

# Randy Ottenbreit

**Date and place of birth (if available):** Southeastern Saskatchewan.

**Date and place of interview:** August 28th, 2012 at Imperial Oil Calgary Office, located at 237-4th Avenue SW

**Name of interviewer:** Brian Brennan

**Name of videographer:** Peter Tombrowski

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

**Consent form signed:** Yes

**Interview Duration:** 1 hour, 17 minutes

Initials of Interviewer: BB

Last name of subject: OTTENBREIT

BB: My name is Brian Brennan. Today on Tuesday, August the 28th of 2012, I am speaking with Mr. Randy Ottenbreit for the Petroleum History Society Oil Sands Oral History Project. And, we are conducting this interview at the Imperial Oil office in Calgary which is located at 237-4th Avenue SW. Also with me today is Peter Tombrowski who is recording this interview on video. Mr. Ottenbreit is a former, long-time employee of Imperial Oil who held several positions with the company over the years. So, thanks for being here to do this Randy.

OTTENBREIT: You're welcome.

BB: Maybe, I could begin by asking you to give us a short three to five minute biography of yourself. Where you were born, where you grew up, where you went to school, that kind of thing.

OTTENBREIT: I was born and raised in southeastern Saskatchewan. I graduated from chemical engineering at the University of Saskatchewan in Saskatoon in 1973. After graduating, I was hired on with Imperial and worked initially with Imperial in Calgary from 1973 to about 1975. And at that point in time, I was transferred to Devon just west of Edmonton, where I was a gas plant engineer. About a year and a half after I was transferred there, I went back to school for a couple of years. I went to the University of Western Ontario for a master's in business administration. In 1978, I returned to Imperial, to Calgary, and worked in reservoir engineering for a couple of years. At that point in time, I was transferred to Toronto. Worked in what was the equivalent or precursor to the corporate planning department and was there only for a year. Came back to Calgary and worked in what's called business services as a supervisor in business services and reservoir engineering. In

1985, I was transferred to Ottawa where I worked for two years as Imperial Oil's government affairs manager, reporting to a government affairs vice-president. So, for two years I was in Ottawa gaining experience with respect to federal government and how it works. We had a number of matters that we were dealing with, with the federal government at that time. So, I got involved in those, both in terms of the upstream part of the company as well as the downstream, and the refining and marketing part as well.

In 1987, at the end of my assignment in Ottawa, we moved to Norman Wells. I was referred as the area manager; that's the person who would kind of head up the operation at Norman Wells. Which had started production as a result of an expansion that took place in the early 1980s. So it was an expanded operation in Norman Wells, and we were there from 1987 to 1988. We had expected, actually, to be there longer. But a fellow passed away, and there was a series of moves, and we got caught up in that. So, from Norman Wells we moved to Cold Lake. And, that was my first involvement in oil sands operations, and I was the operations manager. At Cold Lake we had about 400-plus employees working. We were just in the throes of completing an expansion, one of a series of phased developments at Cold Lake. So, I was there from 1988 to 1990. In 1990, I was transferred to Calgary. In Calgary I worked as the environment safety and industrial hygiene manager, kind of a precursor to environmental health and safety type of position. I did that for about five or six years; I'm not sure about the right date.

Then I was assigned to head up the company's application for a further expansion at Cold Lake. What was unique about this particular expansion is that it was the first time we updated the environmental impact assessment that had been done for a Cold Lake mega-project back in the 1970s. All of the development up to that point in time, in the mid-1990s, was done on the basis of the work that had been done in the 1970s for the Cold Lake mega-project. But, this was an expansion that was outside the geographic area of that application and assessment, so we had to update the assessment and extend it from what had been done earlier. So, I was involved in that, and the result of that was that we did get approval for a further expansion, for a development that is known as Mahkeses. Following the receipt of that application, I did some work on Syncrude as a representative of Imperial Oil on some owner's committees, and that was until about 2000.

Then in 2000, and for the next ten years, I was involved with Imperial on the Mackenzie Gas Project. I was referred to as the development executive for Imperial Oil on that project. Imperial was the lead company, the operator on behalf of Harco Ventures. We developed and submitted an application for the development of three gas fields in the Mackenzie Delta area. We submitted that and went through extensive reviews and two years of regulatory hearings. Following that it took two years further for the reports to be issued. The result of that was that we did get approval from the National Energy Board for the Mackenzie Gas Project. But it has not been developed at this point in time. We're assessing the conditions for that development.

BB: So, your first direct involvement with the oil sands was when you went to Cold Lake. Do you recall when you first heard about the oil sands, and what you knew about the oil sands at that point?

OTTENBREIT: I certainly heard a lot earlier. Part of it was that the company's original application for what we refer to as Cold Lake mega-project was unique and ahead of its time, so to speak, because it was one of the first projects that did an extensive impact assessment. The scale and the breadth of that application was quite unique. The hearings that I went through ... I remember Bob Peterson, who was subsequently Imperial's chief executive officer and president, and led the

company's participation in that. So, you couldn't help but know about the oil sands and Imperial. Imperial has had a long-standing involvement in the oil sands, and in particular in the Cold Lake area. So, I would've picked up a lot of conversation about Cold Lake prior to my moving there. So, I was very enthused, quite frankly.

BB: When you became operations manager then at Cold Lake in 1988, the cyclic steam stimulation had been used there for about 20 years or so, and SAGD had come in more recently than that. Tell me about each of those two in-situ technologies. How successful were they in terms of producing the resource economically?

OTTENBREIT: Sure. Cold Lake was developed on the basis of cyclic steam stimulation, CSS. To go back a little bit, the SAGD technology was developed by Imperial as well. In fact, Imperial holds the patent for SAGD technology. But, the thing that caused us to go with CSS as opposed to SAGD was the nature of the reservoir. The Cold Lake reservoir conditions are such that it does not lend itself toward SAGD development. So, CSS was a more appropriate application of technology to develop Cold Lake. In other situations, other types of reservoir conditions, SAGD is better than CSS. Had that been the case, we would have used it at Cold Lake. But, like I said, the stratification of some of the kind of shale layers at Cold Lake prohibited us from using SAGD technology, which requires a pretty uniform, vertically uniform reservoir to be applied.

BB: Oh, I see, because the Imperial Oil website says that, in fact, SAGD has been in operation in Cold Lake.

OTTENBREIT: Yeah, in a smaller scale. But, the main development is CSS.

BB: I see. Was that seen as the economic way to go by the time that you got to Cold Lake: the CSS?

OTTENBREIT: The CSS. Clearly, because by the time I moved there in 1990, we were up to phase ten of Cold Lake phased production. So, we had gone through ten phases, and all of those were developed on the basis of CSS technology as opposed to SAGD. We were clearly experimenting and trying SAGD, but CSS technology was the appropriate way. So, I would say the decision was driven by the type of reservoir that we were dealing with, more than anything else.

BB: Maybe you can just expand a bit in terms of the general operations of Imperial at Cold Lake when you were there. What was happening, for example, in terms of Imperial's involvement with the local community and, in particular, with the aboriginal community.

OTTENBREIT: So, this would be more externally focused?

BB: Yes, with the people who lived there.

OTTENBREIT: So, at the time that the Cold Lake mega-project was applied for, one of the things that the Energy Resources Conservation Board saw was the need for an ongoing dialogue between the companies and the community. So, they were certainly supportive and encouraging of companies to establish such a dialogue. By the time I moved there, there had been long-standing community organization called Community Advisory Committee or CAC. So, what happened was, on a monthly basis, the CAC committee would hold an open meeting. So, it would be in a conference room in a local hotel, and anybody could attend the meeting. So, what happened was the representatives of the community, headed by a fellow named Don Appleby, would meet with

representatives of the companies as well as with the local representatives of the Energy and Resources Conservation Board.

So, we would have monthly meetings, and at those meetings we would provide an update, like a verbal update, sometimes a PowerPoint presentation as to what was going on in the operation, and what we saw happening in the next little while. That gave Don and other people from the community the opportunity to ask us questions. So, that happened on a monthly basis, and it was also an opportunity for the community to bring forward issues that they had heard from other people over the course of the prior month. By the time I was there, I would say that Imperial was a regular attendee. I would be there with two or three other people they would come with me for that meeting. Garth Leask was our community representative. We had a small office in the community of Grand Centre. So, Garth knew Don Appleby, and knew how this process worked, so he was very helpful, from my perspective, in terms of orienting me what the CAC meetings were about. So, we were regular attendees. There were some other companies that would attend, but I would say their attendance at CAC dropped off over time.

By the time I got there, it was not as many people as had attended in the past. Subsequent to my leaving Cold Lake, it got to the point where there was some friction almost between some of the CAC members and some of the companies. So, the Energy and Utilities Board, at that time, made an attempt to try to address some of the issues the CAC had. So, I recall being invited back on a weekend to Cold Lake to attend a session where representatives from various companies, representatives from the CAC including Don Appleby, representatives from the Energy and Utilities Board, some of the board members. We got together for a workshop one weekend with the intention of trying to address it. Now subsequent to that, I think CAC got reinvigorated for a period of time. But, it has subsequently been replaced by a different organization of community representatives and the companies. So, it looks somewhat different, meets some of the same objectives and purposes. But, it is different than what CAC was at the time that I was there.

So that was part of the external involvement. In addition to that, we would have regular meetings with representatives of the communities, the towns, Cold Lake, Grand Centre, Bonnyville. We'd meet with the MLA in the local area. And we would make a habit of going to visit the various settlements and bands, aboriginal bands and Metis settlements in the area as well. So, that was all part of what I was responsible for because we had been in Cold Lake for a long time and hope to be there still for a long time. It was important that we maintain a dialogue with the communities. So, there were different forums for that.

BB: What were some of the things that would come up in discussions when you met every month?

OTTENBREIT: Some of the items, types of items that would show up, would be things like employment statistics in terms of the number of people working, the number of people from the local area. That would be something of interest to the community. Other matters would have been concerns around water usage. When we first started operations in Cold Lake, to make the steam that you require for cyclic steam stimulation, we used fresh water initially. Then we developed a technology so we were able to recycle more and more of that water, so we required less and less fresh water.

Then we also developed a technology that allowed us to use non-potable water. There was some brackish water that we also used. So, the usage of fresh water by Imperial and other companies was

of particular interest to the people in Cold Lake, because the lake level in Cold Lake, the water level in Cold Lake, fluctuates naturally and people were always concerned that we were the cause of some of those fluctuations. So, that would have been an on-going topic. Later, when we submitted our application for the Mahkeses development...

BB: That's an aboriginal word, I presume.

OTTENBREIT: Yeah, it is an aboriginal word. All of the developments at Cold Lake, with the exception of the first two, use aboriginal wording. So, we have the Maskwa development which is the aboriginal word for bear, and the Mahkeses development. The Mahihkan development, which is the wolf, I think, and Mahkeses development, which is fox. So, those are all aboriginal words that we utilize to refer to the plants themselves. But, when we put forward an application for Mahkeses, almost coincident with that, some water samples revealed that there was some arsenic in the groundwater. So, some of the local people were concerned that these industry operations were causing the presence of arsenic in the groundwater. It's not surprising that they were concerned about the presence of arsenic. I think we were too. But, we did end up doing some historical research and discovered that we did in fact have some samples of groundwater quality prior to the Cold Lake mega-project application in the 1970s. And it confirmed that the arsenic had pre-dated any operation in the oil sands area of Cold Lake.

So, those are all examples of types of issues that people would have been concerned with. Air quality would have been another thing, to the extent that Imperial tended to conserve the natural gas that was produced. Some of the smaller operations were of such a small scale that it was cost prohibitive to do that, so there was some venting of produced gas. So people would've been concerned around odours or that type of thing. So, that would have been another type of issue that would have come up in the discussions with the community.

BB: So, you touched on the fact that some friction then developed over time in between the community and the companies?

OTTENBREIT: I wouldn't characterize it as a broadly based friction. There were some personality issues that Don Appleby would have had with some of the company representatives. I would say, it was less of a concern with Imperial than some of the other companies. Some of the other companies stopped going to those meetings. Partly because, the way that Don conducted a meeting was fairly aggressive and confrontational, so you felt as if you were being interrogated. Some people took issue with that. I think that was probably some of it, and not all of the community reacted the same way. But, to Don's credit, he also recognized or felt as if he had a responsibility to the community. Because what had happened was that attendance as I mentioned, had dropped off. So, he felt a weight on his shoulders to represent all these issues. It was his mannerism and his style to be more assertive, aggressive is probably the better term. So, those kinds of things got in the way of a better dialogue than would have happened in the past.

BB: But, nothing so serious that you stopped communicating?

OTTENBREIT: Oh, no; not at all. We attended every meeting of CAC. Imperial never did stop going. So, we were always at those meetings, and I think we also viewed them as productive. Yes, there was some question as to what's the best way to conduct a meeting like that. But, there is no question that it was important to maintain that dialogue. And important to ensure that you just

didn't rely on CAC, that there were other ways to communicate. Because, communicating with the town council, as an example. Those people had the opportunity to come to CAC meetings. But they chose not to because they weren't necessarily fond of some of the aggressiveness of some of the questions.

I think the other thing that happened after I left is they started filming CAC meetings. They showed them on the local TV channel. This is not Oscar-winning material. I shouldn't talk too much about it because I wasn't there when that happened. But, why somebody would want to sit down and watch that is beyond me.

BB: This would be on local cable TV?

OTTENBREIT: Yeah, it's a cable TV channel. I guess they were hard up for material.

BB: So, monthly meetings; that seems like a lot of meetings. Was there always something to talk about?

OTTENBREIT: Well, sometimes there wasn't. And you might take a break during the summer months, as an example. But, I think it was important to maintain that dialogue. We would, like I say, attend those. I'm trying to recall whether at some point in time they would have gone to every two months. But, my recollection was that they were monthly meetings and they continue.

BB: So, tell me about the measures that were put in place, that Imperial put in place, in terms of environmental protection, wildlife, habitat protection, that sort of thing?

OTTENBREIT: Sure. I won't go through an exhaustive list. But some of the key ones would have been, probably first and foremost, technology that we advanced such that we could reduce the amount of fresh water; that we could recycle that water and reduce the amount of fresh water we would take. That was a landmark technology that others have used as well. To get from the point where we would take fresh water and use it once, and you'd have to continue with fresh water as the only source of water. But, when we got to the point of recycling it – I'm not sure what the date is right now – I think 95% of the water gets recycled, so it kind of goes around in circles and that reduces the amount of new fresh water we would require. So, that was a key technology I think.

Another one was that we always conserved the natural gas we produced. So, when we produced a natural gas it would be compressed. We would use it for fuel rather than venting it. So, I think that was something that was looked on favourably by the community because it helps us reduce our operating costs. We wouldn't have to purchase as much natural gas because we're using produced gas. But, it also meant that you didn't have any odour issues or that type of thing. So, I think that would have been another technology advancement.

Another one that was important at Cold Lake was the horizontal well and long reach that deviated drilling, because that allowed us to minimize the amount of surface area that was used. So, rather than having a lease for each well, which was what happened at the early May plant, as an example: that was one of the first plants we developed. So, rather than having a surface lease for each well, you might have one lease for 20 wells and now it's a bigger number. So, it minimized the surface area required.

BB: The footprint, as they say.

OTTENBREIT: The footprint yes, right. So that would have been another technology, and that type of technology was utilized a lot at Cold Lake. But it was also used in other places, in other types of oil field development. Some other ones that I recall would have been when we develop a lease and you take off the overburden, and we would conserve that overburden, and so it would be stored just at the edge of the lease. When you get to the point where you abandon the lease you can use that and put it back, and use that same overburden to restore the lease. There are other things like opportunities for animals to ... All of the pipe, the steam lines and the production lines are above ground because with the CSS operation. The pipes heat up and then they cool off, so they expand and contract, and you need an opportunity for that expansion and contraction. You could only do that if it was above ground. But, we also wanted to make sure it was high enough so the animals couldn't go under. Those are smaller items, but all of those things were the subject of commitments that the company made during various regulatory procedures.

BB: Maybe you could tell me a little bit about the safety measures that were in place both for the people who worked at the plants and then for the people who lived near the plants. What kinds of safety concerns or issues would you be dealing with there?

OTTENBREIT: I think as is the case with most oil field operations you're dealing with substances that are flammable. So, you have to make sure you design the facilities properly so that you don't have releases of flammable substances.

You're dealing with moving equipment, so you need to make sure that the equipment that we use has got integrity. There is sour gas produced, so you need to make sure that you don't get to the point where somebody is exposed to H<sub>2</sub>S. But, I think it's almost always such an integral part of what we do, and it's just hard to pick out specific items.

We have within Imperial, something that we refer to as operations integrity management system. There is an expectation that when you do work you will do a risk assessment on it. Safety is uppermost, not the only issue that you address, but safety is uppermost. So, on an ongoing basis whenever we did something from a small piece of work on a well-site we would end up doing a risk assessment. Some of it can be quite rigorous and some of it can be informal. But before you start a task, you would have a tailgate meeting to ensure that people understood what they needed to do and the steps you're going to go through. But, there is just a variety of measures.

BB: So, it's built into the philosophy of the company.

OTTENBREIT: It's so ingrained it's almost kind of hard to pull it out separately. I think from the community's perspective, we wanted to make sure that there weren't releases of flammable substances or H<sub>2</sub>S. So, that's something we were very mindful of. We had air quality monitoring, a series of trailers, where we'd monitor air quality. After I left, there was a fairly extensive groundwater monitoring system that was put in place as well, partly as a result of the Mahkeses development which dealt with that concern over arsenic presence in the groundwater.

The other thing that was interesting as a bit of a tangent, was that there were reports from some of the townspeople, on occasion, around what they referred to as earthquakes or rattling of houses. I recall one instance where somebody phoned me up and said, "I've had somebody report that they've got some cracks in their ceiling. And, I wanted to let you know there's this concern and has something happened in your operation that would give rise to that?" As it so happened, we were

injecting high pressure steam and the ground actually heaves and subsides, so that was a concern which was a good issue to raise.

So, we did follow up and we weren't able to find anything that went on in our operation that would give rise to that kind of report. But, at the same time we thought, "Well, let's phone the Cold Lake Air Weapons, the Air Force." So, we phoned them and I can't remember if it was the base commander or whoever I was talking to said, "Well, as a matter of fact there was somebody who went over the sound barrier at about this time," and they were able to correlate it exactly.

BB: Blame the military.

OTTENBREIT: Yeah, well they had already addressed the issue with the pilot because you're not supposed to do that. They can do it once they're over the Air Weapons Range, but to get to the Air Weapons Range you leave the community of Medley right beside Grand Centre and fly there. So, you're not supposed to be doing any aerial maneuvers over the town. But, that was interesting. That was neat in a sense that when something happened, that they phoned us. I thought, well, that points towards the fact that we do have a dialogue and they feel comfortable giving us a call to find out what happened.

BB: You mentioned about conversations then, with the First Nations people from time to time. What would some of those conversations be around?

OTTENBREIT: Most of them would have been socioeconomic types of things. Let me go back a little bit into time. In Norman Wells, when we expanded the operation we were very conscious about trying to give opportunities for local businesses. In that area, a lot of those local businesses are aboriginal business, to participate in the expansion. So, we had things like dry cleaning services and security housing that were all local aboriginal business opportunities. So, that was during the expansion.

My recollection was that there was a high degree of involvement of local and aboriginal businesses in the expansion at Normal Wells. After the expansion, we were looking at what other kinds of opportunities are ongoing that might provide employment to local and aboriginal businesses. So, we created a drilling and services company called Shehtah Drilling. It was a drilling joint venture between Imperial and a Dene development company. I'm not sure if it was Dene drilling company, but it was the Dene Nation. So, it was 50/50 and most of the people working on the rigs were aboriginal people from the north. The fellow who headed it up was an Imperial secondee, because he was a drilling manager and had the experience. So, we had that experience in Norman Wells and levering off that in Cold Lake, we put in place a well servicing company called Pimee.

Pimee was owned by aboriginal groups, bands and Metis settlements in that area with the exception of Cold Lake First Nations. Cold Lake First Nations, if I recall, chose not to participate in the ownership of Pimee. We did have a similar setup where it was a joint venture between Imperial Oil and the aboriginal bands and settlements. We seconded somebody to head it up. Later on, both Pimee and Shehtah were managed by aboriginal people who had gained experience and ran those operations. They also subsequently bought out Imperial's share. So, they are wholly aboriginal businesses.

So, that's an example of something that the aboriginal bands would have been concerned about: opportunities for employment, both with Imperial and also with contractors like Pimee. So, a lot of our discussions with the aboriginal bands when we go from one band office to the other would have revolved around what were our statistics with respect to aboriginal employment as Imperial employees. What kind of contractors were we using that they provided, that they had put in place, businesses they had put in place? So, a lot of the discussions were on what I refer to as, those socioeconomic things: employment and business opportunity related.

After I left, there were some other measures put in place to enhance that: in particular, more with Cold Lake First Nations. It turns out, that Cold Lake First Nations is Dene and the other bands for the most part are Cree, or Metis settlements. So, that's why Cold Lake First Nations distanced themselves somewhat from the other bands in the area, because they were associated more with their neighbours, with other Dene groups to the north than they were the Cree to the south and the east.

BB: It's interesting the discussions in many instances would be around job opportunities, because the impression one gets sometimes from the news is that when the First Nations are involved, all they want to talk about is what's happening to the fish?

OTTENBREIT: Well, I wouldn't say we didn't talk environmental issues, we did. But, I would say that the majority of time was spent on socioeconomic matters and for that matter that would have been the case ... Well, that's also what I saw when I was working on the Mackenzie Gas Project. It was a real mix or balance between socioeconomics and concerns about the environment.

BB: In terms of the employment opportunities, then, did Imperial have training programs in place for people who might want jobs?

OTTENBREIT: Yes, we did. After I left both of those, the programs got expanded somewhat. So, in Norman Wells we called it a Northern Development Program, NDP was the shortened version. Where we would bring aboriginal employees from the surrounding communities, in the Sahtu district, that's the district around the Norman Wells, and they would work for a period of time up to two years. At that point in time, we would make a decision whether we wish to extend permanent employment to them. So, that was a way for them to get oriented to it because they don't have the experience with oil and gas operations. You don't have that same opportunity that you would if you lived in Alberta. So, we provided that opportunity through this Northern Development Program for young aboriginal employees to get familiar with the operation. Then we could get to a point where we would extend the job offer to them.

So, that was in Norman Wells. In Cold Lake there was a fair bit of work done specifically with Cold Lake First Nations where we sometimes characterized in our discussion, it was between the operations manager and the chief of the Cold Lake First Nations, saying that their shared objective would be to get as many aboriginal employees from Cold Lake First Nations working on our worksite as we possibly could. So, that would have been an objective that both the chief and the operations manager would share. I think we made some inroads on that. I mean, it comes with its challenges and that's always the case. But, I think we made some progress over there.

BB: So, was part of the thinking to try and get as many people from the local area working in the plants rather than bringing them in from outside?

OTTENBREIT: I would say from a philosophical perspective, if you're looking at hiring for an operation in a particular area, you look locally first. If you can't source enough, you go further and further and further. Economics drive you that way too: why go far afield looking for people if you've got them available nearby? The other thing is, people from a more distant location may not want to transfer or to stay there for a long time. Whereas, if you have somebody from the local area there, they're more inclined to stay with your operation for their career.

BB: When you came back to Calgary in 1990, to become the manager of safety, health and environment for Imperial, did you still have an involvement with the oil sands operation?

OTTENBREIT: Yes, I did in the sense that there were some people located in Cold Lake who from, I'm going to call it a functional standpoint, who would be reporting through me in Calgary. Because, we had safety advisors in Cold Lake, and we did in other operations, so we would have a safety network where maybe two or three times a year safety representatives from all of our operations would get together. You'd roll out programs. You'd get feedback as to how things were going in various operations. So, we had that kind of a network on the safety side. Same thing on the environmental side, there were environmental advisors living in Cold Lake and we would maintain an ongoing dialogue with them, and they would functionally report through my position. On the industrial hygiene side, we had industrial hygienists located in Calgary who would go to the field operations and do inspections and issue industrial hygiene reports. That would involve things like, exposure tracking, that type of thing.

Exposure tracking was an interesting part, I felt personally, of the industrial hygiene program in that employees of Imperial during their entire career, the company tracks what their cumulative exposure to various substances might be. You do that by looking at a particular operation. Let's say it's a plant, a gas plant. The industrial hygienist would go out and determine what's the concentration of various substances in the air, as an example. Exposure to noise would be another thing that we would track. During the course of somebody's career, they might work at that gas plant for a while. They might go and move over here to a different one. So, you can track their exposure over the course of their career. Then you see if there is any correlation between that cumulative exposure and things like mortality. What do people die of; what illnesses might people have? So, that was a way to utilize some science in terms of doing exposure tracking.

It is ultimately our employees who would have been most exposed, as opposed to the public, because the public aren't right where the operation is. But, that was kind of an interesting part, from my perspective. When the industrial hygienists who worked in the group that I was a manager for, was becoming more familiar with this program, and frankly, I feel good about it.

BB: So, once you had some information on that, could, theoretically, you find yourself in a situation where you say to an employee, "You've been exposed to this type of, whatever it might be, that ultimately could either affect your hearing or affect your health in other ways." Then maybe suggest to them that it's time for a transfer?

OTTENBREIT: Theoretically, you could. Practically, I don't recall any instances of that. Let me give you an example: noise and hearing would have been a case in point. So, if we saw that the noise in a particular operation was above a certain level that could result in some sort of cumulative deterioration of somebody's ability to hear, we would, first of all, put in place measures like making it mandatory to wear hearing protection. The other thing would be that we might change the design

of some of the equipment that gave rise to the noise. But, I don't recall it ever getting to the point where we actually had to relocate somebody for that reason. I'm not saying it didn't happen, but I don't have any experience with that.

BB: Better ear muffs.

OTTENBREIT: Better ear muffs and just make sure that they are following certain techniques to prevent hearing loss.

BB: When you went back to Cold Lake then, in 1995, as regulatory affairs manager for the expansion. Maybe you can tell me which expansion this was. What was the name of that?

OTTENBREIT: It was called Mahkeses.

BB: Now, you'd been away for a few years. What kinds of changes did you notice from the time you'd been there previously?

OTTENBREIT: I'm trying to think. One thing I recall is that by that time, there was a more established routine ongoing dialogue with Cold Lake First Nations, so I saw the evidence of that. They had put in place this program where we would bring people from Cold Lake First Nations into Cold Lake. Give them some training and then look at hiring them. That was built off the Norman Wells experience that I referred to earlier. So, I observed that. That was clearly more ingrained. The community dialogue, the one with CAC, I'd say ... I'm trying to recall when the successor organization got put in place because we ended up talking a lot to the various people and groups during the course of the development of the regulatory application. So, probably an example would be, there was a group of people who lived around Marie Lake and these were gentleman who lived in Edmonton, actually.

So, we would meet fairly regularly with them and making them aware of what the development of the Mahkeses would be. So, on the south end of Marie Lake there were some cottages and stuff and a fellow named Don Savard, who headed up this group, the Marie Lake Landowners Association. So, we'd meet with Don and members of his group, talking about what our plans for Mahkeses were. When the concern over arsenic present in the groundwater broke, we had meetings with Don, we had meetings with ... there's a group headed up by a lady named Sally Ulfsten, who we would meet with. We would meet with individual landowners. We had a lot of discussions. But, because as you developed a regulatory application, one of the expectations is that you inform the community as to what it is you're going to do. You listen to what their concerns are, and then you address them. That doesn't mean that you're able to resolve every issue, but as a tracking mechanism, typically, you would keep track of the concerns raised by community residents and then to the extent on hearing that concern, addressed it by taking some measure that you'd track the concerns that you had addressed. That was the same thing with the Mackenzie Gas Project. That was a bigger scale communication.

BB: How long does that process take place? From the time you decide to expand the project to the time it is approved?

OTTENBREIT: I'm not sure if I can recall the specific times for the Mahkeses. First of all, when we make the decision that we want to proceed with the expansion, then there's a lot of baseline data that we would have gathered. So, this would have been baseline environmental information. So, we

would have been gathering that field data. At the same time, we would have initiated environmental assessments being done, usually through consultant groups. So, we hire contractors to do those assessments because that's their expertise. All of that work is required to put together an application. So, it might take a year or two to get to the point where you're ready to file an application. You'd file that application with the regulator. In Alberta, it would have been the Energy and Utilities Board, and upon receiving that information, you are then obligated to make it available for other people who may want to review that application.

After reviewing it, both the regulator as well as the public have an opportunity to ask us questions. They go through a pro forma process where they would file the information requests. So, we'd receive a bunch of information requests in writing, and then we'd have written responses, send that back out again. So, you might go through a couple of rounds, or more, of information requests that seek to understand what it is you have applied for, as well as to raise issues or concerns. So, after you've got to the point where you've had those exchanges through the information request process, then the regulators say, "Okay, now we're ready to go to hearings." And then, they call hearing. Scheduling that might take some time. Now, in the Mahkeses hearings, I think it was three weeks or something; three or four weeks of hearings. They weren't necessarily continuous; they were actually I think over year end. I think we had some in November and December and then we finished in January, if I recall.

Then we waited for the Energy Utilities Board decision. It could have been anywhere, a year plus or minus, something like that. So, in total it would have been maybe one to two years to develop the application. You file the application. You might have a year or so of information requests. Or it could be two or three. So, you might get four to five years from start to finish.

In the case of Mackenzie Gas Project, it was a much more protracted and extensive process we went through. We made the decision to do move forward in 2002. Then, we got the approval in 2010.

BB: When the board then finally makes its decision, is it just a yay or nay type decision? Or could the board say, "It'll be a yay when you do this and this"?

OTTENBREIT: It tends to be a yay or nay. Well, if it's nay, then that's pretty short. If it is a yay, it could be subject to a number of conditions. So, one of the first conditions always is, if you get an approval, you get an approval subject to you doing the things you said you were going to do. That's actually a very serious and rigorous process, because somebody at a very senior level in the company, ultimately has to sign off and say, "Yes, all those promises and commitments that we said we'd do, have been done." So, that's one of the first things. Then to the extent that other conditions are imposed on you by the regulator, you also have to fulfill those conditions as well. So, it's never ... I can't recall any time where they said, "Yay. That's it." There's always something, some conditions attached to it.

BB: Now, you mentioned earlier that the first assessments were done back in the 1970s, and something had to change when you were making the application for the expansion. What were some of the differences that you recall between what was required in the 1970s as opposed to what was required in the 1990s?

OTTENBREIT: I'd say the expectation for the issues you need to address was much more extensive than was the case earlier. That's not to diminish the thoroughness of the work that was

done in the 1970s because it was a real landmark in terms of environmental impact assessment. I think one of the things would have been that there was more of an emphasis on socioeconomics. I think that's what we've seen generally over time. And, not unique to Cold Lake, is that socioeconomic issues have gained prominence in those reviews. On the environmental side, one thing that was clearly different was that we had a bunch more information available to us than we did back at that initial study in the 1970s. So, we had our experience from the 70s, the 80s and the 90s. So, the baseline information was much more extensive. So, you also at that time maybe asked questions about anything during that earlier period of time.

So, you had to spend a lot more time understanding kind of the history of the operation, and be prepared to answer a variety of questions. So, again, there would have been a lot more information. We had a lot more experience. So, people might ask us something about what had happened in some operational incident or whatever, and you could get asked a question about that. So, you got to the point where you had to know a little bit about a lot of things, because you don't know where the questions are going to come from. So, that was different than the 1970s. In the 1970s, when we were looking at a mega-project application, it was a much larger scale than what we were applying for with the Mahkeses development. But we had a lot more history to incorporate into the Mahkeses application and the regulatory hearings than was the case earlier.

BB: Were you there to see the Mahkeses development when it was up and running?

OTTENBREIT: No, I wasn't there when it was up and running. I have gone back a couple times for some celebratory occasions. We had a gathering for a lot of annuitants of Cold Lake associated with the one billionth barrel that was produced at Cold Lake. So, that was an example. So, when we got to 25 years of commercial operations, we had another gathering. So, I've gone back a couple times, when I was invited. It's nice to be remembered. But, yeah, Mahkeses is up and running and in fact, the next development is in the process of being constructed. The next development is actually in a different part of the reservoir. All of the developments up to the Mahkeses were along this part of the reservoir that in terms of the geology was quite consistent and on trend. The next development is north of Marie Lake, and it's in a different type of reservoir. That went through the regulatory hearing. It was approved, and is in the process of being constructed right now.

BB: Starting in 1998, you worked for a year or so on the Syncrude technical committee. What was involved there?

OTTENBREIT: The Syncrude owners had ongoing regulatory committees; a committee system established to be current with what was going on with the Syncrude operation. If funding requests came forward, you might have to go back to the owners. So, you had an owners committee, and those were the senior people in our organization. They also needed to have some people on the technical side and the business side to support their roles. So, that's the position that I held. I was an Imperial employee, representing Imperial on a committee of technical and business folks, who would be maintaining an ongoing dialogue with the Syncrude staff both on the existing operation as well as the expansion.

BB: I have a general question for you. What would you consider some of the main achievements or highlights of your involvement with the oil sands over the years?

OTTENBREIT: I think some of it, probably, would have been the degree of external communication. I think that's something that I think, from a personal standpoint, I probably value. It was good to see that carry over. It's not unique to myself, clearly. The Energy and Utilities Board wanted to ensure that there was an on-going dialogue. So, I think that would've been one thing.

I think we went through some difficult times when I was there. When I showed up, we were in the throes of completing the expansion up to phase ten. The Mahihkan had just been completed. But, what happened then is the price of crude crashed, and so we actually had to mothball that expansion for a period of time. And so, you went through some ups and downs, and I think the way we handled it, I think it was done well. So, people in the communities aren't happy when that happens, and neither are we. But, you can't ignore what's happening in the marketplace, and so I think the way we responded to the downturn and the price of oil back in '86, I think was done reasonably well. I think that on the regulatory applications, I think the thoroughness with which we addressed issues are something I feel good about.

BB: Where did you live during that time?

OTTENBREIT: When I was there, it was still separate communities. You might think of Cold Lake as one community, but there was a community of Cold Lake, there was a community of Grand Centre, and a community of Medley. Medley is the Air Force Base. Since, I was there, they've subsequently amalgamated. So, it's one community called the community of Cold Lake. So, we lived in what was the community of Cold Lake. We were probably three or four blocks from the lake itself. It's a really pretty area of the province, and so we were quite pleased, actually, to be living there.

BB: Were you involved with community organizations such as the local chamber of commerce, those kinds of things?

OTTENBREIT: Well, we would've been involved in some. We were a member of the chamber, and the fellow who represented us on that was Garth Leask. He was an ongoing presence. So, I would have worked with Garth on some of those issues. But, I would say that we kept pretty busy with the operation, and the involvement with the community that we had as a company. There were fundraisers, some bowling charities, and stuff like that. There was always media on that in that local paper, and they'd be phoning us, asking us stuff.

BB: You mentioned that there's a great challenge involved when the price of oil goes into the bunker. What are some of the other challenges that you remember having to deal with during your involvement with the oil sands?

OTTENBREIT: Expansion has its challenges too. When you're expanding it gives rise to those regulatory proceedings. So, clearly that was a challenge in and of itself. I think it's particularly challenging because the appetite that regulators and the public have for information and whatnot have just grown by leaps and bounds. That's both good and bad. It's good that the dialogue occurs but it becomes more challenging because you're dealing with a lot of information. For instance, when you're developing an application you're always trying to strike a balance between how much information you provide in detail and how much do you provide in summary. Because, if you provide everything in detail then people wouldn't necessarily understand what the detail was telling you. But if you limit it to the summary information, then people say, "Well, you're hiding

something.” So, trying to strike that balance is a challenge. It certainly was the case with Mackenzie Gas, as well. I mean, we had some people telling us that we should have provided a lot more information, and some people telling us that we’d provided so much that you’re just trying to confuse us. So, I think that just comes with the territory in terms of your dialogue with the public. Some people are expert on certain matters and they want the detailed information. Other people just want to know the summary.

BB: Is there anything else, specifically, that we should talk about as far as the oil sands are concerned?

OTTENBREIT: I think that pretty much captures what I would think about it. I think the oil sands have gone through ... I mean it’s a tremendous resource, and I think the country and the province are quite blessed to have that. It’s nice to see it develop. I think it’s been developed fairly responsibly. Certainly, the public’s expectation is becoming more demanding. That’s just the nature of the business. I think that industry is responding to those increased expectations. We’re sometimes a little slow off the mark, I think, in terms of anticipating some of those shifts. But, over time I think that not just Imperial, but the industry generally, is getting better at managing oil sands operations.

BB: How can industry get ahead of the curve in terms of what’s happening there? Because, quite often, the industry ends up being in reactive mode.

OTTENBREIT: I wish I knew the answer. I’d be the first to criticize us as being reactive, because clearly that’s how we come across. I can think of proactive steps that have been taken, but you never seem to get credit for that.

BB: It’s not as newsworthy, it seems.

OTTENBREIT: It’s not newsworthy if things are okay.

BB: That’s what I mean.

OTTENBREIT: So, to the extent that we do things, do monitoring and whatnot, it doesn’t result in any issue or any controversy, it just doesn’t get reported on. So, it’s only when some element of confrontation that it makes the news.

BB: 5,000 ducks on the tailings ponds, and that kind of thing.

OTTENBREIT: Yeah, that’s right.

BB: You spent just about ten years with the Mackenzie Gas Project. Now we’re hearing the news from south of the border about the Keystone XL expansion, and on this side about the Northern Gateway. From your experience, and from what you know of what’s involved in getting a new pipeline happening, what are some of the lessons that can be learned?

OTTENBREIT: The history on the Mackenzie pipeline goes back a long way.

BB: Does it go right back to the Berger Inquiry?

OTTENBREIT: Yes. The natural gas fields and the anchor fields that were discovered in the Mackenzie Delta were discovered in the early 1970s. That was a proposed development put forward by a number of companies. It was the subject of the Berger Inquiry. At that point in time, Justice Berger's conclusion, as a result of these two or three years of visits with these people up in the north, was that the development should not proceed at this time. He never did say it should not proceed. He said, "It should not proceed at this time." So, that was his recommendation. It was on the basis that he didn't think that people in the north were ready for it. They didn't have the mechanisms in place, governance mechanisms as an example, in place. Land claims weren't addressed. So, as I understand it from reading what I did of Justice Berger's report, he suggested that it be deferred for 10 years.

Now, there always was debate, quite frankly, whether it ever was deferred. Part of the reason I say that is because Justice Berger's report was, I think in '75, and the Norman Wells oil pipeline was built within that ten-year period of time. But, quite apart from that, it was an issue around the readiness of the north. Now, subsequent to that, there were a number of land claims settled. And one thing that happened that was quite different from the time of the Berger Report is that when we started doing some work in 1990, and we did what was called the Feasibility Study. It was a study to examine the feasibility of proceeding with an application and a development because we weren't sure whether we were going to do it. We wanted to assess whether the north was ready for it. So, we spent a lot of time meeting with people, talking to them. And our conclusion was that, yeah, the north is ready for it.

The thing that was probably a good indicator of that was that while we were doing our initial work, aboriginal leaders in the north were meeting and decided that they wanted to participate in that development. So, they created something called the Aboriginal Pipeline Group. So, I think it was in the fall of 1990 that the Aboriginal Pipeline Group got set up and they invited us to meet with them in Inuvik. Then, I think it was a month or so later they got back to us and said they'd like to strike up a partnership with us, and we thought, "Gee, this is an interesting development." So, the following year we spent a fair bit of time negotiating with them as to what would be the manner of the participation. And that culminated in a meeting in Hay River in June of 2001 where they actually went through a process where they presented a description of the project, talked about what we had proposed in terms of the business relationship. Then that was the subject of debate and dialogue at a meeting of aboriginal leaders in Hay River.

Then they put it to a vote and most of the aboriginal groups voted to join in on the proposed joint venture. Some of them said, "I need more time." So, I think it was different. That is symptomatic of a fundamental shift and that is that the same groups who back in Justice Berger's time in 1970, said they weren't ready for development, now, they were not only ready but they wanted to be part of it. So, it was quite different. Now, there was one group to the south called the Deh Cho and what's different about them is they don't have a land claim. Briefly, in the north end would be the Inuvialuit or Inuit. Just south of that is the Gwich'in. South of that is the Sahtu and then the Deh Cho. So, those are the aboriginal regions. But, the Deh Cho ... all the other groups have land claims and the Deh Cho don't. So, they, in essence, were looking for opportunities to try to use the Mackenzie Gas Project as leverage in their negotiation with the federal government on land claims. Because, they were asking for some things at the land claim negotiation table that none of the other groups had ever received. So, there would have been ... so there was a fair bit of coverage in the newspapers about not all aboriginal groups being supportive. But, that was unique to that particular situation. The Sahtu, in reality, were all very much supportive of the development.

So, again, that was a substantive change. So, the situation that we went forward with for an application was that we not only had aboriginal support, we had aboriginal partners. At some of the hearings, for example, some of the aboriginal groups would be putting up their own witness panel because they had to answer questions on certain issues as well. So, they were in the same position as we were. I mean, it was kind of a unique relationship and different than anything we'd ever done before. Our sense was that the situation called for new ground to be broken.

BB: So, dialogue obviously was important.

OTTENBREIT: Oh, yeah. We spent a lot of time in discussions. We had probably over 2,000 recorded meetings where we had a record of the meeting. We probably had at least twice that many; other meetings that were more informal would include meeting in coffee shops and so on. But, I'd say that the amount of communication and consultation that took place was second to none on that project. To the point where I think we saw evidence of what I call consultation fatigue; people were just tired of listening to us. [Laughs]

BB: Well, after ten years, my goodness.

OTTENBREIT: They'd say, "Come back when you've got something new to talk to us about." But, the regulatory process took so long that it got extended and it was over a long period of time. So, that would be, if there was a learning from that for other projects, one of them is to communicate, communicate, communicate. The other thing is, are there opportunities for participation? Northern Gateway, as I understand it, offered that opportunity and, I guess, I don't know personally the uptake on that. But I think the aboriginal groups' willingness to participate has also evolved over time too. You've got, in the aboriginal community, a lot more business oriented folks, progressive business leaders. I can think of a number of people across the country. In Norman Wells, as an example, when we proceeded with that expansion, at the same time that we expanded production at Norman Wells, Enbridge put in a pipeline from Norman Wells to Zama. And, as I understand it, they did offer an equity participation to the Dene, or the aboriginal groups in the north, and they chose not to.

This time they did. In fact, like I said, they met on their own and didn't know anything about what we were doing, and decided that they wanted to progress with the development in the north, and they wanted to be part of it. Part of the change might also be due to the fact that circumstances had changed in the north. What I mean by that is, it used to be that people in the north could make a living hunting and trapping and selling furs, as an example. But, things like the anti-fur movement in Europe and elsewhere was quite successful in terms of essentially destroying that opportunity for people who used to be able to make a living and could no longer do that. So, they were looking for other ways to build an economy. So, in the southern part of the Northwest Territories, in south and east, that's where the diamond mines have been developed. So, the Tlicho have the opportunity to participate in that, and they've done quite well, frankly. But, in the far north it's oil and gas. They don't have diamonds and they don't have mines. So, they're looking to develop businesses or an economy since they don't have them.

So, they have some business leaders who saw that as a need to address their socioeconomic issues. Because, when you don't have employment, you have social issues. You have social problems if people aren't employed. So, some of the business leaders had the foresight to take it upon

themselves to try and create an economy for their children and grandchildren. So, that is a different circumstance than what existed back in the 1970s when Justice Berger was up there.

BB: So, where is that at now? What's happening with the Mackenzie Gas Project?

OTTENBREIT: Well, the price of gas gone down as a result of the emergence of shale gas. So, I think one of the questions is what is the appropriate time for the development to proceed? So, that's one of the uncertainties. The other one is, we have yet to conclude the negotiations for the fiscal terms for the project; that's with the federal government. Because, north of 60, this is federal land. So, those things we have to await the conclusion of. So, right now, it's more or less suspended.

BB: You're officially retired. Do you expect that you might return if something starts happening on the Mackenzie Gas front?

OTTENBREIT: Oh, I'd love to.

BB: That you might be called back on a consultancy basis?

OTTENBREIT: Oh, if it happened, that would be great because it means something's happening. I think that development would be good for the north. I think it's good for the companies, and so I think it would be a real positive if that did occur. And if I was able to be part of it, that would be fantastic.

BB: How about Cold Lake, then? Any further possibilities there?

OTTENBREIT: That's a little harder to see because it's been longer since I was involved in that.

BB: Of course.

OTTENBREIT: It's an ongoing operation. So, you've got the ability to call upon a number of other people who have been associated with Cold Lake. So, I'll probably go back for future celebrations.

BB: Of course. Every time they open a new plant or ...

OTTENBREIT: Yeah, that's right. Or, get to that 2nd billionth barrel. I would love to see that.

BB: Well, I think that pretty well covers everything I wanted to ask you. So, thank you for that.

OTTENBREIT: You're welcome, Brian.

BB: I really appreciate that. I hope I haven't left anything out that I should be asking you about.

OTTENBREIT: Well, you gave me an opportunity to raise things you may not have raised. So, I certainly have had the opportunity to talk myself.

BB: Right, terrific. Thanks then.

OTTENBREIT: Thank you.

**[END OF RECORDING]**

