HAROLD V. PAGE

Harold V. Page was born in 1921 in Kenora, Ontario and was educated locally. In 1939, he enrolled in the Faculty of Engineering, University of Toronto, and received a BA Sc in Chemical Engineering. At the same time, he did his Canadian Officers Training Corps program and then served with the Royal Canadian Engineers as an instructor in military engineering for three years. In 1946, he joined the Aluminum Company of Canada in Arvida, Quebec, as Production Supervisor of the ore plant. Eighteen months later, he was sent to India to start up a new alumina plant, a joint venture between the company and the Government of India. In 1951, he joined Dow Chemical in Sarnia, Ontario as Assistant Construction Manager and rose to become Works Manager. In 1962, he became VP of Engineering and Manufacturing for Dow Europe. In 1968, he responded to a national advertisement for a new position as Executive VP Great Canadian Oil Sands and Director of Sun Oil Canada, and was hired. After a very few days orientation, it was apparent that, of the company's two manufacturing operations, a conventional oil refinery in Sarnia and a new oils sands mining plant in Alberta, the latter was a much more urgent management problem. He moved to Fort McMurray, 18 miles from the plant site at Tar Island. Although impressed by the enormous complex, he realized that it would require a big and efficient staff to operate and maintain it. The plant staff was still struggling with startup problems, about 12 months after the plant had been declared "open." Page implemented many changes in the next year, and the plant gradually produced "synthetic crude oil" (SCL) in increasing amounts with improved quality. By late 1969, production equaled the design capacity of 45,000 bpd, continuously for sustained time periods. Page then left GCOS and, in 1972, established Hydrocarb Consultants Ltd, an engineering practice serving corporate and government clients on natural resource development, especially bitumen and petrochemicals. From 1977-86, Page served as Managing Director, Alberta Chamber of Resources. From 1986-89, in semi-retirement, he was the Manager of Consulting Engineers Alberta and, from 1989-91, consulted to the Alberta Energy Department on hydrogen research.

Date and place of birth (if available): July 1921 in Kenora, Ontario

Date and place of interview: March 5th, 2013 at Harold Page's home

Contact Information:

#118 Canterbury Manor
8311 142 Street NW
Edmonton, AB, T5R-5Y5
Tel 780-483-8377
Email Harold Page hpRPmpLP@shaw.ca

PETROLEUM HISTORY SOCIETY Sponsors of The Oil Sands Oral History Project include the Alberta Historical Resources Foundation, Athabasca Oil Sands Corp., Canadian Natural Resources Limited, Canadian Oil Sands Limited, Connacher Oil and Gas Limited, Imperial Oil Limited, MEG Energy Corp., Nexen Inc., Suncor Energy and Syncrude Canada.

Name of interviewer: Adriana A. Davies, PhD

Name of videographer: Jimmy Bustos

Full names (spelled out) of all others present: N/A

Consent form signed: Yes

Transcript reviewed by subject: Yes

Interview Duration: 2 hours

Initials of Interviewer: AD

Last name of subject: PAGE

AD: Harold, thank you so much for agreeing to be interviewed.

Page: You are very welcome.

AD: We will begin with just some biographical information; if you could begin by telling me where and when you were born, and then just a brief educational summary and a summary of your working history, and then we will get into very specific questions about your background in the oil sands.

Page: Very well. I was born in Kenora, Ontario, in July 1921, and I was educated in Kenora and, in 1939, I was fortunate enough to be awarded a scholarship to the University of Toronto into the Engineering faculty, and that a little bit of a difficult decision because the war broke out in 1939, in September. However, the Canadian military offered the option of military training simultaneous with the academic studies, and so I enrolled in what was the wartime Canadian Officers Training Corps. And, on completion of the academic studies, we went directly from the lecture hall to the drill hall, and I served three years with the Royal Canadian Engineers. We were actually assigned as instructors in Military Engineering.

Post-war, I took a startup job in Ottawa to get re-oriented and in a very few months I actually joined the Aluminum Company of Canada or Alcan, and that was in their smelter operations in Arvida in Northern Quebec. Arvida was a company town, since Rene Levesque's day, and sits next to Jonquière, which in turn, along with Chicoutimi, is now part of the city called Saguenay. [Interviewee correction: Should read "Arvida was a company town in those days, but it is now annexed to Jonquière which, along with Chicoutimi, forms part of the city called Saguenay."]And I was with Alcan about 18 months when I was dispatched to India to start up an alumina plant, which was a joint venture between Alcan and the Indian government. That was in September, 1948; I arrived in Calcutta, which happened to be the first anniversary of independence, and my assignment was to get the plant started up, train the Indian engineers and get back. That took about 6 months. I returned

to Arvida and, actually, at that point was desirous of getting more into the chemical industry because that was my academic training in chemical engineering. That's the point at which I joined Dow chemical in 1951. I was hired on to Dow Chemical in Sarnia as Assistant Construction Manager, and by about 1961, I had become a Works Manager. At that point I was offered the opportunity by Dow to go to Europe for their European Operations. Dow Chemical along with many other international companies that were involved in the reconstruction of Europe post war, which was made possible by the Marshall Plan, an exercise in having to build new plants and start them up. And, they actually had acquired some new plants. I recall, correctly, we had four sites in the U.K. Precisely, we had four sites in the U.K. Terneuzen was in Holland, it's now major petrochemical Centre. And two other sites in Holland and one in Germany, one Italy, one in Spain and one in France, and also Greece. [Interviewee correction: Should read "We had four plant sites in the UK; three in Holland, including Terneuzen which is now a major petrochemical complex; and three in Spain; one in Italy; one in Greece."]I returned to Canada in the centennial year and spent about a year and a half in Toronto, and that's the point I had responded to an advertisement for the position of Executive President of Great Canadian Oil Sands and Director of Sun Oil. I think that's the point at which we pick up the history of the GCOS.

AD: Absolutely. I'm just going to backtrack a little. So, in terms of your work in Europe for Dow, what were your responsibilities, what did you do?

PAGE: As the Vice President of Engineering and Manufacturing, it was my responsibility to see that our new plants were built correctly and to evaluate some of the plants that the company was interested in purchasing and, actually, being involved with some of the local people, the responsibility to train local people. There was an emphasis on training local people from the beginning. And our approach was to ensure that the people that were going to operate and maintain the plant were involved in the design of that facility, and also sent to spent some time in the parent company, mostly in the United States, in those plants to be trained to operate and maintain them, the emphasis being on the turnover as soon as possible to the local people and, particularly, the engineers that would be responsible for the plant.

AD: So, in other words, you were senior management at the Operations level so that you knew all aspects of plant operations.

Page: The specific technology of the individual plant was conveyed primary by the parent company through the design phase. My responsibility was to make sure that we had a native one that was particular [Interviewee correction. Should read: "My responsibility was to convey the technology to competent nationals"]; in Holland, for example, that we had a Dutch Engineer, in fact, that several Dutch engineers actually work on being involved in the design of the plant, so that they would be actually better equipped to operate and maintain that plant.

AD: Because they came from that country.

PAGE: Exactly. They knew the local conditions and, of course, the language was a factor.

AD: Yes, now your back in Canada, how did you find about the job at Sun Oil and Great Canadian Oil Sands?

PAGE: It was advertised nationally and I saw the ad and responded to it, and was selected by a recruiting firm in Toronto.

AD: Ok. Do you remember what the name of the recruiting firm was?

PAGE: [Interviewee correction: "Should have said, 'No.'"]

AD: And who actually interviewed you?

PAGE: One of the principals in the recruiting firm. [Interviewee correction: Ken Heddon].I think they are referred to as business consultants.

AD: Okay, so you didn't talk to anyone from Great Canadian Oil Sands at that point, it was through the recruiting firm.

PAGE: Not until the recruiting firm actually recommended me as the candidate.

AD: So what did you think attracted these recruiters to you, I mean, your background and knowledge, do you maybe want to summarize that. What were they looking for, did they tell you?

PAGE: Presumably, their choice was based on the fact that I'd had experience in the design and construction and operation of facilities that were somewhat similar, and I'd even had some earlier experience as a summer student in some mining operations, at least in the ore treatment facilities that are connected with mining.

AD: So they recommended you and what happened next?

PAGE: I spent just a matter of a few days with the president of Sun Canada in his Toronto office, and some of his staff some of whom had had as part of their role some involvement in Great Canadian Oil Sands. For example, the personnel manager and also the administrative man, who had had visits, naturally, to GCOS and had some knowledge of it.

AD: Now, do you remember who the person in charge of Sun Oil in Canada was?

PAGE: Ken. I'm sorry, it escapes me at the moment.

AD: Don't worry, I'm sure it will come back. So, basically, you were offered the job and for the historical record, what were they paying at the point, I mean, what wages, benefits, etc.?

PAGE: It was about $35 000 sort of thing and their standard benefit plan at that level, which I presume was also recommended by the recruiting agent who recommended that type of thing at that time.

AD: And what attracted you to the job?

PAGE: Primarily the fact that it was a new, and to me a very interesting, Canadian resource development and, also, the fact that the upgrading part (both the bitumen treating part process and the refining of the bitumen was called upgrading) was quite similar to some chemical operations.

AD: So, you accepted the position. When was your first day on the job?

PAGE: Well, I was on the job of course about the time I left the president in Toronto and that would be in the summer of 1968.

AD: Summer of 1968.

PAGE: As the title indicates, there were some responsibilities for both the operations. Sun Canada at the time operated an oil refinery in Sarnia and also, of course, the GCOS aspect. It was apparent from the rather extensive literature that had been published on Great Canadian Oil Sands as it was recognized as a new venture in Canada, and therefore there were very good publications on it, which was part of the attraction for me. But it was apparent from discussions I'd had in Toronto, even the first couple months, that's where the real problem was, at the Great Canadian Oil Sands. It had been declared open almost a year prior to that and wasn't operating. So, it was obvious that would be my first priority.

AD: And was that stated bluntly to you that there were problems that they needed you to address for them?

PAGE: They weren't stated bluntly, but it was obvious from the discussions I had that the plant just wasn't running. In fact, it was the difficulty of getting qualified people to go to the plant's site; and, rather than being expressed bluntly, it was more a matter of people almost seemed to be accustomed to it. That was almost a year. They had a whole series of problems and I got the impression that it was almost an accepted situation.

AD: But, as we know that was the baby of J. Howard Pew, and he basically defied the company and backed it personally. Did you meet Pew at all?

PAGE: I did, yes. That was a very early and almost traumatic impression. The very mention of his name in the company sent shivers down people's back. Mention J. H. Pew anywhere in the office, even my first introduction to him, I almost stood up and saluted and, as matter of fact, I was later to learn that J. Howard insisted to know, on a daily basis, the status of the plant, of the GCOS non-operation and it struck me as being so very, very different from anything I had experienced in my

PDF-XChange Click to buy NOW! www.docu-track.com

corporate work up until that point, where the president of the company wanted individually to know in detail on a daily basis.

AD: So, when did you actually meet him?

PAGE: During that first two or three months in Toronto on a visit to Philadelphia, primarily to meet the vice president, who was the real authority in the so-called Board of Directors of Great Canadian Oil Sands, of which I was a director. And, it was at that time that I happened to meet JR. H. Pew. He also actually visited at the plant site very briefly after I had moved up there to Great Canadian Oil Sands, to the site, but it was extremely briefly.

AD: Now, when you went to Philadelphia and you spoke to the person who was the expert, what kind of briefing did this person give you, and do you remember the name?

PAGE: There wasn't much of a briefing. They were more looking at me and wondering where this guy came from and there is, as you may know, a difference between industries. The oil companies and petro-chemical companies have a different concept of their own people and training, and their own operations and way of doing business. I sensed that there was a little bit of "oh-oh, he's not from the oil industry," but that was just a first impression.

AD: Yes, so then you returned to Toronto and when did you come out to Alberta and can you recount that story?

PAGE: I made a quick acquaintance trip alone to Fort McMurray and Tar Island, which is the site of the plant, just to get a quick assessment and only stayed for a day or two, and also to determine what kind of living accommodation would be available for my family, because we had three of our five children still with us, and that was a consideration too. I felt I had to be certainly near the place and move the family to Fort McMurray, which we did in August of 1968.

AD: And what did you think of what you got yourself into, as it were?

PAGE: That's a good way to put it. We drove and one of the first impressions was the 100 miles of gravel along highway 63 to get there. Until the house was ready, we stayed overnight in a motel and got up in the morning to find that someone had crashed into the car and, so, I asked where I should report it, and the motel manager said that the Mounties are just up the street there, and they were very angry because I disturbed them. They had spent the night tidying up a fight at one of the local beer parlors and told me to come back later. That was my first impression, yes. Of course, I later realized that the community of Fort McMurray was in no condition to accommodate the number and type of people that were required to live there, and it was a recognition that the infrastructure was not at all prepared to accommodate that kind of industrial operation and with the manpower intensity that was involved.

AD: So, tell me then, you know, your first tour of the site, and what you found? And be as detailed as you can; I mean, this preliminary assessment/audit that you did.

PAGE: From my purely technical point of view, I was impressed with the magnitude of the operation, and enormous open pit operation. As a matter of fact, it very soon became a bigger surface mining operation then almost anything else in Canada, and the amount of material that was being handled, very impressive; just the size of the operation from a purely technical point of view. From an impression of people that were there, it was apparent that there were insufficient number of people and those that were there seemed rather discouraged and had almost come to the point that failures 2-3 times a week were natural, and to be expected. They were just plain overworked, relative to the number of failures and the problems of getting everything operational.

AD: So, can you talk about some of the failures that you observed?

PAGE: Well, starting in the fall, while the weather was still reasonably temperatured, there was a matter of the lack of continuity of the process. In order to be properly operational, sufficient oil sand had to be delivered from the mine to the extraction plant without failure, for the extraction plant to keep operating. And, of course, the extraction plant had to likewise extract the bitumen from those oil sands and get it to the bitumen upgrader for it to operate, which, in turn, had to transport the lighter hydrocarbons to the hydrocracker and anything that happened along the line meant that everything else was down, everything downstream.

AD: So, it was a complex series of operations that hadn't really been tested sufficiently to be able to get the kinks out. The people I've interviewed talked about de-bottlenecking. What was your take on this? I mean you've got the mining operation, extraction, then the whole hydrocracking process; you've got a power plant; all of these things in a pioneer community, lacking in a whole bunch of infrastructure. What was your assessment of all of this?

PAGE: My overall assessment was that it had been prematurely scaled up from what I would consider to be a proper pilot plant operation. The previous pilot plant, which wasn't even part of GCOS but was City Services and operated at Mildred Lake, but that's another story, because there was no exchange of information that I could identify between that operation and the bitumen operation, which was operated, of course, by the Alberta Research Council.

My understanding of what had transpired was that the Bitumount Pilot Plant was commendable but on a very small scale and, particularly from the mining perspective, was minuscule. It was what was studied by Sid Blair for Bechtel Corporation, from which was done the feasibility study. That was before my time, so I don't have much detail on that. And, of course, I had, on occasion, actually visited the Bitumount Site, long after it operated. From what I could see of it, it was an enormous, very ambitious jump to do a feasibility study based on the bitumen operation, and of course, having had experience with pilot plants and scale-ups, this seemed to be an excessive gap and, therefore, it wasn't a surprise to me that they encountered so much difficulty getting everything operating continuously, and in sequence. The scale was just enormous beyond anything that had been examined, at least in bitumen and, I think, probably also from what little I had learned from City Service, it wasn't that big either.

AD: So, then, how did you go about. You were there; you weren't going to quit, turn tail and run, so what did you do?

PAGE: Well, it was just a matter of examining it piecemeal, talking to people that were in charge of each place. There was a mining operation that was, the beginning of the train of activity. And, of course, putting it into a time scale, we arrived in August and, then, I wouldn't pretend to be vaguely familiar with it for a couple of months, by which time, we experienced one of the coldest winters on record. That's when they thought the real problems were created because the oil sands vary depending on weather. In the summer heat, after several months of heat, the bitumen actually oozes from the oil sands. In the winter, it turns like concrete and there were several times in the winter of 1968-69, when we were measuring temperatures of below -50 at the mine face.

The very special equipment, the bucketwheel excavators that were used to actually mine that oil sand certainly weren't designed for that. As a matter of fact, even the steel which the bucketwheel excavators were constructed had a critical temperature below that temperature. That was resolved by a Canadian engineer who was on staff, by the name of Mike Pearson, who was a graduate of Queen's University, and who had the forethought to check with his professor there.

Man, some of the things they were trying, like putting a butane torch on the end of the excavator that was just totally ineffective. He [the professor] recommended to his former student, you have to blast it. That was a dreadful thought because, at that point, the mine face was very close to the refinery, and blasting something like that was probably pretty dangerous. As a matter of fact, the people who were running the refinery said "No way." They had set off a couple test charges; they said "Wait a minute, we can't do that." There was really no option and it was done, and the mine management, actually, authorized drilling a hole; bringing in some ammonia nitrate and extra fuel oil; and set off the lifting charges.

It was a whole new experience. It was the only thing that allowed us to operate the mine in the winter. But, in the meantime, of course, there was no small reserves of bitumen between the sand the extraction plant had long-ago used up, and nothing could be operated downstream. That was the biggest thing that was done at the mine face. The extraction plant was in pretty good shape, actually, and the manager there had actually worked in some of the testing, and it wasn't too much of a problem, but there was a problem after we got the operation and got the bituminous sand going into the extraction plant.

The concentration of bitumen in the sand varies. It varies from about 6% for the delivered cut off point at the top, down to almost 18% at the base, which is close to 100 feet. When the richer bitumen goes into the extraction plant, it requires more steam, and that was not apparently taken into account in the design of the steam plant, and, when the higher concentration bituminous sand had hit the extraction plant, it called for more steam. The steam plant was overloaded in the condensate tank and it overflowed, and the previous winter they had made what was probably the biggest iceberg that had ever been created on land. So, it was very difficult, but they worked it out by means of, well, a number of measures really. A little more careful in trying to blend, to the limited

PDF-XChange Click to buy NOW! www.docu-track.com

extent they could, the ore quality, and also communicating more with the steam plant so that some of those demands were a little less drastic and unexpected.

AD: Who were some of the key players at that point? Can you remember the men you dealt with?

PAGE: I regret I don't remember some of the names, no.

AD: Don't worry. So after 6 months, do you feel that (this would be spring of 1969), what was your sense of operations at that point?

PAGE: Well, I think, [I had] certainly some hope. Initially, I wondered if there was any hope, but we hadn't even got to the refinery which being, of course, further downstream in the operation, they had had problems primarily of a mechanical and equipment nature failure, but wasn't really tested because it wasn't as continuous a stream of bitumen there. The staff was joined by a mechanical engineer [Interviewee correction: should be a chemical engineer] by the name of Reg Humphries, and that was an improvement and we also managed to recruit and bring on staff a mining engineer, Tony Allen, who had much more appropriate mining experience in dealing with the larger operations and, more significantly, working in the cold weather. So, we had an improvement in the staff, which was a significant part of it. Of course, both of those men brought to the staff more experience and also less discouragement and the ability to get on with it and tackle the job. That was an important factor.

AD: So, when would you say that it started to function as an integrated plant with these various functions?

PAGE: Well it was a gradual thing but I would say, to the best of my recollection (I didn't keep my detailed notes on it), we didn't have time, but I would say it would be, and incidentally weather was a blessing too but, say, by the summer of 1969, we were getting gradually and continually a little more production, a little more continuous operation. Still, the occasional failure [occurred], but more and more continuous, for longer periods of time; so, actually, we were in reasonably good shape for the winter of 1969-70. In fact, by late 1969, we had continuous operation for considerable periods of time, for the first time at the design capacity 45,000 barrels a day, that's of the product, the so-called synthetic crude oil.

AD: They mentioned earlier that J. Howard Pew, visited while you were in Fort McMurray. Can you tell me a bit about that?

PAGE: It was very brief, and the community of Fort McMurray didn't rate too much attention within the company. The whole place, they really felt the plant site was their domain. That's the impression I had. So, it was an extremely brief visit at one of the motels, which I'm sure wouldn't quite rate in Philadelphia.

AD: So, when would that of been?

PAGE: I'm sorry I don't recall.

AD: But he would have seen that the plant was now functioning.

PAGE: Well, I think they probably … the best I could say is that there was some distinct possibility that it would. We were on our way.

AD: Did you ever report to him directly?

PAGE: No. The principal person from the parent company at the time was Thayer [Clarence] and he had been recalled from retirement by J. Howard Pew to be in charge of the design of the plant.

AD: Can you just repeat his name?

PAGE: Thayer was his family name and it was presumably his decision to contract the principal designer, under his authority, to the Bechtel Corporation. So, it was really his plan, J. Howard, of course, was there almost out of curiosity and reverence, but the real visitor at that plant was Thayer.

AD: And his first name was?

PAGE: I've forgotten, I'm sorry I don't …[Clarence] But, anyway, he invited me to show him the plant, take him around, and it wasn't the most pleasant experience I've had because I, at that point, had certainly decided that there was inadequate preparation right from the time that the contract was awarded for design, and through the design, and I had by that time come completely to the conclusion that there were quite serious inadequacies [on the part] of a number of people on the design, involved in the design, who would have had and been committed to operate and maintain the plant. It just plain wasn't planned in that respect and, yet, I couldn't show him around - he designed it - but I was prepared to go along with him. So, we didn't relate too well because my only concern was doing everything possible to get it operational, anyway, even though it hadn't been planned in time.

AD: So, do you think there was a sense of shooting the messenger, because you told him the operational difficulties, and he was person in charge of the design.

PAGE: Actually, neither one of us talked about that. I didn't have to tell him that it wasn't properly designed.

AD: Because he saw it.

PAGE: He wouldn't admit it anyway.

AD: That was a very cagey kind of conversation then.

PAGE: We didn't have much conversation.

AD: Okay.

PAGE: He wanted to know – "Why don't they do this; why don't they do that?" His meeting and mine and joint tour didn't accomplish much.

AD: And when did that take place? Do you remember?

PAGE: To the best of my recollection, it would be about the summer of 1969, but it was nothing that either one of us could say to one another that could accomplish very much. In any event, it was big, there was no question in my mind. It was just designed on too large of a scale, too soon.

AD: Now other interviewees have mentioned that Bechtel would send in engineers from California, or whatever, who really didn't understand the operations. And that, in the end, it was self-help kind of solutions, that the ingenuity of the people that actually worked there brought about changes that brought about better functioning. Is that your assessment?

PAGE: I don't think it's as simple as that. There's no question in my mind and, then, Bechtel, certainly at that time, was one of the best-recognized international engineering firms. A considerable part of their reputation was in the mining field, in addition, to the refining industry. But, in the mining field, I think that, and they of course were on the spot, they came frequently to the plant site there. Their mining experts came frequently to the mine site. But, certainly, in the extreme cold weather, the thing that enabled us to run the mine was our Canadian mining engineer that said we are going to blast it. But, in all fairness, Bechtel, they knew everything we did and everything we planned to do, and all, though I can't remember the details. I'm sure they were aware of it and certainly didn't object to it.

AD: So, how did you, in the period that you were there, how did you improve the operations so that it became continuous?

PAGE: Well, I don't think … I wouldn't lay claim to doing that personally by any means. I think that, if it was anything, it was just a matter of providing some kind of encouragement and determination that it had to be done; and dealing with it one problem at a time. But there were, and I want to emphasize that there were some very competent people, and I think it was just a matter of them actually applying themselves, and having some confidence that it would work in the end. It would go, and they did.

AD: Are there any achievements that you want to note, in your period at GCOS?

PAGE: I think we probably touched on them. It was a matter of having to make the necessary adjustments and additions to a situation that was just too ambitious at beginning, especially at the time of the big public event saying it was open. "Man, we're open," and just open the valve. And that was somewhat optimistic.

AD: Now you left the company. Can you tell me a bit about that and what prompted you to leave?

PAGE: Oh, I don't think it prompted me; I think we were in pretty much disagreement on several things.

AD: Can you talk about that?

PAGE: It's a little difficult to do that. I had certainly a couple of points we were not agreeing on, especially with the Canadian who was designated as president of Sun Oil Canada and the President of Great Canadian Oil Sands, whose replacement I was intended to undertake We just didn't fit.

AD: So, someone else was hired in that Senior Executive Position. Who was that?

PAGE: They sent in the manager of their senior refinery, whose name escapes me. I'm sorry but some of these names are not prominent in my mind, and some of those memories are not my fondest. But, they did send in, at the point that I relocated to Edmonton, they sent their senior refinery manager to Tar Island, where it was his job to take over and to report directly to J. Howard and possibly through the Toronto office.

AD: So, was there one incident or a number of incidences that prompted this?

PAGE: No, I don't think so. I think that it had become apparent to both of us, and when I say us it's the president of Sun Oil Canada at the time that we didn't fit. Incidentally, his name is Ken Heddon.

AD: Ken Heddon. Do you feel that, in a sense, it's what today would be called "constructive dismissal?" That, really, the recommendations that you were making with respect to making the plant more efficient, fell on deaf ears, and so you were forced out, in effect.

PAGE: I don't think it was that, but certainly we differed on a number of things, no question about that. As to why they chose to do what they did, I don't know. I don't really think that that particular event pertains much to the history of Great Canadian Oil Sands. Its public knowledge there was a court case, and its public knowledge that they settled out of court.

AD: So, when did you leave Fort McMurray and when did you leave the company, in effect.

PAGE: July of 1970. Well, no, I moved out of Fort McMurray to Edmonton in July, 1970. We settled out of court by 1972.

AD: So, did you continue to work for Sun Oil during that period or had you set up your consulting firm?

PAGE: No, from 1970-72, I had an office and was still on the payroll, but I spent most of my time unofficially liaising with government officials, many of whom were interested in advice and regulations, technology, and with several Canadian, Alberta firms who were interested in

information and advice in how they might market their services and their product into the oil sands industry.

AD: Can you tell me a bit about that contracting work, with first of all the government and then the different companies?

PAGE: After I left in 1972?

AD: Yes.

PAGE: Yes, it was something I always wanted to do anyways, to do some consulting. And, then, it became official, of course, and on a contract basis; some with the Alberta Government Energy Department and with companies that were interested in selling their services or products into the oil sands industry. The first foreign project was in Madagascar, where CIDA [Canadian International Development Agency] had advertised for technology, and for knowledge and people to evaluate and advise the people in Madagascar whether the deposits they had were bitumen, and would possibly lend themselves to development.

In that connection, I worked in conjunction with the Federal Department of Mines and Energy, who actually recommended me to CIDA to do that, and there was only so much that I could do, of course, alone. I finally recommended to them, after I had done my CIDA project, recommended that some of the samples I had sent back be analyzed by the Alberta Research Council, who actually picked up the project at that point.

AD: So, it's interesting that Canadian expertise in oil sands was being marketed abroad, that you were part of that vanguard. Now, what did you do for the Energy Department, in the first instance?

PAGE: In the first instance, it was mainly just some consultation. It was later that I had a formal contract but that was into hydrogen research, which could be remotely related to bitumen but not directly.

AD: Okay. So in terms of your other consulting with other companies, you want to mention some of that work?

PAGE: The other international contract was with CESO [Canadian Executive Services Overseas], you aren't familiar with them, and that was to provide advice to a company in Malaysia, who were actually processing bitumen, not natural bitumen but bitumen from a refinery. To process it, in order to make it adaptable as a waterproof protective coating, primarily for pipelines.

AD: That's bizarre, because it goes back to some of the early Clark and Ells experiments, you know, using it as paving material and Fitzsimmons and roofing material.

PAGE: Yes, and Peter Pond on canoes.

PDF-XChange Click to buy NOW! www.docu-track.com

AD: I gather that you also did an environmental study for the Alberta Government. Can you tell me a bit about that? When did you do that and what did it comprise?

PAGE: That was a separate contract with the Alberta government, who had just recently established its Department of Environment. At the time, there was much concern with acid rain elsewhere in the country, and there were environmental concerns being expressed in the press and elsewhere about possible environmental effects of oil sands development. The minster of the Environment at the time actually authorized and invited competition bids for a study of the environmental impact of the Alberta oil sands. There was an engineering company in Edmonton that put together a team of which I was one of the prime members to do that study.

AD: What was the engineering firm?

PAGE: The engineering firm was called Integ [Intercontinental Engineering of Alberta Ltd]. The group leader there was Percy Butler. He and another engineering firm actually but together a team for the purpose of competing because it would involve studies such as atmospheric monitoring and things of that nature. The team also … I was probably one of the essential members from the point of view of having knowledge of the oil sand industry as such. And the other members of the project team would have the other skills such as meteorology and that type of thing.

AD: So what year was that?

PAGE: I think it's probably … [pause] it would be certainly in the early 1970s.[1]

AD: As you know the major environmental impact assessment for Syncrude lasted for 10 years - from 1975to 85 - and that really is the grand-daddy but you are talking about the Alberta government at that earlier period, early 1970's, just after the formation of the department looking at the oil sands in terms of the ...

PAGE: That's correct. We didn't have anything like that in our budget; we had a few months to do it. As a matter of fact, I still have a copy.

AD: Actually, I would love to see it.

PAGE: Would you?

AD: Yes, because I'm actually writing on this right now and also would you consider donating it or a copy of it to the Glenbow Archives because, of course, these interviews are going to reside in the Glenbow Archives.

[1] The study titled *An Environmental Study of the Athabasca Tar Sands* was begun in March 1972 and completed in March 1973.

PAGE: By all means, I have the one copy; it's the only one I kept. It was actually published by the Queen's printer. But you can have my copy; I assume I don't need it anymore.

AD: Because that would appear to be the first environmental impact assessment on the oil sands, so, for comparative purposes it would be really interesting.

PAGE: Remind me before you go; I'll give it to you.

AD: Excellent. Now you were doing this consulting work, post-1972 and, then, in 1977 you got involved with the Alberta Chamber of Resources. Can you tell me about that; how did that happen and what were your duties and responsibilities?

PAGE: Well, almost from the time that I moved to Edmonton in 1970, I became, shortly thereafter, interested in industrial activities.

AD: How did you get involved with the Alberta Chamber of Resources?

PAGE: Well, in the 1970s, it was still the Chamber of Mines. They had gone through several names and I think it had ended up as the Alberta Chamber of Mines, Oils and Resources. It had started out probably two decades prior to that as an organization of Alberta people that marketed their goods and services to the mining industry in the Northwest Territories. As a matter of fact, it morphed into, thanks to Cominco at the time, into a source of information for the mines in the Northwest Territories and even Cominco helped, for example, provided funding to get a manager with experience - one of their retired people - to set up a proper organization. And they even got to the extent of selling claim tags for people from Alberta, some of whom were prospectors, including the famous Steve Zarnick.

It's like anything else; it grew and not only supplied services, but accountants, engineers, contractors, but also people that were interested in investing in mines. In fact, the original manager, he was a combination bush pilot and also training as a geologist. He flew some of the first people into the Pine Point Mine site [Mike Finland]. Then, it was called the Chamber of Mines. As such, it became somewhat similar to mining associations in other provinces. It was called Chamber of Mines because it was suppliers. Other provinces had mining associations that included actual mining companies. The Alberta organization morphed, at least in 1970, I had become a member and was one of the board of directors. By 1977, Mike Finland, flew with Wop May [Philip "Wop" May, WWI flying ace and bush pilot], very well known. I think he was featured in one of the Klondike parades. He retired and we decided what we were going to do with it. And we decided to re-organize the whole thing. It still had the mining perspective, because by that time, Great Canadian Oil Sands was surface mining more "stuff" then the rest of Canada, quantity wise. So, there was still the mining but it was also the aspect that it wasn't mining hard rock, so we changed the name to resources.

The only hired manager was Bud Chesney; Bud was a very good mining engineer but he really didn't care for work around the office and being grounded, so he quit. What we had put together for the board of directors was a complete new direction for the organization. Also, it was quite controversial

because there were people that still supplied the Northwest Territories, so we still wanted to leave that Northwest in there (Alberta Northwest Chamber). But, some of the others argued that that doesn't fit because the Northwest Territories had matured to the point where they had their own organization. Just like Klondike days, it was a bit of an insult to use the name. So, we ended up calling it the Alberta Chamber of Resources, in addition to the fact that the oil sands not only mined stuff but created hydrocarbons. Anyways, Bud Chesney quit and I said I'd take it on temporarily. At that time, I had done it for years so, then, I decided I would take it permanently. I took on the management of the thing, but under a whole new mandate and under different terms of operation; get rid of the selling name tags and selling mining claims and selling mining maps, and get out of that old building on the corner of 105th St and 100th Ave. Go upscale and, one of the things they had been doing, is hiring some of the old miners who had come to Edmonton to dry out and sober up, and had a contract with the mines to give them a medical inspection and send them out as hired by the mines. And that was part of the resource of the previous old Chamber of Mines, and it had a plywood figure of a prospector there on the front door on the corner of 105th Street. Get out of that and go upscale and talk about the planning of oil sands and new things. That's the point at which I took on that.

AD: So, because of your experience, then, you were able to guide them in the next era, because this was then the era of Syncrude. Did the Chamber of Resources have any ties with the development of Syncrude? Do you want to talk about your period there then?

PAGE: That's significant. Syncrude incidentally was an important member of the Chamber of Resources and, certainly, one of the many objectives in developing what became the Chamber of Resources was to be an information centre and co-operative centre for oil sand developments. Syncrude was coming; GCOS was already there and Syncrude was being planned, and what not. However, and it to considerable extent it still is somewhat [important] but the Petroleum Industry Association, quite frankly, is so strong and to them that's oil. What we planned to operate at the Chamber of Resources was no competitor for the oil industry and Petroleum Association. It could put the Chamber of Resources in one corner and forget it, and that's oil.

But that gets me into another story that you may not be interested in. It was Peter Lougheed that called it "oil sands." The natural resource is more properly called "tar," and even the product, which again, due to the fact that the oil companies own practically all of the mineable oil and the in situ leases. To them that is oil, and their perception of that is feedstock for their refineries. In actual fact, the so-called "synthetic crude oil" that we started making continuously in late 1969 was, in effect, kerosene with which we operated all the mining equipment on the site. To put that into a refinery, that's terrible. As a matter of fact, even that was recognized when they gave us the value of synthetic crude oil at $2.75 a barrel, 25 cents more than the benchmark of conventional crude.

AD: Isn't that interesting.

PAGE: So, the terminology, in my opinion, is all backwards, all wrong. But, then, that's not the kind of thing that one wants to talk about publicly in Alberta because oil, that's it. It's oil. Furthermore,

the majority of Albertans have no problem with Calgary being the biggest concentration of American expatriates of oil. But, those are things that, I'm sorry, my background doesn't quite fit that. I have a different perspective; I have a different perspective.

AD: Its intriguing what you've said that, as the Chamber of Resources identified its goals and expanded, that then it went head-to-head with the Petroleum Industry Association, which is ironic and shows how much change can occur in 10 years, because the Oil Sands Task Force, which was of course after your time, came out of the Chamber of Resources, and positioned the oil sands industry.

PAGE: That's right. I wouldn't say it went head-to-head but it was a foregone conclusion that it wasn't going to have much success other than from a mining perspective.

AD: So your turf was restricted.

PAGE: We recognized right off the bat that … besides that, even in the mining area, there was the Coal Mining Association, where my name sake, Garnet Page, was at. So, those are little turf areas and interesting associations. And the industry association either exists or fails on the extent to which it's able to represent the industry, or do anything useful to the companies, or even propaganda or whatever it is. And, of course, the Petroleum Society is so strong; as a matter of fact, I don't think I was on the Sun Oil payroll 5-6 months when someone from the United States sent me a membership to the American Petroleum Society. I sent it back to him; I said "I'm sorry I got enough." But it's an example of a very powerful industry association, extremely powerful

AD: Now, you made an observation earlier on that the old Chamber of Mines, or whatever it was called, was looking at opportunities for companies in the oil sands industry. Of course, we had the economic downturn of 1981, and there were a number of companies, Edmonton-based, Leduc area, these founder companies that then became involved in the oil sands. I'm thinking of the construction side - do you want to talk a bit about that? You mentioned that was something the Chamber was interested in.

PAGE: I think I have to put that into a timeframe. What I attempted to describe in my involvement in the Chamber of Resources was more in a timeframe of 1977. I did that for about 10 years; at that point, I think I resigned or went on half time, and that's where our friend Don Currie took over. I didn't mean to imply that we recognized at the time, that there was an opportunity there for it, but it soon became apparent that that was petroleum territory, in their opinion.

But, you're quite right in that there was a gradual increase and extremely important increase in the membership of oil sand companies that were attracted to resources. That was a gradual process and, as they realized that the oil sand industry, as such, was a part and, to a large extent, Syncrude, because of the Syncrude name, and the size of it. Also, because of the increasing number of applications for oil sands plants and the permits that were provided. There was a trend there that companies involved with oil sands began to realize that this was a recognized industry. It's in the press and on the TV, and more and more of them got involved. So, the Syncrude President was

President of the Chamber of Resources for a while. So, there was a trend there that went on in spite of what the Petroleum Association might have wanted.

AD: So, I was thinking of Eric Newell and that era of the Oil Sands Task Force, which was after you left, but you were experiencing that in your period.

PAGE: We may have triggered it, headed it in that direction. But, I think it happened not because we were prescient but it was natural.

AD: So, can you mention any of the companies that saw opportunities in the oil sands, became members of the Chamber of Resources, and then did well out of that. Can you think of any in particular that you want to mention and your dealings with them, if any?

PAGE: I think it happened more when I was doing a fade. I would probably succeed a little better in answering this because Currie and I are having lunch, but he would be more familiar with this. But, in any event, I don't think I can. I think the very fact that those increasing memberships of companies involved in the oil sands industry, the fact that there was an increase, is indicative that they were getting something out of it. Companies will not join an industrial association unless they are as affluent as most oil companies are, are going to insist they get something out of it. In some cases, it's just recognition and liaison with other companies. More often it's usually a better recognition and information exchange that you wouldn't otherwise get, and without being accused of fixing prices. The fact that they are increasing, they're getting something out of it. To define what it is, is a little more difficult.

AD: Yes. Well, we move into what some would consider a dangerous term - of "lobbying." But, of course, the organization did do this, as its membership grew and there were companies that had a critical interest in getting work in the oil sands, because this was a growth area that, then, began to boom as other projects came on stream. So, you did become a lobbying organization.

PAGE: As a matter of fact, you just mentioned something that may be one of the most significant activities of the Chamber of Resources relative to the oil sands industry, and let's call it lobbying. That's where the lobbying term applies very aptly. Endless meetings with Alberta Energy and regulations and royalties, and some were some pretty rough meetings. The deputy minister at the time, on behalf of the industry, we would really go after him. In fact, he was a representative of the Alberta Government on the Board of Directors of the Chamber, and we had no hesitation to deal with him as roughly as we felt was necessary. Whether or not that fits the description of lobbying, I don't know; he would present to us the proposed changes and regulations before they came into effect, and we would debate it on behalf of the industry, which is probably one of the most significant and more easily-defined activities that benefits the members.

AD: So that shift into professional management, which really occurred when you became the managing director in 1977, was when the Chamber re-envisioned its self, repositioned itself and actually became quite powerful as a result of the increasing membership.

PAGE: I think so, and moving out of an old building and moving into offices where people tend to recognize that you are something, and don't have some miners that aren't totally sober coming out of the building.

AD: So, it's a totally different image and the negotiations with the government, providing feedback, the whole regulatory regime, the royalty regimes, the Chamber became involved in that?

PAGE: Yes, it shifted into that

AD: Because, I wonder why the Oil Sands Task Force report, which is enormously influential, and basically can be viewed as the "spur" to the development that has occurred in the last 15-20 years?

PAGE: That grew out of that certainly, and the oil sand industry got a name on its own behalf, rather than being an adjunct to the petroleum industry. It's different. As a matter of fact, to me that is back to the very beginning, going back to Ernie Manning's government, which I realize, and that's almost, after you salute J. Howard Pew, you have to salute Ernie's memory.

So, saying anything against that in Alberta is something you have to say pretty quietly. But, what they could not have realized was that the oil sand mining industry is a different beast than the oil patch. To begin with, its labour intensive which raises the point of community, which they never looked after. They tended to that by introducing new legislation called "New Town," specifically for Fort McMurray, but that's all. They appointed a bureaucrat to run it. As a citizen of Fort McMurray, I didn't like that; it didn't work. Who are we supposed to be, tenants or what? That's just one thing, and the conventional oil industry regulations dictate that, if you are going to drill a well, you get yourself there; you build your road. So, they opted to say it happened. They said to Sun Oil Company, not to J. Howard but to people down below him, "build your own damn road!" There was no bridge across the river; well that was a big deal. In retrospect, things were always easier. That was dealing with a different beast.

AD: It's interesting that you have pointed out what is a partial response to the question of why highway 63 has not been twinned? Why infrastructure has lagged with respect to other municipalities in the province and it was that "New Town" designation that basically, and the idea that the companies should build those access roads rather than a proper municipal structure, tax base, etc.

PAGE: And that is so obvious, again, I can't help compare that, in particular, to Holland. They plan for their industrial development decades ahead. Now, there are differences [with Canada], beyond language. They are short of land. They are overcrowded. They are below sea level. They have been flooded out. For example, one of the early things we said "Being Northwestern style," and even after you had your third cup of strong coffee and two cigars, "and we've got to have it level here," they would look at each other in Holland and laugh. They would say "You know what? That is planned for ahead in 10 to15 years, cause we have to dredge the Ghent Canal to get the gravel to get the road bed, and you will get the railway when we do that."

AD: So, the observation that you are making now, sort of in hindsight, is that not only that the project was a technological challenge, it was a challenge in all sorts of ways, and you experienced those failings first hand.

PAGE: As a resident. I perceived, at least in my perception, it's because of the conventional oil mentality. "You want to drill, you got to lease; that's your problem, you get it there, no one is going to live there." We are talking about a different beast. Even in 1968, when we moved, the population of Fort McMurray boomed to 6,600.

AD: And how many were living in camps?

PAGE: 1,500 and that Thayer, that J. Howard depended on, not only for the engineering but for all the brain work said he was going to run the plant for half that. The economics and all the planning and everything, and that's why we didn't have a very jolly tour group. As a resident, in 1968, and of course, Fort McMurray was in no shape to deal with that, absolutely not. There was no dentist; in fact, the only dentist, either the Sun Oil Company or whatever account Sun Oil or GCOS used, they provided a dentist the equipment for a dentist to move in there. He said "Thank you," set up shop and left. We had no dentist for 6,200 people. Nobody would go up there. The second dentist that went up there was a rehabilitated alcoholic, well, not totally rehabilitated; he was on the way to being rehabilitated. My daughter worked for him as a dental hygienist. One doctor, a Canadian doctor, meant well but I wouldn't want him to work on me. He worked with an Oriental doctor, who was much more interested in the cafe that he owned and the nurses and the waitresses that worked there, than he was in administering medicine.

PAGE: It really was a boom town, but, I mean, Canada had mining boom towns and had dealt with these issues but they weren't transferred to the whole oil sand operations.

PAGE: Other Canadian provinces and the Territories had, Alberta hadn't. Alberta is a conventional oil industry province - orients to that, and more than that, even their regulations, to the whole industry. In other provinces – Ontario – sure, you could, mining sure, we had mining in our little town. That's why Kenora got on the map, because of mines.

AD: You've been reflecting on this stuff for a very long time. You have mentioned Premier Manning and, of course, he held the Mining portfolio for many, many years including the first part of his tenure as Premier.

PAGE: But that is because, I suspect, mining to him was the industry name for minerals and, oil, in their legislation, is a mineral. The only other aspect that I can put on the significance of terminology is the gravel; you mine gravel too to make roads. But Hubert Somerville was the guy. To me that is the difference. Alberta is an interesting province, and quite a different province.

AD: Now, you ended up, I think, your career consulting to Alberta Energy, but this was on hydrogen research. Do you want to talk a bit on that?

PAGE: Okay. How did that come about? I had tapered off to work on a half time [basis], just for the consulting engineers. I had resigned from the Chamber of Mines and I said I was only going to work half time. So, at that point, the consulting engineers said "Okay, well, we want that half time." I said, okay, and I was doing that and I had hit 65. The fellow the Alberta Government had appointed to establish a research program for hydrogen, was interested and, I think through Currie, asked me if I would consider it and I said "Alright, I will." I was interested in it anyway.

It was about that time that hydrogen was being touted as the perfect fuel. If you put hydrogen in your car and what comes out is water, technically. It's no coincidence that the Province of Alberta produces and consumes more hydrogen than the rest of the provinces put together. Most of it, much of it comes from the oil sands industry, because of the final stage in the process is re-forming natural gas to make hydrogen with which to upgrade the bitumen. So, somebody, and Yuergen Kleta may well of been the guy, he is extremely clever. As a matter of fact, he immigrated and worked for years in the Research Organization in Switzerland, and he could see all this; much more than many of them over there.

Anyway, he approached me to see whether I would actually train and help a guy set up this program for hydrogen research. It was an interest to me, so I agreed to do it. There is no question about it that Alberta has the hydrogen and has got the technology. Again, we ran into an environmental purist problem. In order to get the hydrogen, we re-formed natural gas and that produces C02. So, we were fighting that one. Meanwhile, Ontario which was also seeking and getting federal funds to research hydrogen said: "Well you guys make dirty hydrogen. We make clean hydrogen."

"Oh do you? Well how do you make it?"

"We electrolyze it; we take water, put in electrical current, and that splits the water into hydrogen and oxygen. You throw away the oxygen; you got the hydrogen. Clean. Absolutely clean!"

"Where do you get the power to do that?"

"You got to burn the coal"

"Wait a minute; you are worse off than we are."

Those are the kind of debates we used to have, as to how to go. The concept of hydrogen as a clean fuel is technically sound, in fact, the Germans have invented an internal combustion engine that will operate on pure hydrogen. The difficulty, one of the problems that you run into, is that people say, the "Hindenburg." [German airship destroyed by fire with all passengers on board on May 6, 1937.]

Well, Hindenburg, if you look at the technical facts that was an electrical short and it's not as dangerous as most people perceive. As a transportation fuel, which is the goal of many people, you have a problem with onboard storage. Because it's such a small molecule and requires so much pressure and refrigeration to store that it beats you. You have heavy equipment. There are other

means of putting hydrogen into a gel form. The Japanese have done research with porous substances, mostly minerals, with which you can absorb hydrogen into.

The most promising of which is to design an onboard natural gas re-former so that you have natural gas and re-form it onboard. That is a possibility and, of course, the most advanced is the fuel cell concept, which has made considerable progress, especially with the firm in Vancouver.

In any event, it was a little difficult to get industries, especially the petrochemical industry. The petroleum industry really wasn't interested. They were making gasoline and who needs it. The chemical industry certainly had probably even more advanced technology but couldn't see it as being in their corporate interest. It didn't go too far other than just knowing what could be done.

AD: Now did that happen through the AOSTRA [Alberta Oil Sands Technology and Research Authority]?

PAGE: I'm sorry, did it?

AD: Did that project come under the umbrella of the AOSTRA or not?

PAGE: Not at the time. It was done through … the Alberta Department of Energy, and, specifically, Yuergen Kleta, who has retired since. It was also kind of upstaged by a recent interest in wind power, which was getting more attention and being developed more in other provinces. It has since been developed and there was an application somewhere in Alberta which got government approval.

AD: But, they were exploring alternative sources of energy.

PAGE: Yes. I wasn't part of that but I perceived that that would have taken the interest off the hydrogen research.

AD: Is there anything else, reflecting on your involvement in the oil sands and subsequently the consulting work and the Chamber of Resources, is there anything else, summative remarks?

PAGE: Apart from the oil sands, to me, one of the even more interesting consulting jobs was consulting to the late Bob Blair. When he recognized the potential for the petrochemical industry in Alberta, and particularly because his company, the Alberta Gas Pipeline, were producers or transporters of most of the natural gas being exported from Alberta, and the possibility of extracting ethane from natural gas. Ethane being by far the most economical feed stock for many petrochemicals and it was in the very early stages of planning what became Nova Chemicals.

AD: So, when did you do that consulting work with Blair?

PAGE: I have forgotten my timing. It was long after everything else, after the hydrogen research thing. I'm sorry I forgot the time frame. It was in the early stages of that and it was natural, and that

progressed into a contract between Bob Blair's company and Dow Chemical to export ethane. Some of that ethane got exported to the Scarborough area and, of course, some of it was developed here.

That's how Nova Chemical got into the polyethylene business, which they are pretty big. What to me is an interesting postscript to that is that this whole shale gas development has changed that whole picture in which the United States has cut back on their imports of Alberta natural gas, which not only affects Alberta economics but also affects its petrochemical industry because there is less natural gas going out; there is less ethane that can be extracted from it, which would use feedstock which would otherwise go to the petrochemical industry. That was an interesting caper.

AD: Excellent, so any other concluding remarks? Otherwise, I'll thank you for your interest in the project and agreeing to be interviewed.

PAGE: Well, I was going to say I regret my memory is not as good as it was, or what I thought it used to be. But that's why I'm here, amongst old folks and other 90 year olds

AD: You've done very well and I thank you.

[INTERVIEW ENDS]