

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Gerry Sykes

INTERVIEWER: Tina Crossfield

DATE: August 2001

TC: Today is August 13th, 2001 and we are with Mr. Gerry Sykes at his home at 1681 Evergreen Hill S.W. and my name is Tina Crossfield.

GS: I am Gerry Sykes and I hope you can understand what I'm saying.

TC: So, Mr. Sykes, can you tell me where you were born and when?

GS: I was born on November 1st, 1930 in the Hedley Mine Hospital. I was the last baby born in that hospital, since they knew that my mother was expecting and they kept it open for my arrival. My mother was Bernice Edward Sykes, my father was James Struthers Sykes. At the time my dad was in Keremeos helping his father out in an orchard that our family had at that time. My dad played hocked with the Swift Current Indians and also was part of a baseball battery that got paid for going with different teams in baseball tournaments. Shortly after I was born he got a job with Macdonald's Consolidated Wholesale in Swift Current. We lived in Swift Current until 1941. Me dad had joined the Army in 1939 and we went to Moose Jaw to be with him. Shortly after we arrived in Moose Jaw my dad was transferred somewhere else and my mother decided that the family was going to stay. I have a sister, Virginia, who is 6 years younger than myself and she is married to Allen Hunter, a well known Calgary lawyer. I arrived in Moose Jaw, I don't remember much of what happened in Swift Current other than going to school and that, for a short period of time, I had rheumatic fever and could not walk. However, when we moved to Moose Jaw I was into grade 5 and I went to elementary school at Empire School. I continued my education in Moose Jaw until part way through Grade 11 at Central Collegiate Institute. At that time my dad, this would be in 1946, my dad was entering into a purchase of the family orchard at Keremeos and I went off to Keremeos by myself, to stay with my grandmother who had the orchard. So my dad finally got out of the Army and came to Keremeos and my mother came shortly after I was out there. In Moose Jaw I was active in organized hockey until the time I left, Army Cadets and the Reserve Army. I was in Grade 11 when I left Moose Jaw, which was a very academic high school, where I was taking . . . so 3 languages was basic for the form I was in. They put me in Grade 12 when I went to Keremeos and I graduated from Keremeos and then went to Grade 13, which in British Columbia was first year university, since I was too young to go to UBC in Vancouver. So I spent my first year in Penticton. Then I spent '48/'49, '49/'50, and '50/'51 at UBC where I took a Bachelor of Arts in pure Science with majors in Maths and Physics. During the time I was going to university I worked first with a government survey crew and then for 3 summers, the Nickle Plate Mine at Hedley. I was on the survey crew as, I guess you would call it rodman, although we didn't have any rods when you worked underground. It was a good experience.

#054 TC: Can you describe that underground experience? What was it like?

GS: Working underground, it was a controlled temperature. And of course, I was only there in the summertime and I worked the odd time at Christmas time because the mine manager used to come down to Keremeos because they were always short of people at the mine during Christmas and I, being in the survey crew, knew the mine. So they gave me funny little jobs that meant beating people to different places to get ore out of the different ore bodies. The temperature underground is very even in that mine, it's not true of all mines but in that mine it was very even and it was clean. It was a gold mine, the gold was in arseno??? pyrite and the mine was up on the Nickle Plate Mountain but the mill was down below. Occasionally what we surveyed, the surveyor would have the transit, we used the chain for distance and what we'd do is hang pegs off the ceiling where we'd drill a hole with a light drill, pound a wooden peg in there and hang a little spat and then I'd hang the plumb bomb and the instrument man would line up on that to get the angles. So we did all of this sort of stuff and we did things like measuring the amount on some of the drifts. They were on a footage basis so we would be responsible for measuring those because the mines would get bonus. We also surveyed some of the stokes because some of the stokes, the miners were on a bonus system so what we did was calculate out the amount of ore on the stoke floor so that they could get their monthly bonus cheques. And when the surveyor went on holidays I had the job of surveying, which was relatively simple, I didn't have to do anything detailed. And of course, when we finished coming up out of the mine we would go to the office. We always came up early because we had to be out of there before they blasted. One time we were out in an old part of the mine, we walked into an area which they were going to bulldoze, which means they had dynamite covered with clay on top and wires leading out to make a blast. We're alive today because one of the miners said, I wonder where those surveyors are and went back. We were in the midst of that. So in the mine people looked after people, you just didn't do things willy nilly. It was a good place to work. One time I was surveying and I had one of the clerks out of the office as my helper and we got in a situation where we came across a man who had cut his hand in one of the ore chutes and his hand was really hanging there. So my helper fainted and I ran to the mine, to where the skid came down, and rang the emergency bell which was 8 short signals and then followed by the signal for the stoke we were at. Which meant the first car would stop there. And I went to the phone and told them what the emergency was. So I opened the chute door and hauled this guy over and loaded him on and left my partner on the ground fainting and they met me on the next level, and transferred, with all the first aid people and whatnot. But kind of an experience that I had, but that was the only bad experience in the mine that I saw anyway, hurt. So it was a very nice job. And the experience I got from surveying I used in the geophysical industry. I can say, not much about university but I was hired by Ted Rozsa who, at that time, had Frontier Geophysical. Ted had started Frontier, I believe in 1949 and he'd hired me, you know, the hiring season at university is in the early spring, of 1951. I went to work for Frontier Geophysical in May of 1951. I spent one month in the office in Calgary then was out on a horseback crew, Party Managed by Sandy Macdonald. We spent the summer up in the Burnt Timber area. It was very interesting since we soon learned that

we should carry the instruments and the only thing we let the horses pack was the dynamite. And we hand augured some of the holes. And we had snow every month of the year. So in September

#112 we finally came out and we went on a wheel crew in Bow Island and in December I went to another crew in Tofield, which was the crew, Party 3, which was just starting. The instrumentations of the day that Frontier used was SIE, P-11's which had all the components in cans, except for the tubes which were out. When we were in the foothills horseback crew we developed the film with a box which had black sleeves on much like they do in . . . you did it all out of sight and you hoped like heck the records came out developed well. And when we developed the records we carried a little stove and we had to heat the developer and the fixer there. They weren't always that great. On the wheel crews though, we could develop them under red lights so the quality of the data was better.

#127 TC: Under heat lights?

GS: Red lights, yes. You had developer, a can of fixer and then a can of water to wash.

TC: And it was a light sensitive procedure so it was done in the dark?

GS: Yes, it was done in the dark. So when we were in the field, on a horseback crew you were doing everything blind because you couldn't see what you were doing. In the truck units you could see what you were doing. Frontier at that time, and I was being trained as a JO and an observer, they wanted all the people to be, some of the people that they hired went out as surveyors, it depended on your background. But you weren't going to stay in that kind of a position, you were just going through the training position. That doesn't happen today.

TC: Working with horses in the back country must have been quite challenging too.

GS: Yes. A fellow by the name of Stan Burrow had this, this was his first job and the horses weren't really that good. He had a few good horses but some of them were kind of raunchy. His dad was. . he really looked after the horses. But I'd been in Keremeos and I had friends there that had horses that they used for hunting, so I was well aware what a good horse was. Keremeos was kind of an interesting place, in those days on the Indian Reserve south of town they had a rodeo every Sunday. So horses were not uncommon. As a matter of fact, my friend, Wendell Clifton, whose dad had the horses, he and I used to come into town and try and lasso the girls on the main street. So it was fun. But that's the way it was.

TC: Did the instruments get jiggled around a lot?

GS: The instruments, when we packed them on horses they were in cases, wooden cases surrounded by foam. But we were nervous about the horses so what we did was carry them by hand and they were aluminum cases that had waterproof covers on so you could carry them. We didn't have problems from that point of view.

TC: And you packed the dynamite on the horses, that's what you said?

GS: Yes. It was too heavy to carry any other way. Later in that crew we had a little tractor pulling a doghouse. But that was at the last part of that time period. So after Tofield, the winter of 1952 I was up in Virginia Hills with Party 3 on a Gulf contract. One of the

supervisors was Harry Carlyle, who's still alive and I see occasionally and he ended up at one time as President of Gulf Canada. The Party Chief on the crew was Dick Baillie. So we spent the winter in Virginia Hills and we were doing continuous profiling.

#167 TC: Where is Virginia Hills?

GS: It's south of Slave Lake. I call it Virginia Hills as a general area. Then in the spring, party 3 went to Ponoka. Actually I shouldn't say that, we went to Camrose on a mile correlation job for Gulf. We had an instrument truck and I was not the observer on that crew. I was now in the office as the assistant computer. The instrument truck was a wheeled truck with a cab and was set up as a typical seismic truck of the era. The mile correlation, what we did is, we drilled a hole on the corner of every section and shot it and we used short cables that were hand reels out. Then sometimes we did continuous profiling but usually it was just the short cable. We started in Camrose and then we moved to Ponoka. Like I said, I was their computer in the office at that time. The seismic crews of that day, what we had was, the Party Chief ran the crew, there was no Party Manager, the Party Chief ran the crew and there was an assistant party chief or chief computer, which was my job and then there was another computer, which in these days would be called technicians I presume. I met my wife Joyce in Ponoka, where she worked in the telephone office. And of interest, 5 fellows married girls from the Ponoka telephone office that year. Didn't all get married the same day but that was interesting.

#194 TC: And were you one of those 5 guys?

GS: I was one of those five.

TC: As assistant party chief/computer, you would take over for the Party Chief if he wasn't there or. . .?

GS: Yes, I would but most of the time he was there. The only time I can remember taking over for an extended period was when the Party Chief went and got married. And Dick Baillie got married when we were in Olds. So the field crew at that time, we had contract drills, usually two of them, digging 60' holes. We had a surveyor and a rodman and most of the time they either used transit or. . . I can't remember the survey thing, I've never used one, anyway, a plane table and they had an alidade on the plane table. Then, if you were doing continuous profiling you would have two more people on the survey crew that were chaining and you chained out, you flagged the line.

TC: Can you explain that a big more, what chain out means?

GS: If you're shooting 1/3 of a mile you had to chain out the third of a mile and put placing for the cables and where the holes would be. Because you had to drill the holes opposite the shot put station. So they would chain that out. That wasn't required if you were doing mile correlation because you'd just put a stake where you wanted it drilled. But when you were doing continuous profiling, they chained out, sometimes chained all the stations in too. So that's how you knew where you were because the surveyor would then survey in where he had flagged the different stations in between the shot points. Then the field crew consisted of an observer, a junior observer, a shooter and 2 or 3 juggies. Like I said, the cables were either laid by hand reels or a reel on the back of the instrument truck. Then

things changed when we went to magnetic tape, which happened in about 1954, '55 then the Party Chief and the computers were in Calgary and a Party Manager managed the field operations. And that's what happens today. It was interesting in the mile correlation project we did for Gulf and the continuous profiling. We printed a copy and worked on that and did the interpretation here and every day we sent the originals to Pittsburgh which was Gulf's headquarters and that's where they did all the interpretation.

#236 TC: So was the Party Manager managing all the field ops from an office?

GS: The Party Chief did it from the office and we had field ops in every town we were in. But when we went to tape, where we were actually . . . then we moved the party chief and the computers into Calgary and a Party Manager came on the crew to run the crew. There are a lot of people you're going to be interviewing, like Warner Logan was involved with Western Geophysical forever almost and he can more explain to you what happened then.

TC: And all this time you were still with Frontier?

GS: Yes. I was with Frontier till 1960. I would add that Joyce and I were married in the spring of 1954 in Ponoka. I was a Party Chief and I took a crew to Saskatchewan where we did Kenora, Wadena and Lucky Lake. That was also a Gulf crew. Between that and party 3 I had a slimhole crew for awhile where we were doing velocity studies on a technique developed by Ted Rozsa. And that was for Shell and we'd drill slimholes, 900 - 1,800' and shoot them for velocity as well as obtain regular seismic records at those locations. With this crew, which was in 1953-'54 we were in Gleichen and Drumheller and Rocky Mountain House.

TC: Can you describe your living conditions at the time?

GS: In the bush camps, the camps were not like the camps of today. When we were up in the Virginia Hills we were in, that camp was sleds and we towed them with cats and they were 4 men bunks, there were 2 bunks on one side and 2 bunks on the other and they were small. Then there was a kitchen and whatnot and there was a washroom with a bath room and whatnot. Living conditions when you were out in the field, out in the plains, you found places where you could either room or get room and board. Some places were better than others, that's the way it was. Most people wouldn't live like that today, as a matter of fact, seismic crews don't live like that today.

TC: And after you married?

GS: When we got married we were in Lucky Lake, or Wadena, Kenora and Wadena and we just rented a place. And when we were in Wadena we lived in a house that had no windows, it was sort of dirty. The whole yard was dirty and one of the drillers on our crew had his trailer parked in there, it was just outside of town. Well, I don't think most people would live under those conditions today but that was yesterday. Didn't hurt anybody. And then in Lucky Lake, we were in a little room place above a Chinese restaurant and it was not good. So Joyce, during her time in the phone office had saved up \$600 so we used that as a down payment and we went to Regina and bought a trailer and hauled it back. So I had a rich wife with \$600.

#291 TC: That was still a lot of money in those days.

GS: Yes, the trailer cost about, we financed the rest of it, \$3,300 or \$3,200. So that was the down payment on it. Like I said, I stayed with Frontier until 1960. I will say one thing about Frontier, Ted Rozsa and Wilf Baillie who Ted had brought in as a partner, I think in '52 or '53, they really believed in updating the technology. In, I think it was 1954, that we bought a Reynolds plotter. What happened with the Reynolds plotter is, when we shot a record in the field, the camera was set up to record the wiggle traces and the variable density trace, alternate traces. What happened is, when that data got to Calgary, when those records got to Calgary we filmed them and the Reynolds plotter could do the statics which were easy but you had to be channelized. So that variable density would be channelized and they had plastic cams to take the movement out. Now geophysicists will understand this but not very many others. So the real problem is, we always had to take out the move out because when you shoot a hole here and you've got a spread out here, the stuff that goes down and reflects back up comes back with no move out, no time delay. But when you go down here, and come back here, well, you've got a time delay and that's the move out correction you have to make for that travel time. And you have elevation and static corrections because everything is plotted to a datum. That is handled relatively easily but move out . . .so we actually filmed our seismic sections on the Reynolds plotter, we made all these corrections on the plotter. That was quite ingenious. The next year though, 1955 was the year that we went to tape. Frontier went to tape and they were both FM and AM tapes. What we did is Frontier bought a play back system to handle magnetic tapes, it was called an SIE-MS 600. The significance of that was it had a ??? delay system that handled move outs. And you could handle the elevation and datum corrections very easily just by reostats but the ??? delay system allowed you to handle the move out. It was crude by today's standards but it was far superior to what we had been doing because we had to do it all by hand. But as for Joyce and I . . . well, I'll continue on with that. I thought that Ted always was really up to date in technology and it was really very interesting working for him.

#345 TC: Is he still living?

GS: Yes, he is. He has a company called Rozsa Oil and I think Ted still does his own geophysics. He's a very wealthy man, very wealthy. He's given millions to the Calgary Philharmonic and other things, like Foothills Hospital. He put a music centre in Michigan Tech where he graduated, I think he gave them \$20 million to build a music centre there. But he's very smart, very dedicated and really a good person to work for.

TC: And Mr. Baillie?

GS: Wilf.

TC: Wilf. That's not Dick Baillie.

GS: No, that's not Dick Baillie. Wilf and Ted worked for Shell, that's the connection. Dick worked for Hudson Bay Mining and Smelting and that's where he came from to join Frontier. Wilf Baillie has been interviewed in this program and Ted Rozsa has been interviewed many, many times. They were the seasoned people. We all started out learning the trade. During my career with Frontier I had a foothills crew the summer of 1955, which I Party Managed, which was in north of the Burnt Timber area and it was

front north to the Limestone Mountain area. I also was up in the Northwest Territories one winter where we had the field crew and the interpretation crew in the Territories. It was west of Hay River, between Hay River and Fort Smith on a job being done for the Rockefeller people. The fellow the represented Rockefeller's here at that time was John Lay, who recently passed away. He was a well known Calgary consultant. Then I got involved with crews for Pan American, which is now Amoco and did a combine reflection, refraction job in the foothills. South of Rocky Mountain House down to Calgary and also, in the Castle River area and south, near Waterton. Then in 1959-'60 I worked on a crew, I was the Party Chief on these crews doing lead interpretation, in the Crossfield area. In 1960 Ted bought out Wilf's interests and sold Frontier to the 3 supervisors, Dick Baillie, Sandy Macdonald and Ed Rutledge. I had worked under those supervisors on several crews. At that time, actually when that sort of happened I was working in Pan American's office doing interpretation on some foothills data. I decided that the industry was going away from interpretation in the field and the seismic crews were all just going to be operating field operations and I rather enjoyed the interpretation so I left. I went to a company called Canberra Oil Company which was a wholly owned subsidiary of the Superior Oil Company, which then was headquartered in Los Angeles. So I worked for Canberra until 1962 in Calgary and then they closed Canberra down and they transferred me and others to the U.S. and I was transferred to Casper, Wyoming and worked for the parent company.

#426 TC: What was your position with Canberra?

GS: I was intermediate geophysicist. I had 9-10 years of experience and that was an intermediate geophysicist in those days. I worked in Wyoming, I took charge of the south Big Horn Basin where we had a seismic crew working, so I ran the seismic crew and did the interpretation for the south Big Horn. In the spring of 1963 I was transferred back to Calgary, to the Calgary and Edmonton Corporation that Superior had purchased about 6 months previous. Hoyt Kane??? was the vice-President of exploration and Dick Siegfried was the chief geophysicist. Then in approximately 1965 C & E was merged into Canadian Superior and Art Thalmer??? was then the President, Hoyt Kane was the VP-X and Dick Siegfried was the chief geophysicist. I remained with Canadian Superior until January 1st, 1981 when I took early retirement. I had been appointed chief geophysicist of Canadian Superior in 1973. Canadian Superior had really grown during the 20 1/2 years that I spent with them. We really went into geophysics more, particularly seismic during that period. We got involved with the Beaufort Sea, foothills exploration, north Zama, well, northern Alberta in general and of course, we had major holding in central and southern Alberta. We also had marine operations in the Beaufort and also off the east coast, where we ran seismic crews. In 1970 Canadian Superior decided to go international. It was very interesting because we were giving technical presentations to the Board of Directors and they'd decided to do this. They said, there's no time limit, you are going to do international exploration, just stick with it. It was almost that blunt when they came out and said it. So in 1970 I got involved with the first one that we did, we joined with Home Oil Company and others in exploration off the Malta shelf.

End of tape.

Tape 1 Side 2

TC: Okay, the Malta shelf.

GS: The Malta shelf yes. I didn't got to Malta, Home ran the operation, they were the operator. Since Home Oil and Canadian Superior were rather large companies, we each had a Maltese graduate student on our staff as training during that period and I did all the interpretation on that job. We drilled a well and it was dry. Shell drilled a couple of wells, they were dry. Aquitaine drilled a well, it was dry. The problem I think, was, in later years when we had done vast surveys of seismic through the whole Mediterranean, we realized that was not the place to look for petroleum. In retrospect, had we done all the homework first, maybe, but we were just getting into international exploration, as was Home. So we did the right thing but the Malta bank was not the place to be. From that time on I got involved in quite a bit of work internationally. What we did is, Canadian Superior had Dick Siegfried as chief geophysicist, John Horton was a senior geophysicist, I was a senior geophysicist and Lloyd Shulty was a senior geophysicist. What Canadian Superior was, we didn't set up district offices all over the world or anything like that, what we did is we flew people and we did evaluation and decided whether to join or not to join an operation. And indeed, the only time we actually put people on the ground is when we operated somewhere in the world. Then we would open an office and put somebody there. But we always flew in the technical staff for that part of the time and flew it back out. The reason for that was because we paid half of the Superior's London office and we were involved in the exploration with Superior in the North Sea. The costs of the London office were astronomical and Mr. Feldmeyer, who knew the value of a dollar said, no, we're going to explore the smart way, keep it from costing. What it meant is flying people here, there and everywhere but it kept your costs low compared to putting people on the ground. So it was interesting.

#059 TC: How long would those shifts last, if you flew in a crew?

GS: Well no, what we would do is we'd do evaluations and then we'd get involved. I went to France to do an evaluation on an area offshore Libya. I spent I think in total, 10 days, which would be 8 working days, doing that evaluation. Then I flew back to London. Where I did the evaluation was Aquitaine's office in ???, I did my evaluation, I flew to London, I copied all the maps, shipped them by air. In the meantime I'd already written a detailed evaluation of what I wanted to do and the parameters so our economists could look at it. The Telex was 8' long that I sent from the hotel. But that's what you did. We didn't enter into the venture because though you could find economic oil, the deal wasn't good enough for us to make money. But that's the way it goes, that's what you do. Sometimes you get involved with something. Joyce and I were on one international deal where we got involved in the Arabian Gulf. Joyce and I were going to London on a holiday. I'd been through London on other things. So they called me in and said, Gerry, would you go to Rotterdam and look at this play for me. So to do that they had to pay

Joyce and my way. They always flew us 1st Class, so Joyce and I went economy like we were going to go on our holiday anyway and we flew to Rotterdam. So after that the company said, you know, your 1st Class is worth more than your two economy tickets, you don't want the money, 2 or 3 hundred dollars back and I said, no. We went to Rotterdam and we arrived in Rotterdam at night, we had problems getting a room but we had one when we got there but the girls spent two hours on the teletype trying to get reservations because Milan and Rotterdam had a big soccer game. Anyway, the fellow that was going to look at this play with us, I was the geophysicist, the geologist came from a company called SIR, Societe, Italiani, Rellini, out of Milan. They were out partners in the venture on Malta. So he was going to do the geology and I was doing the geophysics. So Joyce got to see Rotterdam. Then when that was through we went back to London to have our vacation.

TC: Where was your permanent residence?

GS: Calgary. What happens is that you would work, you would be doing your thing, even when I was chief geophysicist I would still do a lot of travelling. But you really did your job here and then every once in awhile you'd take a break and go on one of these evaluations. Now, I didn't go out and ride a boat, like, the Rotterdam trip involved a play in Umalgwain??? and Jarja???, emirates in the Arabian Gulf. We took that deal and we shot a lot of seismic. When the deal was made I was in Calgary, Dick Siegfried and Hoyt were in and our land people, Bob Schrader were in London making the deal. I got a phone call at home from Dick saying, we've signed the deal on Umalgwain and Jarja. The sheiks were still in there, he said, you better get a seismic boat. So I got a seismic boat, moved it out of Singapore and I told our other partner, Amerata who we were also involved with in the deal that I had signed up a boat and I wanted to get all the seismic I could do for that boat because I was paying a premium to ship that boat up there. So that's what we did. So I phoned Dick back in London and said, the seismic vessel is sailing on the tide tomorrow. That's how you did things. Then I had to spend several more days trying to line up enough work to pay for that ???, \$1,000 U.S. moving fee. But that's what you did, that's part of the job.

#109 TC: So how would you go about finding a seismic boat?

GS: There's lots of seismic contractors. When you go international you always talk to people, you find out, I kept track of where all the seismic vessels that I knew were. That's what you do is you just call people and say, have you got a vessel available for this period of time for this project. That's part of dealing in the international world. It's like when we're operating in western Canada you would talk to seismic contractors all the time, or they'd talk to you. So you'd know when you could get a seismic crew and sign it up. It doesn't matter whether it's a land crew or a marine crew, just keep a track of where all those people are. That's the job of a chief geophysicist, to know all that. But that's just phone calls, telex's maybe, phone calls. And you got help from people and your partners. We didn't always run these things ourselves, we'd have partners that did some of that. So that's the advantage of having partners, what you'd try to do is find good partners, they could operate one thing and you would operate another. The problem with operating is it

took full time people, whether they were in Calgary or somewhere else. So what you wanted to do is when you had another operation going, to do the interpretation on a seismic operation, that somebody else operated, really basically was, an interpreter and a technician. When you operated one it was a lot different because then you had your land people, you had to have drilling people, you had to have your seismic field people available. If you have a marine boat running, that's an expensive operation, you have a supervisor on that boat. Same as the land crew. So you have a lot of people tied up in an operating situation, so you don't want to operate too many things or you run out of people or you just do a poor job.

TC: So you really have to focus on what the priorities are, where it is you want to go and who it is you want involved with that contract.

GS: Yes. And you're always looking for partners. Different ventures. I was involved in a lot of seismic off Tunisia and ??? was the operator there and most of the meetings were held in Houston but occasionally I'd have to go to Tunisia, not very often. But I did all the interpretation.

TC: Was it difficult making the switch from land interpretation to marine?

GS: No. As a matter of fact, ??? thought that, because as chief geophysicist you're also responsible for the interpretation of people working for you. And I noticed that whenever we hired somebody that had international experience, i.e. looking for the big play they had a really hard time going down. When you went from western Canada where things were nitty gritty you had a problem getting up into the big picture but it wasn't as hard. And good interpreters can switch back and forth, providing they've been into the little, small stuff first. I never found one that could do the big picture and move down into the small picture. That's a real problem. You just work at it and that's all you do. Part of my job, as chief geophysicist I used to go around and visit all the geologists, western Canada, internationally, to see what they were working on. Can we do something with our seismic, can we help you develop the prospects that are drillable. So that's what you do. We got heavily into modelling and I sort of led that and I had a fellow that we had hired from Western by the name of Percy Schect, who was a good mathematician. We started doing the modelling thing, as a matter of fact one of my prized fields I found was because we had modelled and we had learned how to do things and we knew what we were looking for and when we saw it, that was it. So what you really try to do, the chief geophysicist should be looking through all the technology. At Canadian Superior when I was there, I was chief geophysicist, I didn't have to look after the day to day things that the geophysicists were working on from the point of view of where they were working, whatever. But I would look at the plays they were working on and see that the interpretation techniques were okay, that was my job. And then all the technology, all the training, all the field operations. And what you do, you have people, I mean I'd have a guy looking after field operations as well and he was always in the office next door. Because field operations were always very expensive, whether they be marine or land so you always want to keep that. And then my secretary kept the books so that we always knew where we were. The accounting department used to come down and do their quarterlies from my stuff because we were up to date in what we had spent money or

committed to spend money. And that's part of it. And then the data trading, I had a fellow that handled all the data, bought and sold data and whatnot. And then we had people doing modelling, we had people like research geophysicists, we had people that did the processing, or supervised the processing. When I was there we never had a processing centre because it just didn't pay. You kept books saying how much did I spend processing, how much did our partners spend, what is our percentage, can you afford a processing centre. No. So what you do though is have people monitoring all those jobs in the processing. It's not just an administrative job, it's sort of a supervisory job. The big thing is keeping your technology up.

#186 TC: Were there a lot of guys that perhaps had no formal education, I'm thinking about your pure science background, you had a graduate degree but. . .?

GS: What happened when I graduated out of university, somebody said why didn't you graduate out of UBC in science. Well, a bachelor of science the only thing there was a nurse. We had no geophysics degree. There was a geophysics degree in Toronto which was mainly for mining, which was gravity magnetics, mostly magnetics. And then the other two schools were Colorado School of Mines and St. Louis University. But things changed. Now we all have universities with geophysics degrees and teach courses in geophysics. That wasn't there when I went through college. And then, in the early days, one of our good geophysicists at Canadian Superior had no degree at all. He trained himself. There were actually two of them and you had to guide them, in the later years, through the technology but being an interpreter and finding the oil and gas, they were good. But they didn't really have the background to go through all the technology so you had to guide them through that. Nowadays of course, they want people with Master and PhD's and who knows. But those 2 fellows I talk about would turn out 5 times the work that those people would do. Because they were totally dedicated to doing it. And it's a different thing. What we did is, in the early days we picked everything, hand picked them from records, we put them together, correlated from the records, then we had paper sections, the Reynolds plotter sections and then the magnetic computer plots where you had sections. Then came the era of work stations. And even in, like the magnetic tapes, we went from analogue AM and FM tapes, to digital tapes, digital tapes came into Canada I think, in about '64, '65. We're totally digital now. But technology changes. I'm kind of unique in that when I started my career, along with a lot of people you've probably talked to because we saw the whole spectrum of technology up to now. When I started you had to be out in the field, that's part of your training. Nowadays they don't do that. People of my era saw the whole spectrum of technology. I still go to the conventions and I still take the odd seminar. I go to both the geological convention here in Calgary and the geophysical convention and I take a few seminars every year and I have clipping files of what's going on in oil and gas around the world. I'm still a member of the Professional Society of Exploration Geophysicists so I read all that technical stuff. What I do is take the articles I want and I throw the rest of it away, and I file them. But I still keep up with all what's going on, particularly where it's going on, what's happening in the oil business because I'm interested. Now, after Canadian Superior I should get on, I

went to ICG. Joyce and I had taken a trip, I had gone to make the decision, late '80 my boss, the Vice-President told me to take over the interpretation in the Dominican Republic and so I did. That wasn't normal but when an executive order comes to do something. . . so I did that. Anyway, we went down and presented our findings to the government in the Dominican Republic and Joyce and I were going to New Zealand and Fiji just shortly after I got back. I had one day after I got back from the Dominican Republic. I had recommended not drilling a well on the Dominican Republic play but the company wanted to drill it. So you don't fight city hall. Anyway we went to New Zealand and had a wonderful trip and on Fiji, sitting on the beach watching the breakers roll over the reef I decided I was going to retire. I had an offer from Dick Siegfried at that time, who had been the Vice-President, had gone over as group President for ICG Resources and wanted me to join him. So I decided to do that. Canadian Superior at that time was getting very large, almost bureaucratic and there was about 35 professional people in the geophysical department and probably another 35 or 40 technicians and other support people. And if your interest is in other things, you know, finding oil and gas and doing the things and following the technology rather than being a straight administrator. I said, time to get out. So I went over to ICG and I stayed with them. I told them when I went over there that I was only going to be there. . . . ICG is this little, they still have parts of it left. ICG Resources, it was called Inter City Gas is what ICG stands for. So I went over there as chief geophysicist and I also ended up doing. . and then I hired somebody to do that and I was international exploration manager because we were doing a lot of work in the U.S. and out of a suitcase. Like, every month, fly to Houston or to Dallas, to Midland, Texas and home and then occasionally go down to Denver. I worked on some stuff in the Gulf Coast and south Texas and in New Mexico, there's a string of places we worked. Wyoming, Nepata River basin and also in Montana and North Dakota. But they were little things. And then I also did work on things in western Canada as well. I looked at really, a couple of international plays for them, one of which was very tempting. I did a lot of research on that because the well was going to be about a \$20 million well and the rig would have to go up the Amazon. It was in Peru. What I did is I researched that for weeks, I finally told my boss, the risk is too great. And the company, when I turned the deal down the company said, you know twice as much as we do about it. I said, I should because I'd looked at that play when Sun had the play and this Union Texas was the one that took it, they got Texaco I think, to go in with them. But it just was, if I'd been with Canadian Superior I might have said, it's a gamble but it's very high risk. With ICG they couldn't afford that risk and you had to make those decisions. I've worked everywhere in Canada, I've seen every play going but I don't know whether you want me to list where I've worked.

#298 TC: Could you tell me perhaps, what you feel your greatest contributions have been?

GS: I think that I brought, during my career the biggest contribution was bringing Canadian Superior into the technological era, particularly the modelling. As to economic achievements and I outlined these things. When I was working for Frontier I did the

interpretation in the Crossfield area for Pan American. Bill Allison was Pan American supervisor and Ed Rutledge was Frontier's supervisor but it was my interpretation. That became the Crossfield, Elkton gas field, which is significant. I would say the north Zama oil fields, when I was with Canadian Superior. What happened is Lloyd Shulty worked Rainbow and I worked north Zama. One time, after I'd left Canadian Superior I was at a party and somebody said to me, you're famous. I said, why, and they said, well, at Canadian Superior, the maps of north Zama are all yours. I said, do you realize that those were all done by hand, all the data interpretation. And I was lucky to get a record section over that location before we drilled. What happened at north Zama we were with Dome Provo and Canadian Superior. Canadian Superior had 50%. We both operated crews there and they had two drilling rigs but we were partners. So we would meet and at that time Canadian Superior was in the Britannia building and Dome was right across the alley from us. So we would meet to bid on things and we would meet to decide on well locations and stuff like that. But at one time I was receiving. . now on those land blocks we were with Dome Provo but we were with other people in different other plays in north Zama but at one time I counted up one week that I was getting data from 16 seismic crews. 2 of them were company operated, 2 of them were Dome operated which we were putting out, and the others were other people operated and spec surveys and whatever. So that was quite interesting. Then also with Canadian Superior, north Zama was '66, '67 and in, I think, about the same time I was responsible for the discovery of the Chairhill??? and Alexis oil fields in central Alberta. That was my daily whack. An interesting story about that with the Chairhill pool, in fact, was a big pool. In fact we had a block of land in there and our geologists always said, there's a dolomitization along this unconforming front, which is Mississippian Banff Carbonate. The dolomitization runs parallel to the erosional edge. So we drilled one on that basis but we didn't drill the anomaly that Dick Siegfried and I liked. So one was a dry hole so our Vice-President said, farm it. So we got in a fellow by the name of Don Quinn with Texas Crude and he wanted a piece of this and we showed him the seismic and Don said, where would you drill and I pointed right there and Dick pointed right there. When we drilled that location, that was the discovery well for the Chairhill pool. I don't know how many millions of barrels were in it. And then from that program we went in and found the Alexis oil field as well. They found some other stuff but it was small potatoes, but those were good size pools. The two that I'm really proud of, I told you about the one, the Taber north oil field, while I was with Canadian Superior. I found this using technology developed within the company. There was another pool that had been discovered, not by seismic, called Grand Forks. And there was a crappy line going across it that I reprocessed and reprocessed and finally found out, and I modelled the Grand Forks field so I knew what I would find on seismic. Finally the record data quality down there is very bad and we had this one dynamite line across Grand Forks at the time. And we processed it and Percy Schect did a hell of a job on it but we processed it and there sitting there, was what we modelled it to look like. So what happened is we had taken a land deal, we had acreage down there and a land deal or seismic option from a small company that was out of somewhere around Lethbridge, someplace like that, Barron's Oil was the name of the company. Anyway, so we had shot

a couple of lines and I tell you, we were busy doing things all over the place. So Don Parkhill who was the chief landman phoned me up and he said, Sykes, we've got to make a decision on drilling this Barron's land, where we had an option. I said, I'll take the record sections home tonight

#384 and I looked at it and I said, by god, that's what I want to drill. So I came the next morning and I said to Parkhill, exercise the option. Then I went to my boss. And I showed him and he said, Sykes, you did the right thing. And we drilled it and I can remember, I was in Houston at a course that Superior put on and we were at a hotel, the Galleria, in one of the rooms. One of the fellows from the hotel knocked on the door and he said, is Mr. Sykes here and I said, yes, he said, they want you to take a phone call but not here, go up to your room and take the phone call. So I went up, I was a hero, 92' of oil, 28% porosity, it really was a great find. What was great about it is, it was found for the right reasons. I guess the other big major thing I did was the Joffre, Dietry oil pool, there's a piece of rock there that the company gave me, in my office. We had taken a deal, we acquired the use of a big ??? package and we put a partnership together. So Harvey Robinson, who had his own company was the geologist and Harvey and I had worked together at Canberra Oil Company, he's a really great geologist. And I did the geophysics. I had another geophysicist working with us in this project because it was massive, we had about 60,000 kilometres of seismic I think, something like that. So one day I took a look at one of the sections, I said, gee, that looks interesting. So I took it to Harvey and I calculated how high the seismic anomaly was and the only thing we could trust was the Wabuman???. And I said to Harvey, that's only about 45' high where it was and Harvey took a look at it and said, let me do some geological work. He found out that in that area off regional, the Wabuman was already 50-60' high. So we bought the land, \$2,000 a hectare and we drilled a discovery and there was 323' of pay in a D-3 pinnacle reef. I don't know whether they've recovered it all yet but it was supposed to have been recovered 12 million barrels of oil the well cost \$550,000 to drill and our seismic package, I think we spent \$100,000. Then we really went and spent the money. And one of the things was, that was found on a piece of the spectatum???, there were 19 other lines after we had made this, had crossed that anomaly and nobody had looked at it. And I often cite that, that is, if you believe the seismic alone you wouldn't do it, what you did is you coordinated with the geologist into what he was doing and between the two of us, that came out to be a very drillable prospect and a very successful one. But that's sort of the combination. Seismic didn't tell the whole tale and geology didn't tell the whole tale but put the two together, that was the story. Now, like I told you, those are things that I can remember, there are lots of other things where I was part of a successful venture. For instance, the Raving Gulf one, which Lloyd Shulty did most of the work,, I did all the initial evaluation but after the seismic crew had gone through, he did it. But we drilled a well, 5,500 barrels a day. But when oil was \$1.75 a barrel that's not economic, we poured the cement to it. Somebody eventually came and developed that pool when oil was \$22 a barrel. It all depends on economics what you can do.

#467 TC: Finding it is not enough, it has to pay for itself.

GS: It's got to pay for itself. And that's really what you do. But you know, one of the things is that in the modern exploration I followed, we have the advent of 3-D, Canadian Superior participated in the second treaty survey ever run in the Gulf of Thailand where we had oil and gas interests but we could never figure anything out from the stacked datum, CPD data. But we could never find anything out from it because it was a mish-mash. But when GSI did the project and it's been published but it was really, you know, that's going into the major part of technology and following it along. Now everybody does 3-D but at that time it was right at its infancy. And now you've got people doing what they call 4-D. 4-D is time lapse seismic in the 3-D domain. In other words, what they're trying to do is watch the reservoir as it goes from oil or gas into water. And if you predict that in the reserves, whatever. . . Oh yes, get the plaque off the wall. . . that's what we did in Joffre. But the whole technology has really gone. . . when I started we were doing 24 trace recordings with standard geophones, standard amplifiers. But you know, in the 20's when seismic started doing, they were using standard amplifiers and maybe 3 or 4 traces. Then we came into the sectioning thing, we went to magnetic tape and then to digital tape and then to the sophisticated processing techniques. They keep getting those better as time goes on. Then we went to 3-D seismic and like I say, that's expanded into 3-D with a 4-D component for some applications. So so far, I've seen it all. Because when you notice the big plays coming, you notice the deep plays Petrobras is drilling off Brazil and the deep plays being drilled sub salt in the Gulf of Mexico, the deep plays being drilled in deep water, I'm talking about, off west Africa. If oil was at, when I entered in business, \$1.75 a barrel you could never go those plays. Some of them are debatable how much money you'll make with them, even today. But that's what happens, one time, who thought you could drill wells in the North Sea, who thought you could drill wells offshore Canada in the east coast, because of the icebergs and the rough seas and everything. But if you can make a buck at it the technology will come along, people will develop it. And I've worked round the world and I'm called on the evaluations.

TC: Do you have any regrets about your career path?

GS: No, I don't have any regrets. I really enjoyed it. I've got a couple of file drawers full of and they're indexed by country following clipping files of what's happening in the oil and gas industry. No, you can always. . . the career path type of thing is, should I have gone out on my own. But I was past the age of taking the risks to do that. Now today, a geophysicist could do that but very few geophysicists could take the risks in my era. Even become consultants and whatnot. And I finished my career by doing some consulting for.

End of tape.

Tape 2 Side 1

TC: Okay, so since retirement you've done some consulting.

GS: What happened was, I told ICG that I would go to work for them for 6, 7 years, something like that. They were very surprised when I said, I wanted to do this and I

wanted a couple of days a week. I said, I'll work on staff for you a couple of days a week but I want more time and they said, no, but we'll take you as a consultant. What happened is, Sask. Oil bought out ICG Resources. Of course, they got rid of all the managers but because I was a consultant, I was not a manager, I was kept on. So I did some work and then of course, Ken Jones who was a New Ventures geologist knew that I had done a lot of international work. So that's when I worked for Sask. Oil, Wescana, in western Canada but I did quite a bit of work in Algeria and Tunisia for them. This is evaluation work. And then I put together their seismic operation in Tunisia ??? and then I turned it over to their own people, who should have done it by the way. I didn't mind doing it. So I did that and then I did, in the years going on, I had done some work for a fellow by the name of Vic Sutherland who had formed North Rock Resources. I was doing that while I was working at ICG and I told Dick what I was doing, he said, no problem, you're not going to compete with us which was true. So I did some work for him and I was involved in his discoveries when he started his company and I did a lot of the geophysics for him. He got big. So I did some work for them, the I was trying to move on. I worked for them for a couple of years, as a consultant, trying to work 3 days a week. Then to finish off I got one of my friends who was involved with a small company and said, would you come over, can we hire you as a geophysicist and I promise you it will be just 2 days a week. And he kept his promise, so I worked there for about 4 or 5 months, something like that. I was supposed to work one month. And it was time to get out. The business has changed.

#028 TC: How, do you feel?

GS: At one time it was mostly substantial companies, not just Imperial and Gulf and Pan American or Amoco, Shell. They were there but they don't do much anymore. Of course, Petro Canada has added to it and Petro Canada is still relatively active but they're into the big plays too. And then you've got a few of the intermediate companies that have started from small beginnings and then you've got a lot of small companies. There's no trust in the industry anymore. There's trust at the big companies, but the little companies, nobody trusts them anymore. And they're into small things. Some of these companies will drill wells and it will be a good well because of the commodity price. We would have poured the cement to it, in my era. So the commodity price has made a difference. And that shaped it but it's tougher to find. . like to find 12 million barrels of oil, like at Joffre. I think that's the last one found in Alberta. There may be one more but what's happening is, those kind of things are difficult to find now. And I'm sure some more exist but they're difficult to find. So the business has gone to really, a commodity priced business.

TC: And the little companies are very risky and so investors don't want to . . .

GS: Well, investors are scared with them you know. What's happened is, if you follow the oil and gas business like I do, that's not wise, what's happened is they've had a big run up because of commodity prices. But just in talking to one of my friends, you start looking at what has been found, some of these companies have gone up but really, the amount of reserves they've found is really not significant enough. They made money because of the commodity price. It's a business type of play. It's not my kind of oil business, not the kind I grew up with. I've done things with North Rock and whatnot, I'm comfortable with

small companies, providing they know that they're exploring for reserves and not just commodity priced things. I don't think they know that. They say they do but not really. I don't see the kind of exploration going on, amongst those kind of companies, that really are reserve additions. So it's a different business. Now the big companies, they're doing that still. But you've lost Imperial and Shell, they're not exploring western Canada anymore and Canada. Basically, they're going into heavy oil and that sort of thing. And that's fine, they have the capital to do those kind of things and a little company couldn't do that. And that's fine. Petro Canada is still doing some things but they're sort of pulling back from their international. And there still are international opportunities out there, with some significance but you're going to have to work hard for those too. But the technology helps you a lot, even in western Canada. If we didn't have the 3-D we wouldn't have done as well. And when you talk to . . . like, I still have lunch during the wintertime with a bunch of contractors and drilling people and whatnot, when you talk to them it's all 3-D. I said, are you really doing any exploration work. Very little, what we're really doing is. . . they say, there's so much spec data out there and all that sort of stuff. But most of their work is in 3 dimensional stuff which is really developing reserves. Some are doing some exploration but not a major part.

#071 TC: So do you mean developing existing reserves?

GS: Yes. And what I call probable reserves, your far out step outs. That's still developing reserves. As a geophysicist I used to do the seismic for those at Cansu??? But in reality I was doing it for the engineering and production department, I wasn't doing it as an exploration thing. I was doing it because the geophysical department was a service and we primarily do exploration, we were front line but for the other people we were a service. And I'd always make the budget up so we'd always have dollars in it so they could do those kind of things, exploitation type things. So that's a capsule summary.

TC: When did you start to see that wave of new graduates that had just finished their graduate degrees in geophysics? You know, it was later than your time.

GS: No, not really because when I was chief geophysicist we hired graduates out of universities and trained them. That kept going on. Canadian Superior had gotten. . . it's a degree of size of a company, like for instance, the people that most, a lot of people were trained by Pan American or Amoco. They're the graduate school for geophysicists. They'd hire a lot of university students and the big majors did, Gulf did, Imperial did. But they don't do that anymore, or very little. At one time they'd hire tons of people and then there was companies like Home and Canadian Superior, those intermediate size companies, Pan Canadian, started hiring them. They got to the size where we can afford to train people. You can't hire somebody out of university, you may have a geophysics degree but that's not the real world. You had to lead those people into the real world. So when I was at Canadian Superior, the last 5 years I guess, we were hiring a fair number of graduates. Most of them are out consulting as a matter of fact. But that's fine.

TC: It's interesting, you'd said before that doing a degree in geophysics now doesn't necessarily include that field work, being out on the site.

GS: No, it doesn't.

TC: That's a shame.

GS: It's the way the industry has gone. They've compartmentalized. Unless a person goes into consulting very early and looks after field crews. I mean, they'll know what the records look like and everything but they won't really know, go out and see a field crew and see where everything is done the way it should be done. But there are people that do that. And they come from the contractors. And they are trained through the industry. What's interesting is when I was at Joffre, I always did this with field crews when I went out to supervise field crews. . .we were running the lines at Joffre, I said, observer print your record. He'd print it, I'd take it and mark it, this is what we're looking for. You compare your records and if you see that, I want a phone call. So you know, there's lots of ways you can do things. But he said, you're the first person that ever has done that. This is a guy with 20 years experience. But there are people that do it, don't get me wrong. So it's a different industry. I trekked over mountains in the foothills plotting where I wanted the cats to go for a seismic line. That's work, I couldn't do it now. Well, I'd be very tired if I did it now anyway. But that's what you did, that's what part of your job was.

#121 TC: A lot of the crews were going on existing roadways and gravel roads.

GS: Out in the plains that's true but up north you're always dozing lines. Not probably today so much because now what's happening in the field operations is, a lot of places won't let you cut. You use the existing lines so you put the instrument on these existing lines and what you'll do is put the drill holes, they'll be mini drills and you won't need a line other than a survey line. So you can get away from it that way. And in the foothills you can put an instrument truck down by helicopter where you want it, so you can handle those kind of things differently. When I was working the foothills you couldn't do it that way because there were no. . .like, I put the first line across Limestone Mountain. And I told my fellows when we went across, and I did the same things, nobody sits in the 3rd seat, tie the doors open and if a truck gets away from you, you jump, a truck is not worth men. I doubt very much whether there is much new cutting going on with like, a bull dozed trail anymore, if any. They might snow plow some things out but it would be tough to do. But there are a lot of lines. But those helicopter crews, you can do all of that stuff. But in the early days that would be dangerous and very, very expensive. And really the portable drill type things weren't available, helicopters weren't good enough to handle that kind of risk. As a matter of fact, on the Territories crews, we had two crews up there, I was one and we had a helicopter with us, between the two crews and the drilling rig. But it would only seat three people. And we used that for scouting in those days, and taking people into Hay River when he got hurt or needed to see a nurse because there was no doctor in Hay River at that time. And if it was really bad you could have called in a charter plane but we never had anything like that happen. I could write a book about all this stuff.

#152 TC: Did you keep any notes or journals or anything like that?

GS: I've got journals from probably, 1970 on. They are all downstairs and they wouldn't be that detailed but they would tell me where I had been, what meetings I had gone to. But I didn't write any detailed things, I'd write more detailed things now than I do then.

TC: So tell me a little bit about home life?

GS: Well, we have two children. When Joyce and I were married we went on the crews and whatnot and then like I say, we bought the trailer with Joyce's down payment when we were in Lucky Lake. And then we'd park it in the winter because I was always up north. I think the first couple of winters you went out to B.C. with my folks, didn't you. And our daughter Kim was born in B.C., in Penticton. My folks had an orchard at Keremeos. Because I know that is was when Kim was born I was in Stettler. We had come down with one of the crews, out of the bush. So I knew, I phoned the company, this was Frontier, phoned the company and said, Joyce is expecting, I'm going to get home. So they sent a Party Manager up to take over, so when I got the phone call, Kim was born then, but I got the phone call so I phoned the office and I said, I've got no bloody money. So they went up to the airport, gave an envelope of money to CP Air and they handed me that and I took it out and paid for the ticket and flew out to Penticton. And it was blossom time, March. March 19th Kim was born.

JS: They always turn pink for his baby girl.

GS: So anyway, we lived in a trailer for the first while, at the Bluebird Motel in Calgary because things were starting to get where you would go out at times but you were in Calgary most of the time. Then we sold out trailer and the company didn't want me to buy a house or anything so they loaned us a trailer. That only lasted a few months then we just said, no, so we went into an apartment. I think it was 28th Ave., wasn't it, yes, west of 14th St. a block off 14th St. and 28th Ave. We were there for a year and then we bought, what I called our mortgage ??? out in Haysboro. We moved into that in November of 1958. We bought it when they were starting to build it. We didn't have any money, once you paid the down payment. \$2,500, \$2,450 or something I think was the down payment but what you have to think about is that I was making \$600-650 a month, maybe \$700 a month back then. It was tough saving money. You have a wife, a daughter. So the stove and the washing machine came from GE on wholesale because Frontier had camps and they had a wholesale account with GE so I sent the surveyor over to pick up the refrigerator and the washing machine. And he loaded them in the pick-up and drove them down to our new house in Haysboro. So we lived in Haysboro for 37 years, we've lived here for 6 years.

JS: Our son Ward was born in Calgary.

GS: As a matter of fact, he's a lawyer in the Cayman's and he was just here last, we put him on a plane on Friday.

#203 TC: Do you have brothers or sisters?

GS: One sister I mentioned, Virginia. Her husband is a lawyer, she has 3 children and she has grandchildren. Then our daughter Kim was born in Penticton, she has a boy and a girl, they live out by Millarville. The kids come in about once a month and spend the weekend with us. But Ward came up here for 2 weeks and he brought the granddaughter with him. His wife's parents are in Orillia so she takes her time and goes up there. And we usually go down to the Cayman's to visit in November. A long trip though, 3 airplanes, so it's a long trip. Do that's sort of where I'm at, what I do now. I watch my investments on my

computer 2 or 3 hours a day, I play golf, I track what's going on in the oil business. I have a walk every morning the days I don't golf and in the wintertime I walk every day. And Joyce looks after the garden, that's her baby.

TC: I was recently in B.C., the last 2 weeks. There was a lot of talk on lifting the moratorium on the west coast.

GS: There has been talk about that before. As you know, and you probably don't realize, Shell did some seismic work and drilled, I think, 12 holes. I don't remember all the details but Lou Stevens was out looking after that, he worked for Shell then. And I think Chevron did some seismic out there later. The Shell stuff would be not worth a darn because it was way early. And Shell drilled a bunch of wells and I don't think there was anything really promising but that Queen Charlotte basin is what they're interested in. Now whether there's anything there or not, who knows. I don't know whether there are real problems environmentally or not. It's difficult to know just what it would be. I would think, when you look at the amount they're drilling off the Gulf Coast, it's enormous. And the problems they have down there, the only problem they have is they've got too many shrimp because they all live around the platforms. And they have the odd little spill but not often, they're pretty good. Now that's a warmer climate. It's very difficult to know whether it really would be, to an environmentalist, you know, they like to create genocide but whether there really would be an environmental problem is difficult to know. It is a colder climate but it's not like the Beaufort. Nor is it like the east coast. But it's more like the east coast than. . well, the Arctic is tough. You would really have to do. . it's expensive to drill in the ocean up there because you've got ice most of the year. And how you protect everything. B.C. I'm not sure. I don't think it's a major environmental problem as long as they watch what they do. And the seismic is no environmental problem. Probably the drilling isn't either but it's the production platforms where you'd have problems. And piping the stuff ashore. Those are the things that would be the problem I would think, on the west coast. But they've done work out there, they're drilled wells and I don't think they've had any real sniffs. But who knows, I don't know.

#262 TC: It's interesting how it goes though, you think. . for my perspective, sometimes I think it's all been found and then somebody comes up with a new idea.

GS: It's ingenuity and people with different ideas. The other thing is, you've got increases in technology, just not only in exploration but in drilling. Who thought they'd be able to produce the Campos??? basin off Brazil, it's very deep water. And you get all these things coming about. But it is getting more expensive because technology is not cheap and it's going to get more expensive. What you're going to see is commodity prices remain high and get higher. That's the way it is. Because there is a limit to what you can find. I don't know what the limit is but there is a limit because just by definition about how oil and gas are formed is the definition. Gas I know you can put garbage in dumps and you can get a little bit of methane out of those. But you're not going to provide gas in the winter for Calgary out of a garbage dump. So who knows. These are our two babies, this is one of them, the other won't come out while you're here.

TC: Beautiful Siamese cats. Is there anything else that you'd like to add.

GS: No, I don't think so. I've done work, other than the U.S.

TC: I think it's very interesting. . .

GS: 39 countries.

TC: 39 countries, wow. But it's very interesting to have a background such as yours where you've come right through with the technology and all the new computer advances. It's a tremendous revolution that has impacted us.

GS: Yes, it's kind of interesting because I took a couple of seminars last year, one before Christmas and one after. It's kind of interesting that at the last one I was walking down the street and I saw a guy that does some consulting and he said, what are you doing down here Gerry. I said, I'm taking a seminar, what on, I said, on neuro-networks, what are they. I said, they're the latest thing. And they're in their infancy too, but technology keeps going.

TC: Well, some people kind of plateau out and they don't go beyond it and there are others who are lifelong learners.

GS: I think that technology, probably in the seismic industry is not going to be with the oil companies anymore, it's going to be with large contracting companies, large processing companies and universities. At one time the university ???, they just weren't into it, but I think that that's where it's going to be now, not oil companies. Now some of the drilling technology might be spurred on by oil companies, be funded but it will be the drilling companies and some of the big engineering companies that will really spur the technology on. But you know, you look at an oil company, they don't have those kind of people. The big oil companies, they're the only ones with budgets to have those kind of people. So it will be interesting.

TC: Well, I really appreciate having this time to talk with you. I always learn a lot by these interviews.

GS: Like I say, I probably glossed over a lot but like I say, I could write a book. Not a long book but a short book, able to cover, maybe a hundred hours of what we did today. But what I try to do is try to sort of get a feel for all of this stuff. Because it brought back memories to me too.

TC: Okay, I'd like to thank you again and I'm going to turn the tape off now.