

JOY ROMERO

Date and place of birth (if available):

Date and place of interview:

Name of interviewer: Peter McKenzie-Brown

Name of videographer: Peter Tombrowski

Full names (spelled out) of all others present: Peter Kinnear

Consent form signed: Yes

Transcript reviewed by subject:

Interview Duration: 1 hour, 30 minutes

Initials of Interviewer: PMB

Last name of subject: Romero

PMB: I'm talking to Joy Romero, who manages the Horizon Oil Sands Plant at Fort McMurray. Also, in the room with me is Peter Kaneer and Peter Tombrowski, our videographer of course is with me today. We want to begin by talking about your biography; let's just start with that, please. Can you tell me a little bit about your own career?

ROMERO: I'm a metallurgical engineer by training. And, I graduated from Nova Scotia Technical College in 1979, so a few years ago now. And, I've had the pleasure in working in steel, ore, coal and oil sands. So, that is that side of it. And, when you and I first met, I was the vice-president for bitumen production. But, now I'm the vice-president for technology development for all of Horizon.

PMB: For technology development?

ROMERO: Yes. There has been a bit of change, some time has passed since we first met, Peter.

PMB: And, that was at a workshop on environmental -- mostly environmental related issues; how to resolve a lot of those issues. To my mind as somebody who has kind of parachuted in, it was unusually interesting.



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.



ROMERO: Yes, it is very interesting. And, actually, that was the reason for me transferring from being in the plant from that role to being in this role was to actually put that focus for Horizon. And, as it related back to the company as a whole to drive the technology development predominant component of that is environmental.

PMB: You're still living up in Fort McMurray, is that correct?

ROMERO: Two years ago -- see, things have changed and I am now living in camp while I am at work. So, my team even though we do technology development it is still situated on-site. And, I think that is exactly the value. I was out yesterday with one of our analyzers on the plant with my team members and other support people that have come. And, the fact that we are on-site and not somewhere else is really the value that we add, because we are not divorced from the everyday things that happen there. We don't have an illusion about exactly what the issues are because of our interfaces with people. So, I am really happy to be there.

PMB: Let me see whether I understood what you just said. I thought I heard you say that your team is in a camp on-site? Is that correct?

ROMERO: Well, I live now when I am at site is where I put my head down, I live in camp like many of the people who work in the oil sands. I lived in camp at first with Horizon when I went up for about three years. And, I spent about three years living in McMurray. And now, my home with my husband is here in Calgary. And, I live in camp when I'm at site.

PMB: Oh, okay. Can you describe the camp for us? I presume they're not tents. Are they physical structures? Are they buildings, small buildings?

ROMERO: They are actually rather large buildings. So, one of our camps is the house 3,000 people each. So, they're rather large hotels. We have a Timmy's, a convenience store. Obviously, the cafeteria, gyms that would make any workout soul drool. Yoga on certain nights, you can play cricket on other nights. We have artificial surfaces to play hockey year round. Seasonally, you can play basketball basically any sport you wish. We have an area room that is hosted by Athabasca University with a library that you can take stuff in and out. You can sign up to do Red Seal. So, you can pursue education of any type of degree that you wish. And, the people are there to support you to do that. And, we have a lounge on-site. We're a dry camp as many of the camps are. So, after dinner the guys can go and have a beer, watch a hockey game and visit with each other. And, so we try to make it as home-like as possible. For many people, it is our home away from home.

PMB: Okay, well that caught me by surprise.

ROMERO: It's not a tent. And, we're not hard done by, by meals either. You can eat as healthy or unhealthy as you wish.

PMB: But, when you think of an oil sands camp, well my son was working up on one of the project a few years ago as a welder. And, he hated it and he was gone within a month. And, the reason was



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.



that there was alcohol everywhere. There were drugs everywhere. This was before Petro-Canada had been bought out. He was on, what was Petro-Canada's plant then that was being constructed?

ROMERO: McKay; the McKay SAGD?

PMB: No, it was -- it does not matter. But, he was really upset. And, he was gone within a month.

ROMERO: So, alcohol is allowed obviously. So, if you tend to ban things sometimes that makes something worse. If you have it in that sort of normal, I want to. If you show up at work in the morning and you're under the influence, you're gone. And, there is a zero tolerance to that. There are drug dogs all the time that service the camps; so, we probably one of the cleanest places for both alcohol and drugs that you can probably have on the planet.

PMB: You said "drug dogs"?

ROMERO: Absolutely. So, everybody knows. So, it is a huge deterrent, because if you're caught there is no discussion. It is, you're gone. So, randomly as you get off the airplanes, because we have fly-in, fly-out. We fly right in to our site. So, at any time you can get off the plane there will be gorgeous little dogs there. They're absolutely sweet. And, basically everybody lines up. You put your bags down. The dogs check. And, obviously they may or may not spot. But, if they do that is it, you're gone. And, the camps are checked weekly.

PMB: So, you just take the flight back at your own expense? That's basically it?

ROMERO: That's right. That is correct.

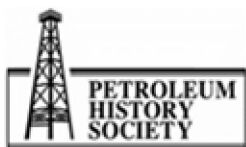
PMB: Wow. Isn't that interesting?

ROMERO: I can honestly tell you in my time there I have never seen and I've been there since day one. But, have we had individuals that need to say goodbye to us? Yes, we do. But, by far the majority -- we've got heavy equipment and it is dangerous work. It's important that people are alert and in the right frame of mind to be able to work up there.

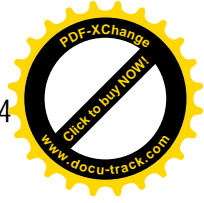
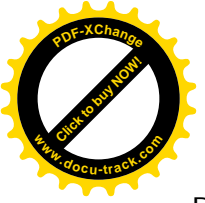
PMB: I just remembered the project he was working on, it was the Fort Hills when it was just early being developed. It was the Fort Hills Project. So, it was nothing like what you've described. It was a rough workers' camp at that time. Okay, anyway. A couple of easy questions: When did you first hear about the oil sands? Can you remember that far back?

ROMERO: Yes, I do. I had a job offer when I first graduated from university and was working at Wabush Mines in Labrador. And so, working as a young engineer there, fresh out of school and with offers to come to, at that time it would have been GCOS.

PMB: Oh, Great Canadian Oil Sands, GCOS.



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.



ROMERO: So, it was a long time ago. The first time that the offers were made and...

PMB: And, so you did go up and work?

ROMERO: No.

PMB: No? You turned it down?

ROMERO: Stuck with, actually at that time we -- because, my husband and I are both the same engineers. And, we graduated from university. So, we kind of tend to move around together. So, at that time when we chose to leave the iron ore, which is where we were we actually...

PMB: Iron Ore of Canada.

ROMERO: Actually, it was Wabush Mines which is an iron ore mine. There are two towns that are next to each other: Wabush and Lab City. Lab City is IOC, Iron Ore Company of Canada. And, Wabush Mines is the Town of Wabush. And, so when we chose to leave there we actually left for the coal mines in southeastern BC. And, we were there for the better part of 17 years before coming to Calgary to be involved in oil sands. But, actually when I left there I stayed home for six, seven years full-time with our young family. So, three children under five at one point and that kind of kept me more than busy enough.

PMB: Those children by age, oldest first, what are their names, please?

ROMERO: The oldest is Thomas, then Judith and then Rachel. So, they are all wonderful adults off in their own lives and careers now.

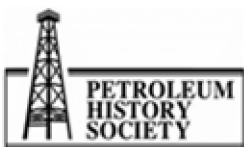
PMB: So, then your husband left the coal mines in BC. He was in BC, yes?

ROMERO: That's right.

PMB: And then, what was your next step?

ROMERO: So, when we left Wabush, I actually left and I had resigned there before our second child was born. So, when I went back to work was in the Elk Valley as well, with Teck. We were there for several years before coming in 1997 to Calgary with Kilborn both of us actually, to work on Suncor Millennium. So, that was my first real introduction to working in oil sands. So, I had the pleasure, Kilborn was taken over by SNC-Lavalin at that point. So, I had the pleasure of joining the Millennium project and had a wonderful mentor there by the name of Bill Strand, who taught me an immense amount. Well, really the basics about oil sands and the differences between the industries that I had come from and what oil sands was. So, as I learned I then actually became the process lead and led the process design for Millennium through ore-preparation/extraction process.

PMB: Now, the Millennium project of course, was a big Suncor expansion?



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.



ROMERO: That's right.

PMB: It was really the project in a way that turned the company into one of the great oil producers on the world. And, there have been more changes since then, more expansions since then. But, it was an enormously important project. Is that correct?

ROMERO: It was and it was a real pleasure to work on it. I learned so much and Suncor was very generous in their way in which they allowed me to learn. And, to interface with their team and their people and having come from operations into the engineering design world, I need to understand the operations. So, they were very kind and actually let me sit with the operators over night-shift, because that is when you really learn; not day-shift, day-shift operators are too busy. But, when you go and you sit with them on night-shift that is when they've got time to talk to you and tell you what their issues are, those kinds of things. And, Suncor was wonderful. They let me do that and sit in the various control rooms so I could understand what the problems were and what their issues were in operating. So, in designing Millennium we could take those issues out as much as we could and it allowed me to just understand better and to be able to do a better job for them.

PMB: Now, at that time Suncor was fairly advanced in its use of trucks and shovels. So, you really weren't involved in that part of the equation or not?

ROMERO: No. That was standard by that time, the truck and shovel. Of course, where I came from that was normal. Coal or iron ore, the truck and shovel operation, the conveyors, the breakers and all of those things; that was all equipment that I was quite familiar with. The thickeners that were used as primary separation cells, I mean, all of the pieces of equipment were all equipment that I had used where I had been before and been a part of the operation myself. So, it is applied differently and how it is applied and the different things of separating liquids versus the solids and those kinds of things. And, it is oil not coal or iron ore; those kinds of things. But, the pieces of equipment were very, very familiar old friends.

PMB: So then, you were involved in the design of the Millennium project. What was your title by then?

ROMERO: I was lead process.

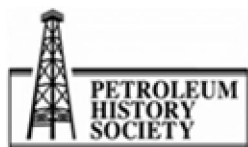
PMB: Was your husband part of the team?

ROMERO: He was, actually.

PMB: Well, I haven't asked you his name?

ROMERO: His name is Diego Romero.

PMB: Diego Romero, okay. Is he still working? Is he working with you now at Canadian National Resources?



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.



ROMERO: No, no. He followed the oil sands for a while, but he is now with Teck Corporation and his current projects are predominately coal, again, so. He is quite enjoying that again.

PMB: Fair enough. That was great stuff. You've told me about your personal involvement in the oil sands. You were actually quite famous in Canada because of about a one minute commercial that appears on a lot of the Canadian news and business networks. My association with you, of course, is in that workshop on the environment. So, I would like to begin to ask you now about your involvement with the CNRL oil sands project. Maybe, if you could give me a history of that project, which is a graphic on the wall behind you.

ROMERO: Yes. Well, I had the great fortune of working on the Millennium project with Réal Doucette, who when we came to Canadian Natural to lead the Horizon project I was actually the next employee that he hired. So, I've been with the project literally since the beginning. Since it was an idea and to have the privilege of being with something from when it is an idea to producing 110,000 barrels a day and we're still executing that idea in the subsequent phases. So, it will be fully built as that vision in about 2017. So, we're still executing the vision that was established from 2001/2002.

PMB: So, you actually joined CNRL in 2001?

ROMERO: Yes; January, 2001.

PMB: Then you started to just design the plant and the systems that would make it work?

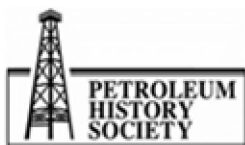
ROMERO: That's right.

PMB: And, it was you and Réal Doucette. What his job with CNRL?

ROMERO: He's still leading the project and all of the construction and future development for Horizon.

PMB: Okay, fair enough. Now, when I talked to Rick George, one of the things that he described to me which came as a bit of a surprise was that the upgrader and so on at Suncor is actually connected to a bunch of SAGD facilities and that kind of thing. So, all of this oil is flowing into that upgrader. Are you doing any of that with this project yet? And, if not, do you plan to?

ROMERO: Ours is strictly a mine feed to the upgrader. And, at this time we did consider a SAGD facility when we started. When the project was first announced it actually had a SAGD facility with it. That timing and the economic timing of it was when natural gas was at its peak, so the economics associated with SAGD was not the best at that time. So, we actually dropped the development of the SAGD component. But, right next to Horizon, so when you understand the deposition. The mineable oil sands they hug basically the Athabasca River because the topography there, the overburden is low. As you move away from the river, you have a greater increase of overburden. And so, like many of the operators we have right next to us, SAGD properties as well, so at some



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.



point that (well we call them ours is Birch Mountain East) is our properties that hug our mining operation. That will be developed.

PMB: So, at some point in the future then this will be connected to SAGD?

ROMERO: That's right. Now, the plan ranges sort of in the 2020 plus time range.

PMB: In terms of the resource calculations: a) what are your reserve estimates for this project itself, and (b) do you have any thoughts about what might be recoverable from SAGD?

ROMERO: So, for us actual reserves are over six billion barrels in place for just Horizon.

PMB: For the mine?

ROMERO: For the mine. And, I don't know off the top of my head what Birch Mountain East reserves are.

PMB: That is sort of a moving number, isn't it?

ROMERO: Well, as you define the resource.

PMB: And, as SAGD and the other technologies improve?

ROMERO: That's right.

PMB: Now, as I started to say a while ago is where you're most famous is because of this little ad that appears on TV everywhere you look. And, I'd like to really talk about the environmental aspects of your work. So, I'd like you start please by explaining the notion of the "Tragedy of the Commons". It's an idea that I learned at that workshop we went to a few years ago and it's fascinated me ever since.

ROMERO: So, the "Tragedy of the Commons" saying, it is Garrett Hardin by definition. So, it was about 1968, I believe is when he came up with this. His explanation of "Tragedy of the Commons" is any common resource that is used by people for their own interest, unchecked, is the true sense of that. So, when it comes to oil sands there is really two ways to a resource. There is obviously the oil resource and then people often refer to, of course, the resource is the environmental impact. The definition of a "Tragedy of the Commons" is unchecked and it doesn't really apply to either of those. Because, of course in the resource we are very much controlled by all of our resources and we must recover a minimum out of the resource. It has to be approved every single step of the process needs to be approved. And, before we start, that plan must be developed for the entire life of the facility. So, for 40 years plus. So, it is a heavily regulated not everybody can go.

So, even that "Tragedy of the Commons" is that anybody can you use that common resource. Well, no; not anybody can use the common resource. You have to have approval and permission. You



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.



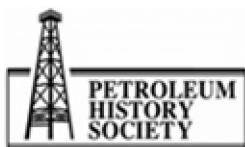
have to purchase leases. So, it's not really fit in that sense, because it is very controlled. You have to buy into it. It's common; it belongs to the people of Alberta with our governmental structure. And, they let us lease that land. And, for the privilege of leasing that land we must recover at a certain level. Which of course, we pay royalties both federally and provincially. So, it is a very controlled and regulated environment for the resource itself.

PMB: Before you continue that, as I recall the idea of the "Tragedy of the Commons" is that if four farmers are sharing a particular field and that is where their cattle can graze, it could very well be that one of them who, let's say all the cows had twins or something, that farmer would graze all of his cattle which would be much more than the others on that one common property, to the detriment of the others. So, that is the idea of the "Tragedy of the Commons". That if the commons are not properly regulated there can be people or interests which will destroy it for the other people who have interests.

ROMERO: That's exactly my point. So, with respect to the resource itself, it is highly regulated. So, not anybody can just go out and -- Now, we all know let's say coal, many years ago or centuries ago when it was common heating and I'm sure it still is in many countries, like China and various others. That, people just go to a seam and get the coal for themselves, right. And, if everybody went and did that and that is an unfettered access to a resource. That is not how oil sands is, oil sands is a very restricted access. So, for just the oil itself, it does not fall into that category. And then, if we move to the aspect of, is the resource the natural resources that are there. So, the land, the air, the water, the fish, all of those kinds of things; neither is that uncontrolled.

We are highly regulated with respect to the amount of water that we use; the water allocations. I mean the province; I mean that's the wonderful thing about living in Canada. Not only are we regulated, we're totally transparent about absolutely everything that we do. And, we're also given trajectories of where we are and where people would like us to be. So, it is with respect to anybody doing what they want, unfettered and uncontrolled to the detriment of others. That is not the environment that we work in. It is actually a very controlled environment and that is the beauty of being somebody who works in a resource industry in Canada. We live in Canada that has these laws, that takes care of these things, that ensures that the reclamation is there, that ensures that the amount of water that is used protects the fish and that keeps that environment there. That the effect of a plant, that the air is kept within limits that are safe for people that live in that region. Same thing with respect to land reclamation, yes we disturb the land.

Obviously, any mining does. But, we also reclaim that land. I live here in Calgary and I don't know what part of the city that you live in, Peter. But, I live in one of the newer communities. That land is not going to be reclaimed. It's got a house on it. It's got a whole whack of use. It generates a whole whack of greenhouse gases. It uses water and all of those things. And, that is not going to be reclaimed, but ours will be. At some point, everything goes back and that land will be put back as close to the footprint, worked out with the people who stay there. So, for example, how we've done that is we had to divert the Tar River. The Tar River is actually a fairly small creek and one of the things that we did on our site was build a lake, a compensation lake. That lake was designed in



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.



concert with the people in the community who live there, who that is their resource. And, to compensate for any fish or habitat that was in that river is now replaced by that lake. And so, in the "Tragedy of the Commons" that is not what happens. But, that is what happens with us, so it is not an unfettered use of what is there. It is very much a controlled use and a respectful use of that land to make sure that it can be returned to those who it belonged to or used it in the first place.

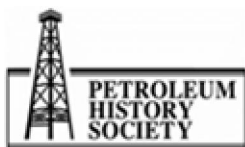
PMB: Now, one of the arguments that I've heard which is similar to that is that the City of Toronto and Mississauga are huge facilities. They generate a hell of a lot more CO2 emissions, for example, than all of the oil sands combined and they are not going to be reclaimed.

ROMERO: Yes. Now, we don't make excuses of that. And, we are always trying to reduce our footprint. So, the fact that it is less than somebody else, that's nice. We wish more people would understand that and the impact. All we are, is one one-thousandths of the greenhouse gases, for example, that are produced in the world. So, when you see things that say, for example, the oil sands are the cause of climate change or those kinds of things. It's very disturbing to see that, because it couldn't be more untrue. If you stopped oil sands tomorrow there would be zero impact on climate change, because we are only one one-thousandth of the effect of greenhouse gases basically in the world.

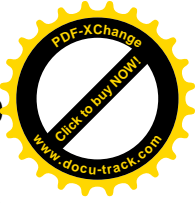
So, stopping us, shutting us down completely today would make zero difference with respect to that. And, with respect to the rest of the barrel or the impact of not just the production, I know full well that that it is demand for oil. Whether it is us that produce it or someone else that produce it; that demand tomorrow isn't going to change because the oil sands were shut down. That's just going to come from someplace else and probably, someplace else that doesn't have the regulatory environment; both for the extraction of the resource or for the protection of the environment that Canada does and especially, with the transparency that we have and also, the fact that you have an industry.

What people don't understand is that as an industry, if you don't believe that we want to improve the environment then look at the economic benefit for us to do that. Our tailings pond is because we were one of the last large of these groups to be able to develop. Our tailings pond is half the size of what a conventional tailings pond would have been, had we not used the technologies we did to develop our tailings pond. At 50 million dollars a metre lift for a tailings pond, to reduce the amount of water that we take in, to be able to recycle that water, to have not taken that footprint, you do not have to be a rocket scientist to figure out that that's good business to have a smaller tailings pond. It is good business that we have built heat integration between our upgrader and our extraction plant, that our extraction plant only finished our latest expansion will use zero natural gas to heat the extraction plant. That extraction facility is completed by waste heat from the upgrader.

Right now, we have the lowest greenhouse gas footprint, because putting in that capital equipment for waste heat recovery pays. So, that lower greenhouse gas outputter intensity per barrel is good business sense. Not only does it reduce the footprint, but it is good business sense to do that. When you look at our flares on-site you basically can't see them. Because, our fuel gas is used to fire our



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.



furnaces, we recycle all of that. The benefit of having the facility built in this last number of years is those technologies all now exist and we can employ them to create that kind of facility that has a much smaller footprint. Well, guess what, so is our operating costs lower, right. So, that driver...

PMB: Oh, okay. So, the business case is really strong?

ROMERO: The business case, so if you don't believe that you have engineers like myself that believe that we need to do this, because it's the right thing to do then please at least believe that we're driven by the economics that it's the right thing to do. But, I mean, that's the beauty of -- we're Canadians. This is our land. It's our responsibility to use that resource to the best ability that we can. So, if you take a barrel of oil out, how do we get the most of that barrel both in the production of that and then, as we send it out to be used, right, by the population.

PMB: This almost leads me directly in my question about your job. Your job is to work on the technology, or is it basically technology development?

ROMERO: Yes.

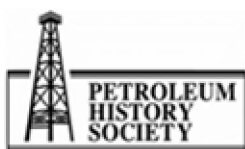
PMB: Can you talk a little bit about that? I think you just have. But, I'd like to hear as much as I can about your contributions to that or CNRL's contributions to that, your team's contributions to that?

ROMERO: Yeah, it would be my team. I just get to lead a bunch of smart people. They're the ones that do the hard work. So, basically what we always want to understand is our gap from where we believe that we need to be. Our mandate for our department, for example, is that production will never be restricted because we haven't met or exceeded environmental regulations or from a cost point of view. So, our accountability is to make sure that the technologies are there that meet or exceed all environmental regulations. And, that it makes business sense to do them and that we can actually keep that place running. So, that's the broad base that we always start from. So, we're always looking forward and understanding. So, for example, of the facility that is built now, our water use, our greenhouse gas intensity, our tailings foot print, the technologies that we use we built those. They're operating. They came into effect in 2009. We chose those technologies in the 2003/2004 time-frame.

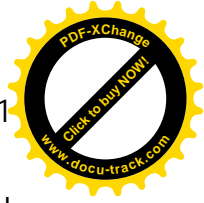
So, you have to always be able to look forward and see what environment it is that you're going to be operating in to be sure that you meet what is you're going to be required to do at that time both from a regulatory point of view and from a cost point of view. So, that you actually have a business. If you don't have either of those, you're not going to be operating; because, we live in Canada and if you don't meet those regulations, you don't run.

PMB: Now, a couple of days ago I listened to a presentation by Ed Wittingham who I'm sure you know from Pembina Institute.

ROMERO: Yes.



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.



PMB: And, he's a very sensible environmentalist, I think, with a pretty pragmatic environmental organization. One of the things that he said as he wrapped up his presentation was that what is important is to put together the progressive business and pragmatic environmentalists and let them work together. That was kind of a neat concept. But, he did say and he was talking about the oil sands specifically, he did say that in his view, maybe there does need to be more stringent regulations in certain areas. Let me ask you first, do you know Ed? I'm sure you're familiar with him and how would you take those points of view?

ROMERO: So, I think one of the things that we're understanding as an industry, is that we haven't done a good job of having people understand exactly what it is we do, or the way in which we already steward the environment. So, are there things that we can do better? We're engineers: you always design the next mouse trap better than the one in which you're functioning or you modify that; those kinds of things. So, if to have our social licence to operate which is really what is out there today, is that people have really a very much an misinterpretation of how we operate or what the numbers really are.

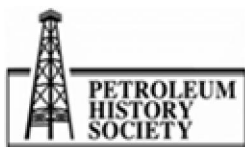
So, for example, we already are regulated by the in-stream flow needs by the province for the amount of water that we can take from the river. We are a fraction, as an industry, of the amount at low-flow which is the January time-frame before [?]. So, now is the lowest time flow of the river. We operate at a fraction of what we would have to actually draw from the river to harm the river in any way. The other rivers in the provinces are dedicated to over 68% of their use and those kinds of things. We are less than 5.8% or 3.4%. Sorry, I have got to get the exact numbers in something when I do that. So, oil sands we are allocated 7% of what's there. But, we actually withdraw much less than that. So, the red level in metres per second to draw low flow now is 9.9%. On an average day, we're actually below that at 5.16%. Red, they would take us off the river. We would have to shut down and not run. Yellow is 12% and green is 20.3% which is no problem.

So, we are a fraction of that. So, do we want to monitor more and understand what is there more; absolutely, no problem with that and to be totally transparent, absolutely. But, when Ed said we need more, I think people need to understand what we already have. And, exactly the same with respect to gas emissions and the regulations that are there. So, this is where the regulations are and this is where we perform as an industry. People need to become more knowledgeable or people need to be more open about where those limits are and where the industry actually performs. So, from an air quality, these are actually the air quality regulation numbers. This is where we are performing, well below. And, if you compare inside of these...

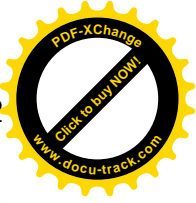
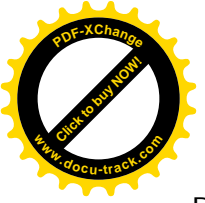
PMB: It looks like about a third less? Am I right?

ROMERO: That's right. And so, if you look this one is sulphur dioxide for example. And, this one here is...

PMB: Where are you in sulphur dioxide?



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.



ROMERO: So, if you look at the numbers that are here in Fort Chipewyan these are the numbers that are measured in Fort Chipewyan. This is Fort McKay. This is the Valley or so, basically what is us where we operate as mining. This is Edmonton here. And, this is Calgary.

PMB: Wow. That's very impressive. And, I do remember and this is 20 years ago or so, 25 years ago when there was a lot of concern at that time, maybe this was even in '78 when Syncrude opened. There was a lot of concern that it would contribute to acid rain, remember that? Because, there were a lot of sulphur emissions at that time.

ROMERO: The thing that you need to realize in this is that those direction are with increased production; so, this last eight years, 2010. So, you have basically in this particular one you can see is actually a reduction. So, what that is, are scrubbers and...

PMB: Total volume deduction?

ROMERO: Right. So, with increased production so the intensity would be -- so, what that is the technology: scrubbers and different sulphur recovery and all of those things being implemented. The same as in every other industry that is out there and over time as this new technology has developed, it's adopted and so you have less impact. So, do we welcome more scrutiny; absolutely. But, if you want to watch, for example, in a year the local air quality. This shows the various different air stations that are here. And, the new measuring and monitoring, these will be at least doubled. You can go on today and watch 24/7 the air quality on Air TV from **W***** Buffalo and tune in and watch this, that's how open and transparent that we are in Canada. We exceed nothing that is harmful.

PMB: Now, one of the things that have happened and I did an article about it. A fellow who had begun measuring water quality in that area in, I think it was 1978; it was quite a long time ago. He really is an old-timer. One of the things that he commented on was that the equipment that is available now makes the statistics that are available from them, completely irrelevant. Because, when you were talking about a part per million or something or a couple of hundred parts per million; that was about as much as you measure some of these things. And, today it is parts per billion that you can measure.

ROMERO: So, as it goes and we measure things better. But, I don't think that...

PMB: That was not meant to be a criticism.

ROMERO: Yes. The data is always there, but remember those were the measurements. But, with the standard measurements of what was harmful is that those were within the laws that we have within the country are within the range that is measureable. So, we didn't exceed with the technology that was then. Did we welcome new technology and new measurements now? Absolutely. So, when we were participating in the industry with 50 million dollars to support the additional, people often say new as if we never did this stuff before. I mean the amount of measuring that is out there, it's the highest measured area basically in the country and I think stats are a lot even greater than that. So, we've been monitoring for a long, long time. Is there are new monitoring equipment, can we



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.



monitor more? Absolutely. Do we welcome that? Absolutely. None of us want to end up with a "Tragedy of the Commons" by any stretch of the imagination. We want our industry to be sustainable over many generations. There is a place for fossil fuel in the world. It needs to be used responsibly. And, look at all of the recycling that we do of that fossil fuel on our site. Can you imagine if everybody recycled and re-used waste heat, all of their types of things that we do on our site was done in the general population, how much further a barrel of oil would go. I mean, we're pretty darn good at recycling and reusing. If we could get the whole world to do that, I mean we'd have a much smaller footprint out there and demand for energy of any kind, right.

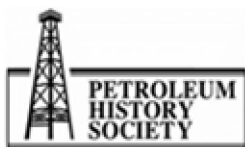
PMB: You're preaching to the converted. But, I'm still getting pretty excited. Good commentary. Okay, I would like to move on a little bit, because we're making awfully good progress here. Licence to operate: this is an idea that at least in my experience is fairly new. And, I know that there was major research done for Suncor in 1960 when Suncor first applied to build that plant. I don't know whether you're aware of this: they were told, "No way, you can do that, because there's going to be too much pollution." This was in 1960. Go back and eliminate a lot of the pollution and so they redesigned the thing and they increased the cost by around 20% or 25% or something. They went back two years later and got their construction application. And, I have seen information about the environmental research that was done for Syncrude in 1970 and late 60s and early 70s, which was world beating at the time. It was absolutely remarkable.

ROMERO: Absolutely.

PMB: So, there is a long history of this, but this idea that social and environmental protection is necessary to give companies a licence to operate. Could you explain that, please?

ROMERO: Well, I think one of the things and is probably the easiest way to explain it is, right now is we have a product in Alberta that we are having trouble moving out the current production, fine. But, future production is at risk relative to the social interpretation of our product. So, in essence, right now we are not enjoying a social licence to operate. And, so was it that we have to do to regain that? Well, some of it is education. And, some of it is showing the trajectory as I've showed you that we have in fact reduced that footprint, even if Suncor had improved the environmental footprint at that time to start. And, I don't know that history. They've continued to improve it as they operated. And, we need to do that. Up until now, one of the things that I've always been involved in and enjoyed really since I actually started is collaborative technology development within the industry. CONRAD was a part of that Canadian Oil Sands Network for Research and Development. OSLI, the Oil Sand Leadership Initiative.

So, these groups had tried to take that effort towards -- and the environment was the focus of both of them. And, it was "How do we work together to reduce our environmental footprint on all areas." Because, when it comes to producing oil and the various technologies that we use, we may compete. But, when it comes to safety and/or the environment, we don't compete there. And, so it is very important for us to work together. Our CEOs of the producing companies have met together, especially with the advent of the social licence to operate. So, we refer to my ad and these



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.



kinds of things. This is, again, in that sort of education and trying to help people understand, those are all efforts. But, the proof needs to be in the pudding. People need to see something more concrete. So, even though we are, as I said, not exceeding any of the regulations of where we are, that doesn't stop us. We understand that we can still do it better. We also understand we can do it better together. And so, under the guidance of our CEOs of basically 95% of the production of the operating companies that are out there, we formed Canada's Oil Sands Innovation Alliance, COSIA. And, in there if we thought we were collaborating before, this is collaboration on steroids. We're focusing on tailings, greenhouse gases, land and water. And, the really neat thing is before we would get together and work on a project and everybody who worked on that project shared the IP with that project. But, if you weren't in that project and three of five companies worked on that project, they would have that IP but two didn't. Inside of COSIA, that's not the case, regardless.

PMB: What companies belong to COSIA?

ROMERO: There are 14 companies. So, it is...

PMB: Probably more than you're going to remember right now.

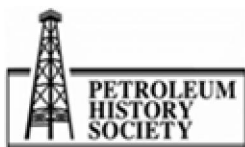
ROMERO: Exactly, so basically everybody is. So, all IP if it's still only three of the five companies that develop something, that IP developed by those three companies goes to the other 14. So, if it's three, all 14 companies get that IP. They get that support to bring that new leading edge technology to their practice.

PMB: IP refers to?

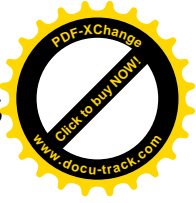
ROMERO: Intellectual Property. So, any best practice that any of those companies have with respect to land, water, greenhouse gases or tailings are shared across. So, the whole idea is not that there's a lowest common denominator, but everybody moves up to be the equal to the best performer. And, of course, all companies have different areas that they perform better in. But, it's to raise the environmental performance of everyone. Because, we are judged not by the environmental performance of our best operator out there, we're judged by the environmental performance of those who are not as strong as others. So, it's really, really important to bring the industry as a whole to the best level that we can be. And, so COSIA is very much set to do that on all of those various platforms of land, greenhouse gases, water and tailings; which of course, is the areas that are most commonly known or understood that are out there.

PMB: Now, there is another part of this which is aboriginal and community relations. Can we talk about that, please?

ROMERO: Absolutely, I would be happy to do that. And, this is where you brought in the "Tragedy of the Commons". I am actually going to bring on this, Professor Michael Porter from Harvard. Because, he works on exactly that continuum of what he calls philanthropy; at the beginning in which companies in their social responsibility basically just give stuff away. Then you have the



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.



corporate social responsibility or CSR. Actually, I was just listening to a program in India on Sunday morning, I believe.

PMB: A program on what?

ROMERO: From India on BBC, that talked about that there are now companies that are legislated to give large companies that are profitable to put 2% of their profits into corporate social responsibility. Professor Porter talks about what he calls, shared value. And, that shared value has to be the way in which we move. And, when he actually found out what we were doing in the oil sands, he actually came and visited us and toured and took a look. And, said that we were probably the most advanced form of shared value that there is the world. Because, of the impression that was out there and what he found in the way in which we work were completely different than the impression that somebody is led to believe.

So, what I'm really very, very proud about Canadian Natural is that we actually don't count minorities by minorities. As, Réal said to somebody one time, that I was working with is, "We don't hire women or men, we hire the best people for the job." That's exactly the same, whether it's aboriginal people that we're talking about, our local small businessmen in Fort McMurray or smaller sized companies that are from around the world. What we do is we generate the project and we generate scopes of work that allow people to learn and that allow them to participate. So, Fort McMurray, Fort McKay, Fort Chipewyan; that is our home, those are our nearest neighbors. So, we have to make sure that we package work and allow people to be able to have shared value in what it is that we do. And so, that's exactly what we do and I'm sure you interview some business, various other things. You can see that we have packaged our work to allow people to be a part of a multi-billion dollar project at their right level; and, to learn the safety standards and all of the other components of working on a large site in order to be successful. And, we help people on that progression.

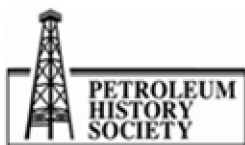
So, whether that is aboriginal or small business owners within the Fort McMurray region, smaller engineering companies, construction companies within Alberta or because of the capacity that is necessary; whether that is a company from the US or a company from Poland or a company from Spain. We package our work so that it can create that capacity in the region, in the province, in Canada and in the world to literally allow everybody to have that shared value from our job.

PMB: Now, looking at project in Fort McMurray. For example, the Fort McKay business and Fort McKay is an aboriginal community.

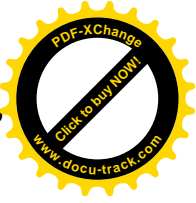
ROMERO: Right; Fort McKay Group of Companies.

PMB: So, those companies which are owned by the band and are non-taxable under federal law would, for example, be getting a lot of your work?

ROMERO: They bid for that work the same as anybody else does and they earn that work. And so, I think that is what is really important is that they are qualified, they earn that work, they are as



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.



vibrant a part. I often hear these things and it's not in the terms of handouts. Not on our site, that is not the way that we work. People are there because they add value. And, they are an integral part of what we need to be successful on our site.

PMB: And, now to use that example: you do hire some of those companies...

ROMERO: Absolutely.

PMB: ... to do work on your project?

ROMERO: Absolutely. And, they are there...

PMB: Because, they're good enough to do the work?

ROMERO: Absolutely. And, for me it's almost a personal thing that is -- maybe it's because I am a woman in the thing too and you get lumped into this... that people make accommodation for. These are the aboriginal components that we have that work on our site. They are there as equals to everybody else that is there. It's not accommodation. They have the same skills sets and all of those other kinds of things. Now, do we arrange work and group things so that they can qualify? I mean, you can let work out that you can by in which you contract it, exclude a huge amount of people or groups or companies. Or, you can package your work so that your work is inclusive. Our work is packaged so that it is inclusive. And, in that inclusivity, the best qualified people get that. And, in that, I think if you look at our stats we have one of the highest actual aboriginal components that are there. But, it's because we also work with people and they're qualified to do that work and they are the best people to do that job.

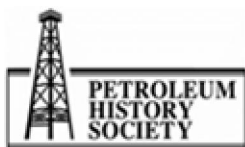
PMB: Shell put a news release, I think it was about two years ago, saying that they had just touched a billion dollars' worth of services and supplies from aboriginal firms in that area. Any idea whether you've hit a measure like that?

ROMERO: I'm not sure what the number is, but from just working on-site, all of our road maintenance for example, is done by the Fort McKay Group of Companies. Whole aspects like there are just whole sections where we have welding crews, various other things that come from -- so as far as I understand, the capacity is basically if the capacity is there, they're on our site. Somebody else would be able to give you numbers better than I am. Sorry, I don't have them.

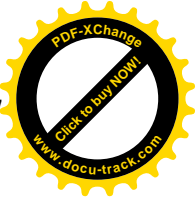
PMB: I thought you might have that.

KINNEAR: What the comment is: by decision, we don't track it as closely as some other companies do. I just wanted to mention the little side note to that, is that some companies make a big priority of tracking aboriginal participation with a very high degree of accuracy. We have chosen not to do that for a variety of reasons.

ROMERO: For example...



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.



KINNEAR: But, we are aware of participation on this thing.

PMB: Because, it almost is saying, "You're different."

KINNEAR: Right.

ROMERO: So, the Fort McKay Group of Companies has just announced that they've taken on a partner and had a formal announcement of that hear at the Petroleum Conference in Fort McMurray. They recognized Canadian Natural, because we were the company that basically allowed them to start and gave them that chance, right.

KINNEAR: The other comment I would say is, we very much believe and support the idea of capacity building. So, even though Joy is correct of course in saying, it's not a preferential approach we take to contracting. We know that it's also important to recognize that First Nation Communities don't necessarily have the education or the backgrounds in business to do the kinds of things that we need them to do to participate on-site. So, we look for very many opportunities across all of our operations to add to the education and training. Bring smaller companies along with the training that we can offer them, just in the normal course of business. And, capacity building isn't a subsidy you might say or a preferential treatment. It's a recognition that not everybody starts in the same place.

PMB: Having the aboriginal communities in the Fort McMurray area is a real benefit to companies, isn't it, because you have this manpower to draw on?

KINNEAR: And, elsewhere in the province as well. Yes, it's a very much a part of our approach to every project we do throughout the area where aboriginal communities are active.

PMB: Thank you very much. Those were useful comments.

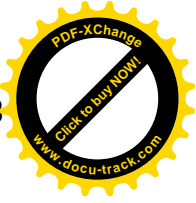
ROMERO: So, that same capacity building that he's talking about, we've done that with respect to companies from the Maritimes, companies from Quebec, companies from Ontario. So, if we need a company for pipefitters or various other things, we've done that exact same capacity building across the entire country. So, when we built Horizon we actually flew people to Horizon to locations in Newfoundland, to locations in Nova Scotia, two in New Brunswick as well, two or three in Quebec, at least two or three in Ontario. I don't think we had Manitoba. And, we didn't fly from Saskatchewan, they drove -- no, we did; we flew from Regina. And, we also flew from BC. And, we're just picking up construction again now and we are just again, going into flying again from across the country.

PMB: You're talking about flying employees in for work, tradesman or tradespeople in from other parts of the country.

ROMERO: That's right. That's correct, absolutely. And, so when we say that we are Canada's Oil Sands, we literally are Canada's Oil Sands.



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.



PMB: And, of course one of the advantages of bringing a few people in is that you would eventually be bringing in their friends, other tradespeople.

ROMERO: So, there will be a company -- so, again, it's part of this building capacity, right. So, there will be a pipefitting company that we let a contract to and Newfoundland or in Nova Scotia or in Quebec and we literally go and fly their workforce from that community to our site.

PMB: So, it might be 20 or 30 people?

ROMERO: That's right. So, the planes go as required. You will have a plane that picks up the two communities in Newfoundland and whatever in Nova Scotia and New Brunswick and then it flies and then it comes west. But, we basically build that capacity of those companies to be able to work. And, so wherever there's a level of underemployment is where we will look to be able to bring people to work. Now, when they come and work in the oil sands, often their safety standards are less than what we need them to be. So, there is that capacity building at that time for those companies, so that their safety standards come up to snuff. And, are they used to building and all of those other kinds of things, inside our kind of structure. Well, probably not so we help them understand just how to interface with building and all of those other kinds of things. But, we build capacity within the country.

PMB: Wow. That's fantastic.

ROMERO: So, that's the shared value.

PMB: I was having trouble following that, but that's perfect. I'm going to ask you a couple of general questions and then I would like to zero in on CONRAD, because I believe that's an important story. In terms of the Alberta Government and the Federal Government, two things: earlier on I thought I heard you say that you pay royalties to both the Alberta Government and to the Federal Government. And, I'm having a little trouble with the royalties to the Federal Government. Is that correct or do you mean income tax?

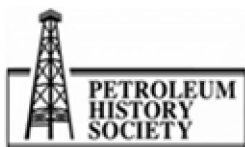
ROMERO: We pay money to both. But, it is -- what is the proper term for the Federal Government?

KINNEAR: That would be the benefits or the flow of funds to the Federal Government is predominately corporate tax and royalties strictly to Alberta.

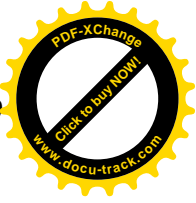
ROMERO: This is why he's here.

KINNEAR: That would be something.

PMB: I wanted to be really -- because, that didn't make any sense. I was just reading a book about the Canadian ownership of resources.



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.



ROMERO: Sorry. Yes, the royalties are strictly provincial.

PMB: In terms of the role of government in oil sands development, in your view has it been supportive, has it been effective and could it have been more stringent?

ROMERO: So, the role of government in oil sands development has been huge. Because, in Alberta you had the Alberta Research Council developed basically to support the technologies required. The University of Alberta was formed for...

PMB: Dr. Karl Clark...

ROMERO: Yes.

PMB: ...who was the original oil sands scientist.

ROMERO: Right. But, the actual formation of the University of Alberta was the idea of it would find technologies to support this tremendous resource. How do we tap this resource? So, as you go along, whether it be the regulatory environment within Alberta certainly with respect to oil sands has led the regulatory environment across the country. We're the first to have carbon tax. Do people know that, that we pay \$15.00 a tonne?

PMB: In 2007?

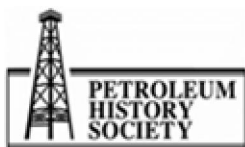
ROMERO: I can't remember the -- but, about that time frame.

KINNEAR: It was very close to that time period.

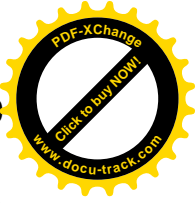
PMB: It was around that time period.

ROMERO: Around then, I don't remember the exact time. So, Alberta tends to actually lead with respect to the regulatory environment that was there. So, from again, the social licence to operate and I'm not sure that's understood by a lot of people, but it does. And, again, as I shared with you at the beginning, if you are in fact, reducing footprint, that is energy that you spent. That is dollars. For the most part, what our job, my job, the type of people who deal with the technology development side of things is to make sure that we do those in a cost effective way. And, most times I don't have any trouble justifying things that I want to do, because there's an economic basis there for it, right. So, that aspect of it is good.

The one issue when it comes to regulation that is really, really important is that if it is very prescriptive as to how we do something, it can only be prescriptive in the technologies that are known today. When it is outcome based, that gives us latitude to develop technologies to achieve those outcomes. When regulatory things are extremely prescriptive and what people don't realize is that even though we don't have that many oil sands facilities up there, they are all very different. They all produce oil sands. They all have ore bodies like anybody who has a mining background,



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.



what comes out of the ground doesn't come out consistently. And, the quality of the oil sands that is there is different. So, it means that we have operations that are all oil sands, mining facilities. But, there are differences in each of those to adapt to our topography, our legacy equipment that we have and the operations that we see and that we're going to integrate into the future. And, if you have regulatory constraints, for some of us you actually increase our footprint. So, an example of that is Directive 74. So, Directive 74 is the tailings.

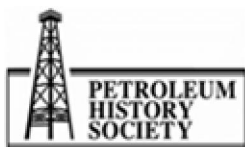
PMB: Is a directive from whom, the ERCB?

ROMERO: The ERCB for tailings. So, that was the intent of it. And, we all have no issue with the intent is to basically reduce the number of tailings ponds that are out there and reclaim them faster. We only have one tailings pond. And, we'll only ever have one tailings pond with water on it. You have to remember, we haven't been operating for 30 years or for 25 years. And, we've had the benefit of being able to change our technologies. Well, Directive 74 requires you to take what's called, mature fine tails or there is a layer in the tailings pond that isn't solidly settled (basically easiest thing to say). Take that out, dry it on land and remove the water from your tailings ponds. Well, remember we've got one tailings pond which is half of the footprint of what would have been there if we weren't. And so, for us to literally follow the regulation we need to cut down trees, clear an area, increase our footprint to meet that regulation. That's an unintended consequence of a regulation that is written very prescriptive.

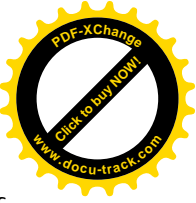
Now, had the intent been looser and we work very hard with the ERCB to understand, "Look what you're asking?" And, the consequence of that on our site is we don't think this is your intent, your intent is that we reclaim this pond as fast as we can, that is a safe structure that we leave behind; all of those kinds of good things. And, that it's not a liability to anybody. We understand that. But, we need to work with you to adapt that to our site, our topography and our processes.

PMB: Wow, fantastic example, thanks. The ERCB, of course, has been around since the 1930s in one form or another. And, the structure of course, under the Ralph Klein Government went through a lot of change. What would you say about the ERCB? And, I don't think you want to make a political comment. I've heard complaints recently.

ROMERO: I work with the people there. Our teams work with the people that are there. They want the exact same thing we do. They want to have a resource. The first part that I shared with you, they want to make sure that if we have opened up that ground and we've dug a barrel of oil sand, they want to make sure that we get the absolute most of that out for the people of Alberta that we can. So, they hold us stringently to that. With them and the other Alberta, their sister regulators, they want to make sure that we do that in the most environmental way that we possibly can. We are aligned in that. And, they understand that we have to be able to operate. They understand that we have to be able to do that in a cost effective way. So, when we sit down with the regulators, it's not that we're in -- we have the same goals. They are very competent people who care passionately about what they do. We're competent people who care passionately about what we do. So, what's really important is that we have those conversations so that we can get to those points. So, that we



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.



succeed in not only meeting or exceeding the regulations, but we also do that for the people of Alberta, the people of Canada, the world can look and say, "Yes, you did a good job." And, it's their job to put in the regulations that show that we're doing that good job. We respect what they have to do as their job and we work very hard with them to make sure that we're compliant, obviously. And, that we understand what their vision is, we also help them understand our vision and we make sure that they're congruent, right.

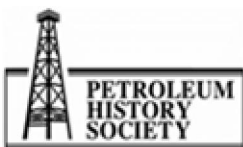
PMB: Good. I know that your time is limited and so I'm going to try to wrap this up in five or ten minutes if you agree. There are two comments that have come up that I've taken notes on here: 1) the pipeline issues and how that is affecting the whole industry. And, I know that this is not your expertise or specialty, but I also suspect you have a lot of knowledge about it. (2) I want to ask you about COSIA. So, the pipelines, right now there are huge problems with getting oil of Western Canada and into the US and hopefully one day, overseas markets?

ROMERO: So, for me they're the same -- talking about pipelines and talking about COSIA, they're actually the same thing in my world. Because, COSIA is the vehicle that I have an opportunity to influence the social licence that there wouldn't be those restrictions with respect to the pipelines. So, COSIA is the place that Canadian Natural can turn, that Shell can turn and that all of the other operating companies can turn; where we put all of our efforts together to improve the technologies that we're using to bring ourselves, as I said before, to the highest level performer of all of us. We work in a way that -- I watch different groups and different projects. You can't tell what company somebody is from when the technical teams are working together. And, that's exactly what we needed. And also, we actually look at the various projects. So, this is where we're at and this is where we want to be.

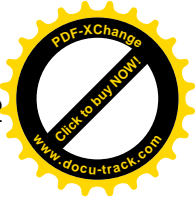
PMB: Before you continue with that, COSIA stands for the Canada's Oil Sands Innovation Alliance. Can you tell me a little bit about how it's structured and how it works?

ROMERO: So, it was formed at the request of what is called the CEOs council. It is just the oil sands CEOs that are members of CAPP, Canadian Association of Petroleum Producers; too many acronyms. So, at their desire to focus the technology development with respect to the environmental work, because we had CONRAD, we had OSLI, we had several other places in which technology development was being done. When that happens it's deluded. You can't focus. So, we've literally brought the entire industry together under one umbrella and we put more money than we ever did before. And, more people and more resources to make sure that we are progressing these issues even faster than what is humanely possible. But, to gain that social licence with respect to being able to move our product, that it is seen to remove that dirty oil impression that is out there.

So, if there is a gap in our greenhouse gas intensity to conventional oil, what is it that we need to do to close that gap? With respect to water usage, even though we're within regulatory requirements, what is it to reduce that yet again? What is it that we can do to reclaim the tailings ponds faster and what is it that we can do to reclaim the land sites faster again. So, that is our focus across all of those companies. And, it will, at some point people will realize and understand the work that's being done



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.



and it will come to pass, we will get through this. And, people will see that that product other than of course, if it's somebody who basically says, "No fossil fuels, period." We'll never be able to satisfy that group. But, the general population that wants to be out there, that knows, are we doing this in a social responsibly way that preserves the environment that respects where we are, they will get that. But, not only are doing it now we intend to do it much better yet again in the future. And, that's my ability, what I have control over, where I can work; the form where I can be to make that difference with respect pipelines and other things.

PMB: And, COSIAs only a few years old, isn't it?

ROMERO: It is one year's old on March 1st.

PMB: Okay, good. So, that's ---

ROMERO: That's a baby.

PMB: I didn't realize. I thought it was a bit older than that. So now, my final question and actually you might want to compare and contrast these two: CONRAD, can you tell me a little bit about that? Because, I know that Howie Dingle was the co-founder of that in, I think it was around 1978 or something. It was quite a while ago.

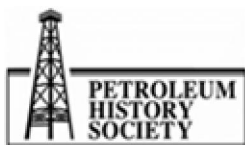
ROMERO: CONRAD is really important. We looked at, in forming COSIA, we looked at CONRAD. We looked at OSLI. We looked at OSDG, Oil Sands Developers Group. We looked at the electrical.

KINNEAR: OSTC.

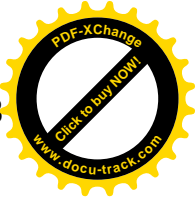
ROMERO: Yeah, we looked at the Oil Sands Tailings Consortium which is formed under CONRAD. We also looked at EPRI (Electrical Producers Industry Association in the US). But, we looked worldwide at collaborative groups. And, what was successful and what isn't successful. And so, close here at home we had CONRAD to look at it. And, if you went about 27, 28 years ago and CONRAD was birthed, it had a lot of the exact same goals as COSIA today. And, the successes of CONRAD were that it did birth the Oil Sands Tailings Consortium of which COSIA was modeled after; so that literally came first. And, that's now about three years old with some huge successes' that have come from it. And so, that was there. You have the Froth Treatment Consortium in which you had the paraffinic froth treatment process come out of that.

PMB: This is a system that's now being used by Imperial.

ROMERO: Imperial, Shell. So, that's again an example of collaborative work. So, that vision of all the companies coming together, networking as companies networking with academic institutions, networking with the governments. Because, those are the members, it's federal government, provincial government. It is academic institutions. It is National Research Council. It was Alberta Innovates Technology Futures. All of these Alberta Innovates and Environmental Solutions was



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.



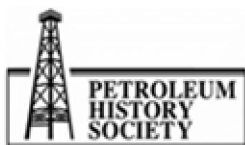
actually the group that did the secretariat work for CONRAD. So, all of these got together and really did a significant amount of progressing those improvements that you saw as we came along. Over time however, it enjoyed less and less of senior input. And, the reason why is because you had a whole whack of other groups forming. And, any one of us as companies has so few people who can go to these various things. And, with the environment basically, if somebody started something you couldn't not go. Because, if you didn't go that meant you were a company that didn't support the environment. So, to workshops or to all these various things that started. We actually had a picture of all of the different groups that were out there. And, it literally looked like a constellation of the world, stars and various other things. And, there were so many of these things that people had to go to. So, when that happened that diluted the quality of people who could make decisions about what projects we were going -- we would then have to go back and get permission from their companies. And, it slows the whole process down.

So, almost the attention that oil sands got on the environmental landscape actually was the demise of some of these groups that were doing really good work. Because, it pulled people from where maybe they would have stayed focused before. So, to the wisdom of our CEOs, they basically said, "Look, we can't succeed with these various things that are out there. We really need to consolidate underneath one umbrella." So, OSLI was another one of these groups that were out there. So, we literally took all of that good work and the good models of the things that succeeded with respect to CONRAD, from who were the members and how does that work together when you have various levels of government and the academics to working with the companies. How do you do that? We took that and translated the successful parts of what worked well to COSIA, same thing from OSLI. So, without CONRAD or without the Oil Sands Tailings Consortium or without OSLI, we wouldn't have been able to build what we've built inside COSIA. So, COSIA, it will always have dancing in the back. It may be called COSIA, but it really is this mesh of CONRAD and its successes.

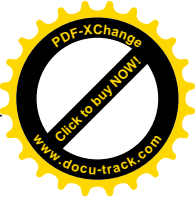
PMB: So, let me make sure that I understand this. COSIA now essentially does the work that CONRAD used to do. But, also did I understand that OSLI, the Oil Sands Leadership has also been kind of folded into COSIA?

ROMERO: Yes. Basically, we've pulled into COSIA all of the environmental technology development for the oil sands underneath that umbrella. Now, obviously we still need to interface with Alberta Innovates and the various groups that apply to the oil sands. But, now they have one place to go to interface with. And, so if we interface with the National Research Council, there is one place to go. And, because it was extremely difficult for them as well, because they too had to put people or go to all of these various other things that had popped up. All well intended, all with a mandate was that felt necessary and somebody was passionate who leading that. But, unfortunately, the effect was to dilute the ability of people to focus people predominantly. And, what follow people, of course, is financial resources as well. So, when you bring all of that brain-power now into one organization, it is much more powerful.

PMB: Wow. This has been a great interview and you have almost no time left. Is there anything else you would like to say? You've done a great job.



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.



ROMERO: Thank you. I guess it is just a privilege to be a part of oil sands. I mean, where else as an engineer do you get to have the opportunity to improve things at such a quick rate. Most places, things are established and you have the same old for a very long period of time. We basically are building something better just on a constant churn. Our drumbeat for improvement is amazing. We go from basically idea to beaker to pilot to commercialization at break-neck speed. And, it's an amazing place to be a part of.

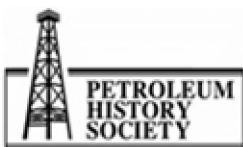
PMB: Is there anything you would like to say?

KINNEAR: I would just like to say, that I was really happy to hear everything that Joy has said, because it covers what I consider the two big things we need to think about. The first and this is very well recognized by the CEO council of our leaders in the oil sands industry. And, that has to do with Joy's earlier presentation about the type of performance that has already achieved, the type of regulation we already have which is not well understood and not well communicated by our industry. So, we recognize that we have not communicated nearly as well as we need to and part of our problem is people simply don't understand what is and what we are doing in those areas. It's a critical failing on our part to have not done a better job of that. Because, whenever we do that we recognize right away people have a different impression that they might have come into the discussion with.

But, the second and probably slightly even more important part and is recognized by the CEOs as well, is the absolute need to continuously improve and hopefully at an accelerated pace, improve the performance in all areas. So, we don't say we're good enough, we're regulated enough, our performance is good enough; we know that's not the case. We're under the microscope and for good reason. It's a very high-footprint industry which is going to get the scrutiny it deserves and our performance has to match people's expectations before it continues to improve. So, I think Joy covered that off beautifully in her walk through of all these things. But, there are the two important parts and it is well recognized.

PMB: Thank you very much. And, of course that was Peter KINNEAR speaking again. You've both been great. I much appreciate everything you've done.

[END OF RECORDING]



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.