

PETROLEUM INDUSTRY ORAL HISTORY PROJECT
TRANSCRIPT

INTERVIEWEE: Jack Walper

INTERVIEWER: Betty Cooper

DATE: ???

BC: This is Betty Cooper and I'm talking to Mr. Jack L. Walper and I'm talking to him at the home of Dr. A. S. Wright, at 750 Crescent Rd. N. W. in Calgary. Mr. Walper lives in Fort Worth, Texas, 6517 Wrigley Way. Mr. Walper, what I'd like to do first is get your whole name, Jack L., were you christened Jack?

JW: Yes, correct.

BC: And the L stands for?

JW: Louis.

BC: When and where were you born?

JW: Well, our post office was Excel, Alberta, out on the Goose Lake line. We lived on Dad's homestead, I was born on his homestead just north of Excel.

BC: And what year was that?

JW: 1916.

BC: And were you the only one in your family?

JW: No, I had 6 brothers and 2 sisters, of which I'm the third from the top.

BC: Do you want to just record them all for us starting from the top?

JW: My oldest brother is Gordon, my second one is Alden, then I came, then my brother Robert, Donald, my sister Jean, my sister Katherine and my youngest brother is Mac.

BC: And where did your father come from?

JW: From Ontario.

BC: When did he come out to Alberta?

JW: I believe in 1906. He came out just on a sort of visiting excursion. He was a hockey player and he played out here and then went back to Ontario and convinced his father and my grandmother to move to Calgary and they did, I believe in about 1907.

BC: Did he play hockey professionally?

JW: Semi-professionally I believe. I understand there's a picture of him and the team of the St. Mary's in the Corral down here that they had blown up and he's on that team. He was on a number of semi-professional teams here in Alberta.

BC: And what was his name?

JW: John Abel Walper.

BC: And your mother, did she come from Calgary then?

JW: No, she came from Ontario also, from Arthur, Ontario.

BC: Did they meet out there?

JW: Well, they had met in Ontario and she had come with her mother. And my father, whose home was in Kitchener, where there was the Walper Hotel, which used to belong to my great-grandad and my grandad and his brother. Dad played hockey for Saskatoon

out here one winter after he'd homesteaded and he met my mother again, knew her and they got married and she went to homestead with him in 1911 or '12 I believe it was.

#030 BC: Where were you educated, where did you get your primary education?

JW: In a little school called Golden Centre out on the prairies, up until I think grade 10. Then we moved to Alex and I finished my high school education there.

BC: What year was that when you would have finished high school?

JW: I think it was '35. I went to Vermillion School of Agriculture and since I had my high school I took a 2 in 1 course and I went there for just one year and got my degree at that school of agriculture in 1937.

BC: A degree in agriculture was it?

JW: Well, it wasn't a degree, it was just a 2 year affair.

BC: Diploma?

JW: Diploma, I think they call it a diploma. I did that in 1936, '37.

BC: Then did you go to work in agriculture?

JW: No.

BC: What did you do?

JW: My first experience after that was taking a car load of horses down to Montreal.

BC: When was that, in 1937?

JW: '37, yes. And I visited in the east then and worked there for a year and finally made my way back out to the west, following the harvest one year. Well, since that was the Depression, I just worked at anything I could. Went back down east again with a chum later on.

BC: How did you get back east, did you ride on the rails like many did?

JW: That's exactly right. Side door Pullman. This other chap and I from Alex, Norm Todd is his name, he and I rode down to Ontario and went to work at the Nobel Munitions Plant at Nobel, Ontario.

BC: Before we get into the munitions plant, tell me a little about this riding the rods?

JW: Well, we had lots of company. That's the way that you travelled in those days. It wasn't difficult, as long as you stayed on the boxcars and didn't agitate the trainmen, they were very cooperative, or not necessarily difficult to get along with but that was the usual mode of transportation. All the farmhands and that, the harvest farmers, they all rode the freights back and forth. So it was not an uncommon thing to have 17 or 18 of us in a car.

BC: What did you do, sing songs or play cards?

JW: Well, a little. . . tell stories and we'd more or less pair off into groups with someone we'd have something in common. I can remember some unforgettable characters that we met and their philosophy on life, I was always interested. And it was an interesting education.

BC: Did you go hungry often?

JW: Quite often. Yes, the trains didn't stop for lunch. And if we had a little money we could always buy something but if we had to beg it took longer.

BC: And if you went begging where would you go?

JW: Fairly near the tracks, because you never went too far away. I never really hoboed it like the real classical hobo. They just spent their time travelling. They knew all of the places

where they could get meals and couldn't get them and what to avoid and so on. But we had a purpose in mind, I guess we were going someplace and we were going to get there. We went hungry because we didn't have meals, I can remember very vividly we were very glad to share a can of sardines with a fellow. And the oil of the sardines never tasted any better than it did that cold . . . well, it wasn't winter but it was north of Lake Superior near White River and it was cold and miserable. It was a very great delicacy I can assure you.

#076 BC: They say that there were marks on gates and marks on houses so that you'd know the friendly ones, was that just a myth?

JW: No, I'm not sure that they actually put marks on them but these fellows that travelled, they knew where to go.

BC: They'd tell you, go to 17-7th Ave.

JW: Sure, they knew where the soft touches were, where they were accepted. I don't recall of ever seeing any marks but word of mouth was a pretty good way of getting around. And they knew what Sally Ann's, or the Salvation Army were the best. They had them all. . . I guess like the tourist guides, rated according to stars, I don't know.

BC: They also say that there wasn't a great deal of thievery or dishonesty, is that true?

JW: I never witnessed any of it. There was none as far as I was concerned and we had all of our belongings that we were carrying. I don't know of anybody that ever lost anything.

BC: Very different from today?

JW: Very different from today.

BC: Why do you think there is that difference?

JW: You wouldn't want to hear my philosophy on today's population.

BC: Sure I would.

JW: I don't know. I've tried to figure this out. I think our affluent society has something to do with it. I think the whole philosophy of the people, that the world owes them something is entrenched in the attitude. And if they don't like what they get they take it. I think in those days we didn't look at the world that way, we didn't think the world owed us a living. We were doing our best to survive.

BC: Like today, there was something in the paper just the other day that because of unemployment crime is soaring. Now in the Depression, the unemployment. . .

JW: That wasn't the case. No.

BC: You didn't think, I'll just take that, it's easier.

JW: No. In fact, many of us, and I know myself in particular, we would go to these bakeries where they'd have 2 or 3 day old bread and buy that for, oh, a nickle would buy us 2 or 3 loaves, maybe some old rolls. We'd take that sometimes to a restaurant, buy a cup of tea. The waitress would keep filling that tea bag up with more hot water and we'd get 2 or 3 cups out of it, eat our rolls and have quite a nice satisfying meal. Now I'm sure that wouldn't compare with a Big Mac or something like that nowadays, but we thought we were pretty lucky when we had that, we were quite satisfied with that lot. And we didn't think the world owed us a t-bone steak. We accepted that. I think the youth of today have too high of expectation. They want to start at the top of everything. We were content to

start at the bottom and work up.

BC: Now you were from the west so certainly you would appreciate the fact that, although they were saying in 1935 in the east the Depression is nearly over, it wasn't over for the western part of Canada really, until the war came along.

JW: That's right. I could no, really, improvement. Although before that I had left and went down to the States to visit my aunt and I think it was picking up in the States. They'd had the CCC and a number of works projects and those were being phased out and there was more employment.

#117 BC: You never went into any of the relief camps that they had in Canada?

JW: No.

BC: You mentioned going to the munitions factory, was that a war time job by then?

JW: Yes. They had started making gun powder, or TNT actually, and cordite and a few other, nitroglycerin was made there at Nobel.

BC: What year would that be?

JW: That must have been 1939 we went down east that time.

BC: And how long did you stay at the munitions factory?

JW: I really didn't work there very long. My chum worked there longer than I did. I actually had a job in Perry Sound working in a garage most of the time. Then we decided to go to Galt to a welding school, the government had a welding school there that we enrolled in and we went down to Galt, Ontario and enrolled in that.

BC: This was government paid?

JW: Yes, it was a government project.

BC: Was it with the idea of working in the shipyards or in the aircraft factory?

JW: Yes, in aircraft. In fact, we graduated from there and went to work for a company in Preston, Ontario making these Bretton carriers. We went right on the assembly line welding in war work.

BC: So you would have come from getting whatever you could out of the harvest to a war time wage, which was pretty good in those days.

JW: Yes, it was pretty good. When the war work opened up and with my welding trade I did quite well. I went around to construction jobs and a number of different places. And eventually then, came back out west. I got I guess you'd say, affluent, I bought a car and drove it back out west and worked out here. Building, mainly, they were building these air bases for the Empire Air Training Command. And I worked on a number of them.

BC: All throughout Alberta?

JW: Well, yes. One at Bowden, one at Claresholm, one at Vulcan and a number of other smaller sub-places. I worked those for maybe a year and a half or something like that, in construction.

BC: So you were in an essential industry then, throughout the war?

JW: Yes. Well, then I joined the American Air Transport Command when they began working on the Alaska Highway.

BC: How could you, a Canadian, join the American Air Transport?

JW: Actually I'd lived with an aunt in Montana and I thought I was going to go to North

Africa, I thought I was going to get a big trip out of this and I landed up in Edmonton, Alberta.

BC: You went down to the States to visit your aunt and decided to join the American Army. Was that difficult for a Canadian to get into the American Army?

JW: Not then. No, that was in about 1942 and Pearl Harbour had just broke out so everybody was recruited and everything.

#158 BC: So how did you manage to get up into Edmonton, how did that happen?

JW: Well, a whole contingent of Americans then came up to start working on the Alaska Highway. Well, at first we were building airports to fly supplies up to Alaska and also fly supplies up to build various parts of the highway. Because that was one of the better ways to get equipment up there. There was no road, no railroad, about the only way you could get it, a lot of it came up by boat to Alaska and they were building the road back down. Then my welding training and I did some construction, I got transferred into the engineers and that's when I got involved in the Canol pipeline. They sent me up to Whitehorse and then on up to stations along the Canol pipeline as a welder and a heavy equipment mechanic.

BC: What was your rank in the army by this time?

JW: I was just a technical sergeant.

BC: You would have then gone into Norman Wells?

JW: At that time I never got into Norman Wells. You see, I was based in Whitehorse and I was always sent up from Whitehorse and I never got anymore than the Plains of Abraham. They came in from the other side to get anything that was wrong. I think most of the trouble was on the western end of it, they had a lot of breakages, a lot of trouble with the road slides in the spring.

BC: There's been a lot of criticism since that project went in, in fact I think it was written up as the most wasteful piece of war effort that was ever done. How would you react to that?

JW: You mean the Canol pipeline, or the Alaska Highway?

BC: The Canol project.

JW: I would have to say that both projects were very wasteful. There was some tremendous waste of equipment in both.

BC: In what way?

JW: Machinery was just bulldozed off the road and over graded. There was piles of it buried in road fills that was later staked by people up there as mineral claims and unearthed and used.

BC: You mean if it broke down they just. . . ?

JW: Yes, if it broke a part of it, or if a driver got a little cold and his car didn't have a heater, he's push it off the road and ride with a buddy of his that had a heater. There were some pretty wild tales of what went on up there in terms of the construction end of it. And yes, there was tremendous waste of material.

BC: Did the higher ups not know what was going on or was the control too far away?

JW: I think it's like all war efforts. It's a big hurry up thing and people think they can solve everything by throwing money at it. I think that's what made Truman. He came up there

to investigate it and I think that's what put him in the public eye when he went back and pointed out all of this waste that was going on up there, he became noted when Roosevelt selected him for his running mate in his last term. That's the first time I'd heard of Truman, when he was up there on his inspection trip.

#205 BC: Did you see him, were you there at the time?

JW: No. I can't recall seeing him. I may have seen him but I can't recall seeing him. There was a lot of civilians came through there that were contractors. That's where Bechtel, Price and Callahan had their start. Now you know Bechtel is the one that owned. . . our Secretary of State, and our Secretary of War I guess, both are members of Bechtel Corporation.

BC: Were they the contractors?

JW: Yes, they were one of the prime contractors, Bechtel, Price and Callahan were one of the prime contractors on the Alaska Highway and the Canol project. There were a lot of sub-contractors under them but they had the prime contract.

BC: Did you have much contact with the Canadians who were assigned to that project?

JW: Not very much. There were Canadians in Edmonton that were working on the maps and the Canadians were flying a lot of the air photos of the north country. But most of my association was with Americans. In fact, I knew very few Canadians within the Air Transport Command or the Corps of Engineers. One or two, I met but there were very few.

BC: What about the people connected with Norman Wells, you did meet Ted Link I think, was that when you first met him?

JW: No, I knew of him then and of course, I knew of his work. But no, I met him when he was on a speaking tour with the AAPG and I met him here in Calgary on one occasion and then on another occasion at an Arctic symposium.

BC: This was subsequent to. . .

JW: Yes, subsequent to. . . that was in the late 50's I think. And I got to know him a little better in that respect. But my first acquaintance with him was when he was on an AAPG distinguished lecture tour.

BC: I think we'll come back to that in a minute because I want to just finish up the Canol project there. When you finally left was that because the war was over or did you get transferred to something else?

JW: I got my back hurt working there in the shop. I got caught with a motor that was a little too heavy for me and I wound up in the Army hospital in Whitehorse for awhile and then I got leave from the Army to go back and actually went back to school then with a disability.

BC: This would be before the end of the war then?

JW: Yes, it was before the end of the war. The war in Europe was just about over then.

BC: Tell me just before we go on to your education, what it was like, what did you find Whitehorse was like in 1942, '44?

JW: It was booming. There were people all over the place, camps of various contractors, army camps, and it was a busy airport. It was really the centre of activity for that area. Because

it was really the end of the Canol pipeline and it was right in the middle of the Alaska Highway, which was going full blast. So it was a booming town. I haven't been back for a long time but I'm sure it was much larger than it is now.

#257 BC: And the camps, of course, they didn't have the nice trailer type camps that they have today, what were the camps like?

JW: They were just barracks, lots of barracks. Some a little better than others, some not too good. It depended upon, to a certain extent I think, the contractor or whether it was army or who it was, what the type of facilities you had. And also to a certain extent, the quality of the food that we had depended upon the time of the month I think, and the shipments that were getting in and who was getting them.

BC: Were you on sort of war time ration there or did it matter, did they give you sort of northern rations?

JW: No, it was good. We ate at mess halls and it was good eating. Yes, sometimes near the end of the month we'd have 4 or 5 different kinds of beans but still I have nothing against beans. The variety wasn't always there but the food was good and wholesome and I had no complaints at all about it, it was quite all right as far as I was concerned.

BC: When you went back to school, what did you go in for?

JW: Petroleum engineering.

BC: What made you decide to do that?

JW: I had been on some prospecting parties in the Canadian north and the people that ran the parties were mining engineers.

BC: Was this while you were up at Whitehorse?

JW: Then too, I met some, but mainly before, between the time I graduated from Vermillion School of Agriculture and when I was on construction, part of that time I had taken a course at the University of Alberta in mineral prospecting, a night course and I had got a chance to go on some of these prospecting trips in the summer a couple of years. I was impressed that the top man who was giving orders was the mining engineer. I thought, if I'm going to go look for oil now I should get a petroleum engineering degree. There was none in Canada to be had at that time, and this arrangement that Mount Royal had with the University of Oklahoma was the first time, and I read that in the paper, that I had heard about a chance to get into petroleum engineering.

BC: What was the arrangement?

JW: You took 2 years of the curriculum here at Mount Royal and then transferred to the University of Oklahoma.

#298 BC: And you got the full 2 years credit?

JW: Yes. Well, I had such a hodge podge of courses from the agricultural college and from my high school that the one year was about all I could profitably take at Mount Royal because I would have only had to get a few selections. So I went to the University of Oklahoma then, after one year here and wound up my first semester at the University of Oklahoma I was taking courses at the freshman level, the junior level and the sophomore level. In order to catch up or to straighten out my course of studies.

- BC: And then how many more years did you have to take?
JW: I got out of Mount Royal in 1945 and I graduated from Oklahoma in 1947.
BC: You moved pretty fast.
JW: I studied hard. But there were a lot of other Canadian boys down there, who had been down actually, in Oklahoma before the war, had gone into the service and come back down there. I met them and we had sort of a Canadian club down there.
BC: Were there any of these Canadian boys that you can remember who subsequently came back in here and are known in the oil industry here today?
JW: Yes, I'm sure that there are. Jack Story went into the oil industry here. Johnny Taylor. I don't know what companies they're with now. Tom Kimmet, he was with a mud company I think, Baroid or something like that, I don't know what he's doing now. Yes, there were several. And then there were some more came down the next year from Mount Royal that I had gone with at Mount Royal but some of them flunked out, they were just young fellows and they didn't last. Some of them did and some didn't.
- End of tape.

Tape 1 Side 2

- BC: You were going in for petroleum engineering and so when you got out did you come back up to Canada as a petroleum engineer?
JW: No. When I was about in my junior year down there I began to get the idea that petroleum engineers were not the people that explored for oil. I went over and talked to Dr. Cecil Lallacker???, who had written a book on petroleum geology and he later became my academic adviser. He said, yes, I have to inform you that it's the geologists that do the exploring for oil, not the petroleum engineers. They just sit on wells and look after production after it's been discovered. I said, I want to be an explorer and he said, you better switch to geology. Which I did. So I took my degree in geology, in spite of a lot of kidding from my colleagues down there from Canada who stayed in the engineering part of it.
BC: This would have been rather hard to switch from engineering to geology because there's so much more science in geology, would there not be?
JW: No. It was easier to switch that way than it would have been the other way. I'd already got a lot of my math and engineering out of the way. The biggest hang-up I had was I had to take a foreign language. I didn't have any of it so I had to take all 4 semesters of a foreign language in about 2 years in order to catch up.
BC: What language did you take?
JW: Spanish.
- #036 BC: This would be one of the more popular ones in the States anyway, because there's a large Spanish. . .
- JW: Yes.
BC: So when you came out as a geologist instead of an engineer, where did you go?
JW: I thought I would come back up here and work.

BC: This was 1947 that You graduated?

JW: Yes.

BC: So Leduc had already come in?

JW: Come in that year, yes, it had been discovered. I had been spinning yarns about the Alaska Highway. I might as well put it, not so much yarns but experiences that I had on the Alaska Highway. I thought it was going to open a great mineral region and I thought that there would be tremendous opportunities for mineral prospecting on this. We used to sit around in bull sessions, I guess You can use the term, and finally, an enterprising Texan and another Oklahoman said, if that's the big opportunity up there, let's form a company and go up and prospect. We formed a corporation actually, and since I was from Alberta and one from Texas and the other from Oklahoma, we called it Texokalta Exploration Company. We bought some surplus army vehicles, a big Dodge carryall and a trailer and everything and we had this thing all loaded down.

BC: What were the names of your partners?

JW: They made me president of the company because I was the one that had told all the stories. They had John Chalmers was the Texan from Gainesville, Texas, Ernest Kelly, who later became Klondike Kelly because he and I were the only survivors of the whole trip and Frank Lickabah, that was the four of us. We came up here, had a little trouble crossing the border because they all had sidearms, which is a no-no in Canada. So they had to put them in bond down at Coutts here and come on without them because there was no way they were going to let them in with those revolvers that they'd brought from the service with them. And we went on up the highway with a lot of ambition but not much experience. But as I was telling Aubrey Kerr, while we were in Edmonton, we parked this rather spectacular looking vehicle, because we had it painted a bright red, all painted up, Texokalta Exploration on the door. I think we had Weatherford, Oklahoma because that was where one of the boys was from, outside of Uncle Ben's on 101st Street. We were in Uncle Ben's buying some supplies, gold pans and stuff like that for our prospecting and when we came out there was 2 fellows waiting at the car for us, wanted to know if we owned it. We said, yes, they said, what are you going to do. We told them we were going on up the Alaska Highway prospecting for gold. They said, there's lots of activity in the oil industry down here, which we were aware of but rather not particularly interested. We had gold fever. But they enticed us to come up to their office in the Tegler Building, they had an office just across the street. They were lining up something for a promotional scheme and they wanted us to join with them and be the geological expertise.

#073 BC: What were their names?

JW: I'm not sure but I think it was Ram River Oils, as I recall, it was Ram River something anyway. They had their company name and I'm convinced now, after thinking about it, after we talked to them that it was purely promotional. I don't think they were really interested in discovering oil themselves, they just wanted to get some good people in geology to say, this is good and then they were going to have a big land play. We didn't join them, we went on our way looking for gold, of which we found very little. But it was an interesting experience because when we got to Whitehorse, by this time 2 of the

people had decided that the rough life in the bush wasn't for them. That left only Kelly and I. The other 2 partners, when they pulled out they had most of the capital so we were left kind of short on. . .

BC: You had the red truck.

JW: We had the equipment and everything but we didn't have very much cash. So we decided if we were going to survive up here we were going to have to get some money. So what happened was Imperial Oil was going to buy the refinery that they had put up in Whitehorse at the end of the Canol pipeline. There was a fellow there sent up from Sarnia I believe, a fellow by the name of Fred Macdonald, I corresponded with him later, we picked him up on the way going down from the airport to downtown Whitehorse. He said, You fellows know something about the oil business don't You and I said, yes, Kelly used to be an old roughneck and I've learned a little bit about it. He said, we need some help with our inspection team, we can't find very capable help here in Whitehorse and we need somebody that knows something about what's going on. So he hired Kelly and I as foremen and I had a crew of half Indians and half Canadian soldiers and Kelly had about the same. We went around opening flanges and testing the thickness and corrosion of pipes in the refinery and made us a grub stake and then went back out in the country and spent it, or at least we spent it for supplies and went out in the country prospecting.

BC: Did you stake any claims?

JW: No. We found a little placer gold but very little. Worked very hard for what we did find. It was interesting. . . and then this Macdonald tried to talk us into staying with the project because then they decided to buy it and they were going to move it to Edmonton I think, and they wanted us to stay there and work on this. But we still had gold fever yet, we still hadn't figured out we were licked yet. So we said, no thanks, we'll go on out and prospect for gold.

BC: So you did eventually decide that there wasn't gold to be found, at least not in them thar hills.

JW: That's right. Not in those thar hills is right.

BC: So then what did you do, did you come back into the oil business then?

JW: I went back then to the University of Oklahoma for my Masters degree. Kelly stayed up there and he took a job, which I also had a chance to do. The American Army was pumping gasoline I guess, and maybe oil too, they had a line running from Skagway to Whitehorse and then from Whitehorse, they had a pump station that went to Skag, Alaska and then on to Fairbanks to the ??? field there. And they wanted some pump operators that knew something about. Well, Kelly took the job. I think I was a little disappointed in my knowledge of geology at the bachelors level, I thought I better go back and learn some more. So I went back to work on a Master degree at the University of Oklahoma that fall.

#118 BC: So you were just there for the summer?

JW: Yes, we were just there for the summer.

BC: And went back in the fall of '47. Did you go into the Leduc area at all while you were there in '47?

JW: No, we did not.

BC: How long did it take you to get your Masters?

JW: I finished up all the work except writing my thesis in a year but I thought I wanted to stay close by to. . . I had a job offered to me with the Creole Oil Company in Venezuela but I wanted to finish my Masters thesis, which was in Oklahoma, and I wanted to stay there close enough to get that finished during the summer and the fall, which I thought it would take me, so I took a job teaching at the University of Tulsa, which was not far from Oklahoma University.

BC: What subjects were you teaching?

JW: I was mineralogy and field geology.

BC: This was a sessional appointment was it?

JW: Well, it was a job. I thought it was only going to be for a year because I thought I was going to eventually go to Venezuela and work in the oil industry there with Creole Oil Company. But it turned out that I liked teaching and when the end of my year came up I said, if I'm going to stay teaching I've got to get more money and I asked for more money and they gave it to me and I had no alternative then but to stay. So I stayed some more years. Then they said, if you're going to stay teaching you need your PhD and so on, so I made arrangements eventually to go for it.

BC: Which university did you take your PhD?

JW: University of Texas.

BC: So you took a sabbatical to do that?

JW: Leave of absence, right, from the University of Tulsa.

BC: And did all your professional career, have you been at the University of Tulsa all that time then?

JW: When I was at the University of Tulsa, that's when I spent quite a bit of time in the Arctic. I used to come up and work for companies here in the . . .

BC: Oh, in the summer time.

JW: Yes, I'd leave right after school was out and not go back until September. So I spent several summers in the Arctic.

BC: Who were you with up in the Arctic?

JW: I worked for Bruce Bullick and Associates here, I worked for a number of other major companies, but sometimes on contracts that he had with them.

BC: What were you doing?

JW: We were doing geological studies.

BC: Surface geology?

JW: Surface geology. And trying to establish the tectonics and structural geology and locate any. . .well, we were really evaluating the petroleum potential of these various leases.

BC: Whereabouts were the leases?

JW: The ones that I worked on, we had some over on the Peal Plateau and over on the Eagle Plains. One I had right up in the middle of the Richardson Mountains west of Fort McPherson. Several were up along the front of the Mackenzie's, out on the Peal Plateau and Hungry Lake, Ron Lake, even out towards . . .well, Ron Lake is out towards the Canadian Shield, out there where it's pretty. . .

#159 BC: Of the places that you were exploring, did any of the areas eventually, were they drilled on or have they been drilled on?

JW: There was some drilling done there on the Eagle Plains. There had been a well drilled and I heard that it was a producer but it was capped. Of course, there was no place to go. Then I think it was Sinclair Oil and Gas was drilling one on the Bell anticline which we had mapped and there were some other plans to go in there with seismic trucks, but they took them in during the winter and I wasn't involved in that aspect of it. I'm sure there were wells drilled but I've never kept track of which ones were drilled and which ones were productive.

BC: So what years then were you up in the Arctic?

JW: I think about 1956, '57, '58, maybe up to '60, somewhere in there, maybe '61. The late 50's and early 60's I was up here.

BC: Why did you stop coming up, did they move to other areas?

JW: No, I think the government changed its policy on the allowable that they would let the companies write off for exploration so there wasn't as much jobs to be done that they could write off the surface work as part of the lease fees. And I think probably that the exploration was a little disappointing. A number of wells had been drilled and they weren't very good, maybe even dry. The area cooled off I think a little bit exploration wise in the early 60's. Then geology kind of took a nose dive you know, in the middle 60's geologists were not very highly thought after. There was an over surplus of geologists, a lot laid off and it was just one of the bust sequences of the boom and bust that the industry periodically goes through. So I think all of that contributed to a tapering off of the interest in that.

BC: And about that time were you going in for your PhD?

JW: Yes. I had started going for my PhD. . . well, I had my PhD actually then, I had gone in the middle 50's and I'd come back to Tulsa to teach and that's when I became involved in this exploration. But then in the early 60's I went to the Texas Christian University and then my interest went back to Central America, where I'd done my dissertation in Guatemala. Exploration in Guatemala had picked up and I was able to get some consulting work down there so I more or less shifted my area of interest to Central America.

#201 BC: A little different in Guatemala than the Arctic.

JW: Quite a bit different.

BC: Geologically how different was it?

JW: When we got into Guatemala, the northern part of Guatemala was the only thing that had any chances for oil really. I was right in the centre and the later discovery, at the time I was doing my dissertation there, I didn't realize that I was on one of the lithospheric plate boundaries, the northern boundary of the Caribbean plate. Everybody that worked along there were pretty sure that there had been a lot of lateral motion along this fault but we were not able to document it very well. It wasn't until later that I realized what a tectonic system we'd been involved with there. The oil of course, in that area, it was farther north,

in what you call the Pitaine???, which is the more tropical low-lying area and difficult to get in.

BC: Do you think the business of the plates had anything to do with the location of the oil more to the north?

JW: I think it had destroyed a lot of the potential adjacent to the fault because of the breaking up of the rocks and that. There were some good looking sediments but all that was left was a few patches of tar and stuff like that. I think it had all been shook up and the oil and gas had escaped. So you had to go farther north to get into a less deformed area.

BC: You did come back into Canada though, you were up in the area of Leduc. Do you have a brother that's involved?

JW: Yes, when I was in the Leduc area in . . .well, when Atlantic #3 I guess it was, that blew out. It was just to visit. That was 1949.

BC: And your brother is or was a driller?

JW: No, he wasn't a driller, he was a roughneck. I can't remember what position he had.

BC: Was he on Atlantic 3, was he working. . .?

JW: No, he was working on an adjacent well. He took me over there to see, when I was up there the fire had been put out, the well had been directionally drilled and brought under control. He just took me over there sort of as a curiosity. I wanted to see it and we just drove over there and looked at it, it wasn't very far. And that's all that I had really to do with Leduc.

#243 BC: Tell me what impressed you with that area that had been the scene of such a blow-out, Atlantic 3. This would be maybe a year after?

JW: Yes, I would think it would be a year after. I think the thing that impressed me was that in spite of all the oil that had been spilled around in that vicinity, here was a crop growing in it. To me that was . . .well, it didn't mean much to me then, I just realized maybe oil is not that detrimental to plant life. But then, since that, or subsequent to that, we've had these environmentalists that keep complaining about oil spills and oil slicks and all this. I don't think it's as serious as they make it out.

BC: Were the crops looking pretty good?

JW: It was a good crop. I'm sure that oil spills are not a desirable thing to have and certainly it's not good for water fowl, I'll agree, but I don't think it's as disastrous an affair as it was made out to be. I think this pressure has held up exploration of our coastal areas to a detriment.

BC: We mentioned earlier Ted Link and you were going to tell me the story, he was on the distinguished lecture tour. Could you just recall that for me?

JW: Ted Link was a pretty personable individual, kind of fast with a word. He had been lecturing on the Leduc field and this had come at a time of course, after Imperial had spent a lot of money looking at western Canada. In fact I understand they had to sell off their international company in order to finance their exploration program. And several other companies had given up western Canada as a bad deal, I think Gulf and maybe Shell had pulled out. Here comes this tremendous reefal discovery. And I don't think anybody really understood what reefs were at that time, in all fairness to Ted and his

geological staff. So somebody, after he had talked about this and finished his talk, some fellow in the back of the room said, hey Ted, just exactly what did you drill on. Ted said, we had this record and nobody knew what it was so we drilled it to find out. And I think there's more truth in that. Although he said it in quite a joking manner I think really, that's probably what happened. Here was something in the geologic records, in the seismic records that nobody knew what it was and they thought they'd better find out what it was and they drilled it and it turned out to be a reef and it was a big discovery.

BC: And changed a lot of the exploration I think.

JW: Yes, it really changed things. Because now reefs became a magic word in the oil industry and we all started looking for reefs, all over the place, and why reefs occur. In fact I got involved in compiling a bibliography from the Seismograph Service Corporation for their advertising scheme, on reefs, bioherms and biostroms, for the industry that they could pass out to their preferred customers. While I was at the University of Tulsa. Made a little side money on it.

BC: One of the things, and I'd like to just start this on another tape because we're nearly at the end but I'd like to have you talk about the plates because I think this is one of your particular.

JW: Yes, that's my part of geology, that's my interest.

End of tape.

Tape 2 Side 1

BC: Mr. Walper, one of the areas that you've been particularly involved in, in recent years, is plate tectonics. I'd like you to talk about it and its importance related to the oil industry. I think it's rather interesting that just as you say, everybody started looking for reefs, there was a time when everybody had the plate idea. So perhaps you could just take it from there.

JW: Well, of course, we now conceive the earth as made up, the outer surface, the outer lithosphere made up as a mosaic of plates which move independently of each other and in relationship to each other. We recognize 3 types of plate boundaries, the collisional boundaries, the divergent boundaries or spreading boundaries and the ones that transform, that slide past, just slide past like the San Andreas fault. And this here of course, is what creates mountains and it creates basins and it gives us all of the sedimentary deposition and tectonics that provide these sediments into these basins in which we find oil. It also, and this is another interest of mine which has taken up a number of my more recent years in consulting, is in minerals. The subduction of one plate or the diving of one plate beneath another causes it to melt and it produces the magma and the minerals that develop our mineral deposits.

BC: Why is it, if I can just interject for a moment, why is it that today, this is taken by most scientists as a matter of course and yet it wasn't really too long ago that this idea of plates, they said, no, no, no, it's not supportable? What was the big breakthrough there?

JW: Plate tectonics is an outgrowth of continental drift. Continental drift as first proposed by

Alfred Wagner??? was not very popular in this country, or in the western hemisphere. Canada and the United States particularly were very adverse to it. I think it had more acceptance in England and in Europe. I think geologists then, visualizing these continents moving around, they were not happy with it, they just poo-pooed it as you said. I think the big breakthrough came as a result of a number of different things, particularly development during the war of these very sensitive magnetometers that they were using to trace submarines and that, they found out that they could also determine the magnetism of rocks. In measuring this magnetism, they found out that obviously something had to have moved. If these rocks were magnetized, if what they have now magnetism in them, that they couldn't have been magnetised where they are. So they began to develop what we call polar wandering paths, because we were still loathe to consider the continents moving, although what we were measuring was the continental rocks. We plotted what we called polar wandering paths because we liked to think the poles might have been wandering and not the continents. But the physicists kept telling us, no, we can't wander the poles. So eventually it became obvious that the continents is what was wandering, in terms of the motion of this magnetic field. Then I think the oceanographers got into the act and they began to map the ocean floor, probably as a result of the oncoming of nuclear submarines going quite deep. And they began to find these big central rifts in the middle of the ocean, like the mid Atlantic ridge and the east Pacific rise. And eventually it was all put together. Out of that has come the concept of plate tectonics.

#044 BC: Are there still scientists who doubt it?

JW: I would have to say yes. Some of my colleagues. Let me put it this way, they acknowledge it but they don't use it, they ignore it and go happily doing what they've done for the last 30 years. They ignore it. And let me, at the expense of wasting some of your good tape, let me give you a little story. I was asked to lead a field trip by a major oil company whose name we will not mention, through west Texas. Because they were drilling a well there and they wanted some of the higher level executives to see where all the money was being spent. They also wanted to see, on the outcrop, the rocks that would be encountered in this well at depth. So I was asked to lead them around, to show them the various outcrops where they could see what the section would be. Well, I set this up with one of their men and he was in charge of the west Texas operation. As we were driving around organizing the field trip so that it would go off rather smoothly I said, I'll call him Bill, I said, Bill, just out of curiosity is your company really into plate tectonics in the exploration way. He said, oh yes, we are, I said, well, how do you use it. Oh he said, it's the foreign boys that use it. In other words, to him doing geology in west Texas, plate tectonics should be allocated to the east Indies or over in some foreign land, because he didn't want to be bothered with anything new in his area, he had it all figured out and he wasn't about to change his ways. I think that many geologists in the oil industry are of that same aspect. Yes, they accept that it's being used but they're not using it. They have never reeducated themselves to do that. And as a consequence I think it's going to take the younger generation, who's being trained in this in school, unfortunately there's a few people in colleges who are not much better than the people in industry in. . .

- BC: I was going to say that if there are colleagues of yours who do not believe, surely there must be a certain percentage of those who are professors of geology at the universities.
- JW: Yes. And their students do not get an adequate training in that aspect of geology, yes. My students come back to me after field trips which they have been in contact with other students and they're amazed that these students haven't learned what I have taught my students. Yes, it's quite disheartening.
- BC: Closing your eyes to that development in scientific knowledge, how damaging can it be for a young geologist as far as going out and exploring for minerals or for petroleum products?
- JW: If he's not trained in plate tectonics he's at a disadvantage right off.
- BC: In what way?
- JW: That's the way you do geology now. To understand the earth in its dynamic system, is by plate tectonics because this is, as far as I can see, is the best thing that's ever come along. And it's unified the science. That is, now, instead of when I went to school, you graduated with a course in this and a course in that and a course in this. Now we can tie them all together because igneous petrology has meaning in terms of plate motion, just as sedimentary basins have. The rocks are meaningful in terms of how they were made and we can understand better where magma comes from, how sediments get their way into basins and so on.
- BC: What were you taught before? That the earth was shrinking and so something popped up?
- JW: No. Well, yes, there was some of. . .
- #088 BC: I'm sorry, that's being very simplistic.
- JW: Well, that was a theory. But I think that in my education I was taught that the continents were permanently, always, in the place they were. But yes, we always had a problem explaining mountain building. We developed island arcs and built our models. We were never able to explain why these island arcs were there until plate tectonics came along, and then it all fell in. The geo-synclinal theory fit so nicely into the plate tectonic theory, only it changed the terminology. And you can now explain it as a dynamic system, which people of my generation couldn't do, because we didn't realize that the earth was moving in this manner. So to me, it's the biggest thing that's ever happened to geology. This really upset it and brought it into meaningful unification.
- BC: And armed with this knowledge, the young geologist graduating today, what aid, how does this help him in perhaps finding it more easier to explore and define?
- JW: I think that on a broad regional basis, you can say this is a prospective area, it needs looked at, whereas this area hasn't got a chance. That is, if it's all oceanic crust, forget it, but if it's near a sediment course, if there's basins forming there over a length of time that will generate hydrocarbons, then we should look at it. And of course, this takes us into the coastal waters, into the continental margins and so forth. That's where the exploration is going to be, I think that's where the big finds are going to come. I think we've looked at the continental masses of North America pretty thoroughly. We'll find more oil but it won't be any giant fields. I think all the giants of North America have been found other than probably some off in the coastal water.

BC: Like the coast of the Arctic and the coast of the west and east?

JW: Right.

BC: So this is a very important tool then, for the geologist today, as they tackle more complex discoveries?

JW: Absolutely. Yes. Because this is the bigger picture, of which they're going to have to set their more local studies into. And then be able to evaluate them better in terms of this broad picture. I think that's the only way that we're going to really find oil.

BC: Along with the finding of oil from this plate tectonics, there also are other explanations of the reason for the Mt. St. Helen's of the world, etc.

JW: Of course, Mt. St. Helen's is very easy to explain by plate tectonics, because the San Juan de Fuca plate is plunging under the Cascade Mountains, creating that volcanic arc.

BC: So as a geologist, as a scientist, can a scientist give an idea of what those are all active? They're presently inactive but active volcanoes, so they can predict from sort of looking at how these plates are moving, how many years there might be of that kind of activity, can you be that specific?

JW: You can pretty well say that the Cascade Range is not dormant. It's dormant but it's not inactive. Anyone of those volcanoes may erupt again because there is still subduction going on but very slow now, because it turns out now that there's a considerable amount of a transfer into a transform motion there and the plate is not subducting as rapidly as it once did. As a consequence that is going to slow down eruption, but I don't think it is over, as Mt. St. Helen's indicated. I wouldn't be a bit surprised if Rainier will and maybe Baker will erupt also. I wouldn't bet on it.

#139 BC: Don't we have one up in Canada too, that's just at the end up there?

JW: Yes, right at the end, just north of Baker I think it is.

BC: Yes, what's the name of it, I'm trying to think of what the name of it, it isn't the Golden Ears or Golden. . . ?

JW: No, I'm not sure. And of course, from there then, you go into the Queen Charlotte fault, now it becomes the San Andreas again, and there's no volcanism. And not likely to be some, until you get to Alaska, where that plate is plunging under again, and then you get eruptions all the way along there in the Alaskan Range.

BC: You certainly made a very fascinating change in your career, from gold panning to plate tectonics.

JW: Well, yes. And if profitable, I've been a consultant to a mineral company in Alaska for several summers. I go out there not only to show them where they should be prospecting but also to train their young geologists who hadn't learned enough in school.

BC: Do you ever take your old gold pans with you and pan a little for gold on the way?

JW: No. I still have my gold pan but I've never taken it along, no.

BC: Maybe one of these summers you will.

JW: I might.

BC: Thank you very much for taking this time out of your vacation to talk with me, it's been most interesting, both your background in the oil and also your background as a very fine scientist. Thank you.

JW: You're quite welcome. I hope that it's some use. I don't know. As I told Aubrey I'm not sure that I'm the one that he should be talking about.

BC: Well, with all the stories, it makes the warp and woof of the fabric that we're trying to create and so we appreciate that time. Thank you.

JW: Okay.