PETROLEUM INDUSTRY ORAL HISTORY PROJECT TRANSCRIPT

INTERVIEWEE: Karl Olsen

INTERVIEWER: Robert Erickson

DATE: January 16th, 1992

Side 1 – 47:10

[00:00:08] RE: This is Robert H Erickson. I'm with Karl Olson at 9 West Regina Avenue in Spokane. We are going to let Karl tell a bit of his story today. The date is January 16th, 1992.

KO: This is Karl Olson following up on Roberts Erickson's introduction. He asked for a few personal items, a little personal history. I was born in Duluth, Minnesota in 1914, working-class parents. My father was a cabinet maker, building carpenter. And over the years from 1906, when he arrived in the United States, to his death in 1931, he worked for various people around Duluth and Superior, and with several others formed a company to do mill work, and then resigned from that, and about five years later died. My parents had two children, my brother who was four years older, and went through the Coast Guard Academy, crashed in 1943, ??? the Aleutian Islands. After a time of gathering some money, I got back into school and got a Bachelor's degree from the University of Minnesota in petroleum geology.

RE: Did you want to mention how you got into geology?

KO: Bob wants to know how I got into geology. I went to the university with just the thoughts of getting some business courses, but I didn't like it and I understood they had a kind of evaluation or orientation, or qualification testing program. So, I went over to see them, took the test and they thought that my abilities leaned toward natural sciences, so, I took a course in geology and loved it. I was hooked and went on through to get a degree in that. The first, probably four years, I sort of messed around a bit. I wanted to be in the area, personal family reasons, so, I worked for one of the northern Minnesota mining companies, summer of 1940 and ...

RE: Do you know what you were paid then?

KO: Bob wants to know what I was paid. My recollection was that I got something close to $140 a month on an hourly wage basis, working a rather full week and shift work. And the next spring after looking around for a job in the New England, New York, Pittsburgh and so forth area, I took a job with the Oliver Iron Mining Company in an iron ore testing lab for a couple of months, and then an interview or an application turned up with the TDA. I went to the TDA along about June 1941 and worked with them until 1943, when a friend of mine decided our deferment was a bit of a hollow thing, they asked our Draft Boards to call us up. He was accepted and immediately, within the army, rejected because he had asthma. I decided they weren't going to call me a liar as they called him, so, I had attestations to the fact that I had asthma and was 4F'd. So, I was free to pursue whatever I liked. I got a job with the offshoot of Ventures Limited, in Canada, to do some work in northeastern Minnesota and that was interrupted by an offer from the subsidiary of Union Carbide, that was doing exploration work or what was called prospecting work for the Manhattan Project through their Union Mines Development Corporation. So, I when out to Grand Junction and had several very good months with, in fieldwork looking for ....

RE: What year was that?

KO: '43-'44, I turned up for work in September '43 and left them at the end of May 1944.

RE: Was that up in Calamity Basin by any chance?

KO: No, no not exactly. It wasn't in ???. I joined a party initially in the Venato Chinle area, northeastern Arizona, and we were just measuring sections then. Then I moved to a party out of Green River Utah, where we were looking for carnotite deposits. Carnotite enrichment occurred in fossilized logs. And I moved from them to the southeast corner of Utah and worked out of a little town called Bluff, which is very interesting, on the shores of the San Juan River. I worked up around there measuring sections, and the purpose of measuring sections was to see if we could find a sedimentological key to carnotite enrichment, which was known to be associated with organic enrichment. I left them because I felt that this was kind of a purposeless thing. Turned out it wasn't, I was mistaken, and joined Phillips Petroleum Company to report for work to John, Dr. John Knox of Fort St. John, BC, and spent that summer on horseback. When the season was over, I requested the western posting, got Denver, which turned out to be a plum within the company. And in the ensuing year or so I worked as an assistant to people like Mel Johnson and Frank Paulson. And then I started watching wells, and in 1947 a courtship, that had begun in 1944, flourished to the point where I was married, and continued doing much the same as I had been doing, watching wells until '49 when I was transferred to Canada.

RE: Where were the wells? In the Denver Basin area?

KO: No, they were scattered around in Wyoming, Montana, Utah, Colorado. And, Bob asked where these wells were. The mic may not have picked it up. They were in Colorado, especially Rangeley Field, Wyoming Bighorn Basin, a basin in the northeast corner, I can't think of the name at the moment, and out of Rollins, and one well in Montana. And then I requested and got a transfer to Calgary. I was in Calgary from 1949 to the end of January 1961, and then I was transferred to Australia. I was in Australia from 1961 to 1968 with two years in Perth.

RE: I would like to spend some more time on your Canadian years, of course.

[00:08:51] KO: This is just a summary. And then after a year in Indonesia, I came back to Brisbane and retired in '73. So, what I have to offer spans the time between about July 1949 to the end of January 1961. That's the perspective I offer. Now these remarks would naturally deal with the period ‘49- ‘61. Initially, we as an office and the people in it, had to get our feet on the ground and get acquainted with the sedimentation in the Western Canadian sedimentary basin. We looked at samples and tried to catch up. Then we got into some wells. The first well that affected the office was one that had been found by John Knox and his work out of Fort St. John. It was called Lone Mountain. It was just over in BC from a little town in northern Alberta called Beaver Lodge. A rather difficult well, he had a lot of trouble with the hole itself and especially with access.

There were times in the spring where we were simply cut off by the spring breakup. Bob Perry, who died along about 1973, started watching the well when I came out later on. They were also drilling a couple of little test holes west of Dawson Creek, and these were done with a shallow hole outfit. They didn't get anything. The Lone Mountain hole didn't get anything. And then it was back to Calgary to do subsurface

work occasionally. extensive watching of the well when some of the junior geologists were not available or we had too many holes or something like that turned up.

RE: Who were some of those people that were junior geologists, who were some of the people you were working with at the time Karl?

KO: Well when we came to Calgary in 1949, Bob Perry had been the office opener and been superseded by Isaac J. Pierce, when they established a full office and Kendall Hurt came in as landman. We had a fellow named ??? Kennedy, who's died recently, working with Kendall Hurt. And in the geological/geophysical side we had people like Doug Harr??, who's still living, and Hal Wynn, who's still living, and Nor Hannon, who's active and has been active in Calgary for many years. And on the geological side we had Bob Perry and Dewitt Potter, who's now summering in the Calgary area and wintering in the Oklahoma area, and myself. The additions that came later were George Robertson and John Taft. George Robertson is still around, I understand and I'm not sure where John Taft is. He went foreign somewhere in the 1960s, probably early '70s. On the geophysical side we later had Gene Halleck with Ted Labicaine, Charles Helstol, and Buddy or S.L. Grimes. As we got into a drilling program we had people in the production department. Bill Derek started, and Ernie Crooks is still around Calgary. I was his clerk and general office man. He later went with Pacific after the breakup in 1949, no in 1960-61, when Pacific took over Phillips and Phillips became the controlling interest in Pacific. Staff was transferred around, some of the Phillips' people were scattered to the four winds, some went with Pacific. Ernie was one who went with Pacific and as I understand did very well with them.

Ed Arnold was another man in the production department. After Bill Derek was transferred back to the States, Bill Kitsman came in, and he remained the man in charge of the production department until he was transferred to Australia in 1960. I don't seem to recall any others in the production department. Of course, there were a number of them. In the geological department, we expanded as our interests grew and we had a succession of geologists come and go. I'll just list some of their names, they were the aforementioned George Robertson, Carl, and John Taft, Lloyd Cummings, Joe Rorback, Don Harris, Trevor McNeely, Dennis Moat, Dick Westbury. And we had some that came and went, Reginald Kritzinger, Jim Hydrick, Don McClane and so on.

I've given you the names of those in the geophysical department, but I should mention Nor Hannon. He was working with Doug Harr and Hal Wynn early in the piece, and then when our geophysical program diminished and almost vanished, and the staff was transferred around, he left the company and went into hydrodynamics, in which he still has some interest. I forgot Brad Erickson, Brad Erickson worked with Don Harris for some time before the breakup. And there was a Fishbitt??, I can't remember his first name at the moment.

RE: Dave?

KO: Dave went to another company in the breakup and then later got a Ph.D. in paleontology and consulted in Calgary. I think he's still around there, he would have some memories. Now as to Phillips' place in the decade of the '50s in Canada, they came in on the impetus offered by John Knox who had taken the idea and developed the idea of going into the northeast part of British Columbia to see what could be done with those sediments there. And that resulted in some holdings in that area. Then he made a deal with Husky, which brought us into Alberta, in the deals in the lands that they held, including some that were in the reef trend?? We also, took out, in 1950, some very large permits in northern Alberta, which to the best of my knowledge were barren as far as Phillips is concerned, but later

developments may have found some oil in them. We did some farm-outs. We took a farm-out from Gulf and Chevron, I think it was, definitely Chevron or in those days Cal Standard, which resulted in the ??? discovery. We joined other companies, I think it was Husky amongst them, to do some work southwest of Calgary in the mountains, which resulted in a gas discovery, which was not notably profitable, but quite a challenge in terms of production drilling and in terms of the geological interpretations, that was in Jim Scott's folded fault zone area.

RE: [inaudible]

KO: Savannah Creek. That was the Savannah Creek discovery. We didn't get into the Northwest Territories in the '50s. We did get into Saskatchewan and John Henderson and Don Harris, were the people who principally followed that development in the Calgary office. John Henderson is retired to Catwood (???) Texas and would have considerable memory of what we did there. I couldn't possibly pretend to have a good history on Savannah Creek, but I could comment on some of the things that were found there. One of them is highly personal. I went out to spend a couple of days there, when one of our junior geologists was not able to stay on. And being bored with the slow progress, I climbed the mountain to see if I can see those mountain sheep and became so exhausted that I wound up with a ruptured disc. Now on the industry side the Savannah Creek discovery was very interesting for several reasons, one, it had a lot of crystalline or native sulfur in the fractures of the limestone and the reservoir itself was quite highly fractured, but it was also quite highly sealed. So, the reservoir capacity was limited by a small amount of porosity and this became a very critical issue. At that time within our company, I did something that was unusual, I photographed the core as best I could, and these photographs later were an important part of Les Clark's presentation in Washington, before some committee ??? there. The reservoir was a disappointment in that there was a highly sulfurous gas there, loaded with H2S and therefore very dangerous, but it was also limited in its ultimate capacity and that of course limited what could be done to recover gas from it.

It's my understanding that they have produced gas from it, but maybe they're still doing it, I don't know. It presented extreme difficulties in operation. One of the wells was located on top of a bald mountain. I would not say that it was above timberline, but the fact is that there was no timber on that top of the mountain either. And we had to maintain either bulldozers or rotary snow removal equipment on a 24-hour full-time basis. It is one of the very few cases where a portable mask was anchored with the permission of the mass builders. And even so, one of the high winds blew the doghouse down from its perch beside the derrick floor. Conditions were extremely difficult at times, and then again, they could be absolutely beautiful, and the sun was shining, and the wind wasn't blowing hard.

But it was probably about as difficult in operation as Phillips had in Canada. Certainly, on a par with some of those that were hard to reach, in muskeg breakup time. I was preoccupied with other things, so I didn't follow the company's work in Saskatchewan. But since this work originated with Jack Henderson, long about 1960, no 1950, '51, '52, '53, somewhere in there, and he was assisted by Don Harris. These two would probably be able to give a better historical record of the company's accomplishments and what they did in the Saskatchewan play.

[00:23:18] In terms of operation in Canada, it's well to try to establish a perspective which is both fair and understanding without being unduly emotional or nostalgic or unfairly sympathetic. First of all, aside from a core of full-time Canadians who had weathered through a lot of cold winters, there was an influx of oil field personnel that came from all over the world, principally, of course from the United States. And these people had to learn, they had to adapt, they had to innovate, they had to cope. The

following would illustrate two of the kind of things that happened, probably to any major company that had a number of operations. The first one will deal with the Lone Mountain operation where we were about 60 miles from Beaver Lodge, of which approximately 30 miles was new road or new access, hewed through the woods by Phillips in the fall of 1949. Now the breakup came in 1950. They improvised, or they put together a bridge went out over one of the rivers, and for a while the only communication was by a cable and a kind of a person in package haulage way across the swollen river. Later when the river went down, the bridge was re-established, and the well was finished.

We had an operation across one of the rivers in northern BC, that main river that flows north. And the bridge was subject to spring flooding and they even resorted to such things as putting a heavy seismic recording truck on part of the bridge to see if it would hold it down. When that failed the bridge went out, fortunately the truck also left before it went out, and the bridge eventually had to be rebuilt.

Thirdly, this was one which ended in tragedy. Norm Fishbook was watching the well and the operational person, who I believe was not with Phillips, he was working for a company doing subcontract work for Phillips, was trying to break up the ice with dynamite. And as Norm was watching him he saw that he was cutting the fuses shorter and shorter and decided this was no place for him to stand close. So, he took cover some way and eventually this poor fellow, cut a fuse that was too short and was blown to pieces by the dynamite still in his hand or near him. This kind of thing happened in the pursuit of petroleum.

Another example of what happened was that Mobil had a party in northern British Columbia in the summer of 1944, which included a geologist who later was transferred to New York, named Wallace. And when we met up with the Wallace party, we found that they had gone back to see if they could find the body of the packer. The packer had thought that he could forward this sediment-laden river, the name of which eludes me, and his horse had lost its footing and he had been swept away.

These tragedies are part of the history. Another example would be the time when Bob Perry was in northeastern BC. They had camped for the night at a bar and during the night the water came up from a thunder shower somewhere, swept away everything and he was left with not even shoes on his feet and had to try some way or other to get out of it. Well, the fact that he didn't turn up alerted the company and people responsible, including John Knox, to his predicament, they flew over there and eventually found him and recovered him on the edge of exhaustion. He recovered all right. And there again, we have an example of the type of things, the vicissitudes that were faced and overcome and sometimes ended in fatal consequence in the development of petroleum in the period following discovery at the Leduc.

RE: [inaudible]

[00:29:04] KO: Bob has asked for a little review of my work with the ASPG. When I came from ...

RE: [inaudible] the Alberta Society which is now the Canadian Society.

KO: The ASPG was the Alberta Society of Petroleum Geologists which is now the Canadian Society of Petroleum Geologists. In 1949 when we came to Canada, it would not be fair to say that the ASPG was moribund, but it would be fair to say that it was on the threshold of some rather portentous and important changes. I don't recall whether it was Connor Hauge or Stan Harding or Ernie Shaw, but one

of the three I believe was the president at that time. And I do know that in 1943, Earl Abbott?? having staged a rather successful meeting in Banff, in which he managed to get some money in the treasury, became president of the society. It was during his tenure and by virtue of the fact I'd met him on the well, out northeast of Calgary, that I suggested that the society might have some kind of a news sheet or a little publication that could have geological notes in it to bind the society more closely together, so, that geologists out on wells, and out of touch with the central city affairs in Calgary, would have some sense of belonging. Earl took it up with the Executive and they passed the ball back to me and told me to have a go at it. People like Lou Workman, Diane Loranger and Bill Kirker, and Lou Workman especially, got together one evening in the old Petroleum Club, which I remember oddly for having enjoyed for the first time, cream sherry, Harvey's cream sherry that I thought was delicious, and we mapped out what we thought we could do. Conditions were that it wasn't going to cost the society anything, so we had to rustle up some advertising. We had to figure out how to reproduce it, all of which was new to all of us. Lou was probably the most experienced. I managed to get out some sheets that had some very good information in them. To get this publication moving, we had to do such things as devise or draw up a masthead. Diane Loranger got somebody in the Imperial staff to do that with an airbrush technique and it depicted the foothills, with a derrick in it. And for a little variety we used to publish this in different colored inks. Ed Belts offered a paper on pre-cretaceous erosion surface, which was at that time a very valuable contribution to understanding the western Canadian sedimentary basin. And Helen Bellier offered us a perfect paper. It didn't need to have a single comma or period or any other editing. It was printed just exactly as is. We would have some volunteers type up material and then it was photo reduced to letter size and printed by photo offset. We managed to get advertisers to fund this thing, and we had people like Grayson Meade, who picked up the ball to get the journal established as an accepted source for scientific contribution.

We've had a break in this, I interrupted the train of thought a little bit, but we'll go back to the ASPG beginnings, and the fact that we had Ed Belts' very interesting paper on pre-cretaceous typography. Another paper that was very interesting and has remained something of a classic in its way is, Bill Gussow's differential entrapment first saw print or first appeared in print in the ASPG Journal along about 1953 or early 1954. And it was quoted from the ASPG by Leverson and his geology petroleum. Later of course Bill Gussow published this in a proper professional, and geological extent and documentation in the American Association of Petroleum Geologists Bulletin. But we did establish the fact that the ASPG Bulletin, Journal, was there and it was time for someone else to pick up the ball. In late '54 I had some health problems and in early 1955 the ball was picked up by Lou Workman, who did an excellent job of carrying forward. And then he transferred it to Bryan DeWitt and Bryan DeWitt similarly did a fine job improving it as they went along. And Lou Workman came back in again, and after that I seem to have lost track of who carried the ball. But the present Canadian Society of Petroleum Geologists had its origin with Earl Abbott and a small group there in 1953 who felt that, it was stated in the initial editorial, that Calgary would always be the center of oil petroleum exploration in Canada. And so, it has proved to be.

We tried, in staffing the publication, to get somebody from, in a sense, from different companies, we, as far as I know didn't ever have two people from one company. And in trying to establish it, the company would be asked if they had somebody who would volunteer, and we definitely did not want anybody coerced to work on the publication. This way we had people like Peter Moore for a little while, Ralph Beatty (???) for a longer period, Bill Parker for quite a long while and Grayson Meade was mentioned. There were others who were in there for a short period, and then the staffing from there on was something that I couldn't keep up with. But I felt that Phillips had contributed enough time, so that with diversity and the resources available in Calgary, it should be carried on by other people and by other

companies contributing the time of their employees. So, in 1955 I resigned, and Lou Workman picked up the ball and went on with it.

[00:37:42] KO: Bob wants to know other ASPG activities. I'd like to point out that the dictum or the rule or the encouragement for work in the ASPG was Earl Abbot's remark to the effect that, this man's army thrives on volunteers. The idea was, of Jack Goodman, that a geologist that should have some interest in his local organization and he ought to offer it some effort to see that it was healthy and progressive. And in following up these two people, I was active in program work with Graham Campbell and Jim Kirker, and we innovated something that we thought was good at the time ... I understand it is probably not carried forward, we called it the Dry Run Committee. We had one or two of our members who embarrassed themselves and irritated the membership by attempting to give papers in a very much inadequately prepared manner. And we felt that this was not good for the author, that it was a waste of time for the membership and that we should help these people present themselves in the best manner possible.

We succeeded some of the time and in the case of two, why we had rejections and no harm was done. But the point is still there, that a local society should try to bring on their authors and try to help them do the best they can and certainly not to fail if they have something to say. I was the instigator of a, I wouldn't call it exactly "instigator", I carried out the wishes of the society and program of staging a presentation to Professor Booker, when he received an honorary membership. And later we had a memorial dinner, not memorial, but an honorary dinner, for one of the professors at Alberta, whose name escapes me.

[00:40:24]RE: [inaudible]

KO: It must have been Warren, I think Allen had died by that time.

RE: [inaudible]

KO: Bob and I have been kicking this back and forth and I think it was probably professor Warren, at least he was on the verge of retirement somewhere in the 50s. We got him down to give his paper, and very fortunate to find that a doctor friend of ours had a Gissing, which he would let us have at his purchased price. It was very difficult to believe it was an original Gissing of his earlier time, which was very much prized, and was a delightful painting of an autumn oak tree glade with lovely fall colors in it. And Professor Warren was delighted with it. Then I served for one term with Bill Gussow, as his Vice President. I had an interest in the Society, I thought it was a very good thing and I very much appreciated the fact that we had geologists from all over the world. Perhaps more notably from England and Scotland and The Netherlands, but we had some from Germany and some from Italy. And there were of course, the majority of the foreigners were from the United States. That was a good, good group and I treasure memories of people like Leslie Illing?? and Ken North, who were from England Then finally, just before I was transferred to Australia, I was asked to stand against Harry Woodward.

RE: For President?

KO: For President. And knowing that they were probably pressed for candidates I accepted and lost to him. Harry became a very good president and made sure the Society made the right choice. But again, I do feel, and I've expressed that thought at times, that I thought the Calgary group was about as

productive as any local group anywhere in the world and it has remained so, coming out with excellent publications over the years.

[00:42:58] With regard to other names that could be approached for interesting insights into the very, very important 1950s period in the development of oil and gas in western Canada, these names should receive some consideration and it's not by any means to be considered an exclusive or limited list. Bill Gussow is very interesting person. He had a broad grasp of geology. He was an MIT graduate under Waldemar Lindgren, who was also a PhD from MIT under, not necessarily under all Waldemar Lindgren, but he was there at that time. And Lindgren had a legendary reputation in the United States that reached back to before 1900. Bill now is an honorary member of the Society.

People such as a John Downing, he would be interesting to talk to because he was associated with Ted Link. And Ted Link of course was associated with Don Mackenzie and Vernon Taylor, who are also interesting. Ed Baltrusaitas is an interesting person and he's had a very severe stroke, but I understand that he can be contacted. Ernie Shaw, I believe he died not too long ago. He was a very important person in supporting the society and the Imperial Group. Rein de Wit was associated with Cam Sproule, who was certainly a leading figure for many years in western Canada. Ted Williams worked with Earl Abbott and various others. Diane Loranger was in the research section of Imperial and she would know quite a few. And another aspect of the oil business would be the type of the thing that Matt Newell was in and if one could have reached back to find those persons that were wheeling and dealing on the small company level, that would be very interesting. Charles Lee with Western Decounta (???) and Jim and Bill Kirker. Both John Anderchuck and Ralphie Edie and associates of the McMahon brothers such as Scotty Tosh and anybody that worked with Scotty Tosh. People like Smiley Raven, these are people that were warp and woof of that period.

Obviously, my closest associates were with Phillips. And I cite these following names, some of whom are still in the Calgary area that would have insights and memories that I could not have at all. Ernest Crux is still in Calgary I understand. He was a production clerk and later was in charge of Pacific's office in Fort St. John. DeWitt Potter was a geologist and later manager of land in geological for several years. I understand he has a summer place in Canmore and he lives in Tulsa. Lloyd Cummings later became a consultant and is living in Calgary. I.J. Pierce or Isaac Pierce, Ike Pierce, I believe is now retired in Florida. He was planning and geological manager for several years in the early fifties. W.C. (Bill) Kitzman has retired to Borger, Texas. He was superintendent or manager of the production department for a number of years.

Side 2 - 12:00

[00:00:05] KO: Before we turned the tape over we mentioned Bill Kitzman who's retired in Borger, Texas as Superintendent of Production for a number of years for Phillips. Hugh Morrison, who was with the land department., and Don Harris was a geologist that came out from Nova Scotia with a mining background and became an excellent petroleum geologist. He's an independent operator now in Calgary. Nor Hannon, a geophysicist in the earlier 50s, later left us and has been in hydrodynamic applications for the last 20 years or more. Russell Hayes was manager at the end and eventually had something to do with Phillips' operations in Florida, and probably is retired or dead by this time.

Ed Arnold was in the production department. He's retired now, lives in Oklahoma City. He was a petroleum engineer and he would recollect operations from somewhere in the vicinity of the middle 50s on to the break-up. Joe Downy was a land man from somewhere around 1953 or 4 and is now retired.

Charles Fjelstul. F-J-E-L-S-T-U-L, is retired in Denver, he was a geophysicist. Ted Labicaine summers in Calgary. His last name is spelled L-A-B-I-C-A-I-N-E. He would have some interesting stories. The chief physicist in later years was Jean Halleck who died just last year.

[00:02:00] I'd like to mention that Phillips got into, what in my mind was a very interesting program, to do a combination of photo-geological work and ground support work that I believe began in the winter of 1958-59 or possibly it was '59-'60, but at least the field work was going on in the in the summer of 1960. The photos, which at this time were becoming increasingly precise and useful, were worked by Vishay Smith, and in the summer, with helicopter support, the outcrops were checked, and paleontology was done by Vishay Smith's staff. This work came to an end with the breakup and despite the my most earnest efforts to persuade Pacific, who took over with Les Clark in charge, of this kind of work, this work was not pursued. The work was of interest because it dealt with the outcrop area in the foothills and mountains, all the way to the Beaufort Sea and it would have given an opportunity for our company to have a connected and comprehensive view of the sedimentation exposed, and thereby give us a better understanding of what might underlie the cretaceous and glacial coverings eastward toward the Pre-Cambrian shield.

[00:03:59] KO: Bob says that he would like to have some comments on the Australian period. It turns out that the Canadian period and the Australian period were approximately equal. Before going to Canada, I'd only had about five years in the oil business, and most of that was either surface work or well site work. And then beginning in Canada and on and Australia, it was more an approach to petroleum geology in the sense of putting together the pieces of the jigsaw puzzle.

We came to Australia early in 1961. We'd left a cold and frigid Calgary and a nearly as cold and frigid Minnesota and wound up in the tropical heat of later summer in Brisbane. We had some adjustments to make and it wasn't until we could hang a name on it, called "cultural shock", that we began to recover. I have fond and admiring memories of the way my wife adapted herself to this. We liked Australia, certainly liked the people, unfortunately, the Australian climate was not all that kind to any of us. We developed allergy troubles that were, at the most vexing, and at the least disagreeable.

We had another opportunity to get in on the ground floor of the development of an enormous area. Australia and Canada have approximately the same aerial extent, and Australia had numerous basins. So, when we came in '61, we couldn't help but believe that surely in all these basins there would be a considerable amount of petroleum to be found. But by 1963 we had learned enough so that our view of the prospects had been cut down tremendously, even though the Mooney Discovery had come in. It turns out that Australia is a vast area, that it does have a lot of sediments, but these sediments are oftentimes of a poor nature for petroleum generation. However, Lewis Weeks had done some very fundamental research, and when he was asked to assist Broken Hill in their prospects, he almost incidentally suggested that he had some ideas for petroleum. And they picked him up on that. He advised them to consider the Bass Straits area, which they did, and this was the first truly major world class discovery in Australia. And of course, brought attention, which it couldn't otherwise have had. And later years the Bowen Basin was found to have excellent reserves of coal, and the Great Artisan Basin was found to be much more barren than had been hoped originally. The Cooper Basin on the other hand turned out to be very productive of good small fields. And the Northwest offshore came in, as some of us had hoped, as early as 1967 or 8, to be a major producing area. Thus far to my knowledge the Bonaparte hasn't come through as I had hoped at one point. Interestingly again, the personnel that came to Australia was largely American, as to the foreigners, and with a good add mixture of UK

geologists, and of course, again Dutch geologists. And German, and others, French. A major study was done by a French group. And it was exciting to be a part of it.

[00:08:42] We had an enormous scope in terms of the geology that we investigated. There were the tertiary tantalizing sediments in Papua. And in the western New Guinea, there were the equally tantalizing possibilities of Pre-Cambrian production and the Amadeus Basin. There were enormous thicknesses of offshore sediments that could be argued to be productive. There were tantalizing areas, like the Victoria offshore, which, and Beach areas, which had seeps but never came up with anything that was major.

There were related areas, for example, we, out of the Brisbane office were concerned with the possibilities in New Zealand. And again, there were areas there that seemed to be reasonably prospective, and now in retrospect, some 30 years later, turns out that the Taranaki, which was attractive then, is about the only area that's come up with profitable petroleum. We also considered areas offshore. There's a shallow area off Queensland which looked on a topographic basis to have some prospects but apparently doesn't have a sufficient sedimentary cover. There were Island considerations eastward from Australia, that could be argued but haven't yet become productive. There was the offshore again between Timor and Australia, which has become productive. The personnel that came from all parts of the world ...

[00:11:02] RE: [doorbell] Oh that's probably Ruth, I'll get it.

KO: We were talking about the personnel in the Australian petroleum exploration development. They came again from different parts of the world. It's very interesting to note that they caught on very quickly, just as they had in Canada. And eventually they became the core, the people that stayed, this was their home and they became very effective oil finders without any foreign help. That's not to gloss over the contributions made by those that came from overseas, it's just to recognize that both in Canada and in Australia, there were people on the scene that quickly became good oil finders.

RE: This concludes the interview with Karl Olson.

End of Interview