PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: John F. "Spi" Langston

INTERVIEWER: Susan Birley

DATE: June 1983

SB: This is Susan Birley interviewing, it's June 16, 1983 and I'm interviewing John Langston at his home in southwest Calgary. My Langston, I wonder if you'd like to begin with where you were born and raised and where you went to school, some of your background information?

SL: I was born in Calgary, March 11th, 1911 and grew up in Calgary. My father owned a grocery store and the Blue Label Bottling Works, both of which he had founded. I had 3 sisters and 1 brother. We went to school at the Calgary Public School, later known as James Short and then went on to Central High School. I was in the Wolf Cubs and the Boy Scouts. My father died in September 1925. He had had some background in chemistry or in distilling as his plant did provided distilled water and he did give me some coaching along these lines. I continued in Central High School till June 30th, 1927 when I finished Grade 11, passing my Junior Metric and it was decided then that I should start working. I was always interested in mechanical things, worked on cars as a youngster with a chap, Gil McLaren, who later became a pilot with Air Canada and retired as such. We also built crystal radios and even made our own crystals out of lead and sulphur. I had Meccano sets and I actually started driving a car at 11 years old when we were spending the summer in Banff. Mr. Shepard, a Calgary policeman who lived close to us kind of frowned on this when I came out of the lane one day and met him as he was coming down the sidewalk. However he agreed that it was reasonable as long as I just took the car around the front for my dad. When I left high school I immediately went to work in the Eau Claire Sawmills, where Mr. Olson, the superintendent worked and he had been a friend of ours for many years. He was very meticulous in pointing out the mitre gears which were under the edging table where I had to work. In October of the that year the job was coming to an end and I went to work in the Hudson Bay Company store until New Years and then went to work in the Robin Hood Flour Mills in early February as an office boy, then I became a filing clerk, then the mail clerk and then I became a ledger keeper and eventually became a bookkeeper. This seems like rather a rapid promotion system but the Chief Accountant, Mr. T. B. Bjerke, was a wonderful man and he motivated me to a considerable extent. However in September of 1929, another chap who had been in high school with me and who was also a bookkeeper along side me was quitting to go to the University of Toronto. I had always been inclined towards going into engineering so this gave me the idea of quitting when I was able to get a job on the construction of the Ghost River Dam with Foundation Company of Canada. The job was as a material checker and had to do with handling materials , all the way from light bulbs to parts for the power shovels and drag lines etc., used on the job. On February 15th, 1930,

#050 Calgary Power Company Ltd., for whom the Ghost River Dam was being built took over the operation of finishing up or cleaning up the job and they did keep me on, both as materials man and time keeper til the job was finished by the end of August that year. Through an engineer whom I knew on the job, a Mr. J. K. Sexton, I was able to get a job with Commercial Cartage Company, which was doing contract work for the provincial government on highway gravelling. I went to work there in September as a time keeper and worked under a foreman named Jimmy Morrison who was a war veteran. Also he had been working as a rigger in the timber business in Oregon, he had been a trapper and he was a wonderful mechanic. He also owned 10 trucks which were used on the operation. Through the association with him, I again, was exposed to much work of a mechanical nature. Also, although I had been around the Ghost Dam when considerable amounts of explosives were used we also used dynamite in our operations and I took part in putting dynamite in the holes as a part time job. My work with explosives continued one way or another through the early part of my career and I give this information just to explain the concerns I had about safety in such operations. In 1931 the company took on a job to pave the road from Calgary to west of Cochrane and I was assigned there as timekeeper and did a fair amount of accounting work in connection with apportioning costs of the job to different aspects of it. In September of that year, I left the job and registered at the University of Alberta, at the end of the month in the pre-engineering year, which was the equivalent of Grade 12 and in the spring of '32 I passed the course okay with fair marks throughout. I then went to work for Commercial Cartage again, in the gravel crushing operations with the same foreman, Jimmy Morrison. The job finished up in the late summer and on December 1st, I went to the Upper Kananaskis Lake, via horses and sleighs as timekeeper on a construction job which was being carried out for the Calgary Power. The Calgary Power had to take this job over themselves essentially because of the difficulty that the Commercial Cartage were having financing same. This job consisted of cutting a channel in solid rock, from the end of the Upper Lake to the Kananaskis Falls, in order to allow the lake to be eventually lowered and to make use of a greater volume of water by so doing. We also built a gravel filled dam and a crib head works, which would allow for the regulation of the level in the lake when the water was desired downstream for the Calgary Power plants on the Bow river. We worked there all winter and again, considerable amounts of explosives were being used in this rock work. I should mention that the holes in which the dynamite was planted were drilled by hand, which was sort of a come down from previous experience on the Ghost Dam, where power drills or air drills were used.

#108 SB: How deep did the holes have to be?

SL: The holes usually only got down a foot or a foot and a half before they would be loaded. The thing was these were drilled by hand and that work is a lot more difficult than drilling with machines. Men were also working in the bottom of the ditch, which even in the coldest weather had a certain amount of water running through it. One man would sit on a dynamite box just above the water and the other two would stand there rhythmically swinging 8 lb. hammers in time. It was quite a sight to see and these fellows were really

good. I also had to do the first aid work and I never had anybody hurt in that department. The work was essentially finished in the end of May and the sleigh road of course, was melting out, our food supplies could not get in anymore and we came out on June 7th, of 1933. There was not much work available that summer but I did work on a gravel crusher for some weeks before going back to university. In my first year of engineering, from September '33 to May '34, I had to take either civil or electrical engineering because of a lack of Chemistry 1. This course had been changed slightly in my absence and therefore they restricted me to civil or electrical. I took the civil because of my experience on construction work and also going back to the Ghost Dam, Mr. Harold Randall who was an engineer at Westinghouse at that time, later with Calgary Power used to come into my office when I was on night shift in the material department and talk with me and when he knew I was going to go through for engineering he suggested civil although he was an electrical engineer because he pointed out that there were an awful lot of civil engineers working around a construction job. Also it should be mentioned that at the Ghost and on other operations, I was exposed to engineers who were working on construction work and all of these people were very kind and gave me a lot of ideas which helped to form my outlook on engineering.

#148 SB: Did you ever think at that time that you would be involved in petroleum engineering?

SL: No, there wasn't any you see. Petroleum Engineers, I think if there were any around they were kind of frowned on because they'd have gotten in the way of the old hands. Well, there wasn't much work going on you see. There was a little bit of work but a lot of it was with cable tools where they simply drilled down, if the thing blew out that was good. But in the early days, even when I got out there, there were Petroleum Engineers by that time, although they hadn't graduated in petroleum. A lot of the fellows that I worked with had graduated in chemistry or mechanical or more likely, mining. Like Bert Corey, you see, he was a miner and a lot of these fellows were miners. Or if they were Petroleum Engineers, a few had come up here from the States, but not very many. Also in that first year I had a course in surveying and I had gained a little bit of experience in surveying, helping out the engineers to a slight amount at the Ghost Dam and at the Kananaskis Lakes job I used to go out and take water levels and help with other surveying work in my spare time. In May of 1934 I again went to work on road gravelling as a foreman, timekeeper etc., with 16 trucks hauling gravel on the road from Vulcan to High River. At that time there was a seismograph crew working in High River, owned by Heiland Research of Golden, Colorado. With the crew was one gentleman, a Mr. Austin Brownie, who later went to work with the gas company. Their operation was actually for the gas company and Imperial Oil at that time. We had another highway engineer with us, a Mr. Tregillis who had been on the job with me during the paving operation the previous summer. He was a wonderful gentleman and again, he cooperated with me fully and I did him a lot of good too when he was short handed. At the end of the season, that summer, I did go down to Fort Macleod to start a new operation until university started. I did go back to university then in September of '34 and came out again in May of '35 going to

work on a road construction job between Olds and Sundre as a foreman. This was work being done using horses which were rented along with the driver, from the farmers. In the fall I went back for my third year at the University of Alberta and got through it successfully, actually getting a 1st Class general standing. However, in 1936 jobs were pretty hard to get. The Commercial Cartage, which had changed it's name to Belyea Construction, after the owner was not operating. Again, I have to regress a little bit and point out that all of my success in getting jobs pretty well stemmed from one man, Mr. Reginald F. Jennings, who became quite prominent in the construction business here in the Calgary and western Canada area. Reg was my boss and he was a good friend of Mr. Jack Sexton, whom I have mentioned previously. He had put me to work with his company because of Mr. Sexton's recommendation. He was a wonderful boss and despite the rough times that we

#220 were going through, he was very understanding and I don't believe he ever said a harsh word to me even if I did deserve it. In any event, in May of 1936, although I saw Reg, he had nothing going. I was kind of desperate but then everybody was out of work. I did however, shortly after coming from university, meet a school chum of mine from university or a classmate I should say, along with his father, Mr. Ernest Poole, of Poole Construction. Mr. Poole and his family had been very kind to me in Edmonton and he was concerned about whether or not I had a job. When I said no, he said, you go up to the gap there near Exshaw and see Pat O'Brien, whom you know. Tell him to put you to work. This was wonderful although the job was not going to last very long. I did go up there but in the meantime I had been in to see Dr. S. E. Slipper, a long time working geologist in the Alberta oil and gas operations, who was the Chief Geologist of Canadian Western Natural Gas. Austin Brownie, who was a good friend of mine, had told me in the spring of the year that the gas company were going to bring in a seismograph or geophysical party and he thought that Mr. Slipper might be able to give me a job. Mr. Slipper was very receptive but the operation was not starting yet and he was afraid that he might have too many relatives of company people whom he might have to put to work. I did come back from the Poole Construction job where I ended up actually, working for the government engineer some time in May. By following up all the leads I had I was able to get a job with the federal government on construction work between Lake Louise and Jasper. This would have been pick and shovel work but anything with a pay cheque looked reasonable. Dr. Slipper had told me not to come and see him, that he would contact me. However when I was going to catch the bus the next morning to go to Lake Louise, which would have sealed me off from all information, I did contact him. He said, what are they going to put you to work at up there and I told him, he said, well, you tell them what they can do with their job, I'll put you to work. Which he did. He was kind of peeved with the government because of course, seismograph crews were unusual in Alberta, there had only been a few working here, and the paper work to get the equipment and personnel necessary through the border was kind of complicated. He had done all this work and it had gone to Ottawa but Ottawa had not sent it back to the entry port. He had spent the day before I contacted him down at Coutts and when he came back he was pretty mad, although he did have the party on the way. I went to work in the seismograph

crew that summer as the assistant observer along with the observer, Glenn Conklin, who was a Masters in Physics. It was very educational. The equipment was, by today's standards, quite primitive, but it was as good as they had at that time. I was very interested in it, again, I was shooting dynamite. The other people on the crew, the computor and the Party Chief all took an interest in trying to educate me about electronics etc. So at the end of the summer I went back to university for my final year in civil but after being exposed night and day to this crew all summer I was really an enthusiast about geophysical prospecting. Mr. Robert Hardy, now Dr. Hardy, took me aside and told me to forget all that stuff and get busy with my civil engineering which I did of course, too. Anyway I came out in 1937 with my degree in Civil Engineer with Distinction and I worked in the survey school until the graduation ceremonies, came back to Calgary and again, no jobs.

#310 I did go in to see Mr. G. H. Thompson, who was the manager for Calgary Power at that time and talked to him but he was very sorry, he could not do anything for me, although he would like to do so, partly because when I was on the Kananaskis Lakes job a few years earlier I used to write a daily diary, showing the weather, the number of men working, what we were doing and I even had my photographic equipment in camp with me, where I would take pictures, develop them and send prints along to show the progress. However another chap in the office happened to see me, he and I had been in Wolf Cubs again, and that helped because a few days later he phoned up and they had a small job for me. This led to me going to work for Calgary Power on their apprentice engineering scheme which took men who had graduated from university and put them through the ropes of washing the floor in the power house, working on transmission lines, etc., etc. It was not a very lucrative job but it certainly gave people great experience as is evidenced by the roster of the top people in Montreal engineering and Calgary Power today.

End of tape.

Tape 1 Side 2

SL: My work with Calgary Power that summer started in the office and then about the end of May I went to Sylvan Lake, the famous summer resort, to work on a survey of a power line from Sylvan to Rocky Mountain House under Bill Wolley Dod. We worked through to rocky Mountain House and staked out the town of Rocky for power installations. Then I went back to Calgary and out west to my former home at the Ghost Dam and surveyed a line in from the Ghost Dam, into the west end of Calgary, at a place called Aeroplane Corner, where there's a big substation today. This was to be a steel tower line which the government had determined was necessary because of the damage done by a prairie fire the pervious fall cutting down power poles and cutting out power service in this are for several days. We also ran levels on the job and then I went back to Rocky Mountain House to run a line or to partially run the line from Rocky to Nordegg. We had 3 survey crews working and I was running the transit on one. Again, I went back to Calgary before

the Nordegg job was finished to work on the location of the steel towers and then worked on the construction of the towers until December 1st when they sent me to the Horseshoe Dam at Seebe to help wash the floors. I worked there til New Years and then went back to the Ghost Dam where several of my old friends from construction days were still there. The Chief Operator was Gordon Milligan, who had been the first operator to come to the Ghost Dam in the fall of 1929 and who had made friends with me. I worked on the floor, on the Dam there, til May 22nd. I should point out that the work was not just simply scrubbing floors but it was familiarizing yourself with the operation of the power system overall, the power plant in particular, doing repair work etc. and becoming knowledgeable about the overall operation of a power plant, as well as the distribution system. All this experience has been very beneficial for the people who have continued with the power company. Towards the end of May I was sent up to the Spray Lakes to measure the stream flows. This is done during the flood season to establish the information on which the flows through the year can be measured by automatic recorders. The high flow was not encountered till just about the 1st of July and I did not get back to the Ghost Dam until July 7th. Shortly after that I had a phone call from a gentleman with Lane Wells Company of Los Angeles. He told me that Dr. Slipper had suggested that I might be willing to go to work for them as they needed an electrical engineer. I was not an electrical engineer, however I did go in a few days later, on my day off, to see the personnel of Lane Wells company. They took me to Okotoks where they had some of their equipment and discussed the work with me. I was very interested and a lot of my training with explosives, electrical work and surveying all stood me in good stead for the job. They hired me and I advised Mr. McLean who was at the head of the department of Calgary Power where I worked, that I was going to leave at the end of the month. He pointed out very kindly that I had had no holidays and that maybe I should take the last week of July off for holidays.

#061 Maybe he was just trying to get rid of me, I don't know. In any event, I did take my equipment and left for Calgary and notified Lane Wells that I was now free. They asked me if I would come to work immediately which I did. The work with Lane Wells Company had to do with the servicing of oil wells. They had had a survey instrument in Canada which had been used in determining that the whole Millarville #2 well which did not penetrate the limestone as predicted by Dr. Pete Sanderson at the correct depth was . . maybe I better backtrack. Lane Wells Company was a service company out of Los Angeles which had developed a method of shooting steel bullets through the casing down the hole in the well, out into the formation. These bullets were shot from a gun controlled by a controller, somewhat like the distributor in your car on command from a switch so that each bullet could be located at a definite point as far as depth was concerned. Another service they had was not necessarily developed by them but it had been developed by an engineer from whom they had obtained the rights. This gentleman was Alexander Anderson, a Scotsman I believe. It consisted of survey instruments of about 3 different kinds. One was an instrument which was run into the hole on the drill pipe or on tubing inside of the steel casing in the well. By keeping a record of the twist that the pipe developed as it went in the hole the baseline in the instrument could be followed as it

tilted to turn. In the instrument itself there was a film, like a 16 mm. movie film which was advanced every 4 minutes or in some instruments at other times. In any event, this was regularly advanced. The timing of this advance was being followed by clocks at the surface and when the instrument was standing still for a couple of minutes in between the
#101 plum blob and compass had pictures taken of them. Lights came on, the film was exposed and a picture was found on the film when developed. This was partly a surveying problem at the surface because you had to keep track of the turn of the pipe which was done with a transit. In any event this was interesting to me. The other instruments were instruments that were run in open hole, that is, without casing in them which might give magnetic influence. These were magnetic instruments and there was a compass and a plumb blob in there which had a single shot picture taken of it. This was done on a little disc and was developed right on the rig. At this time these instruments were encouraged and then legislated into the regulations on the operations in Turner Valley at first because the whole Millarville #2 well which had been drilled back in the period around 1936 or so had drifted off and had missed the contact with the limestone which had been predicted by Dr. J. L. G. Sanderson. A subsequent survey of that well showed that it had drifted off. It was then that everybody realized that the sloping formation in the Turner Valley structure was such that the rotary drilling rigs were deflected into the formation. That is, you might consider it almost perpendicular into the slope of the rock, which took most wells in Turner Valley off to the northeast. Some wells actually, in the south end which we surveyed later, showed a deviation to the northeast but only after having deviated in the other direction first. In any event between my interest in photography and my interest in mechanical things, this sounded like a pretty good job to me and I was quite enthusiastic about it.

#142 SB: You said that it was legislated that this type of equipment should be used in the wells, was that a government legislation?

SL: Yes, it was the Conservation Board but it was legislated in any event. It was regulation anyway, it would be better if I had said it became a regulation of the Conservation Board.

SB: Because I guess you'd be wasting so much money to be drilling sideways?

SL: Not only that but there was a tendency to go off to the other guy's land too you see, so you'd get into property rights. Anyway it became a regulation and it was accepted pretty well. I think it's all right saying it was legislated because the Conservation Board was legislated into it being and through legislation or one way or another it was there all right. That brought in regulations which required surveying of these wells showing direction and deviation in every 500' interval. This caused a lot of consternation in the drilling business but was accepted. As a result these regulations which were brought in shortly after I went to work for Lane Wells were considered to have been sponsored by Lane Wells in some quarters but this was not so. It was a good business that such wells were drilled straight which gave better geological control and better mechanical control of the wells. We also had a small instrument called a go devil, which simply took a picture of a plumb bob. It was allowed to drop through the mud inside the drill pipe to rest on a seat on top of the bit and take a picture and this instrument was run by the crews, although we

would go out to the wells and service the instrument every week or so. Through one of these rental instrument deals I first met Cody Spencer who was a tool pusher on a well out west of Sundre, it was called the Bearberry Well. Then another well which was first in my experience was the East Crest 4 well. It was a well which had been drilled, as many of the wells were in those days, to about 2,500' in Turner Valley then a surface casing or an intermediate string say, was installed and it was then cemented there. . . I should say this first 2,500' was done with cable tools. Then rotary rigs were brought on and it was found then that the cable tools drifted in the opposite direction to what the rotary rigs went. Therefore sometimes at the bottom of this intermediate string of casing of 2,500' you'd have a dog leg or an elbow. In any event we did quite a bit of work on some of these wells at the start of our operation. Some of these wells also were surveyed with an oriented survey to find out where the bottom of the well was at that time, if casing was in the hole. In any event, it was a very interesting job and then we got into the gun perforating. This was slow in catching on in Turner Valley. Some work was done trying to shoot the bullets into the pay zone of the limestone where the casing was not set through. The idea was to

#206 break the limestone down to allow better acid penetration, however this was actually not too satisfactory. The limestone in Turner Valley was pretty tough, a lot tougher than the sands in some of the wells in California where some benefit might be derived from this type of operation. In any event, the work was very interesting and Lane Wells kept operating in Canada until the summer of 1941, when through lack of equipment elsewhere, the lack of profitable enough operation in Canada, they decided to pull their equipment out. In the meantime through the wide spread coverage of the oil field, both in Turner Valley and in wildcat locations I had become familiar with a lot of people, getting to know a lot of different types of operations and so on, I was certainly tied to the oil business. I had already discussed a position with Gene Denton, who had come to Canada to work for Anglo Canadian Oil Company. He had set up a consulting business of his own, along with Cody Spencer in March of 1941 and had encouraged me in the idea of maybe going to work for him. So that the day after Lane Wells had laid me off I went to work for Denton and Spencer, who were operating a consulting engineering company, or partnership at that time and also, who were providing managerial services to a newly formed drilling contractor, General Petroleums Company Ltd. I worked for Denton and Spencer then, till the end of August in 1945 but at the same time I was employed part time by General Petroleums Ltd., in various businesses connected with the oil operations. We had drilling rigs there, some of which I helped or supervised in the building of same. Then actually managed the operation of some of these rigs as tool pusher. I also worked for Denton and Spencer in connection with supervision of completion jobs on wells mainly in Turner Valley but also in other parts of the province. These had to do with acidizing wells, putting them on production, and general work as far as completion of the wells as producers was concerned. It was very interesting work, my previous exposure to a lot of people in the oil field was very helpful. I always found the people in the oil field as great big, almost a family you might say. Everybody seemed to know everybody else, cooperation in those days, was essential. During the war equipment. . .

End of tape.

Tape 2 Side 1

SL: In any event I had met and did continue to meet a lot of wonderful people there, both as far as the drilling personnel were concerned, geologists, engineers, owners and so forth. The people are a little bit hard to name person by person and it is not my intention to do so but for anyone with whom I ever worked I certainly feel that I did benefit greatly from such association. In 1941 when I first went to work with Denton and Spencer they had no definite work for me but I worked out at a machine shop helping to build a portable drilling rig which was put together according to Cody Spencer's specification on an International truck. These were used pieces of equipment and because of the inability to get what would be ideal components some of these parts may have been out of proportion. However, this rig did successfully operate in the Vermillion field on service work for some months until it was destroyed by fire. We also had a gas compressor which I supervised as far as operation was concerned and operated it myself on occasion. It was a unitized piece of equipment, being a gas compressor that had been picked up from a well at Skiff where it was used for gas lifting, put together with a cable tool engine. It was mounted on skids and when hauled to a well was hooked up to the boilers on these steam rigs which were general at that time in Turner Valley. Of course, sometimes we had high pressure steam and the engine was not exactly a high pressure engine but it did hold together reasonably good most of the time. It was used for pumping gas down the tubing mixed with oil, in order to gasify the oil to get the wells on production, which is a simple operation which was used to a considerable extent in those days and other rental compressor units were used in the field, some of them somewhat larger and probably better rigged up than what our was but then again, we were in war time operations. In the spring of 1942 Denton and Spencer obtained a mobile hoist brand new but it was not really complete ready to go to work. It required a mast and also the engine on this unit was a Ford-Mercury engine and a Ford transmission. These were not really adequate for the job but were all that they could obtain with the equipment at that time. I designed the mast which was kind of top heavy as we had to use a cable tool travelling block as a crown block and it was a little bit awkward to use but in any event we did get it together and took it to Vermillion where I pushed tools on the rig at Cody's insistence. However, he said at the time, he would give me 3 good drillers and all I had to do was supervise. Well, at least I learned a lot and these fellows all did a good job and we didn't get into too much trouble except with that transmission. It just could not stand up under the operation of the rotary table, which again, was a big rotary table taken from a regular sized drilling rig. However we got this well put down for Imperial Oil and cored a lot of it and subsequently drilled another well at an area close by, in the surroundings of the Vermillion field. We cored a lot of formation there and this required, with a standard core barrel a lot of trips in and out of the hole. Also we were using drag bits on the core barrel

and I just about wore my car out running back and forth to the welder getting them rebuilt. I even had to get him out of a dance one night to rebuild a bit for me. In any event we did drill the well to the required depth and then another rig was brought on to the contract, probably at the insistence of Imperial Oil. Aubrey Kerr by the way, was present during this

#064 time in Vermillion, although he was not connected with our part of the Imperial operation. In any event the other gentleman whom I met during my tenure as tool push was Arthur Nauss. He was a geologist with Imperial Oil and we became good friends on the operation, although I think this was his first exposure to a drilling operation. Maybe that is why he became friendly with me, but we did continue as friends and still are. Also I should have mentioned that before I rigged up the mobile hoist I had rigged up a Cardwell KAL??? unit, which had been obtained complete with a gasoline or alternatively natural gas engine from the Cardwell people. This was obtained before the mobile hoist was built but was owned by General Petroleums. I also rigged it up with a mast and rotary table. It was a much heavier unit but was taken down to Saskatchewan to drill a well, I can't remember the name of the place. In any event when it came back it replaced the mobile hoist and continued to work quite successfully. An accident during the drilling of the northwest Islay for Imperial Oil hurt one of the drillers and Cody asked me to go up and push tools so that the present toolpusher, Lou McCullock, very gracefully took over the drilling position and although this was somewhat of a slap in the face for him, he was a very fine gentleman and still is. We got along very well, in fact we roomed together in the hotel. I've always been very friendly with him and he is a man whom just about anybody in the oil field has to admire although he disassociated himself from Regent Drilling some years ago. We also finished that well and then I went back down to Turner Valley and replaced Miles Maybe who had been pushing tools on the north Clonmell well. This was a deep well on the north end of Turner Valley and Miles Maybe had been pushing tools on this but he was really on loan from Drilling Contractors and they wanted him back. So I took over the tool pushing on that well after we had run casing to the top correction. No, I took over. . . the well had been in a problem up the hole between 2 and 3 thousand feet al long time previously and it had been necessary to whip stock the well around a fish. A heavy casing, 28 lb., 7" had been run in the well. This was run down into, if I remember correctly, about the brown sand. In any event I took over the well at about the time the casing was set but was on that casing job. We continued the hole, drilling 6 1/8" and as anyone who was connected with Turner Valley knows, those small bits were not very aggressive and we had to make a lot of trips in and out of the hole. We did finish up the well and ran a liner in the hole to the bottom of the pay zone and subsequently gun perforated the liner opposite the pay zone and acidized. In the first place the gun perforating was done by another service company and I always remember that Lane Wells had problems also perforating at these depths when the well was full of that light Turner Valley crude using a small gun. This other operator, Haliburton Oil Well Cementing Company had brought in gun perforating after Lane Wells left and they had considerable problems. I cannot blame them or their equipment but it was very tedious work and took a long time to get those holes through the casing. Subsequently during the

acid job, a hole was blown through the casing at the point where the whip stocking had taken place. The drill pipe rubbing on air head undoubtedly made the casing thin and that again, gave us a headache. We finally got that cemented and went ahead and got the north Clonmell well on production. It was never a big producer and I'm not sure how long it produced, it is not producing now. I should have mentioned too, that drilling operations generally that winter

#155 were pretty slow throughout the province and Lou McCullock, again, who had a home in Turner Valley town worked as a driller on that well. I also had two other driller working on the well, each of whom had also been tool pushers for General Petroleums. I certainly felt that I got good cooperation from all of them but especially from Lou McCullock. I didn't mention the other people. At the same time General Petroleums, in conjunction with some other people had been looking at a well down on the Bar U Ranch, near Pikisko and also quite near the gate of the Prince of Wales or "EP" Ranch. This was a well which had been drilled in the early 30's and it went to about 4,000' and had 8 5/8 casing set down onto the lime. It had been abandoned but not cemented off, just left there really and had been flooded with water, people had thrown rocks and garbage into the hole, etc. In any event the people connected with General Petroleums formed a company to determine if any production could be obtained from this well. I was sent down there with the mobile hoist after running a Haliburton line in the hole to 27' and finding the first bridge, in order to clean the casing out to bottom. Red Mowat worked with me and this time we rigged the mobile hoist up as cable tools. It had a jerk line set up and we had a string of cable tools. It was lucky that Barber Machinery was located not so many miles away at Longview, at the south end of the Turner Valley field and much luckier again that Earl Griffiths was in charge of Barber Machinery. He was a genius in more ways than one. He knew well work, he knew well equipment, he knew drilling equipment, he certainly knew how to operate a machine shop and there was not a piece of equipment in that machine shop at which he was not an expert. In any event, by determination and long hours, Red Mowat and I - I should point out that I was working as the helper, although supposedly in charge of the deal and I used to have to run across to Barber Machinery and get a fishing tool changed or borrow a fishing tool from some other company and so on. In any event we did get the well cleaned out. Cody Spencer never mentioned this to me but it was repeated to me by some other gentleman, unnamed, who said that Cody told about the operation in these words, those guys went down there, did everything wrong but they got the well cleaned out to bottom. Well, that's kind of a back handed compliment. Coming from Cody it was probably a straight forward compliment because he had his own ideas of courses. But we did then go in and run an oriented survey on the hole and as I remember, the hole deviated off at an angle near bottom, of about 45 degrees and it was heading for that little church that used to be along the road between the Bar U and the EP Ranch. In any event it was then determined we should go ahead and acidize it. We did acidize it, after a lot of bailing and some evidence of oil scum and eventually it did bail out periodically, a small amount of crude oil. However I guess the formation was pretty well water soaked over the years and the water drive had taken affect outwards from the well instead of inwards as we like to do nowadays. I should point out at this time that in

my work with Denton Spencer Company and also previously with Lane Wells Company, while I had not had any training or academic work in the petroleum field I had always been sort of encouraged to read journals, the oil magazines and previous to that of course, the construction magazines. When working with Denton and Spencer we had the annual books of the American Petroleum Institute and they were full of good information. Because of the drilling mud situation in Turner Valley which was quite novel, in fact some

#243 of the drilling mud experts who came up and surveyed it from the States couldn't understand how it worked and thinking of all this, I did get quite interested in drilling mud. Cody Spencer and Gene were quite supportive of this project. So anyway, I kept after these ideas and some of the wells down the southern part of Alberta and elsewhere were drilling through Anhydrite???, which caused intense flocculation of the drilling muds used. During my time with Lane Wells I had been exposed to this to some extent in the Princess field where we did considerable work for the California Standard Company. The people there Reese Norton and Chuck Bradford, the geologist and other people who were in charge of the drilling rigs and so on, had considerable trouble with the drilling through the Anhydrite. In fact one gentleman there pretty well bought up all the baking soda in that country and there weren't very many store there either. But as a well which General Pete were drilling for McCall Frontenac, now Texaco, at Bullshead Butte was nearing the Anhydrite at the end of 1943, I was allowed to go down to observe the operation. I drove down there on Boxing Day and watched the use of chemicals controlled by George Wright, who was with Texaco at that time. The use of these chemicals was pretty satisfactory but also rather expensive. In any event it was a good experience for me. During 1944 I did considerable work in the Princess field, somewhat again, on mud control, where I tried the baking soda approach and it worked very well except that the water loss did get a little high although not alarmingly so. I had the advantage there of having a Beckman Ph meter at my disposal. So I wore tracks between the rig and the little lab that was set up there checking Ph's continuously. This was a day and night job with no sleep except during round trips with the bit. In any event we got through that Anhydride quite satisfactorily and quite cheaply too I might say. That was in 1944 I believe I mentioned. Then I also worked on wells in the Kinsella area which had been drilled the previous year as Kinsella Phillips. These jobs were service jobs trying to recover casing or test wells and so on. Nothing really too exciting except maybe a broken mast on the service rig or something like that, which had to be fixed up in Wainwright and so on. At the same time, we were doing work in the Unity field, where a gas field was developed and supplied the town of Unity later. In 1945, Denton, Spencer Company was formed as it's operations had grown somewhat and as General Petroleums operations were growing. While they had previously shared offices it was now necessary for them to move their headquarters and in the new company, I became the Managing Director, Gene Denton the President, Cody Spencer the Vice-President and Clarence Mathews, who had worked with Denton and Spencer for the last several months became Field Superintendent and also a Director.

End of tape.

Tape 2 Side 2

SL: The operations in 1946 slowed down considerably and there just wasn't much consulting work to be done. The Unity gas field had been pretty well buttoned up. We had installed the gas system in the town of Unity and had hooked up the Saskatchewan Power Company's new station there, to run on natural gas. So when the Lloydminster area began to blossom let's say, in '46, it looked like good business to move over there and see what we could do. At first we did a certain amount of surveying which I would go up and do, seeing as I was a professional engineer at that time and a professional engineer or land surveyor was required to sign the forms. Also we looked after some wells for other companies. I surveyed a pipeline for Commonwealth Petroleums and we then did supervision work on an increasing scale for various operators in Lloydminster. Various difficulties encountered with the wells there and with the overall operations were caused by lack of management let's say. In other words a well would be put on production but the road into the tanks, from which oil would haul to the refinery in Lloydminster would not be kept up and during a rainstorm the trucks would be bogged down, the well would be shut down requiring a bailing job and getting it back on production. This was just a matter of putting in more efficient operations. Also these wells and their owners could not support an engineering service charging the $50 a day and expenses, which was our fee at that time. But by operating on an overall basis, such as an oil company with a lot of wells would do and charging a monthly fee with a small daily fee of $5 during bailing operations when only a few calls a day were made at the well sufficed. It built up our custom and it benefited our customers and it was a very satisfactory operation and I feel that a lot of the well operators there definitely benefited from it. Not only were their operations improved but they could see how they were improved. At the same time various other operations were going on on a very scanty basis, but we did provide a little bit of work on some wells which were drilling using diamond drills. Ram River Oils was operating in the area west and south of Rocky Mountain House and there was another operation near Nordegg and I would go out on these operations to see what they were doing, how I could help them out and in general giving them advice. Actual supervision of the operations was not really carried out but we were able to give them some benefit and suggestions on improving their operations. The Ram River #2 well had produced a fair amount of oil but it was a 3" hole drilled with diamond drilling equipment, it had deviated undoubtedly. No one knew where, the hole could not be surveyed, subsequent follow up wells were unsuccessful and it was an indication that this procedure of a small hole was not a very good place to put your money. But it certainly indicated that there was oil there, although it has never been traced down since. In 1947 we were still doing some work on Ram River wells with probably a little more supervision and about that time though, a company came up to do some drilling with diamond equipment in the pay zone in Turner Valley. This procedure had been described by Aubrey Kerr previously in the Journal of Petroleum Technology, according to information which he got from me

and his own knowledge of the operations. I became quite interested in it, partly because of my exposure to the use of diamonds in the Ram River and Nordegg areas. And also out in Moose Mountain, west of Calgary where we had done some work. In any event I got in contact with the people who were doing the diamond coring work in Turner Valley for Royalite and I was encouraged to go down and meet Mr. Carroll Deely, who had developed this procedure at Church Butte, west of Rock Springs, Wyoming. That's down in the southwest corner of Wyoming. I went down, drove down in February of '47 and we made an agreement to have Denton,

#101 Spencer Co. Ltd. represent Drilling and Service Ltd. of Dallas, Texas. Also at the same time we were representing Wheelsuring??? Tool Company of Canada Ltd., Windsor, Ontario who had made the diamond bits for the Royalite well and who were an affiliate of the same company's U.S. organization in Detroit, Michigan across the river. The use of diamond bits is fairly well known. It was a little hard to introduce. One of the first wells I used it on was a McCall, Frontenac, or Texaco well in the Wizard Lake area. Dr. Bill Howells, a friend of mine was in charge. He was not too excited about having General Petroleums the drilling contractor do the coring with diamond bits at the start. They were doing the coring under contract and he was not exactly enthusiastic to say the least. However, once we started to pull the cores out of the hole and he got a look at the formations, his sold core, he did become much more receptive.

#121 SB: Was it the cost of the diamond coring that was holding him back?

SL: He didn't really appreciate it. The big problem of course, with coring up till that time and the one reason that I became enthusiastic about it after seeing what they did at Nordegg and Ram River was the fact that continuous cores were obtained in the diamond coring operation. Previously as mentioned in the article by Aubrey, coring was done with a conventional barrel, which took rather short cores, maybe 10' and then had to be pulled out of the hole stand by stand of drill pipe or with a wire line core barrel which cut the core in a small barrel which was pulled out of the hole with wire line. The wire line core barrel was very good but for some reason we never seemed to get the pay zone which was what we were after. Although I have not mentioned it really in this discourse, our company was doing a certain amount of engineering work along the reservoir engineering line. That is, determining reserves in gas fields and so on. Core analysis, while not as fancy as what we get today was still something that we longed to have to get reasonable estimates of the reservoir capacity. So this was what intrigued me and this was really the reason we got into diamond coring was to make possible the use of down hole information rather than guess work to some extent or guesstimates let's say, more polite. So when we saw these cores, even though they were non-productive it looked pretty interesting and at that time Bill did become quite enthusiastic about it. The second well was also done on a General Petroleums drilling rig, for them but the operator of that well was Central Leduc. Neil McQueen, a well known oil man in this country and Art Newburn, another enthusiastic oilman were both connected with Central Leduc. In fact they were the people in Central Leduc. They were quite enthusiastic about these cores which we obtained on their well. Again, the Central Leduc BA Pyrcz #1 well at the

northeast corner of the Leduc field at that time was the first well in the Leduc field to be cored. We cored I don't know how many feet but run after run of green shale which certainly showed that we had missed the D-3, we were off the side of the reef. But we had the core there and we had a lot of enthusiastic geologists. Aubrey Kerr of course, has already recounted how he slept in his car while I was sleeping in my car night after night, right at the rig. We also had visitors like Dr. Kinleyside??? who was in the federal government in Ottawa and Dr. Ralph Rutherford from the University of Alberta who had been known to state that he would drink every quart of oil that was ever produced from the drilling in Leduc. This was before it was drilled of course, he used to come out regularly. Hubert Somerville, another fine gentleman with the land department of the Alberta government came out to visit us and other fine people. It was kind of a show place there. Neil McQueen actually had a trailer right on the lease. There was a cookhouse there and I stayed with the geologist's assistant, beside the boiler house in a pup tent so that I was on instant call all the time, day and night. Anyway, diamond coring did get its start and it took hold. It was very adaptable to the Leduc field especially in the D-3 where large ??? were shown up. I have a picture in this Canadian Oil and Gas Industries of Neil McQueen holding a core. I

#190 took the picture actually and it's an article I wrote for this 10th Anniversary issue of the Canadian Oil and Gas Industries magazine which celebrated the 10th Anniversary of the Oilfield Technical Society. But in any event it had become very beneficial and of course, there were improvements in the coring and so on over a period of time and we became quite heavily involved, Denton, Spencer Co. did. I spent many nights out coring wells myself and I had quite a large complement of supervisors. We were represented all over from Fort St. John, B.C., Calgary, Edmonton, down at Virden, Manitoba, Regina and so on, places convenient where we can equipment and get men out to the work. We did work for a lot of companies. Of course, we obtained competition too, some of it good, some of it short lived but it cut into our business one way or another. Anyway in the meantime we were still doing consulting engineering and to get back to the story, at the end of 1947 we get a little bit about Atlantic Oils here. This company was headed up by Frank McMahon and his brother George McMahon worked with him and also Bus Lacey, a good friend of theirs, worked as an agent in getting the rights to a quarter section owned by the Rebus family. Atlantic #1 was started on the northwest LSD of the section and was drilled by General Petroleums. They again, had contracted to do the diamond coring and I went out and did the diamond coring on the job. Subsequently they ran casing and at that time I was in Edmonton, they contacted me there, they had no engineering supervision and asked me to take over the completion of the well. I went out and looked over the well or I may already have known the situation there. They had obtained some well head equipment which was not really adequate for the field. In any event, Frank McMahon gave me complete control and told me to go ahead and change anything I wanted to, get what equipment I needed and so on. In those days of course, it wasn't that easy to get wellheads and so on. You ordered them ahead of time, you didn't have salesmen coming out with them in the back of the car. In any event I did happen to know that on the next lease the Leduc Consolidated people had planned on 3 wells. They had completed 2 wells

but a 3rd well was not successful and I knew that they had a wellhead over there. Jimmy Brown was their superintendent, a long time friend in the oil field and he allowed me to get that well head. Anyway we got that installed after a little bit of juggling around and some welding and one thing and another on the already installed casing. We went ahead and did complete this well. The casing was perhaps and my memory slips me here a little bit, was perhaps set at the top of the D-3. If so we then cored the D-3 and subsequently put the well on production. Maybe I should have gone a little further into the wellhead situation. What they had done was hang the 7" casing on top of the surface pipe using casing clamps which left the angular space open to the air. In any event we put on a
#280 proper wellhead shutting off the surface casing and so on. We got the well on production some time in, I'm not sure of the exact date but it was sometime probably in October or November and there were a lot of spectators around, including the Rebus family. Of course, they were royalty earners on the well so they were quite enthusiastic about it and they very graciously had all the people over to their home after the well was finally on production for a meal and a few drinks and a good chat, they were very nice people subsequently then, I continued working on the other wells which General Petroleums drilled and I set up programs as we did in our engineering work, right from the start to the finish of the well. We did not keep an engineer on the well from start to finish but we got the daily reports and the program was to be followed with the proper coring, testing and so on, according to the program. On Atlantic 2, which was immediately east of the #1 well, on the next legal subdivision, General Petroleums drilled down and I went out there for the coring through the D-2 and it did not look too good but we wanted to run a drill stem test and of course, in those days again, the service companies were being run ragged. You couldn't just phone up and have them there in an hours time. We had to wait several hours. In fact, I think it was late Christmas Eve when we finally got a drill stem test. I wanted to be with my family of course, on Christmas Day and I can remember on Christmas morning I had the road from Edmonton to Calgary completely at my service there, there wasn't anybody else driving on it. Then I was back up again for the coring of the D-3. We had a little problem there, it was more personnel problem than anything else and it's not worth mentioning but we got the D-3 cored and we had some lost circulation there which we did get under control and we were going to set the casing above the D-3 rather than set it through and perforate. I came to the conclusion that that could be pretty touchy so I got what was called a baker's shoe, a basket affair, which allows you to pump the cement down the casing and up the outside of the casing without putting any more pressure on the formation. Of course, it ended up New Year's Eve that we were running the casing. Ken Hutchinson, a long time friend of mine who was an operator for Dow on their cementing and had been of course, on acidizing jobs with me many a time, he was there for Dow and we got the casing down. And we were losing mud in the formation. Of course, you have to circulate before you run the cement. Anyway Ken said, Spi, that pit is dropping a little bit what do you think, I said, let's drop the dart. Well you drop the dart and it plugs the hole in this bakers shoe and diverts the circulation out above the basket affair which keeps the pressure of the mud and cement, which is heavier than mud as a rule, from being applied to the formation. Luckily we got away with it all right but it

certainly. . .

End of tape.

Tape 3 Side 1

SL: But that experience certainly showed me that you could get into difficulties in the D-3, something that had not generally been discussed previously to my knowledge. So when I got back to the Macdonald Hotel where I had a room, New Year's Eve celebrations were already over but the New Year's celebrations were still in progress and I was pretty tired out. Lyle Caspell, who was also working with Pacific Petroleums and Atlantic, who were two mutual companies of McMahon, he had been out on the well with me but had gone in earlier and when I got there, there was a phone call for me and he told me that Bid Lowry of Home Oil was in the hotel and would like to see me. So I talked Lyle into going up, we went up, I don't think Lyle had a drink but I did with Bid then we went out about 3 in the morning, celebrants were still at it. We got down to a little store, nonexistent now, but it was down on Jasper Ave. the street that the Macdonald Hotel was on and just up a block. When we got there the place was crowded, there was a gentleman operating the door, letting people in or out. Well, it happened to be Earl Griffiths of Barber Machinery. In any event he did let us in and we got in, had a bit to eat and went back to bed. But the other thing was that when I had arrived at the hotel I found a message for me saying that there was a ticket for me at CP Air to go to Fort St. John the next afternoon on a well for Frank McMahon. So in any event the next afternoon I took off on a DC-3, the first commercial flight I'd been on. As a matter of fact that was only the second flight I'd ever been on in an aeroplane, the first one was in 1927 with my chum in a Gypsy Moth, where I sat up front by the engine and he sat behind and watched things. In any event we got into Fort St. John and drove to Dawson Creek on the bus and established in the hotel and looked after a well there, shallow well in which we did find some gas. Dr. Slipper I don't believe, I'm not sure whether he was doing the geology but he came back into my life again about that time, a very fine gentleman. We got this well down. I was of course, dependent on the tool pusher, another good friend of mine, Gordon Emsley, who had his family there in the little town Rolla, just out of Dawson Creek. We had a shack on the rig and I could stay there and get some sleep and maybe a bit to eat once in awhile, we'd get some food. And we got this well down and got into pay zone, I can't remember the name of it and ran casing and swabbed the well and got a blow of gas. It was not considerable but seeing as it was one of the first gas wells in that area, Frank McMahon insisted that we just cap it, I mean just close it in and keep it there. I was all for abandoning it from the gas flow. In any event it was evidenced that there was gas there and they were quite right, it was their well. It was just my opinion after seeing some other wells shut in and abandoned. But I then went back out to Calgary and about this time of course, Atlantic 3 had been sputted in on the location just south of the #1 lease. It got down and I had I think, Clarence Matthews who was with me and another chap, they were out there. By that time we had established an office in Edmonton, we had a few people in the field. He

was out there and he was looking after it. I think I did go out there and core the D-2, which was not promising. I can't remember on the D-3 whether I was there or not. In any event during the drilling of the D-3 circulation was lost. I won't try to go into all the detail, all my records disappeared, the complete report on the well which we always supplied every operator disappeared, the unit operator's were given all this stuff according to Mr. Tip Maroney, whom I contacted later. I've never been able to get a copy of it. When we finally gave up our engineering practice in about 1954, we had returned all copies of all reports to the operators rather than having them lying around. Anyway I have to then go by my memory of what happened and actually I was not on the well myself to any extent except for the coring of the D-2,

#066 which was just a one night stand. Part of the time I was up at Fort St. John. In any event some time in February this well got down in the D-3 and it blew out, didn't catch fire but it blew out and spread a mess around the fields there and was finally brought under control. Then various efforts were made to seal off the formation, all kinds of things, oats and wheat, didn't have any sugar beet pulp but everything imaginable was pumped down that well to try to get it under control unsuccessfully. That is to keep it under control. The circulation was reestablished, it was not blowing out anymore but it was still, in my opinion not under control because they were still losing mud and so on. Various cement jobs were run on it, I was present during some when I was in the area. We ran cal??? seal plugs, we did various things there. In any event my youngest son was born on March 10th, I was in Calgary at the time of course, there were other people on the well and the well was out of control again. Various things had been tried. I wasn't there so I had no control over what they did. There were a lot of discussions when I had been there. Various people, we'd have a little meeting and discuss various things we could do. Some mistakes were undoubtedly made but in the long run we did feel that we had got to a position where we could do something. Again, I'm kind of disjointed because I was back and forth. At the same time running back and forth, I was up at Fort St. John again for awhile. But I did spend some time there, with Lyle Caspell, he was around, very wise guy and Jack Pettinger, a long time employee with Haliburton was there. All these people cooperated very well. As I said, we ran batches of cement, we ran batches of cal seal and so on. Finally and I'm probably making this too brief, but we did get that well plugged above the D-3. Again, I can't even give you the depths. I'm not sure the depths reported in the books are even near correct, I don't want to use them. But we were above the D-3 and we had a plug there. Every time we'd get to a certain depth, say x feet, we'd lose control. We had a plug above that. In the meantime I had ordered in a Larkin packer, which was something like a cement retainer, with a port, this was going back to my Atlantic 2 experience. I had this flown in by air which took a little manoeuvring, you didn't buy these things off the shelf at that time. But I knew what I wanted and I got this larking packer and we got it in and it was in the doghouse or in the tool shed, there to be run on the 7" casing, which was also on the rack. We set up a program to run this casing. First we were going to drill down to 30', cement and that, clean out the hole that is, clean out the hole to 30' above x you see. Which would allow us to get 7" casing, we only had 300' of surface casing in the hole which of course, later was shown to be ridiculous but at

that time steel was short. We were fighting the Korean war or something anyway steel was short so we just didn't have the pipe. And this was the practice, 300' of surface casing, everybody did it, Imperial included. In any event what happened was in my opinion, they went in to drill and we had some personnel and I can't even tell who it was at the time, of course, this happened 3 or 4 in the morning, they drilled down to 30' above x and the well blew out. Well, then everything went haywire from then on. The drill pipe was plugged by some scheme of putting something down it, various things took place and it ended up that we had a perforation in the drill pipe at 2,000' down which allowed us some circulation but we couldn't do much in controlling the well at that depth. We kept doing various things there but unsuccessful and on the 18th of March, or maybe it was the 17th, St. Patrick's

#141 Day, what significance that has, I don't know. But in any event, on about that day I was phoned up at night and the well was cratering, it was blowing out through the ground. It took me back to Atlantic 1 of course, that if we hadn't put that well head on it probably would have been a fountain right there because it would have been blowing up, it was cratering there and it would have gotten across there, it was coming out seismic holes a long way from the well and various things like that, oil was coming out and gas. So then we started a lot of head scratching. We still worked on the well, we had a steam line from an adjacent General Petroleums rig to run the draw works so we could run the draw works and handle pipe and do things like that and we worked on the well and it was kind of miserable work because you're under tension all the time. And of course, you felt that you had to improvise, you couldn't always get what you might have liked to have had. But it ended up that we did get kind of desperate and Lyle Caspell, who was a pretty good head and I went over this together. And we'd had some experience, we'd had lots of previous experience using cal seal but we had some experience on this well with cal seal. We reasoned that if we could mix up a big batch of cal seal, say 1,000 sacks, carefully controlled because the amount of additive to the cal seal control the setting time, the amount of water I believe.

#166 SB: Was it a special. . .?

SL: It was a special cement developed by a man by the name of Andy Anderson whom I'll talk later. But the idea was that if we could get that cal seal going out of that small hole in the drill pipe - the timing had to be controlled, we had to have circulation through the hole but we had to keep that cal seal moving so it didn't harden up till it was outside the pipe. Well, with the fluid coming up from the bottom our theory was that the cal seal would be carried up and would tend to coat the formation where the oil and gas was leaking out. It was not blowing wild, it was leaking out. We still had pressure on the well. And we had pumped stuff out there but it didn't do any good. And this seemed like a reasonable idea. We got in touch with Gene Denton and he got in touch with Dick Gibbons, who was the head of Haliburton and our idea was to get hold of this guy Andy Anderson, whose name we knew, I didn't know the man and get him to come to Canada and supervise the use of this cal seal. Next thing we knew a man by the name of Cyclone O'Donnell arrived, a Haliburton man who'd had a lot of experience in Texas with wild

wells. That was the information we were given. Well, Andy Anderson apparently was sick with some problem in Denver. So anyway, here we were and we had a man who came on a lease and knew immediately what to do. He decided that what we had to do was to pump 10,000 sacks of cement and about 1,000 sacks of cal seal, some amount of cal seal, down the hole. Well, that took a lot of improvising, the roads were bad, it was in April, the mud, the highways were no good. Farmers road you know, everything was getting stuck. We had an awful time, we had 10 car loads of cement brought into Ellerslie I guess, just east of the field. It was hauled out and piled up on platforms. Every cement truck in the country was hooked up, Haliburton and Dow. We pumped it in, this took a period of about a month to get organized, we pumped it all in, it pumped through that hole just like a darn but didn't do any good, no good at all. Of course, the cement was probably heavy enough, it fell down

#205 and slowed the flow of gas and oil down momentarily but it broke through. Our idea had been to squeeze it out like stuff out of a toothpaste tube that would. . more like a guy plastering a wall instead of firing a cannon at it. So that didn't work. People were getting pretty desperate, the government included and so on and Mr. Ian McKinnon, who was with the provincial government then and later, I met him, he asked em to come over and visit him, which I did. I went over to him home and visited him one evening, a very nice visit there and gave him pretty well all the information I had or knew about on the thing. Anyway, the Conservation Board and the provincial government felt that they had to do something now so they brought in a Mr. Myron Kinley and his son-in-law, who is quite famous now, is Red Adair. They came in and they had a lot of ideas, I used to run back and forth, I spent quite a few evenings or nights even, in Barber Machinery and Earl Griffiths, if he was alive could tell you some of the things we had made there. Some of the things, which we got out and then in the morning - we couldn't work at night you see, on account of the lights - but in the morning we'd get some piece of equipment hauled in there, carried in, manhandled in from the road into the lease and it wouldn't be used. But in any event, they did various things, tried to clean the drill pipe out, there was stuff stuck in the drill pipe and that again, was a fishing job which wasn't very easily done through a lubricator you see. Anyway, it was unsuccessful and they did their best but they packed up and left. About that time the Conservation Board took control. In the meantime, actually, if George McMahon were alive today he could tell you at that time I did go into his office and talk to him and did say that all I could see now was that we had to drill a relief well. I wasn't thinking of two wells which they did do but my idea was that we had to drill a relief well and get at it from down below. In any event, that was what they did decided to do and they drilled two, one from the west and one from the south. Eventually, Tip Maroney was conscripted from Imperial Oil, he was a great man and very knowledgeable and he and Charlie Visser, another long time friend of mine, very knowledgeable well man, they worked together on it. We did keep an observer on the well, on these operations during the early part. About that time the oil show was on down in Tulsa, 1948, and Imperial Oil invited me. I don't think they were trying to get me out of the way but they invited me to go down in their aeroplane to see the oil show, which was very nice of them. I did so. Of course, I was out of it then, we were divorced from the

thing. In fact, I was looking after some other wells. Had to, had other customers or clients I should say. In any event, when I was at the Oil Show I met this Andy Anderson and I had a nice visit with him and of course, he wasn't really aware of all the things but I have him a run down much like what I've given you, but maybe a little bit more specific in some things and he was at least encouraging that he felt maybe we could have done something. He didn't say, it would never work. He was a genius with this stuff, he had developed it and it was good material, it worked. You could set it up, you used to stir it up in a cup and in 5 minutes or 10 minutes or 15 minutes or 20 minutes you couldn't push a pencil into it, according to the additive. So anyway, that was pretty well the Atlantic 3 story except for one point. I mentioned in my discourse here that when they drilled, they were going to drill that plug before we were going to run casing, they were going to clean it out down to x-30. X was the point where it always blew out when we drilled through the plug. 30' is the length of a

#280 single joint of drill pipe and I know, in fact it happened to us on a well one time, that an extra join of drill pipe had been run in a hole and the hole was drilled 30' too deep. So even the kids with the mathematics today could figure it out. It looked very suspicious to me, there was no way of checking. When I was pushing tools, it wasn't my idea, one of these chaps that worked with me, he was a tool pushed, he brought the idea forward which was instantly seized, of knowing the length and the number of every joint of pipe on the lease you see. Know exactly what's on the lease before you ever run in the hole. I think that's a good idea. Anyway I just wanted to . . I hope that I've explained that adequately. Aubrey of course, if he needs anything else, I'd love to give it to him but I am desperate, I've gone through my files, I've looked, I talked to Ralph Binney when he was still alive, he searched General Petroleums files, they couldn't find anything. The unit organization, Tip Maroney contacted them, they couldn't find anything. It wasn't just for me, it was some other people, some ex-Imperial hands on that who wanted to put together the story on Atlantic 3 and every one of those reports disappeared. I should have kept one on a personal basis.

SB: This is the end of the first interview with Spi Langston.

Tape 3 Side 2

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Tape 4 Side 1

SB: This is July 7th, 1982. Susan Birley interviewing John Langston at his home in southwest Calgary. Mr. Langston, I wonder if we could go back just for a bit to the early days of Turner Valley. You were going to high school at the time but you had some early memories of Turner Valley. I was wondering for one thing if you remember if there were any German seismic crews that were operating in Turner Valley at that time.

SL: No. I was in high school in the middle 20's and this was really before seismic work really started. I haven't got my notes here but I did write a paper on seismograph when I was at

university and it seems to me that the first seismic parties operated in Mexico, I believe for Shell back in the late 20's or early 30's. This process had been developed in Europe. So there wasn't anything at that time, there was of course, drilling going on in Turner Valley right from 1914 on. But again, sort of concentrated in. . [phone rang] . . I do understand however that some seismograph work was done down in the very south end of Alberta, probably as a result of prospecting work done there by Myron Zanmer, who were will probably mention later. As far as I know, the first seismograph crew that worked in Alberta was the one which I think I mentioned previously in 1934, Heiland Research Company and at that time I said they were from Boulder but actually they were from Golden, Colorado. As a result of their work it might be mentioned that a well called the Arco #1 well was drilled, south of the Turner Valley area, which was a dry hole. A subsequent operation was done in 1936 by Seismograph Service Corporation of Tulsa, with whom I worked and also Heiland had a party in the field which worked in Wainwright at the same time we did but I and not aware of what company they were doing work for.

#029 SB: So most of the early seismic crews were from the United States then were they?

SL: Oh yes, there were no seismic companies organized in Canada. Some were later of course, and had various successes here but the instrumentation was developed in the States. It was like our computer operations today, it changed from year to year as far as its ability to recognize the formations and so on. Originally of course, it might be wise for the record to point out that early seismograph prospecting was done by the refraction method, which consisted of planting huge quantities of dynamite in actually, more or less of a pit, some distance away from the recording instruments. The shock wave would travel down through the surface layers, into another layer of formation which transmitted the shock at a high velocity. The top layers were rather deadening for the energy waves. This wave of energy at higher velocity would travel along these layers of formation and would then be deflected back up through the surface layers at the points where the receiving instruments or seismographs, or we called them geophones were located. These were rather massive explosions and weren't really too well received. But in the early 30's the more modern methods of using reflection seismograph were used, which waves were driven down through the surface layers and then reflected off of lower formations, back up to the geophones. These charges of dynamite were comparatively small, maybe 1 to 3 to sometimes, in our case, 6 or 15 pounds of dynamite. But this was unusual, it was usually a small charge and this didn't do any damage and was a lot better accepted by the farmers and so on.

#058 SB: Was that called shot point or what was the term shot point?

SL: The shot point was the point at which the dynamite was exploded. In our case holes were drilled with various kinds of drills to depths of 30' as a rule. Sometimes we had to go lower, on at least one occasion, an experimental hole was drilled to about 250' because of some problems of the deadening effect of the surface layers in the Wainwright area. But generally our shot points were rather shallow. In fact some of them were quite shallow

and were drilled by a father and son team with what amounted to a post hole auger, with extension pipes used and this was pulled out of the hole with a winch. So that these holes probably got 15', but usually these were located say, in an area where there had been a slough and the ground was probably less resistant to the shock wave.

SB: I understand there was some problem with keeping the seismic crews here all year round because they were coming up from the United States.

SL: I'm not sure whether there was any problem as far as the permit from the government was concerned. I think it was more to do with the weather conditions here, the fact that they'd have to drill through frozen ground and probably some of the crews were not too happy to work out in the winter time. Although, in 1937 I was approached by Glen Conklin, whom I mentioned previously, I worked with him for the Seismograph Service, he was now working for Heiland I believe and they were going to do a survey down in the Pincher Creek area. I was with Calgary Power at the time and he suggested that he would like to have me on the crew but there was a problem which arose because the crew would be going back down to Wyoming in the winter time. So I went to the American Consul in Calgary and the reception I go there was very cold. They didn't mind bringing their technical personnel to Canada to work but they certainly didn't want any Canadians going down there to work.

#088 SB: So you worked with seismic crews, mostly in connection with what fields?

SL: The two areas I worked on the seismograph crew were in the Oyen area, a well called the Fuego #1 well was drilled I think, by some local interests there, back in the 20's and got some oil, heavy oil. This was a well south of Oyen, down in the eastern end of Alberta. We worked all around that area, down just about to the Red Deer River, east as far as Acadia Valley and west to Cereal and north some distance of Oyen. After that job was wrapped up in early August we moved to Wainwright where of course, wells had been drilled previously. We worked there generally north or Wainwright because south of there was the Buffalo park and we weren't allowed on that area. Of course, working for Lane Wells was an education for me in a new field. My experience with drilling rigs was pretty well confined to some queer looking set ups we had on the seismograph crew. These were far short of what we found even in those days in Turner Valley. Also the whole picture was different, it was out of my sphere at that time. A lot of the things, as far as machinery were concerned were easy to understand and to become acclimatized with but it was a new experience for me and I had to learn a lot of things and at the same time, it was necessary to appear as if I knew something because we were selling a service.

SB: Was Lane Wells more or less the only company, did they have the field to themselves at that time, when they first came in?

SL: Yes. In Canada the only surveying which had been done previously was with the acid bottle, which Haliburton Oil Well Cementing Company usually ran or the cable tool drillers would run themselves, where a long slim glass bottle was run down the well, holding hydrochloric acid and it was allowed to stand at rest in the bottom of the hole for a period of time and when it was pulled from the hole it was immediately emptied of the acid and washed and a ring was etched on the glass, hydrochloric acid will dissolve glass.

So that it did show if there was an inclination of any serious proportions. Then again, there was another instrument that was sold by, I think it was the Technical Oil Field Tool Company, at least the abbreviation was TOFCO. This was used by quite a few of the operators in Turner Valley. It was quite a good instrument but it depended on a clock of course, as we did, but when the time had expired set on the clock, a trigger released a punch. The punch of course, if the instrument was standing still, was pointed straight down and if the instrument was off at an angle, the punch mark would show the amount of deviation. But this instrument was sometimes subject to criticism because it could theoretically, be triggered as it was falling down the pipe. Or again, it could be set up in the corner of the dog house and a picture taken. But this same thing could happen with out go devil instrument, it could be set up in the corner of a dog house and we regularly tested it that way.

#143 SB: So were Haliburton up in Canada before Lane Wells?

SL: Oh yes. Haliburton had come to Canada years before. In fact, a chap by the name of George Haliburton, one of the sons, was killed when his cement truck overturned down in Turner Valley. They actually had a Canadian company, it was registered in Canada as a Canadian corporation and they had operated for years in Canada. I imagine it would go back to the early 20's or at least, early in the 20's.

SB: What about some of the other companies like Dow, when did the come in?

SL: Dow came in to Canada and did one acid job. Of course, acidizing was a new service too in, I think you could say, the early 30's. They originated this service because of work they were doing on salt wells in Michigan I believe and they cleaned them up with acid and this service was adapted to the oil fields. I think it was a Mr. Austin but I'm not sure, he came up on a well in southern Alberta and I'm getting back into history now, which I'm not familiar, but they acidized a well and I think it was Roney-Nordon and I worked on that well later running a survey. But they brought the acid up in barrels and dumped it in the hole as far as I can understand. In 1937 Dow came to Canada to set up shop because of the. . I said, 1937 I believe, I was graduating from university at that time and with all my knowledge of seismograph I did respond to an advertisement which was put up in the arts building at the time that I was graduating. I applied to Dow - when I said that name, Mr. Austin, I was mistaken, a man by the name of Ray Austin, he came up and interviewed another chap and myself, this other chap had also applied and he took all the detail and gave us an interview but I heard nothing more from them until August of that year, when I was working for Calgary Power. They again, called me in for an interview and I met a Dr. Love at that time who was with them and they were expanding their service at that time. However in the earlier incident, a good friend of mine, Gordon Webster was employed by Austin and he was much better adapted probably because he was a chemical engineer.

#183 SB: I guess we should go on to Lane Wells or your first work with them, where was their office, did they have an office in Calgary at that time?

SL: Yes. They came up here to do some preliminary work and after they looked around they

decided that the field was a good prospect, they decided to bring permanent equipment. The first equipment they brought up was a skid mounted unit, which had to be hauled around on a flat bed truck. It was not really too handy for quick calls. So when they decided to come in here they brought in a new unit and they had set up a Calgary office in the Lougheed Building. Then they brought a couple of gentlemen up, a Ray Hancock and a Bill Allen who were old timers at that time, as far as old timers went with Lane Wells. They were experts respectively, in surveying and gun perforating. They also had another gentleman who was in charge of the office when I was interviewed but he was replaced later and my boss was Murray Walker, who stayed here during our three years in the field. This Bill Allen and Ray Hancock trained Jack Antliff and myself to operate their equipment and they stayed here about a month or six weeks and went out on the first jobs with us.

SB: Did you have another office in Turner Valley?

SL: No. We operated out of Okotoks, we had our equipment in Okotoks in part of a garage there and there was a small 6 x 8 office there. The following year I think, in about 1968, the head office in Los Angeles decided that it would be expedient to have Mr. Walker headquartered in Okotoks and he was located there and the Calgary office was closed. Business wasn't quite as good as what they had expected actually.

#219 SB: I guess in your early days, working for Lane Wells and in the oil fields, you encountered some people that you worked with later on. Can you think of any of those?

SL: One gentleman who certainly fits that description was Ken Doze. Ken was an engineer from the southern States who was with Haliburton Oil Well Cementing Company. Part of our job when we weren't working on wells, had to do with sales efforts. In one of my trips into Turner Valley, I stopped in at Haliburton's plant and had a real nice visit with Ken, who impressed me highly and I have retained that image of him ever since. He's a great engineer and I did a lot of work with him in later days.

SB: When you first went to work with Denton and Spencer, they were set up in Calgary by that time were they?

SL: Yes, well, maybe previously explained that Gene Denton and Cody Spencer, to my knowledge were both, I was going to say enticed, they were both persuaded to come to Canada to work for Anglo Canadian Oil Company Ltd., which was a Calgary company and which had a subsidiary, Drilling Contractors Ltd. Drilling Contractors Ltd. was run by Ralph Will who was another very fine chap. In fact, all these people were really good and he is still around. Ralph was a drilling man and he had worked in Wyoming and I'm not sure what other states with Cody Spencer who was a drilling man and was quite competent in equipment set ups, that is on the drilling rig. He was known as a unitizing expert, let's say. That is, putting draw works, pumps and everything together in the best possible fashion. Gene Denton was a production engineer, and he had also worked with the Ohio Oil Company, I may have that name wrong. He came up and he was very, very efficient and knowledgeable about the acidizing and all this kind of thing and I worked with him on jobs where we were helping with gun perforating on wells and as far as Cody

Spencer was concerned I worked with him in connection with surveying of wells and that kind of work and got to know them both quite well.

#270 SB: You mentioned that you also worked part time for General Petroleums, how did that company start, who was the founders of that company?

SL: I think what happened there was, with the surge in drilling, some people in Calgary, composed of, and I know I'll miss some of them, Mr. Fred Shouldice, an old timer in Calgary who was a lawyer here, quite prominent, Mr. Ralph Smith who headed up Ralph M. Smith Investments Ltd., Mr. Carl Bell who I remember was in the insurance business and there must have been a few others. . oh yes, Mr. . . I'll think of the name later. In any event they had pretty well decided they wanted to get into the oil business and of course, Mr. Smith being in the investment business he was quite interested in this and got the others involved. The other gentleman's name by the way, was Harry Howard, he was a Chartered Accountant, so it made a pretty well rounded business organization behind the company. Then Cody Spencer and Gene Denton, when they went into consulting, they were persuaded to come in with the group. So it made a group with good backgrounds generally. General Petroleums was then formed as a limited company with shares out in the public hands.

#303 SB: Did you ever work with Daryl Spencer, Cody Spencer's brother?

SL: Oh yes. I certainly did. And he was another fine man. Daryl had oil field experience in the States and in the spring of '43 he was working in Nevada on what I now feel was the atomic energy operations there. He had a job as a signal man on a big construction derrick. When quitting time came one day he slid down the ropes towards the travelling block and at that time, the operator of the crane, not realizing Daryl was there, tended to lower the block which drew the cable into the travelling block cutting off the fingers on both hands, retaining only, as I remember it, his thumbs. I was with Cody in Turner Valley at that time and he was terribly shocked at this, which you can't blame him for. Well, when Daryl was in sort of the semi-invalid stage he came to Canada and spent some time with me as a visitor really, out on the job. We did cleaning out the western Alberta well on the Bar U Ranch.

End of tape.

Tape 4 Side 2

SL: Later Daryl came to Canada and with some help from Cody, set up Dominion Drilling Ltd., which headquartered in Edmonton. They did a lot of drilling, in fact, did work for our company, ??? Rainbow Oil Ltd.

SB: How did you find it was working for Cody Spencer and Gene Denton, were they easy to work with?

SL: I don't know if that's a fair question. Gene was a wonderful man and so was Cody in their own right. They had definite ideas on what they wanted to do and I got along pretty well

with them as long as I did what I was told. We had a few problems all right but nothing very serious except one time which still amuses me. I was working with this mobile hoist rig up on a well near Duvernay, on the Saskatchewan River, north and east of Edmonton, north of Two Hills as a matter of fact. This was an old, old well that had been drilled years before, they had hit gas and had run casing and then they had pulled the casing, the is the production string out of the hole and had theoretically abandoned the well but the gas had worked up through the surface layers and was bubbling out around an area there, about 50-70' in diameter. The Conservation Board wanted to do something about this and Gene Denton agreed that we would take the mobile hoist up there. I went up with a couple of lads, one an old cable tool driller and his helper to get this thing under control. Well, we had some problems there. We cleaned the hole out and then we had the gas bubbling up through the casing and then we put a well head on it, we put a plug in the top there but we worked into the well and the idea was we were going to clean down the hole and then run a cement plug in it. But this took some time and we only worked day light and we had this mobile hoist with a gasoline engine on it, which was still the Ford motor, not too well suited for the job. And then again, we didn't have any antifreeze for the engine, this was in the war time. So every night we had to drain the water out of the radiator and we also used to drain the oil too because the oil would get kind of thick overnight. This was getting into December and it was pretty cold that year. So in the morning, we had a rotary cable by this time on the well head, but in the morning we would take this plug out of the top of the casing and light the gas to heat up the water and the oil to put in the engine. Of course, we had some timbers on there but this wasn't that hot, it wasn't that big a volume of gas. But we'd boil up the water and boil up the oil and put them in the engine, get started, then we'd put the fire out and go to town. Well, I was sending in telegraphic reports every day to the office there and I didn't mention heating the oil and the water. So I got a long day letter from Cody and it explained to me how I should extend the exhaust pipe out 40 or 50' from the engine and a few other details so we wouldn't have any fire. But there was no problem. But generally I got along very well Cody and with Gene Denton and had many a good time with them. Once in awhile when things were going kind of rough, Gene did get kind of hard and especially if you hadn't had any sleep for 3 or 4 days, sometimes it rankled a little bit. But I really respected him and I certainly respected Cody.

#059 SB: You mentioned before that during the war there were quite a few shortages of equipment and things like that. Did you ever come across any activities associated with War Time Oils?

SL: No. War Time Oils was pretty well restricted to Turner Valley area and I don't believe that I had anything to do with them. I did complete a few wells in Turner Valley, that is looked after the acidizing and completion operation, running tubing that kind of thing. But as far as I remember, none of these were designated under the War Time Oil program. I may be wrong, there might have been one there. I looked after a well called the Gem well, but I'm quite sure it was not. The others were for Home Oil and a few other companies there. We just looked after the completion of the well, from the time they got

to bottom, then we'd move on and supervise the running of the tubing and setting up the well heads and look after the acidizing and putting the well back on production after each acid job.

SB: Was there any apparent increase in exploration activities to do with the war effort or was that evident?

SL: No. I wouldn't say exploration. It's hard to really distinguish. The Vermillion field was a small oil field which had been developed to some extent. The market for the oil wasn't very good but I suppose partly on account of the war effort and the shortage of coal in those days, the CNR, whose line ran through Vermillion and actually, very close to this oil field, they were instrumental in the setting up of an oil cleaning plant. This oil was used to fire the locomotives. They were steam locomotives but they burned oil

SB: A person gave you the credit for putting together a two legged mast for a rig. ??? different from the mobile hoist that you were mentioning?

SL: This was not the first two legged mast. The first one in our company was the one, and I mentioned it I think, with one of the first jobs I did with Denton and Spencer was go to down to Turner Valley and work on the completion of a rig which had two legs, let's say. In other words, there were two pieces of casing with struts welding them together for the bottom part and they were about 30' long and then telescoping into those two legs were two smaller sized casing joints and then on the well the inner legs with the crown block on top were raised up and held up with clips and clamps. There were various ideas in this regard but we ended up with clips. So I sort of think there were other rigs of this design and then subsequently this first rig burned up. I think I mentioned this earlier, on a well in Vermillion and then we got hold of a big GMC truck from MacCosham Storage and Cartage and got a good draw works from the Cardwell Company and I looked after the fabrication in the welding shop of masts and stuff for it. It was a good sized rig.

#108 SB: I guess the person was Al Wright, who was the tool pusher.

SL: You mention Al Wright, he was one of the chaps that I met, I must have met him in Turner Valley but I met him again where he was really a top man with some of the original exploration work in the Vermillion field. We worked together for various times. Now the rig that he refers to was the mobile hoist and it was really just a little, short stubby sort of a truck looking affair and was really built for servicing work, for which it was well adapted. However Denton and Spencer, who owned this rig, got a contract with Imperial Oil to drill some wells in the Vermillion area. So they then had to have a rig that would handle regular length drill pipe, that is 30' joints. So we had to build a mast and it sort of duplicated the bigger, heavier rig's masts, because it still had to be able to take 30's joints of drill pipe. But again, in those days, a lot of equipment was unavailable so we ended up with a travelling block which was rather large and clumsy and definitely heavy. The crown block was made out of a cable tool travelling block and it was a big piece of metal, there was an awful lot of weight to it. All this was mounted so that it folded down, the upper mast telescoped into the lower mast but it was still only 30' long and then you had to have this thing laying down on the top rack of the mobile hoist for travelling. And this worked pretty good but when we first used it we had a problem,

because the power in the unit and I mentioned this previously, was a Ford engine and it definitely didn't have the power on the short purchase, from a swivel point to the bottom of this mast, you see like this and it had to pull it like that and all the weight was back behind and your leverage situation was very bad. It was a pretty awkward proposition and the first time we tried to set it up we broke the mast and luckily we had people like Al Wright there who took hold and with the help of some welders, with torches and one thing and another, we got the mast straightened out and did drill some wells to, I'd have to look them up but a couple of thousand feet deep, which was the contract depth. We drilled two wells like that. And this rig was later used in servicing but by that time we had put a better motor in it, put a Wakishaw??? motor in it and it could handle a mast, although the mast was still a little bit ungainly. But we did a lot of work and I had supervision of that rig later and it was a big relief because putting that mast up with that Ford motor was deadly. As a matter of fact, I could explain it, I don't remember Cody ever coming out to the job when we were putting the mast up.

#157 SB: When you started your diamond drilling, I guess this is jumping ahead again, but Al just thought you should give yourself more credit that it was a real pioneering effort. Did you notice a lot more activity as far as Denton and Spencer was concerned as a result of bringing this in?

SL: Going back again, I think I previously suggested that the reason I got into the diamond coring was because of the improved situation as far as getting reservoir information was concerned, tied into our engineering thinking and being able to evaluate wells and to determine reserves in the ground. The real credit in the diamond coring goes to this man, Carroll, or his nickname was Tink??? Deely in Dallas, who developed the diamond coring and kept improving it. And, through a lot of luck. The first job was done in the west Edmond field west of Oklahoma City, I visited that field and this was done for a consortium or a unit group, in which Gulf Oil Company was one of the members. They cooperated very well and he learned a lot on that job and thanks to cooperative people there, diamond coring was developed. He was pretty discouraged there because he had sent a contractor to do this work but with the results they got they were pretty reasonable with him and encouraged him and stood the expense of helping him along the way and then he subsequently had other ???. So by the time I got involved in the operation, things were pretty well under way, although new developments were made. We made a few slight ones but Deely really recognized the problems as we went along and helped.

#188 SB: What were some of the ones that you managed to ??? Denton and Spencer?

SL: Well, it's hard. Really, just sort of methods of operating. I can't really pick out any definite technical improvements we made to the equipment, it was really just more technique which ideas were passed along to Deely.

SB: There would have been differences in dealing with the formation too, as compared with in the States, would there?

SL: Well, yes. A lot of our formations were fractured or had fault zones in them. One operation which I always look back on was in the Muskeg well. Now, I don't know if I

mentioned this before but in the Muskeg well, they had very tough going and were drilling through a soapstone which is very hard.

SB: Was this an Anglo Canadian well?

SL: No, this was a well up north of ???, Alberta, north of Hinton area. It was drilled by a joint effort and I think I mentioned this, it was Texaco and Imperial and so Imperial were the operators. But in the well the rick bits, the 9" rock bits were going very slowly so they decided they wanted to core it. And of course, they wanted a good sized hole. So we had a large core barrel and we ran bits in there but the hole was in effect, corkscrewed. It was drilling out and always doesn't necessarily drill a complete round 9" hole but it tended to corkscrew around as it went down. So the core barrel of course, was 50' long and it was straight and it had stabilizers on it which required that the hole be necessarily not corkscrewed. So the first diamond core head came out of the hole, it went in at 8 5/8" and when it came out all the diamonds on the outside were worn off and it was about, I can't remember if it was 8 1/8 or 8 3/8, but it had lost a lot of its circumference. So we had two bits there and on the radio I discussed this with Charlie Visser who was there, keeping tend in Calgary and although I hated to admit it, I didn't think we were doing any good. But Charlie said, run the other bits by, we want to see what we can do there. So okay, we ran the other bit and we had to reream??? a lot of that hold again because it still hadn't been reamed out but anyway, we left that and walked away from it. But eventually, after they got into the limestone they hit some more very, very hard stuff and had 7" casing in the hole at that time and these small rock bits are very, almost fragile in that kind of an atmosphere. So we ended up running 6 1/8 core bits in there and then we really did some good for them, we were coring hole there at a much better rate than they were able to drill it.

#246 SB: You were also going around and selling the diamond cores as well as working coring wells, were you?

SL: Selling the bits?

SB: Yes, selling the bits.

SL: Yes. We sold bits and we sold diamond coring equipment too. Again, this Mr. Paul Jassop, who had been with Gulf Oil Company in the west Edmonton field, he came to Canada and I'm sure I'll mention him again. But he was very much our champion in diamond coring and in the Pincher Creek area those wells were diamond cored and we had our man on those wells but Gulf Oil company owned the core barrels. We sold them the core barrels and the bits and our people did go down and supervise but Paul Jassop, he was a great believe in our coring equipment and very responsive and very helpful.

SB: What were the prices for the different types of drill bits?

SL: It varied. There was a basic charge for setting the bit. You see, the way the diamonds are set, a mould is made up of carbon, a carbon block is taken and machined to the shape of the bit. Then it is scored mechanically to line up where the diamonds are to go and little holes are drilled, now this may have all changed in the years, but the waterway, you have to have a place where the water can come back up around the bit, it is formed by, I don't know whether that was asbestos or not but little ribs of asbestos. Then the diamonds and

in a 6 1/8 bit for instance, about 200 carats of diamonds would be used. And the diamonds were about 8 per carat. So that's 1,600 diamonds set in that mould and these girls, with special not binoculars, but special magnifying glasses would set these. Oh, and I should have explained that there was a paste, kind of like a petroleum jelly put on the inside of the bit, where the diamonds were stuck into these little indentations. There was a definite pattern in there. Then once the diamonds were all in place there was a powdered metal placed into these moulds to fill them up and to form the shape of the bit. And then the bit was put in a furnace. These furnaces varied over the years again because we found that the technology improved and new ideas were developed. So we ended up with a furnace which had a hydrogen atmosphere in it. There was a feeling that some of the diamonds were getting burnt, which weakened them of course.

#307 SB: Where were they manufactured?

SL: Well, our bits were made in Windsor, Ontario. In fact, the first bits which were brought out here when Deely came out in 1947 to work on a Royalite well in turner Valley, those bits were made in Canada. But the bits for the United States were made just across the river in the affiliated plant. The Canadian plant was essentially owned by the son of the family who had the U.S. plant. It was not really a subsidiary company, it was a Canadian company and the bits were made there and of course, they had access to all the information from the U.S. plant.

SB: What would be the price range at that time?

SL: It varied with the price of diamonds essentially. And also we had different values of diamonds too. But the common price ran about around $2,000 - $2,500 for a 6 1/8" bit and of course, bigger ones got more expensive. But normally most of the bits that we handled were in that range, $2,000-2,500. Now they're much more expensive. These were not gemstones by the way, some of them were pretty. Oh, one more thing that I should have explained in regard to the diamond coring is the fact that when the bit was reamed or worn out these bits would then be taken back to Windsor and by an electrolysis method, the metal was eaten away and the diamonds were recovered and then they were sorted and used again. And the customer got the full value per carat of the diamonds recovered. So the end cost was not $2,000-2,500, sometimes we'd get 50% recovery. So that was quite good.

SB: And the first Leduc well, was it cored by you, the first well at Leduc?

SL: Well, the first well at Leduc of course, was Imperial Oil and it was not cored.

End of tape.

Tape 5 Side 1

SB: You were just mentioning which was the first well that you had cored at Leduc.

SL: Well, the first well that was cored at Leduc was the BA Pyrcz #1 well on Pyrcz farm. This was actually the second well that I cored although the first one was in the Wizard Lake area for McCall Frontenac or Texaco. That well was unsuccessful in reaching the D-3.

The Pyrcz was drilled by Central Leduc, which company Neil McQueen, a long time pioneer in the oil business, was the President and it was paid for I believe, by British American Oils. So they had a geologist looking after the well and a geologist trainee situated on the well. General Petroleums Ltd. was the contractor and Sandy Addison I should mention was the tool pusher. He was a long time operator in the oil field and had come up through the cable tool days and was probably one of the top people. Of course, there were so many top people it's hard to compare them. The contractor had agreed to diamond core the well and I went out there and spent all my time looking after the operation. The well was unsuccessful as far as reaching the D-3 was concerned and the D-2 was unproductive. We did core some 480' of core, mostly green shale and this operation was watched quite closely by Imperial Oil, through their geologist Aubrey Kerr and was visited regularly by various government officials, I think I mentioned this previously.

SB: Later on, when you became involved with the Atlantic family, with the Rebus family, how much were they involved with the operation?

SL: Well, the Rebus family and I think I mentioned this in connection with the Atlantic 1 operation, they owned the mineral rights under this quarter section. Of course, they had a definite interest, monetary interest that is, in the wells and the production. So they used to keep check on us and they were very nice people. There wasn't any big problem until their land got all pot holed with craters, with oil spouting out of them. But eventually they gained quite a chunk of money because they got royalty on every barrel of oil that was so produced.

#040 SB: With the Atlantic 3, you mentioned that there was lost circulation in the D-3 with the other two wells. Did the people on the Atlantic 3 well know about this?

SL: Oh yes, it was the same crew. Essentially the same rig had moved over there. However there was no indication to my knowledge of lost circulation on the #1 well. It was noticed on the #2 well, which was east of the #1 well, toward the edge of the pay zone. And #3 of course, was directly south of the #1 well, but the edge of the formation had probably crept over that way anyway, they had lost circulation there.

SB: I was wondering, when you mentioned that you had, one New Year's met Bid Lowry in Edmonton, was he interested in getting you to work for him or was there any kind of business at that point that you had with Home Oil?

SL: Well, no. Home Oil, they were already set up I think, in the Leduc field and had staff there. I had done various work for Home Oil company. The first well I ever worked on in the consulting business was Home #9 and it was an education because acidizing Home #9 was like trying to push your hand through a steel wall. We never had any success there in getting any amount of production out of it. I spent many a dark night watching the pressure on the formation slowly decline and then we'd pump another few quarts or barrels of acid into it. But it was a very good education for me but very unproductive.

SB: Do you recall ever coming across Jimmy Stafford with Home Oil?

SL: Oh yes, I knew Jimmy Stafford quite well. He was a good guy. His sister worked in the office back when I first knew Home Oil and we did work on various wells for Home Oil, including supplying them with diamond bits in the coring business. But we supervised

wells, for instance one time, Bid Lowry and Ollie Nevra both took off to go to the Oil Show in Tulsa and they were just about ready to put a well onto production, I can't remember the number of it. So I filled in for them and took over the operation to get the well on production. Also I'd had much experience with Home Oil when I was working with Lane Wells Company. It got pretty serious actually, on New Year's day, after I'd only been married 11 months and 15 days, when I was called out to go to work on their Home-Millarville #1A well, to gun perforate it. My wife was not really too receptive to the idea but I went.

#081 SB: Getting back to Lane Wells were there any curious incidents in surveying operations that you can remember?

SL: Several. One of the early ones had to do with a well drilled in the Flathead River valley, which is just west of the Alberta-B.C. boundary, close to the U.S. border. This well was drilled by, I'm not sure whether it was Pacific Petroleums, but in any event, George and Frank McMahon were involved in it. They had used a diamond drill rig. This was a rig that operated the same way that mining drilling equipment does and that is that the drill pipe is actually pushed down the hole hydraulically. But it was a big sized rig and a good sized hole was cored, I think about 6 1/8. So we were asked to survey it when they kept getting the same formation in the cores all the time. It seemed kind of curious to them and to everybody else involved. So a special instrument, small sized that is, was brought in to make an oriented survey and this was done. These instruments operated as I believe I mentioned, but maybe I was not too specific in saying how the mechanism was actuated. The instrument was carried on the side of a Chevrolet car on a special rack that held the instrument on a tilt with the top turned over down to the bottom. When the operation started at the well, the instrument was turned upright and a ball bearing in the mechanism rolled back, starting the clock. Obviously the clock could not be started any other way. So this machine was run down a well and pulled back out and when we got it to the lab and started to take our readings we found that the clock had stopped for a stretch of the film but had started again. In other words, it had stopped on the way down and had started again on the way out. Checking the angles against the angles determined further up the hole, they coincided. So it was quite obvious that the only answer was that the instrument had been turned back uphill and the hole had been drilling back up. This fact is mentioned in Canadian geological, that is Canadian government geological memoirs by Dr. G. S. Hume.

#120 SB: When you were doing your consultant work, Gene Denton was involved with New Superior Oils when the discovery at Joseph Lake was made, is that correct?

SL: Yes, that is correct and this was a farm out from Imperial Oil who had their hands full between Redwater and Leduc. And it was aimed at the D-2 and D-3 formations. The well of course, was drilled by General Petroleums. But at that time too, the name of the company was still just Superior Oils, it was changed later. We had an engineer on the well and by the way, Dr. J. O. G. Sanderson was the geologist for Superior Oils. The

engineer on the well was a lad whose first name was Tom and for the life of me I can't remember his last name. He was from Texas, he'd been in the U.S. petroleum battalion during the war, they'd been changed to I think, an infantry battalion and he had suffered from shell shock. He was a very sharp engineer and he only stayed with us, I'd say, about one year. He was a real fine lad though and did us a good job. On a particular well, he was there during the coring and testing of the Viking sand. This coring was done, by the way, with a wire line barrel. He ran some tests on the Viking, which was encountered at 3,219' and the top 10' flowed 1,700 mcf of gas. The sand I guess, didn't look too good below that and the next test though, was run at 3,254-3,264 and it produced 1,390 mcf of gas but oil came to the surface in 30 minutes, 35 degree API oil. A second test was run 3,263-3,266 or 2' more and they got 100 mcf of gas and oil to the surface in 27 minutes. A subsequent test 3,266-71 gave 74 mcf and oil to surface in 87 minutes with a recovery of 1,300' of oil and 150' of water. This was a pretty definitive look at the sand, which was determined to be about 7' in thickness. The tests were actually run, believe it or not, against the recommendations of some of the other people in the organization, without being specific. I therefore, give full credit to my friend Tom, who was looking after the well. Subsequently the well was drilled on and this formation was exposed to drilling mud, which was not as good then as it is nowadays, with the usual problem of water from the mud seeping in to the pay zone. I mention this because it applies to the story a little later. The well was drilled down and nothing was found in the D-2 or D-3 so it was decided to plug back and test this zone. I recommended at that time to Cody Spencer and I should mention at this time that Gene Denton died about this time and was not involved in the decisions but Cody Spencer would not agree with my suggestion that what we should do is plug through that Viking sand and then sidetrack a new hole into the pay zone. Because of the touchy problem of water filtering into the zone and so on. However we set casing through the zone and later proceeded to gun perforate it with bullets into the zone and got nothing except a little dribble of water as I remember. These bullets, and I think there was around 150 bullets shot in various runs, total, so we were at an impasse. Then I got agreement to bring in a unit which had to come from Casper, Wyoming, owned by McCulloch Tool Company. Jet perforating had not yet been inaugurated in Canada and McCulloch Tool Company came in, fired three shots to my memory but according to the Conservation Board report, about five shots and we had an oil well. This was really the discovery in the Joseph Lake field. Three more wells were drilled and we got one well to the north of the discovery, one well to the east of it and one well to the southeast of it, on the adjacent LSD's. The well directly to the west, the #7 well was a dry hole, too deep. But the well to the southeast is interesting because there was only 1.5' of pay but they got a drill stem test on it. We had considerable discussion for about a day as to whether or not it was worthwhile running casing in the well. We figured out how much it would cost us to complete the well with a string of casing and it looked like we could get the casing job paid for. So the well was completed and I think that well paid for that casing job many times over, so we were quite happy about this. The subsequent year, 1950, a big program was started again and a new discovery was made just southeast of this original bump in the sand and a large field was developed. I have to pay tribute at this

time to Bill Elser, Mrs. Denton's brother, who supervised that work for Denton Spencer Company as their engineer in charge and he did a wonderful job of keeping things moving in that operation.

#210 SB: Did that Joseph Lake later become part of the Jaorchim field?

SL: Yes, that is correct, that is where the name came from and it became quite extensive and of course, led to other discoveries in other areas of the Viking sand further to the south and so on.

SB: Did the company change its objectives or anything after Gene Denton died?

SL: You mean the Denton Spencer Company. No, the company remained operating under the same auspices. Mrs. Denton became the Vice-President of the company. Our operations expanded considerably from then on, through the early 50's. We got into the geological consulting business simply because it was impossible to get enough geological information otherwise. We did photo-geology work and some stratigraphic core testing supervision in southern Alberta and a general geological practice. But this was disbanded about 1954.

SB: I understand that you were involved with Ralph Binning somehow, how did he fit into the picture?

SL: Oh, well, Ralph Binning and again, I go back and say he was a good friend of mine, right from back in the days when he came up as supervisor of drilling operations for Noble Drilling, which I can't remember their later name. But they drilled wells for California Standard Company in the Princess field. Then he was back in the States and came back up again. Now he was a good friend, he had worked with Gene Denton and Cody Spencer in Wyoming and again, he was a great guy. A lot of these fellows were. I categorize the whole bunch as great people. He came up I think, sometime after Gene Denton died and worked with Cody Spencer in General Petroleums Ltd. That is the drilling company and didn't have anything to do with the operation of Denton Spencer Company.

#248 SB: Another person is Clarence Matthews, how long was involved with the company?

SL: Clarence Matthews, I first met him back in '39, shortly after I got in the oil field. He worked under Gene Denton for Anglo Canadian Oil company, in their production end and I worked with him various times when I was with Lane Wells. Then he left Anglo Canadian about '44 I think or so and came over and worked with Denton and Spencer as an engineer. He did a lot of work down in the Saskatchewan area, especially around Unity for Beta Petroleums ltd., which headquartered in Regina. We did consulting work for them. Dr. Sanderson again, was their geologist. We discovered, I say we, the group, discovered gas in the Unity field and it ended up that we formed a company with the Regina people and amongst ourselves, called Unity Gas Supply Co. Ltd., which organized the installation of gas in the town of Unity. Clarence was in charge of all this operation. We did some of the engineering work on the pipeline and distribution system in Calgary of course. At the same time, before Gene Denton died, he was well aware of the fact that the salt company, which was owned by Dominion Tar were in need of a supply of salt in this area. Up to that time they had been hauling coal by train to Waterways, Alberta,

where there was salt available and using the coal to separate the salt from the water. This was a rather expensive operation and to be competitive they needed salt closer. Now, at Unity we had discovered salt and so Gene worked with the Dominion Tar people in Calgary and they finally agreed that now we had gas available, or could supply them with gas that they would go ahead, especially after we drilled a well for C. C. Cross' group, called a Verbeta #1 or 2 well. This well was drilled on the understanding that anything below a certain level would belong to the Beta group, from whom they had the farm out. It was on this well that potash was discovered in the coring of the salt zone and the potash was reserved to Beta. Well, with this information the Dominion Tar people agreed to go ahead and buy gas from the Unity Gas Supply Company or rather, the pipeline company. But it was already one group, on condition that we could show them a supply of water and salt. Wells were drilled near, I think it was Old Wives Lake, east of Unity and salt was determined there. Then by the use of temperature surveys we were able to determine that spring water was actually the source of supply of water in Old Wives Lake. So this made a supply of water available. So we handed them all this on a platter and they did pay our group a royalty for a period of time but later they did quit paying the royalty on the salt, although we had gone to quite a lot of expense in developing this package for them.

End of tape.

Tape 5 Side 2

SB: If you'd like to mention a bit more about Clarence Matthews.

SL: Well, he continued on during the construction of the Unity Gas Supply system and then it was pretty well finished up and at that time, things were dull and I believe I mentioned previously in this discussion that we opened up in Lloydminster, where he carried out a very good operation, which I think was an improvement over what had been done in that area before. I think most people would agree with this. Then he came into Edmonton and worked there with us, in the Leduc field and other operations. About 1949 he wanted to go back over to Saskatchewan, which he did with Beta Petroleums Ltd. So he sold out his interest in Denton Spencer Ltd. at that time.

SB: How many people were working for Denton and Spencer around that time?

SL: It's hard for me to remember details, again I kept very little records personally and I'd have to count them on my fingers and toes but at one time, I think the maximum employment got to 54 people. That included everybody, stenographic help, draftsmen, engineers, geologists and further geologists and so on. But it became a little bit unwieldy and things began to slow down. I had been of the opinion for some years that our organization was very awkward and it held little hope for any of our employees to really participate in the management or operation of the company. The engineers and geologists coming out of school were able to work with our company for a year or two and then they'd be hired away by clients. Or they would go on consulting work for themselves. This did not open up my eyes suddenly, I could see it coming and I was unable to change the type of organization we had. So it also caused us to be in conflict. When we were offering consulting services to various companies we then found out that we were in

conflict with other consultants who were doing the same work, as far as offering our diamond coring services. And the diamond coring was expanding quite rapidly about the middle 50's, so around about that time we dispensed or let, let's say the geological division die and then eventually discontinued our engineering services and concentrated on the diamond coring work and another service which we got into which was casing the failure ??? service, which we took on as a franchisee of Larry Darling's company, who had invented this service.

#046 SB: You mentioned also Cody Spencer died, what year was that?

SL: Cody Spencer had kind of retired from General Petroleums and again, I can't remember the exact time but it was about the middle or late 50's and I'm just not sure how much he did retire. He had always had sort of an interest in farming or ranching and he had acquired a couple of sections I think, down near Vulcan where he was raising beef I guess. Then he also ended up with a feedlot operation out at Beddington, north of Calgary and he took on quite a large spread of land, in the foothills, west of Granum and he was quite interested in raising cattle. So he was pretty well divorcing himself from the drilling business and in 1962 he was killed in an accident. What happened was that he wanted to take a load of grain down to his ranch west of Nanton. He had been over at my home on the 26th of December, where in those days, we always had a Boxing Day party. My youngest son, who was about 14 at that time, was quite interested in Cody's ranch and I think he had an idea that Cody might give him a job in the summer time which he was anxious to do. I think some of his friends had worked for Cody down there. So he talked to Cody at this party and Cody talked to me and it was agreed that he could go down for a couple of days with Cody in this truck loaded with grain. When they took off from Granum, on a country road, Cody got out on the running boards to look up at a saddle that he had tied on a grain box and the truck went off the grade and turned over and he was killed. It was a sad situation because he was in good health and a man who was very interested in living life to the full.

#076 SB: So that meant that the Directorship of the company was left to his wife was it?

SL: Yes. At that time of course, that meant that his shares were turned over to Mrs. Spencer and she became a Director of the company. I was then faced with the fact that the two widows were anxious to get their money out of the company. Also I certainly did not feel that I should cash in things which I had acquired, that is say, my interest in Spray Rainbow, which had nothing to do with Denton Spencer Company in order to pay them off. So I could not feel very anxious about buying them out and the company was then sold out by the trustees.

SB: So that meant everyone just??? At what point did you become involved with Scurry Oils Ltd?

SL: In my dialogue I previously mentioned knowing Art Nauss in 1942 in Vermillion, where he was in charge of a field party for Imperial Oil. I was a tool pusher for General Petroleum, drilling shallow wells for Imperial Oil under his supervision. We became friends at that time. He had been a field geologist for Imperial Oil in Alberta,

Saskatchewan and the Northwest Territories. In 1943 he received his doctorate from Stanford University. He was with International Petroleums from ‘43 to ‘46 in Peru and with Tropical Oil in Columbia. In ‘49 when he resigned and came back to Edmonton, he joined Pacific Petroleums in their operations to do with drilling in northern Alberta. I visited with him there and in May 1950 he had joined with Dr. Ted Link, a famous geologist to form Link and Nauss Ltd. Consulting, an exploration firm based in Calgary. At this time we were both doing gas reserve calculations for West Coast Transmission and at lunch one day he suggested that we should maybe get a small oil company going. I said, there was no problem in doing that and shortly after we formed Scurry Oil Ltd., named for the Scurry reef play in Texas which had been so prominent a few years before. I became President of the company and Dr. Nauss became Vice-President and Director. He resigned as a Director on December 12th, 1950 but Link and Nauss continued to handle the company’s affairs. On October 24th, ‘52, Dr. Nauss became Vice-President and Managing Director of Scurry to fill the vacancy left by Ivone T. G. Burn, who wished to form his own land company. Acquisitions of Crown leases, in conjunction with partners, in the Redwater field in the early stages of S Scurry’s life resulted in 12 wells and other acquisitions made the company quite active in the oil business generally. In October of ‘52 a convertible debenture was sold at 5% for $2 million. Continued progress was made. In the early stages of the company it conducted joint operations for Banff Oils Ltd. and Rainbow Oils

#130 Ltd. Banff Oils was the child of laymen brothers in New York and Rainbow Oils Ltd. was formed by a group of people in Cleveland, Ohio who had not been previously interested in the oil business. I had been President of Scurry throughout its life and stayed with Scurry Rainbow. Correction, in 1954 Rainbow and Scurry amalgamated to become Scurry Rainbow Oil Ltd. I had been president of Scurry throughout its life and stayed with Scurry Rainbow as a Director. Growth continued. Financing was effected and in 1957 an amalgamation with Canadian Pipelines and Petroleums Ltd. was made with the Scurry Rainbow name retained. Ken Pipe??? (that should be quotation marks around that) had acquired widespread control of freehold lands in Saskatchewan, which province was becoming quite active at that time. I was asked to become a Director of the amalgamated organization and in 1959 became President and Chairman of the Board, due to a general shuffle in the management. In 1963, Frank E. Taplan became Chairman and I remained as President. Frank had been a big investor in the Rainbow Oils originally and had taken on a post as an assistant to the President of Princeton University which prevented him from being more active in the company after ‘58. We also had obtained control of Plains Petroleums Ltd. and two associated companies, Calalta Petroleums Ltd. and Phillips Oil Company Ltd. The latter two were merged into Plains, which was operated as a separate entity and as a subsidiary of Scurry Rainbow. Also in May ‘63, Scurry Rainbow had bought Agawam Oil Company Ltd., from the United States Smelting and Refining Company for over $4 million, which included a 50% interest in Minerals Ltd., a joint subsidiary of Central Leduc Oils Ltd. This purchase terminated all claims of Scurry Rainbow regarding development problems with Agawam, which had been in the courts. In 1964 E. G. Meshey of New York replace me as President but I remained as Vice-

President until 1968 when, with Vice-President's working full time, due to increased negotiation, it was necessary for me to get back in the background. I continued as a Director until 1974, when the Home Oil Company Ltd. of Calgary made a successful offer for the company's shares. The Board of Directors and Home Oil asked me to rejoin the Board as a director. This has been a very interesting and happy association for me. I also serve as an outside Director on the audit committee of Scurry Rainbow Oil Ltd.

#177 SB: Scurry was involved in quite a few different ??? with Home Oil was it, was it the one that was a partner with Home and others in Highland ??? Leaseholds in 1950. Oh no, that was Scurry Oil, was that the same one?

SL: Not Home. Scurry had not really had any, to my remembrance, not any joint operations with Home Oil. We had still, a joint operation to some extent with Banff Oil, which had participated in properties acquired, particularly in a huge block of land in the Smoky Wapiti area, which borders the British Columbia boundary on the west and comes back over to the 6th meridian on the east. There is 1.2 million acres in this block and Art Nauss was the person, as far as I know, maybe Ted Link had something to do with it, at least he would have collaborated, but Art Nauss was the person who determined that this was prospective territory way back in '52, which sort of stemmed from the Peace River Arch information. This land was drilled up to a very small extent. Staniland drilled a well on Chinook Ridge on the west side of it and I think got some gas but gas in those days was not very exciting. Going back to Smoky Wapiti area, over the years many plays had developed. The first continuing play was probably at Gold Creek, where we participated in the development or the construction of a gas plant with Amoco, the successor to Staniland in Canada. Other plays developed up in the northwest corner of the block, known as the ??? and down in the south end and east end, Dome drilled wells. It pretty well substantiated Art Nauss' optimism in acquiring the block at that time. Of course, during the drilling of these wells, which were necessary to hold permits, some permits were dropped and other permits of course, consist of lesser acreage. So that there is corridor around each permit which is then available for Crown sales. Off hand I can't tell you how many acres there are out of the original block but it's still a substantial interest there and it's still very interesting acreage from production of gas and also for oil.

#225 SB: Getting back to your consulting work, you mentioned dual completions???, could you go into that a bit?

SL: Yes, this was an interesting area for me, partly from a mechanical standpoint and for sure, the economical end of it. In the Leduc field we had two zones, a very good producer in the D-3 and above it, a mediocre producer in the D-2, which ??? oil wells, we acidized to get a reasonable return. So dual completions had been used I think, during the war in Texas and they were not too satisfactory as I understood. But new ideas were developing and as I used to go down to the American Institute of Mechanical Engineers meetings for their Petroleum Engineering society each fall, which coincided with trips to meet the diamond coring people, I read a lot of information about dual completions and sort of studied it. It looked like it could be applied to the Leduc area, especially in those days we

were short of steel pipe and tubing and this would eliminate some of the problem. So in 1948, Ken Doze, whom I mentioned before, who was a really good friend of mine, he went to work with the Saskatchewan Co-op operation in an oil field in Alberta. This was a subsidiary of the Co-op in Saskatoon and Saskatchewan generally, but they had a foundry in Saskatoon. I had done some work for them on a deep well south of Turner Valley some years before. Ken had taken over operations as manager and they had acquired a couple of leases which were under the Saskatchewan River, just east of the town of Devon in the Leduc field. He'd asked me to take on the supervision of these wells. In our discussions I mentioned this dual completion proposition and he was very interested in it. Apparently he had been studying the same proposition. I had been in touch with one of two companies and I'm quite sure it was Otis Pressure Control company, who had an establishment in Calgary. Ken in any event had been in touch with the second company and it would have been Baker Oil Tool Company Ltd. Baker Oil Tool had come out with a new type of packer and Otis had a lot of experience with down home production equipment. We had run some of their equipment previously. As a result, the interest that he had and the interest that I had, to make a long story short, Otis and Baker got together, that is we sort of initiated their cooperation in developing a scheme for using both companies equipment in dual completions. In 1948 I mentioned that I went to the oil show. At that time I visited with a Mr. Kaiser of Baker Oil Tool with the Otis people there. I won't discuss the drilling of the two wells which were directionally drilled under the river there and they were both successful wells. One of them I came close to getting killed I suppose because I was standing out on the end of the catwalk and the derrick, about 5 or 6 in the morning, in the summertime and we were running a swab out of the hole. The swab line had been put on the draw works drilling drum and it came out of the hole rather fast and the driller did not slow down. In which event the cable went up over the crown block, the swabbing equipment tore apart and steel was falling all over the place. I reported this to Ken Doze, who had been at the well the night before and he said, good lord, I should have warned you about that driller, he's just the kind of guy that would do that.

End of tape.

Tape 6 Side 1

SB: So that was quite a close call then.

SL: Yes. However despite the fact that swabbing equipment was not available on a moment's notice I was able to go over to Central Leduc's layout where Don ??? was in charge and borrowed a set of equipment from him so we did get back to swabbing. After these two wells were finished we were then faced with drilling up a quarter section, which the Co-op had acquired from two companies who had let's say, conflicting claims to the quarter, as far as I understand it. Rather than go to court about it, they decided to farm it out and Co-op got the farm out. One of the companies was Home Oil Company. The other company was California Standard or their equivalent name at that time, I'm not

sure. But Ken Doze and I discussed this situation and we decided to go ahead and get the equipment for the job which had been designed jointly by Otis and Baker. This was done and the equipment was set up and shipped to Canada and we had it in our possession. Now the problem was, on this quarter section that there was a very good prospect of getting D-2 production as well as the D-3. We felt that by dually completing it we would save a lot of money for the Co-op. We drilled the first well and got a good drill stem test on the D-2 despite the fact that we had a visit from a, not a water witch but a doodlebug, let's say, who had come to this lease when we were first starting and he condemned the whole area, he knew it was going to be dry. So we were quite happy to refute his prediction.

SB: What was a doodlebug?

SL: Well, you know, water witch type of deal. I don't know what kind of a wand he used but it didn't work there, not very well. So we had drilled this first well and proved production in the D-2 and the D-3 with drill stem tests and I used to report in to Ken Doze every day by phone and when I called him I told him we were all set to go. Or wait a minute, I think I should backtrack on that and say that we had drilled a well and cemented the casing and then went to put the well on production at the time when I phoned Ken. We had the equipment there for the dual completion, I talked to Ken on the phone and he said, you haven't run those tools in the hole yet, have you Spi. I said, no, I'm just getting set to do it, he said, you better not do it or they're going to put us both in jail. I said, what do you mean, well, he said, Bill Connode, who was a top flight engineer who had been with the Texas Railway Commission before he came to Canada to head up the Conservation Board in '38 and John Galloway, who was the Vice-President or at least the man in charge of the California Standard Company at that time, they had both condemned the procedure. John Galloway fro Cal Standard and Bill Connode for Home Oil. So it ended up that we had to drill 8 wells, all of which were productive. The only other catch to that quarter section was that I believe the #10 well, we were running casing and I wasn't on the lease, but they were running casing, on a Sunday of course, and the derrick, which was not a mast rig, it was the same type of derrick that we used to use in Turner Valley which was built from the ground up each time you went on a well, it had collapsed when we had about 3,000' of casing in the hole. And of course, the answer was that the drilling contractor had been moving the rig from one well to the other on either tracks or wheels, seeing that the land was level and apparently some of the bolts which held the struts and legs of the derrick together had been worn thin and had not been checked, not been tightened up. So all you needed, like on a bridge, you just needed that one bolt to go and the whole thing came down. But luckily we got out of that very well, I was there on the well during or very shortly after and another derrick was erected and the pipe was bent over the rotary table so it didn't fall down the hole. The drill pipe was scattered all over the place but everything was reassembled and we were able to take hold of the casing, I don't know if we pulled it out of the hole or just ran it on down in the hole. We probably pulled it out and conditioned the mud. But everything went very good and we had 8 good wells on that lease. Later in the game, now that was in '48, later wells were regularly completed, especially by Imperial Oil and this operation is referred to, as well as other

dual completion types, I'm sure this is what Eric Connors referred to in his 1959 paper in the Canadian Oil and Gas Industry's OTS Anniversary edition.

SB: I guess that's a good point to wind down for today.

End of tape.

Tape 6 Side 2

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Tape 7 Side 1

SB: It's July 20th, 1983, Susan Birley interviewing Spi Langston at his home in southwest Calgary. Mr. Langston I wonder if we could just mention Myron Zanmer, you worked with him at various times and were involved with him at the West Flank 2 well, I wonder if you could go into a bit of detail about that.

SL: I met Myron Zanmer early in my career in the oil field. He was doing some development work down at Del Bonita and later at Spring Coulee where we did gun perforating work for him, that is Lane Wells Company did it. He was a very ingenious man, technically inclined for sure, I'm not certain that he was an engineer but he was very sharp in his thinking. In the middle 40's, about '45 or sometime then he conceived an idea of setting off a large volume of nitroglycerin in a pay zone. This of course, preceded the invention of hydrofracking??? which came about in the later 40's. His idea was to pump 5,000 quarts of nitroglycerin into a pay zone and detonate it at that point, once the nitro was all away in the zone. His mechanism consisted of a string of tubing in the hole with packers above the pay zone and a section of, I think it was aluminum pipe below the packer, which pipe was filled with marbles which carried an exterior column of sewer pipe hanging on it. At the bottom was a bull plug, or catchers sub with orifices to let the nitroglycerin go out below the packer and into the pay zone. The procedure was carried out on West Flank 2 well, which was made available to him by Anglo Canadian Oil as I remember. The pay zone was prepared by flushing it with soapy water. This was to clear the zone of oil, which according to Zanmer would neutralize the nitroglycerine, or at least impair its effects. A large quantity of this soapy water was put into the well and then the equipment was run into the well to use as previously described, the tubing and the marbles and so on. At this time they hauled in the nitroglycerine with police escort and all sorts of precautions and a man named Haskell Grain and one of his men, a chap by the name of Casey Ball from California, came up to handle the nitroglycerine, at which they were experts presumably. The nitro was poured into the tubing very carefully and I'm not sure of the exact details but the tubing was sealed off at the bottom by this plug, which would be opened by pressure applied from the surface after all the nitro was in the tubing. Myron Zanmer had been working on this idea for a considerable period of time and in 1944 or early 1945 he came into our office, that is Denton and Spencer at that time, and discussed this procedure. Clarence Matthews who was with the company at that time

talked to him about it and they went into a lot of detail. Clarence had had a lot of experience in the Turner Valley field where the well was located. Then in September 1945 when the Limited company was formed Denton, Spencer Company Ltd., Matthews was away at Unity, Saskatchewan and Myron would come in and talk to me. And he talked to a lot of other people in Calgary, getting their ideas and accepting suggestions. He was very good at this, he certainly appreciated any comments or suggestions anybody would give him. In order to make a long story short I pointed out to him that there was a possibility of a premature explosion of the nitro in the tubing when this pressure was applied to the bull plug on the bottom, a plug with shear pins there which would allow the nitro to go out the bottom of the tubing and back into the formation. When this plug was pushed down it would be a sudden action and this would cause a water hammer affect. I had done a lot of studying in connection with water hammer because it was always a serious consideration in a hydro electric plant and it does set up a shock wave. Myron had casually mentioned to me that nitro was susceptible to a shock, which of course, we know because that is how it is exploded with a detonator, which causes a shock. So he had not been aware of this possibility of water hammer setting up such a shock. And I know because he told me that he went and discussed this point with at least three engineering outfits in the States and they all confirmed my idea. So anyway he did redesign that bull plug in such a way that it still operated by shearing the pins but the bull plug itself had a stiff grease in it and I think a spring so that it did not open instantaneously. Anyway he gave me the credit for that idea. While the operation was not successful in improving the producability of the well, the detonation did occur, however I don't know how much affect or how far the explosion carried out into the formation.

#086 SB: You mentioned that he also developed an idea called permeability or not permeability but. . .

SL: Yes. After this he came up with an idea which was called the permeator. It consisted of little telescoping tubes which were cemented against the pay zone at the appropriate depths and these telescopes were pushed out against the formation. So that after the cement had set, instead of using a gun perforator which he did not consider as effective as it should be, these permeators would provide channels for the flow of the oil back into the tubing. It was used in various places, not just in Canada but it was used some other places in the world and I've never really seen any report on its effectiveness. He always sort of felt that the gun perforating shattered the cement around the casing and caused contamination by water from lower zones and gas from the upper zones and so on. But I don't know much about the permeator, I talked to him about it. We were always on a good friendly basis and I liked him very much. He talked to a lot of people here in Calgary, a lot of other engineers, and a lot of people I know and respect.

SB: Are there any other areas you'd like to cover with Scurry Rainbow or any later developments?

SL: No, I don't think there's much I can do there except go into a lot of detail and a lot of that is public knowledge, it's been put into our annual report. The company has had its ups and downs, ventures into mining and fairly successful. We are not indebted to the banks

or anything at the present time. A big deal has just been announced by Home Oil, which controls our company with the Dome people, which gives us a wonderful opportunity in helping to explore their leases in the Beaufort Sea, permits too. It looks like a very good opportunity with wide exposure for Home Oil and Scurry Rainbow, the subsidiary.

#120 SB: I wonder if you'd like to go into some of your affiliations with the various technical societies that you've had.

SL: Well like everybody else, as an engineer it was necessary of course, to make such affiliations. These started back in university. At that time we had a student's engineering society of which I was always a member and gave a paper there one time, actually on geophysics and won a prize too, which was important because money was scarce in those days. Then in our last year or two years, of university, the dean and other professors urged us to attend meetings of the Engineering Institute of Canada held in Edmonton once a month. These were informative, good technical talks and of course, you met a lot of the senior engineers in the area. It wasn't a very wide membership, at least it wasn't a great number of people at the meetings but it was very interesting and worthwhile. So I became a member in 1937, as a student member of the Engineering Institute and the next year, after graduation I became a junior member. I'm not just sure when I became a full member of the Engineering Institute but not too long, I guess after I joined the Professional Engineers. The Alberta Society of Professional Engineers had a working agreement with the Engineering Institute at that time and of course, it was necessary for any practising engineer to be accepted into the profession, so this was a natural affiliation. I became a member of that organization in I think 1942 or '44. In the Engineering Institute I filled the office of Secretary Treasurer for two years, 1947 and '48. Then around 1948 there was a felling amongst a lot of the engineers in the oil business and other technical people that there should be some way to get together and have papers. The idea was to have something organized for regular meetings specifically in connection with the oil business. The Oilfield Technical Society has been pretty adequately covered in the edition of the Canadian Oil and Gas Industry celebrating the 10th Anniversary in 1959. I was one of several people who were original members in that club and was put on the executive. The second year I was Vice-President with Jack Gallagher as President. I should mention of course, that John McKay was the 1st President, the first year, I was Vice-President the second year. This was sort of an outgrowth too, of the fact that there were a number of people here who were members of the American Institute of Mining and Metallurgy, which had a petroleum engineering society. And I was a member of the AIME in that regard. Anyway the Oilfield Technical Society did prosper quite well and is still very active. It was originally in Calgary and then it spread to Edmonton. In my year as Vice-President if I was in Edmonton I would go and chair a meeting there, dinner meeting and then an Edmonton branch was formed and now there are branches on the east coast and Regina and so on. It is quite active, one of the main events of the year is the Oilfield Old Timers Night, at which about 500 men are present and old wells are redrilled and so on there. Also we hear about people who have passed on and it's a great get together. In 1961-62 I became the Chairman of the Engineering Institute, Calgary branch.

I think it was about the next year that the Canadian Institute of Mining and Metallurgy started up a series of meetings in Calgary. Now this was the mining division but anyway, some of us joined the CIM&M, about the early 60's anyway I was Chairman for a year of that branch. I also worked as a regional counsellor on the Engineering Institute and a regional counsellor on the CIM&M. I think these meetings are very beneficial, especially for the younger engineers. They certainly benefited me because as I mentioned earlier, I had to do my studying of petroleum engineering after I got in the oil field.

#203 SB: You received a couple of awards too did you, the plate you were mentioning?

SL: Oh well yes, at one of these Oilfield Old Timers nights, they made me the Old Timers Old Timer, which was quite an honour. They do honour different sections of the industry each year and this particular time it was an honouring of the service industry in regard to our diamond coring operations and other work we were doing. That was much appreciated and of course, I have a very nice silver tray from Scurry Rainbow Oil dated 1965 honouring the 25 years that I had put in till that time in various capacities as Director and Chairman of the Board and President and I am still Director of that company as I mentioned.

SB: Did you go into any of the sort of petroleum oriented clubs in town?

SL: Yes, I didn't mention that but when the Calgary Petroleum Club was organized in the spring of '48 I think it was, I became a member of that club. It was a pretty small group at the start so it made very interesting deal. We had our luncheon meetings regularly in the Sun Room at the Palliser Hotel for several months, including a little bar. Eventually the bar had to be moved to a suite on the floor below, in order to comply with the legal requirements. Previously of course, the little bar was run with a banquet permit. Anyway you did meet a lot of your friends and you made a lot of friends there on a casual basis so it was not just good for business but it was a nice part of working in the oil field.

SB: Can you remember some of the other people that joined in that first year or when it first formed?

SL: The people who were in the club at the start there were Joe Irwin and Eddie Laborde . . I should correct the date of the formation of the club, it was the 11th day of June, 1949 and the original application as far as formation under the Society's Act was signed by Jack Bevell of Canadian Gulf Oil Company. S. F. Heard, known as Bob Heard, President of Royalite Oil Company, Carl O. Nickle, publisher of the Daily Oil Bulletin, John O. Galloway, Executive Vice-President, Cal Standard Company, R. C. Brown, Vice-President, Hudson Bay Oil and Gas Company, and J. G. Spratt, Managing Director, Anglo Canadian Oil Company Ltd. All the major operators here were members within a short time. People in the consulting business, geologists, service people and others were all welcomed, especially at the start until the membership built up and then you had to wait at the door to get in.

#263 SB: There was one person that's been an old timer for awhile is Ben Tune???, did you encounter him when he was working in the early days in Turner Valley or anywhere?

SL: Well, Ben Tune, amongst the old timers he's really well known and has always been very well liked. He worked for Ocalta on their #6 well at the southwest end of Turner Valley when I first met him. Then I met him, mind you that Ocalta 6 was the deepest well in the British Empire, below 10,000' in 1938. So it was kind of a meeting place, almost a south end Petroleum Club for that matter because while Lane Wells Company did supply some equipment for the well we also would meet a lot of friends down there when the crew were doing various work, trying to get that well into production which was unsuccessful so I got to know Ben and a lot of other old timers, most of whom had come up through cable tools on that lease. Ben again, was on a well out at Steveville on the Red Deer River, that's not too far out of Princess or Brooks. An incident occurred there, one chap fell in the Red Deer River and Ben jumped in or dove in and pulled him out. So that was another point to his credit. I have seen Ben over the years and it's always great to see him. I even visited him on the replica of the Dingman #1 well which is situated at the Calgary Heritage Park, where he operated the rig as a display for quite a few years. He's still around and he's still a great guy.

#302 SB: Are there any memorable people that you've worked with in the industry that you'd like to mention?

SL: I'd say there are quite a few but I'm sure they're well known here. One chap though, who really comes to mind and who I've always admired and still do was John E. Miller, he was called Johnny or he was also known as Oilwell Johnny. He would have graduated I think from the University of Pennsylvania in mechanical or petroleum engineering, the exact definition doesn't make too much difference. He came to Canada I believe, through the insistence of Ralph Will who had a lot of Oilwell Supply Equipment, that is their subsidiary U. S. deal and they made oil field equipment and I'm pretty sure he was brought up here at the insistence of Ralph Will. I can't confirm that. He left Oilwell Supply about, he was located in Okotoks and he did a lot of work out in the oil fields but he left them around about 1942 or '43 I believe.

End of tape.

Tape 7 Side 2

#025 SL: He had an idea of setting up a shop on his own and he did repair work on engines and weight indicators and instruments and other equipment and I know he did an excellent job. However it was not too rewarding for him and he ended up then, selling his equipment and moving it into Calgary to work for Lion Refining Company, I think that's the name. Mr. Leon Plotkins was a major shareholder and manager of this refinery. John worked for him for some time and then he went to work for Hughes Tool. Now I many get these companies mixed up but he worked for California Standard Company out in the Princess area and he worked for Hughes Tool Company, which of course, makes the famous tri-comb drilling bit. In each case he had a lot of innovative ideas. I can't remember the exact date but early in the career of Denton Spencer Company Ltd., that is

shortly after September 1946, he came to work with me. We had been good friends ever since I got in the oil field and his wife, after I was married my wife, became very close friends. We're still good friends, they live in Dallas now. In 1945, I should make a correction there, he came to work with our company. We didn't have too much going on at the time, consulting was pretty thin, however we were working in the Unity gas area. He did work there in connection with that, on reserve studies. He also did work on a pipeline which we built in connection with Cathodic, protection of the pipeline and built the equipment for same too. He developed and built a gas detector which would detect gas in the mud at that time and we used that to a limited extent. However that kind of operation nowadays is supervised by a technician and the hopes of John were that this could be operated by the drilling crew. It detects the gas in solution in the mud as you're drilling through formations and it gives you a first bit of information on the possibility of gas production. He came to work as I said, for us and again, I stress that things were not too busy. But he had worked in the Princess field for California Standard and Jack Gray, who was a well known Calgary engineer, he also was working for us at that time. I had worked in the Princess field on a lot of wells with Lane Wells Company and altogether we had a reasonable amount of knowledge of the general area. So that fall we made a study of the overall area. Not for any specific client but we sold copies of this report showing all the detail that we could gather. And in those days you got pretty good information because tight holes were not exactly the fashion in those days. But the next year John had an offer and our operations were pretty slow but he had an offer from Oilwell Supply again, they wanted him to move down to Dallas and go back to work with them, which he did. He did some good work for them on pumping equipment, that is mud pumps for drilling rigs, also pumps in connection with slurry pipelining, that is pumping finely ground coal over great distances with pumps through pipelines. Then when he retired from Oilwell Supply he continued this consulting work in pipelining and wrote a lot of technical papers, some of which I've seen. I've always considered him to be a number one genius in the oil field. He's not only an oil field engineer but he was a good photographer, movies, stills, he was a ham radio operator and had the first teletype machine hooked up to a ham radio that I'd ever seen. He made a tape recording of the signals emitted by the Russian Sputnik in 1957, that was October 1957. I happened to be in Dallas at that time at an engineers meeting and visited with him and heard this tape which he played over the telephone for one of the Houston, Texas newspaper radio stations which they aired. And he's still active, he's done work in Libya and a lot of work in Canada on high pressure pumping for injection projects and so on. Again, I repeat I think he's the finest engineer with whom I was ever associated or of which I had knowledge.

#100 SB: Are there any experiences which you had in the field that you would consider more memorable or the most outstanding?

SL: I think it's pretty hard to answer that question. I probably better duck out because a lot of things happen, a lot of interesting things, to me at least. Some of them involve people and I'd just as soon not get into any controversy such as might develop. I think that we had a

lot of good experiences and very few problems, at least that we couldn't overcome.

SB: I'd like to thank you very much for participating and I've enjoyed the interview very much.

SL: I guess I should appreciate your thoughts very much, it's been fun working with you and I'm sure that by the time you end up with some more of these interviews you'll be able to set up your own oil field consulting practice.

End of tape.

Tape 8 Side 1

#023 SB: I was wondering if you could tell us how you acquired your nickname, Spi?

SL: I should publish this one. It actually has served me to a good purpose as far as recognition, not just locally but in a lot of other areas. My name is John, as a youngster I was called Jack and went by that name, despite a few other crazy nicknames, including Red because of my red hair at that time. The nickname Spi came about in kind of a devious manner. I had made some contacts with other engineers including university professors at the Ghost River Dam, where they were working as consultants. When I registered at university, one of these professors, Mr. Harry Webb was my counsellor and as I was then, just going to take my Grade 12, which I had not attended in high school, I had options in one course and he suggested that I should take zoology. This formed a clash and I ended up taking botany. I didn't know very much about the course, however when I attended the first class here were some fellows in there who were studying for medicine or pharmacy or other fields, who had taken the course and they wanted to know what I was doing and I said, I'm just taking botany, it's an option. They said, you're crazy, we've been taking it for 3 years now and haven't passed yet. So I did take the course and it was an interesting course but quite heavy. One of the things which the professor stressed a lot was a single celled algae called the spirogyra. So I took it and not being critical, we did call the professor, old spirogyra. Living in residence there were other fellows there taking this course and in our discussions his nickname would be mentioned and a lot of the other chaps, who had been in high school when I was there and who were now in advanced grade of engineering, thought it was kind of funny for an engineer aspirant to be taking botany and they started calling me spirogyra and naturally it got shortened to Spi. So I had to live with that until I got out of university and went back the first year to work for Calgary Power, where I'd been known as Jack so I reverted to Jack. This went on okay, until I got in the oil field where we were handling explosives, these shots and so on and it got a little complicated when the other chap who worked with me, Jack Antliff, would be on one end of the communication system, on the derrick floor say, or in the truck and I'd be in the reverse position and we'd have to be testing the guns with an electric current. If there had been any misunderstanding at any time it was always possible that one of the shells could have been inserted in the gun and exploded by mistake due to a mix up in our names. For instance the crew on the rig might say to my partner, hold it Jack and I'd hear this over my loudspeaker in the truck and I'd have to

shut down everything automatically. This caused confusion so it ended up that I said, well, at university my name was Spi and let's call me Spi and we'll call you Jack and we'll eliminate this problem and the nickname has stuck ever since. But it has an advantage, I can go to a lot of cities in Canada or the States and phone up an old friend and all I have to say is, this is Spi and they know who it is.

SB: It's very distinctive isn't it. Thank you.