Gulf Canada Incorporated. They hadn't seen fit to do this when I was in charge of exploration and production but it was a move in the right direction and Keith is a very competent executive. When they moved him in in the job I had they assured me that he was presidential material, in their opinion. It's possible that he might continue to go ahead in the company, as they have intended. During this same period of course, I got to know John Stoyek very well, who's President and Chief Executive Officer now, and J. C. Phillips, who took over from Clarence Shepherd. J. C. Phillips is Chairman of the Board but John Stoyek is President and Chief Executive Officer. During this same era, of course, Dome and Gulf were very active in the Beaufort Sea together, so we naturally ran into Bill Richards and Jack Gallagher a lot and did a lot of business with them because we drilled a lot of joint wells together and Harry Carlyle is still doing that today.

#198 BC: You've always been close friends with Mr. Gallagher have you not?

SP: Yes. I wouldn't say close personal friends because he's travelled in a financial level away above me, but yes, I've known him for many years and we've always been good friends. I know his wife and so on, and so does my wife know them. Ron Southern is another man that I know personally who's made a great contribution to the industry by making these big industrial camps and he's one of the largest firms in the world in that respect, and I think has made a great contribution as a Canadian to industry in general and to industry in Canada.

BC: He would have built one of Gulf's early plants. . .

SP: Yes, although I think United Trailer built our first one, the one I took up in the north

country. I didn't even know Ron then but I think Ron's worth mentioning, not because Gulf or I personally have dealt that much with him, but I do think he's done an outstanding job as a Canadian. I think Bob Blair is another one who's done an outstanding job as a Canadian for Nova. Peter Bawden in the drilling industry has done an outstanding job. Arnie Nielsen.

BC: Right. Did you work with Mr. Bawden closely at all?

SP: No. In the Conservative party a little. But I've known him a long time and have a great respect for him in what he's done in drilling. Knew him in Peace River before he really got started in drilling.

BC: Can you remember him up there, what was he like up there in Peace River?

SP: He was just a young buck then, he's a lot younger than I am. But I remember he was up there, I think his mother had a little money that maybe helped him get started but I'd say that much of the credit is just due to him.

BC: Was he drilling at that time?

SP: No, no, he was just working up there, in some job up there, I forget what it was doing but he was in Peace River. But I think that Jack Gallagher and to some degree Bill Richards, who's been one of his top officers, deserves a lot of credit for putting Canada on the scene and doing a lot to build up the company the way they did. Sure, they've maybe swallowed a fish bigger than they can handle, but I think you've got to give them great credit for having done a lot for the exploration industry in Canada. I think. . .

BC: In what way do you feel that they've done a lot because they've dared to try something different. . .?

SP: They've dared to be brave. They've maybe gone too brave and swallowed a fish bigger than they can handle, such as this Continental or Hudson's Bay Oil and Gas purchase and so on. But to a great degree, much of what's done in the Arctic Islands, was started by Dome. Much of what's been done in the Beaufort Sea has been due to Dome's aggressiveness. Gulf's been aggressive too but certainly Dome has been as aggressive or maybe even more so than Gulf in the Beaufort Sea. They've put out that drilling system. Gulf's now getting to a drilling system in the Beaufort Sea but Gallagher has had one several years ahead of Gulf. So I think that they, sure it's unfortunate that they've swallowed a fish bigger than they have and the Canadian public may now have to subsidize them to some degree by virtue of government support of Dome. I still think that Gallagher's done a great service to Canada and the oil industry in Canada. I think Dome has too, notwithstanding their problems today. I think Ron Southern's done a great job. And I think that Bob Blair has done a very outstanding job as one of the top Canadians, very canny Scot type Canadian, who's made a great impression on me and I think has done a wonderful job in Canada. That's about all I really have to say.

#255 BC: Just one last question as we wind it up Stan, looking back through your time in the oil patch, the oil patches, what do you look at as the most significant to you in your career, the most significant times or incidents?

SP: I think the general, the reef plays of Canada, the general reef plays from Leduc on through, Swan Hills and Zama, Rainbow, were the major things of influence to me as an

exploration man and are the areas that I was, as an executive and as an exploration man had a part to play in most and where much of the thrills of finding new fields and gas fields and oil fields, occurred.

BC: What do you feel about Alberta in the next few years, do you think that there are still new fields to find?

SP: Yes, but it's going to be much more expensive. In the way of conventional oil I don't think there are too many more giants to be found. I think there's a lot of gleanings. I think there's still oil to be found and a lot of oil is still in the files of the oil companies. Such as small oil discoveries and gas discoveries that were made in the 40's, the 50's and the early 60's when the price for crude oil and the price for natural gas was depressed, prior to '72, prior to the rise of OPEC. These were wells that were suspended or plugged and abandoned as failures because they weren't considered economic in light of the price of crude oil and natural gas. A lot of those wells have been forgotten and I'm sure that some of those could now, exploration could be renewed where some of those old discoveries occurred. And I'm sure that a lot of companies today are gleaning their files, going rifling through their files to find out what some of these old discoveries were that might then have been uneconomic that today would be considered economic. And to reopen some of those. So some of those are going to do it. But the big boomers, I think most of them have been found. I'm not saying there won't be the odd one but there sure aren't going to be many. There will be more oil found but not any great earth shaking amount in the way of conventional oil. I think there's still lots of conventional gas to be found. I think there's lots of gas yet. Canada is gas prone I think. And I think that we'll still continue to find lots more gas. Because a lot of places that you think of, well, you're just going to find some. So I think there's still more gas to be found, limited amounts of conventional oil. I think there's practically unlimited amounts of heavy oil. And I think the countries and companies are going more and more to heavy oil. In the way of Lloydminster type heavy oil, Athabasca tar sand heavy oil, all of it's going to have to be needed in the end.

BC: Thank you very much for your patience, in talking with me these several occasions Mr. Pearson, it's been very edifying and I know that your recollections will be of great use to other people.

SP: Thank you Betty, it's been a joy to be here and to be interviewed by an expert such as yourself. You've been most kind.