
RICHARD J. DIXON

RICHARD J. DIXON, MBA is the Executive Director, Centre for Applied Business Research in Energy and the Environment's (CABREE) at the University of Alberta. His background includes expertise in energy economics, scenario planning, strategic planning, policy and foresight, particularly as it relates to the energy and environment sectors. Most recently Mr. Dixon led the Strategic Intelligence unit in Alberta Environment where he was responsible for identifying key emerging energy and environmental issues and developing proactive strategic responses for the Ministry and the Government of Alberta. In the Alberta government he co-chaired the government's Emissions Trading Project which won the Premier's Gold Award of Excellence and was used as a basis for development of the Province's Specified Gas Emitters Regulation and Program. Mr. Dixon teaches required graduate courses in the MBA – Natural Resources, Energy and Environment Specialization (NREE). In addition to its energy economics component students are taught how to develop and use strategic scenarios and scenario planning. The NREE specialization is unique in Canada and only one of a few similar of programs offered globally. Students develop analytical skills, industry understanding, and networking experiences to empower a career in the energy and resource sector.

Date and place of birth (if available): November 1953 in Saskatoon, Saskatchewan

Date and place of interview: May 30th at 1 pm at the School of Business, University of Alberta

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Name of interviewer: Adriana A. Davies, CM, Ph D

Name of videographer: Jimmy Bustos

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

Consent form signed: Yes

Transcript reviewed by subject:

Interview Duration: 143.74 Minutes (2 hours 23 minutes)



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Initials of Interviewer: AD

Last name of subject: Dixon

AD: My name is Adriana Davies and I'm a Researcher/Writer on the Petroleum History Society Oil Sands Oral History Project. Today is May 30th and it is 1:40 p.m. and I'm interviewing Richard Dixon, who is -- now I had it -- Executive Director, Centre for Applied Business Research in Energy and the Environment at the Alberta School of Business. Richard thanks so much for agreeing to be interviewed.

DIXON: You're welcome, Adriana.

AD: Now, let's begin with some biographical information to ground [the interview]; if you could give me the date and place of your birth and then, you know, a summary of your academic life, educational background in other words, and also your job history. And then of course we'll drill down on material that is relevant to the project. So if you could begin by introducing yourself as it were.

DIXON: Okay, born in Saskatoon November 1953 so coming up to a big birthday this year. And my father worked on the railway so we moved across Canada quite a bit. Grew up in Kamloops; lived in Montreal, Winnipeg, Edmonton, West Coast, Kamloops. So I have university degrees from U of A, a couple from U of A; one from McGill; and another from Lutheran Theological Seminary in Saskatoon.

AD: Which is, which is unusual.

DIXON: It is, yeah.

AD: So that, you know, doing the Master of Business Administration and then Master of Divinity ...

DIXON: Yeah.

AD: ... it's certainly interesting.

DIXON: Yeah -- I ended up being a single parent a few years ago, several years ago now, and it was really difficult trying to raise two children, you know, by myself and I have an energy -- I have an economics background actually before I had Theology, so I was able to transfer that back in with the MBA and do more research, and follow up on that. The other side of it, which was a real blessing, is that actually I've stayed quite connected with the church, the head of -- the Dean for the area -- he's made it very clear to me that I have the title "The Reverend," still.

AD: Oh!



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DIXON: Yeah. So, I preach occasionally on a Christmas and Easter and this kind of thing, I still; I'm involved in the pulpit that way, yeah.

AD: Well, professors, of course, profess and I mean there is an element of the preacher in every good professor, right?

DIXON: And there is the classroom and I've also taught the Ethics course here because I was heavily grounded in -- it was a German Lutheran education, so very much the German ethicists that we spent a lot of time studying and learning on. So I could sit down and work with that quite nicely in Emmanuel Kant, for example.

AD: Yes, well, we can get to ... we'll get to the ethics at ...

DIXON: Yeah.

AD: ... at a later point ...

DIXON: Yes.

AD: ... in this interview. So basically, just give a summary of then your work background, your working life.

DIXON: Yeah, well, I'm on my fourth career. So I have, and that's not including soccer, which is a professional hobby. Okay, so what I have is that I've worked on the railway and I have some transportation economics as well in my academic studies, and I've worked as a pastor and served parishes; and then I worked in the Alberta government, and ended up at the pinnacle of that position in the Alberta government, Alberta Environment, was a cross-ministry initiative called Strategic Intelligence. So sexiest job title I've ever had, you know. And when we got down to Colombia and met with the President of Ecopetrol a few years ago and your title from government is Strategic Intelligence so you can imagine what he thought that meant.

AD: Yes, exactly. You were a "CSIS" [Canadian Security Intelligence Service] mole.

DIXON: A CSIS mole ...

AD: That's interesting as an Alberta civil servant.

DIXON: Exactly and so the humour was though, because we were with a few of our students, at that point, we're not sure what he said in Spanish. It was hard to pick it up but I think it was "make sure they're safe." So after that trip in Columbia, we had a military escort and some of the women in it loved it because then they had these big tough-looking military types and they're getting their pictures with them. They loved it. But I'm sure it made me feel safer.



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But, yeah, that was with the Alberta government, and then about six, seven years ago the -- and this is an important part from the oil sands -- is that when I came back to Alberta and I took the Natural Resource Energy Specialization, and I was the first, in the first class, and the first graduate of that class. And that was at the behest of Mike Percy and then Joseph Doucette, our current Interim Dean, was brought into the program and, when I was going through this program, it gave me an opportunity to do a lot of connecting. It was my first real connection with oil sands -- was actually as a student, which was quite interesting.

And then we got quite involved with that, with the Alberta government. But then, as I say, about eight years ago Joseph Doucette came back to me and asked me if I would start teaching one of the courses that I helped create with Rick Hyndman, who passed away about a year ago, and so Rick actually had me -- because he was trying to set up this new course, new program, and he didn't have time to do everything so we helped him set up the courses that we were teaching -- or being taught -- we actually helped set them up; ensures a good mark for the course, though.

And so all of that became history with that and, yeah, a lot of fun stuff. But it was very much that we got involved with oil sands right from, you know, at that stage back in the nineties. And part of my role with Alberta Environment -- what I did is I spent a lot of time researching what you're doing -- the early history of the oil sands -- because I needed that information and that intelligence to understand the trends that were happening with it so that I could ... because my job description was, is that the Minister would never, would not be surprised. That was the job, so it made me sweat, like what would show up in the news the next day? You know, make sure that he wasn't surprised.

AD: So what was your title at Alberta Environment?

DIXON: Ended up with the -- well, it was a senior management position but basically the lead for Strategic Intelligence.

AD: Okay, so that's ...

DIXON: Yeah.

AD: ... and ...

DIXON: And that ...

AD: ... and so again now, you've explained it that ...

DIXON: Yeah.

AD: ... and so tell me about what you learned about the history of the oil sands and how then it became relevant to you and to your minister, both, because we've -- when you started, that was when the boom began.



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DIXON: Yes.

AD: We had the Alberta Chamber of Resources, the Oil Sands Task Force, I mean ...

DIXON: Yeah ...

AD: ... all of that.

DIXON: ... AOSTRA had run its course.

AD: Exactly.

DIXON: Yeah.

AD: So, tell me that story then, I mean the research that you did and what were you looking for specifically in this era?

DIXON: Well, one of my jobs when I came in is I was the first MBA to be hired in the department in ten years, at least that's -- you know, it'd been a long period of time where they just hadn't hired MBA students, or MBAs into Alberta Environment. It was mostly biologists, engineers, this type of thing. And so what I was to do is bring in the economic perspective to many of the issues that they were facing -- and of course the oil sands being a huge issue -- is what's the economics of this that they needed to be aware of? So that was a major part of the job, so I went into that research and it was -- actually I started out as a student; I did my internship as a student, a senior, you know, or as an adult student.

AD: A mature student, yeah.

DIXON: Mature student, but it was easy for me because we'd had people like Eric Newell; Jim Carter would come down to the school and we're supporting this new Natural Resource Energy Specialization. And so I got to know them; sit down and talk about the history, what their contributions were; went and talked to a lot of people from the water perspective, you know, what they were doing; the land perspectives; and so really I ended up doing just a lot of interviews as a student, getting a sense from the early seventies on and what was the mindset; what was the history; what would've been lost; what's changed; what's moved ahead? So, there's a lot of that.

So, an example I think would probably be best. If you take the tailings that is such a huge issue now, I mean the original concept for the tailings was that there would be, for example, Suncor, you know, the Great West -- the Great Northern Oil Company [Great Canadian Oil Sands] -- the original concept is there'd be one tailings pond, and you've heard this probably from others, and it would be in the middle of the Athabasca River. And, of course, the reason that they shifted out of that -- and Alberta Environment was trying to push them away from that -- and it wasn't until *Life* magazine decided they were going to do an expose on it that all of a sudden they changed and went with what we know now, today, is Tailings Pond 1A or the Wapisiw Lookout.



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But the reason is that they only planned on one, but the thinking was that this would settle out and it would settle out in a year or two, three at the most. You drain off the water almost on a continuous basis; you pick up the sand out of there, you can dredge it out, make sure it's dry, clean, reclaim it. And so the thinking of the dominant people was very similar, and this is where the history was because -- and the connection that people have lost -- it was with how the coal mines at Wabamun are run -- is that they use a continuous reclamation type of program. And it was the same thinking that then said, "Okay, well how do we do these big projects?" And people, a lot of people had [told] them -- the only mining that we've really done of any serious nature in Alberta was with the coal mines. So the image and the thinking was that thinking and, if you look back, and I'm sure you've heard others talk about this "continuous" reclamation, they had this thinking there.

Now, I know Eddy Isaacs and I have some disagreement on some of the science behind that but generally speaking it was -- that was the prevalent part of that. And so then the trend moved away, right? And that was interesting. And so by the time we get into the real upsurge of the oil sands beginning in the late 1990s, there's no, you know, there was no understanding of that. And the realization is that they had to -- and where Canmet really started to really take off was that they needed to figure out how to deal with this, and they realized that the chemical composition was changed in the caustic frothing methodologies. And it changed the whole nature of what they were actually trying to reclaim.

So all of a sudden now, "Whoops, we don't know," and that's where Pembina [Institute], when it wrote the *Oil Sands Fever Report* in November of 2005, it was able to pick up on some of that history and call people back to question on it. You know, like you're moving ahead too fast on this and you haven't got the science figured out. Not an invalid point. It wasn't maybe heard as well given the message and, I think, if others had maybe said it, it might have impacted more. But that was, that was part of the issue.

So if you go through it there's a whole bunch of examples like that where there was a different kind of rethinking that went on, not knowing the chemical composition, not knowing several things. For example, when we took courses with Rick Hyndman, and Rick was involved in the stuff from day one as Deputy Minister of Energy, you know, in the Energy Department, there was the realization, the early realization, okay, one, they had to get on to the climate change side because there would be a large GHG emissions and so how do you balance that out? So there was pushes to get that type of thinking going.

When it was -- those things combined [were] really quite significant, and here's the interesting part now: when I was up in the oil sands with students three months ago and one of the things I like them to do is visit with grassroots people -- okay, so we get into Suncor and into the frothing room and they're talking about their new water-extraction methodologies that they're employing right now that they've had for about a year, and the person, one of the people there used the term -- "We're moving towards continuous reclamation," and I hadn't heard that term in like decades. And I pointed out to one of the vice-presidents, I said, "Did that come from on top?" And he's going,



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“No, Richard, it’s not.” He said, “We’re not there yet.” But the fact that you had grassroots people starting to think that way, and that will be a big move on the oil sands.

So you’ve had a big shift in the thinking, going to a different type of production methodology; it shows up with the oil sands tailings ponds; showed up with GHG emission; showed up with land reclamation understanding that grew out of coal mines; and then this industry going. “O-mi-god, I don’t know what we’re supposed to do here” and then realizing as it got enamoured with its own technology, right? But yeah, there’s some mindsets; give you one of the early ones -- problems with the oil sands tailings.

All the research has always been what do we do with this sludge? Okay? So it’s people looking at this from an engineering perspective and going, “Okay, it’s sludge, what do you do with it?” There’s been a little bit with the Titanium Corporation looking at “Can we draw off rare earths [metals]?” But -- because they really couldn’t make a strong financial/economic case for it -- they’re back to the sludge thinking. Okay. So one of my jobs with Strategic Intelligence -- and coming out from an MBA perspective -- is you look at your emissions, you look at your, you know, effluents and you look at them from a different perspective, okay? And so part of my job was challenging people to say, “Okay, can this be an input to something else?” And that thinking is not there yet, right? Even a scientist -- and we said, “Have you studied this? Is it a possibility to use the tailing as something in construction?” And the response we’d get from Canmet and others was, well, “It’s just sludge.” And, “No, it’s not sludge.” To the industry, effluent, yeah, but is it a possibility it can be thought of differently? And that’s an important social science aspect. And what we’re seeing is a lot of changes now.

The industry has been driven by engineers, so one of the histories of this that was interesting me was that, for the most part, it is engineers, some scientists, but it’s basically been driven by engineers and they’ve done an excellent job. But they approach problems as an engineering problem. Okay, if it’s an engineering problem, that’s great. But the best example of this is what’s happened with TransCanada. They approached the Keystone Excel problem as ... an engineering problem – “Well, we’ll relocate the line and we’ll do this and this to the technology of the pipeline.” They got a social license issue. That’s a social problem; it’s a social science problem, which now falls into MBAs, anthropologists, whole different And so, if we’re going to succeed as the trend is going, then, leaders making decisions, if they’re all strictly engineers, are going to be looking for engineering solutions. But that’s not -- and they’re trying to solve social license problems; wrong solutions, yeah.

AD: Now, it’s interesting that you’ve raised a number of issues and it’s also to do with the evolution of the science and the technology of the oil sands that we’ve got the first heroic era, as it were, of Ells [Sidney Ells] and Clark [Karl Clark], where initially it was viewed as an asphalt that could be used for paving roads ...

DIXON: Yeah.



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AD: ... roofing material.

DIXON: Yeah.

AD: Then I've actually seen the annual report of the Research Council of Alberta and it would've been, I think, 1923, 1924 where Clark actually says that it can be used to produce fuel, which was a "eureka" moment.

DIXON: Mmhm, yeah.

AD: And so he then works to perfect this initial stage of oil sands extraction that allowed Premier Manning and Mines Minister Tanner announcing in 1951 the ...

DIXON: Yeah.

AD: ... first symposium in Edmonton ...

DIXON: Yeah.

AD: ... at the university, that it was open -- the oil sands were open for business.

DIXON: Yeah.

AD: And, of course, the research then continued but the heyday then was with the beginning of AOSTRA ...

DIXON: Yeah.

AD: ... and Premier ...

DIXON: But it had, it had its moments. Like in '58 is when they published the report that, you know, we can set off a nuclear blast underground.

AD: Oh, yes, I've got a number of people talking about that.

DIXON: Yeah.

AD: Canadians who actually had worked with scientists who had worked on the bombs that were detonated in Japan and ...

DIXON: Yeah.

AD: ... then they were looking at peaceful uses of nuclear power and this ...

DIXON: Yeah. Yeah.



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AD: ... this was, this was one of them ...

DIXON: Yeah.

AD: ... blasting the stuff.

DIXON: Yeah, that original report is 75 meters that way in the ...

AD: So it, it is in the ...

DIXON: Yeah, I've got a photocopy of it and ...

AD: Oh.

DIXON: ... but the original report is in the Cameron Library now.

AD: Wonderful.

DIXON: Yeah.

AD: So ...

DIXON: Anyways, that was part of my research when I was doing this.

AD: When you were looking at all of these original resources ...

DIXON: Understanding the mindsets and ...

AD: Yeah.

DIXON: ... the thinking and the historical elements, yeah, I mean Clark's -- if I can jump back with Clark -- and it was interesting where he knew the traditional knowledge and the Native uses, but then he made that jump out of that and in a completely different ... [direction], and the fuel source was more of a heating [source] that they originally anticipated, right? In my read on, you know.

AD: What ...

DIXON: And then going to the idea of a transportation fuel ...

AD: Yes.

DIXON: ... was like, it was way ahead of its time.

AD: And of course it was given huge impetus by the Second World War. I mean, when you had a Commissioner of Petroleum ...



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DIXON: Yes.

AD: ... and then you had the big push. You know, we talk about Great Canadian Oil Sands and the partnering companies, but in 1939 the, the smelting company ...

DIXON: Oh ...

AD: ... based in Kitimat ...

DIXON: Yeah.

AD: ... that had mines in the north were actually -- were given a contract to look at it as a fuel source ...

DIXON: Yeah.

AD: ... for the mines, and that certainly they were interested in having a stake in the development ...

DIXON: Yeah.

AD: ... but it never happened. But I mean you would've had a resident Canadian company actually involved, a mining leader and then a smelting leader actually being involved and Clark did some consulting for them and it was a huge study involving ...

DIXON: Yeah.

AD: ... federal and provincial ministers ...

DIXON: Ministers, yeah.

AD: ... because both were involved. But so you get that era; you get Great Canadian Oil Sands starting up, having all sorts of difficulties, I mean so you had Bechtel as the chief engineers.

DIXON: Yeah.

AD: You know, the whole mindset around that.

DIXON: Yeah, and some of the missteps they made that were quite fascinating.

AD: Exactly.

DIXON: Yeah.



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AD: But then you had a whole, a second era of research and development, which is really the AOSTRA era ...

DIXON: Yeah.

AD: ... and that if you had not had that research, you would not have had the second -- well, second major ...

DIXON: Yeah.

AD: ... generation of development that we are still currently in.

DIXON: Yeah.

AD: In terms of the environment, you know, Alberta had the first environmental legislation in the country.

DIXON: 1971.

AD: Exactly.

DIXON: Yeah.

AD: '75 to '80 AOSERP, the first environmental and social impact assessment in the country done for Syncrude. So this baseline work was done; the land reclamation legislation was in place; and it was really to address coal mining and the conventional industry, and then of course was adapted ...

DIXON: Yeah.

AD: ... to meet the oil sands needs.

DIXON: Yeah.

AD: But initially, and your point about that they thought that this sludge would somehow decompose or something would happen to it, so that the ...

DIXON: Evaporate off.

AD: Exactly.

DIXON: Yeah.

AD: But, so that they first, they were concerned about building earth dams that would stand the test of time; there would be no seepage; there would be no dam failure, so the ...



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DIXON: Yeah, the clays, yeah.

AD: ... so that it would go into -- exactly.

DIXON: Yeah.

AD: So that again it's the engineer. So the situation today is really, it is about, as you've said, it is the social license, the license to operate and ...

DIXON: Yeah.

AD: ... and ...

DIXON: And the evolution of it has gone from this immature industry -- it only exists in one place in the world -- to developing its own science and now coming up smack against economic and social issues that's going, "Holy smoke, you know, what's going on here?" You know, yeah, it's a fascinating evolution. I mean I'm sure you came across where, like in 2001 Suncor came that close to, came very close -- not little close, big close -- to claim bankruptcy, you know, and if the oil -- price of oil -- hadn't doubled, their labour costs, their construction costs would have put them under for millennium.

AD: Well, and of course, I mean ...

DIXON: They went from 1- to 2 billion dollars plus.

AD: And the difficulties in the 1970s, the 1980s, I mean they were not successful.

DIXON: No.

AD: I mean, and ...

DIXON: No.

AD: ... so that that success had to wait for improvements in the science and the technology ...

DIXON: ... technology, yeah.

AD: ... and, as well, federal and provincial agreements around royalty regimes and all of those things.

DIXON: Oh, yeah.

AD: But contemporary readers of the media or surfers of the web have no understanding of the history ...



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DIXON: No.

AD: ... they only see these economic powerhouses that are environmentally challenging.

DIXON: Mmhm. Yeah, that's so.

AD: So it's a very different perception and the fact that government is not only a funder of research, a doer of research and also a partner with industry on this because of the economic benefits that accrue ...

DIXON: Oh, huge.

AD: ... and jobs.

DIXON: Yeah, it's huge, absolutely huge. I mean you look at it as an investment and the federal government, you probably came across, actually invested more money than the provincial.

AD: Tell me more.

DIXON: Okay -- is when the original millions of dollars were laid on the table -- and it was hundreds of millions -- is it was about two-thirds federal, a third provincial.

AD: And so that's in the early era to 1949.

DIXON: No, that's ...

AD: Since?

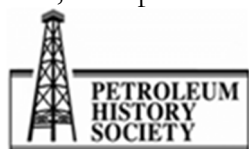
DIXON: Since. That was ...

AD: Since, okay.

DIXON: ... and if you add it up and go right into the 1980s, the federal government was actually much more of a major player than we realize. And so what's left of that is Canmet. Okay.

AD: So can you talk about the federal role in oil sands research?

DIXON: Oh, absolutely, yeah. The federal government was hugely interested in trying to develop Western Canadian ... and if you -- if one sits down with Oryssia Lennie [Deputy Minister for Western Economic Diversification Canada] and sits down with people from Western Economic Diversification, that was seen as a crown jewel, the oil sands for them, you know, to develop this -- extracting -- it was seen as a way of diversifying away from conventional oil at the time. And then you had Hubbard's work out of the late fifties and the idea of peak oil. And that really impacted in the federal jurisdiction more than the provincial in my read on it, and it also impacted people in, well, a couple of other groups, sorry -- a bit of an aside -- is, for example, environmental groups



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particularly interested in climate change issues would have up to their websites, and still up until several years ago, were very much believers in peak oil theory.

And so part of the driver for the federal government was in looking at the research and there's different documents that are still floating around you can get -- you can see that, well, you know, "We've got to develop another oil source." And shale was not on the map; it just -- using source rock as -- just didn't really catch into anybody, was never seen as economically viable; and hydrates were seen as way too far off. So again, now the work of Clark and others came to their attention and that's what their main driver was -- the peak oil theory. And, as I said, you see that, for example, that a lot of the environmentalists, and I've had this discussion with them in Washington, DC and other, and they believed that we would run out of oil, okay, and when we did run out of oil we'd switch over to renewables and there'd be this natural transition, okay?

Well, the oil sands -- represent a huge threat to that. Shale development represents a huge threat to that; hydrates represent. So, as the price of oil went up, now it made us and others more viable, more in the unconventional sources. And so now the GHG emissions have to be tackled differently and so part of the driver and why we, with the Alberta oil sands, even though we represent such a small miniscule part, one of the drivers is that we also ... represent one of the largest reserves of unconventional oil. We're successful. That does a lot to say peak oil is a long way off because now it's a dynamic situation.

But that driver occurred with Hubbard's work back in the sixties, gave impetus for a lot of the federal money that was poured into this in the 1970s. So one of my bosses in Alberta Environment started his career in '76 and it was looking at the environmental side of the oil sands then, and they were already looking. And part of it was the connections with the federal government in terms of the dollars that were coming in. Yeah.

AD: It's interesting, we've interviewed -- my colleague in Calgary Peter McKenzie Brown -- interviewed Ron Wallace, who of course ...

DIXON: Oh!

AD: ... was one of the federal government ...

DIXON: ... yeah. Yeah.

AD: ... scientists involved in AOSERP ...

DIXON: Yeah.

AD: ... because, as you know, the feds pulled out partway through that process and ...

DIXON: Yeah.



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AD: ... so that ...

DIXON: But left all that money ...

AD: Exactly, and so ...

DIXON: ... initial money ...

AD: ... Alberta then was able to ...

DIXON: Yeah.

AD: ... continue this ...

DIXON: Yeah.

AD: ... using contractors and others from ...

DIXON: Yeah.

AD: ... across the country to do this. But what I hadn't realized, and I interviewed several people on the Canmet side that, of course, oil sands research had not stopped as it did in Alberta once Premier Manning declared that, you know, the Clark method was going to work and the industry should now take over. But the feds continued that and, when Canmet was created, as an agreement between Peter Lougheed and Prime Minister Trudeau ...

DIXON: Trudeau, yeah. '72.

AD: ... and for the transfer of those monies ...

DIXON: Yeah.

AD: ... you know, 23 scientists from Ottawa, who had been working on oil sands, were transferred to their facilities outside Devon.

DIXON: Yeah.

AD: So that's the research background that ...

DIXON: That, yeah, that was part of that whole area.

AD: Yeah.

DIXON: But it was also, there was a lot of "pockets" of science and you saw this happening in Alberta, for example, University of Alberta started to get involved quite heavily in it. Calgary, not as



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much so, and you saw the rise of the Engineering Faculty here and it was focused in on the engineering sciences issues that were coming out of oil sands. And so you saw those partnerships and those dollars going in. Yeah.

AD: But of course the U of C came to prominence with Roger Butler ...

DIXON: Yes.

AD: ... and the SAGD technology and ...

DIXON: Yeah.

AD: ... of course, so that, that became enormously important to ...

DIXON: And the Pipeline Institute.

AD: Exactly.

DIXON: Yes.

AD: Yeah.

DIXON: Yeah.

AD: Yeah.

DIXON: And because that arose at the same time, and now that's going through an evolution as well, you know, which is interesting with the provincial government's Innovative Pipeline Strategies approach. So, yeah, there's all these things that fit in, but what I was interested in from my perspective is what was the general thinking? Now, part of this comes from my training both as a theologian, you get this historical [perspective], so you look at these -- so what was driving people to -- either to how they dealt with the issues or why they were doing this, right? And you can find general shifts, and that, and if you know those, it's helpful to understand.

Now they'll change over time. I mean peak oil is getting sunk pretty hard nowadays. But now the drivers that are pushing oils sands and others to improve has got more climate change impact, and land, land use and water use issues. So we're seeing the shift in there and that's fascinating. I mean, we're moving more to an age of "cumulative impact" thinking that we haven't had and we haven't seen in a lot of places in the world; so, yeah.

AD: I want to pick up on the cumulative impact and take us back to your work at the Ministry of the Environment because you were there at the time where the Northern River Basins Study had been done, where ...



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DIXON: Mmhm, that was symbolic, yeah.

AD: ... they were at that point in terms of the policy development of the Ministry of the Environment, they were looking at impacts on the ecosystems and looking at not just individual plants but they were taking a whole land-use strategy for the region. Do you want, do you want to talk about the projects that you were involved in that era because it was a major shift.

DIXON: Yeah, it was, and where it comes back to is Doug Radke [former Deputy Minister, Alberta Environment], okay, and when Doug came in the department and one of his jobs was -- 15 years ago -- was to really unify environment and the fires people, the forestry people and get this as a unified department. And that was part of my job -- was to support the deputy in doing that. And he was successful -- getting -- actually, the problem was, in my opinion, he was getting successful, but one of the successes was/is he sat down and looked at what the vision of the ministry was and he made a major shift from being about the land, the critters, you know, the animals, the water, and it was about quality of life. And what was interesting is that, when we put that in, we had people resign, and I've still got the original resignation letters and I have a lot of respect for these people. They said, if it's not going to be about, you know, this shift -- they understood the importance of the thinking and they were perceptive enough -- they said, if it's not going to be about the environment solely, and not just what the value of the environment is for humans, so this move to an anthropocentric point of view, it was -- like people resigned and wrote some -- I thought very thoughtful letters and really outlined the problem and why they couldn't support the department.

And it was out of that thinking -- okay, if one can point to a single cause, which is very dangerous to do, but if you want a single cause, that was certainly a major driver. It was the shift in thinking to this anthro-centric that the environment is there, that all of us will have a quality of life. Okay? And that came and pushed, oh, the various players and actors sitting in many of these meetings to start looking at, okay, cumulative effects. Why? It impacts, yes, the land, the water, but you know what, it's where we live; right? And so now it's our quality of life -- that we want to have a place to live, right?

And so that's, that was the shift in the department, in the ministry and that was, I think, a natural evolution. I mean originally it started in '71 partly, if you realized that it was part of a "green wave" and there -- this country's had three major green waves, and that was the first one. Towards the end of the sixties, the start of the seventies. And it was not just us, but also the United States. So the EPA was formed at the same time Greenpeace was formed, okay? So here you've got Nixon forming the EPA, moving forward with the Clean Air Act and what they were all trying to do was solve immediate environmental issues, you know, and so you've got huge thinking and Alberta's, a lot of it was tire recycling, what became the recycling programs that we have nowadays, which are really world class.

And that thinking came out of that larger thinking of dealing with these kinds of issues in the seventies. So that by the mid-70s, as the oil sands came up, and they came out of this coal mine engineering thinking, "Okay, we can solve this." It was a -- well -- let's push on the technologies,



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right? And so it was really the birth of the technologies and the engineers to solve these issues and the scientists to solve these, and so the AOSTRA money, the Canmet money, all of that had that type of thinking, you know. And then of course the second green wave was in the mid-eighties and the driver there, if we look at it, was really the Brundtland report [World Commission on Environment and Development (WCED), the Brundtland Commission] and so the issue of sustainable development. So then you've got documents like in 19 -- in the mid-90s being written by the Alberta government, the sustainable development of non-renewable resources, which was really about the oil sands, right? And that came out of the Klein era, and it came out of that type of thinking that came out of the mid-eighties and, as it progressed, that was the second green wave.

And then the third one, of course, 2006, is what happened with Al Gore and the whole idea of climate change and GHG emissions now become a major concern, but if you look at that and how Alberta has been a part of that and our responses with that in the oil sands development, yeah, the connections are fascinating, absolutely fascinating, these questions.

AD: The Department of the Environment, of course, when you joined it had been downsized as a part of the Klein era government restructuring.

DIXON: Well, it was a split. I was there when the split occurred.

AD: Okay.

DIXON: Okay.

AD: Do you want to talk about that?

DIXON: Okay. What happened, in my opinion, and I said it in meetings, is Radke was too successful ... and one of the things was, as an example, and it came down to the trucks. He had one part of the department [that] had thousands of trucks. These were 4 x 4s with winches and everything, but there was more trucks than there were people in the department. So I was in charge of performance measures, so I was looking at all the numbers of the department. I said, "Well, this doesn't make sense, you know," and we found a lot of these trucks, big heavy trucks are off-road trucks, right? And they haven't seen an off-road in their life. So he put in a measure that any purchase of any new trucks had to have his personal signature. Well, that put a kibosh to a lot of stuff. It was particularly in the fires/forestry group and I know that they had had strong political connections and they went down to people in Cabinet and said, "We can't live with this; we need this if we're going to survive," and, you know, fires are sexy, and if you solve fires, you're even sexier -- you know, it's good thing, right? And so what happened was/is that, after those meetings -- you know, it wasn't a surprise a week later the department got split.

But now here's the positive side. The Water Strategy that Lorne Taylor -- okay, so when Lorne came in as minister and very wisely he sat down with a number of us and I was one of those with Strategic Intelligence type of -- we were building that program. No-one had ever done it before and basically the Deputy Minister had come to me and said, "Look, here's the title, now go create the job



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but here's what you need to do." And before strategic forecasting, strategic foresight, all of this kind of work, and so what happened was/is that we put that together, okay, and we looked at the issues of the day that are coming. So, for example -- I'm deviating a bit here -- but we were five years ahead of Bruce Power [CANDU Bruce Nuclear Generating Station] coming to talk about nuclear power in use at oil sands [for extraction purposes -- issue in 2007]. And so we had already studied all the issues around it, and what the concerns were, so that when the new minister, Rob Renner, had to deal with it, we had already had all the back homework done. And that's our job, right? Anticipate what the policy issues are; do the homework; be ready to deal with them as they come and, and so that was part of it.

So when the department split, it was the best thing because the water strategy would never, in my opinion, would never have happened if it had not been for the split of the department because the table was dominated by the forestry, the fires issues and there was little time for the water. So when it came back together, you know, I met with the Minister, I met with the Deputy and said, "Look, you don't, you really don't want to put these on the back burner. I mean especially with water and the oil sands, you can't do that." And so the Water Strategy, part of what drove that was the drought of 2002. But the other part that drove it, which was significant, was with Suncor, okay; and with Eric Newell and Jim Carter is realizing "Look, we can't go past that three percent, but now, if we're looking at ourselves as a whole, we, you know, how are we going to achieve this?"

So when David Percy was brought in in the nineties from the Faculty of Law to write the Water Act, okay, one of the pieces they put in, and which became part of my job as an expert in market-based instruments, was to come up with a market-based instrument in the Water Act that would, eventually, and could be used in the oil sands.

AD: Okay.

DIXON: Okay? And now that's not the first time it got used, though. First time it really got used was with the Balzac Development ...

AD: Right, right.

DIXON: ... and that, so it got used in southern Alberta, and not the north because, and the reason for that is economics, that it costs money to process oil, and when you're processing 33 barrels of oil per one barrel of bitumen, that's a lot of overhead. So there's a natural incentive in the oil companies to reduce their use of water. It's expensive. The processing, the cleaning, everything, and so the farm -- they don't want to use the water. I mean, you know, there's no incentive to use the water. It's expensive. That point you don't even have to put a cap on it.

AD: But it's interesting that you then assigned a dollar value to it.

DIXON: Mhm.



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AD: And that then made it economically relevant because I mean, thinking in terms of household utilities, I mean the price that you paid for water was negligible. I mean, it ...

DIXON: Yeah, and in Alberta, yeah ...

AD: ... it was viewed as a right.

DIXON: But your, yeah, and the problem is you actually don't pay for the water.

AD: Yeah.

DIXON: All you're paying for is the transport and process it from, from raw water to bulk and you actually don't pay for water in this province. And, so we still suffer that we could be much more efficient because we got this water is free. I mean Lorne Taylor got down in Red Deer when we were putting the Water Strategy together and he had some -- he phones me up, oh, it was funny -- and he says, "I need you to put your theology hat on." I said, "Oh, well," and I said, "What, what's what's going on?" He said, "Well, I've just been accused because we want to give water to, that there's water licenses to go to oil companies, I've just been accused that we're sinning against God -- this inventor." He said, "So, how am I supposed to respond?" I said, "Usually when you sin you ask for forgiveness." And he said, "I don't think that's going to work here." I said, "I don't think so either." But it was, it was that kind of issues that, again, what we were driving for in the oil sands and the impact on the whole province in a way that ...

AD: Yeah.

DIXON: ... people didn't realize. Yeah.

AD: And so did you feel that in terms of the environment ministry, you know, this policy shift that occurred post-1999 when you joined the ministry where they began to look at cumulative impacts and ...

DIXON: Yeah.

AD: ... that of course you're having -- that's the era as well where the other players got in. I mean when you've got two companies that's one thing, but as, as the others come onstream the individual approvals process isn't going to cut it.

DIXON: No, exactly.

AD: So can you talk a bit about that process that was developed in terms of approvals and of course water is a central issue because that it ...

DIXON: Yeah.



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AD: ... is, is one of the resources that is drawn on as well as, of course, power, electricity, all of those things.

DIXON: Yeah, rate charge and others are -- like my involvement was to look at the large concept, the trend that was going on and how we could resolve that. And there was three trends that were happening there. First of all, in 2001 you saw more players coming in. Okay, why? Price of oil jumps to 34 dollars a barrel, basically doubles overnight. Okay, so now people -- companies -- do the crunching, go. "Hm, you know what, we think we can make this." Unconventional or conventional oil sources, the United States and other places were drying up; Mexico not looking good, not getting the big million barrel a day oil, so it was, oil sands was "Look, hey, this is the next best thing. And you know what, they've got a lot of the technology figured out, now's the time to jump in."

Okay, so now we had this huge increase in numbers coming in. The science around doing environmental impact assessments also dramatically improved throughout the nineties. So the (Anaise?) and others, you know, a lot more of the rural economy people, the (Katamavitches?), others, you know, the resource economists out of here, a lot of drivers to improve how you do this, okay?

The third one, and the result of this, which provided the third driver, was if you went and I would go in and the boxes that initially, Environmental Impact Assessment would be on --was like six binders, okay. Well, time you get through what happened with Cardinal with the coal; time you get through what was happening with a couple of [oil sands projects] like CNRL and Horizon, all of a sudden, you know, I mean boxes were not doing it. They started shifting to CD disks. They started jumping to massive memory because literally at one point they had this one room full of boxes in the department on one environmental impact assessment.

How you going to manage that; right? And then the interconnectedness towards quality of life got involved in this thinking and then it rose out of discussions -- Tim Yancey, Keith Leggett, Annette Trimbee -- and they all started, well, how do we know -- take quality of life -- the development of CEMA [Cumulative Environmental Management Association] was an interesting one with Randall Barrett [President] and the group there. And what was interesting with CEMA is Randall -- it was interesting [that] he was receiving awards as, you know, best -- he and I would receive the awards all the time for the best, whatever, in 2001, 2002, 2003 and I think they stopped doing them after because we were kind of dominating the scene. But it was just because of the issues we were dealing with.

And so he was doing a lot with CEMA, but CEMA was growing so large and trying to get their heads around how do we now deal with all these impacts, and think about this together because we knew we were coming up to it. So, one of the things that we introduced from economic thinking was the idea of "threshold: thinking; and threshold economic thinking, and we wrote some major papers that were in the department, and that was the last driver that said, "Okay, guys, you're going to hit thresholds and those discussions came out of discussions with the Environmental Protection



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Agency back in 2001 because it was the dominant Resources for the Future, and other think-tanks, were raising this whole concept of threshold. So it's not too hard to go from threshold thinking, which, grew out of Limits to Growth and the Club of Rome, and it was more the economic thinking because Club of Rome essentially failed in a lot of ways. But one of the things was around sustainable-development-thinking in the eighties moving towards threshold thinking and saying, "Okay, now how do we deal with that?"

And so what you saw was these groups coming together and then various people in the Ministry saying, "Okay, let's look at cumulative impacts." Okay, so you had the **Tim Jancy's** and others saying, "Yeah, and what is that going to look like?" And you had -- and it got to be a Cabinet discussion, which was quite interesting.

AD: And when did it get to Cabinet?

DIXON: If my memory serves me right on this, the first time in the Klein era was -- won the award, it was just after -- let's see, we won the award in 2004, okay, and it came out of where we had won an award looking at air emissions and I was co-author of a team that we put together -- the first emissions research that then became the Specified Gas Emitters Program, which is Alberta's carbon tax; okay. We were never allowed to call it a carbon tax, right, but we had already tied our thinking in when we presented to Cabinet that this was part of a cumulative way of approaching this, and that was the original one; yeah.

And it was an interesting discussion with Klein; Ralph told me when we had sat down prior to receiving the Premier's Award that year and we had sat down and talked about it, and the comment that I remember most is -- well, one was -- "Are we going to, you know, if we have an emissions program, where does the money go?" And so there was this great fear that the emissions from the oil sands that as, if we carbon tax it, what happens to the money? And we were thinking about a technology fund; okay.

And then the second was that says, "Yeah, it's the wave of the future; we need to be ahead of this. And, so I give Ralph credit on that one. He very much was pushing for that.

AD: Well, others within the Ministry that I've spoken to have said that, of course, it was under his watch that the Environmental Protection Act, I mean the Water Act, all those significant pieces of legislation occurred. From what you're saying to me is that you have an environment department that is extremely progressive

DIXON: Mhm.

AD: ... and that is heeding environmental trends, economic trends and that in the policy area it is creating benchmark documents that are innovative and are second to none. But that's not what the public sees or understands or hears.

DIXON: It was even a threat to Cabinet.



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AD: Okay.

DIXON: You probably knew about -- you've heard about where that one group was disbanded because they were seen as setting policy as opposed to giving advice to the ministers for policy, and so, when Ron Hicks was Deputy Minister, that was a huge issue he had to contend with -- that, no, we're not in policy. So I was part of the original group that put together what were called the E-scans [environmental scans] and there were six of us. A few of those people have actually gone on to be deputy ministers. And what's interesting is that, and putting those E-scans together, we would look at key issues of the day but we were never allowed to write what we thought the policy solutions would be. So we had to write what the questions are.

Now, historically, which is really interesting, when I left government they gave me permission to keep the original documents, so I've kept those and at some point when we find a good home for them we'll put those in. And those documents were considered Cabinet secrets. And to their credit, people like Ron Hicks and Peter Watson and other deputies and ministers realized that it was the discussion around those documents that was extremely valuable because now it became a way of educating and learning. So, for example, we had looked at cumulative impacts and the thinking on that back in the nineties with these documents, and it was part of the discussion around Cabinet. So there's all this history.

AD: Well, so, because from the perspective of critics of government that -- they view what is happening now as major catch-up and that they haven't done anything for 30 years, you know, the "Sleepy Hollow" syndrome, when in fact that is not the case.

DIXON: No.

AD: Now, you know, David Schindler's charges that the monitoring, which is different from the policy development was inadequate, inconsistent -- those issues. And I don't know whether you want to talk about that.

DIXON: Oh, no; I know David, and David was right -- I think part of it was, and there's this tension from Lougheed, after Lougheed's days, that was part of also when I was studying and learning because I needed to understand the political nature of it -- when the government gets into trouble is when what's in the best interests of a company seem to start to match with what's in the best interest of the province or country; and, if you confuse those, it's hugely -- and there was a lot of crossover and a lot of trust. So, if you look at the Environmental Protection Enhancement Act, incredible piece of legislation.

One of the main contributors to the thinking of that was Jim Carter and Eric Newell. So here's Syncrude saying, "We want to be out in front environmentally," right? "Because this is where we live; this is our community; and we want this to be our legacy, not that we extracted oil. Yeah, we did that well, but you know what, here's our real legacy." So they had that sense of history, and so part of what the -- there was this trust level between government and industry because they were



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wearing these two different hats and, sometimes, you know, in a very positive way industry was taking the lead.

You still see that in Suncor. I mean Suncor took forever to say no to an upgrader; okay, now, is it because of the money? That's part of it. They'd already invested, you know, in the billion dollar range, but part of the issue with Suncor is that they knew an upgrader would be in the best interest of this province. Another upgrader -- got five, need another one. And so they were delaying, in my opinion, to be able to help out this province if it could be possibly done financially, right? And they were looking for every means to make that work. And we knew at the business school -- I'd already done the modelling on this -- there is no way they -- we -- can afford to build an upgrader here. In fact, given our labour costs, anywhere but Alberta, you know. You don't want to be in that; okay.

But you see this confusion between the two and in the Klein era that confusion became overlapping, you know. Some of it was beneficial -- EPA was a good example; Water Act was a good example, where industry did have the best interests of the province in mind as well.

But then, when you look at the Royalty Review, that was a major shift, right? And that was not so much oil sands, there was the natural gas issue, right? And, building the Alliance Pipeline -- was it in the best interests of the province to build the Alliance Pipeline? It was sold as that but, in the long term, it wasn't, you know. The Alliance Pipeline has been -- was a mistake, you know; and the Conservative Party under Ed Stelmach is still hypersensitive to this shipping of the raw natural gas with the liquids down to Chicago and what it did to the petrochemical industry in this province, right?

AD: And several people have mentioned that.

DIXON: Yeah, yeah, yeah and ...

AD: Bob Blair and, you know, the actual getting together -- it was diversification of the whole petroleum industry ...

DIXON: Oh, yeah.

AD: ... and that once you take away its feedstock ...

DIXON: Yeah, because we have to deal with distance. I mean one of the things Alberta, and this comes from Peter Loughheed -- discussions with Peter I was able to have -- is that he said always mind, always keep in mind that we have to be able to transport; so his -- already the access to pipeline issue, [he] always understood that. You know, we always have to access and that will always be our biggest nemesis -- is being able to get our stuff to whatever, where the market is because we're not the market, never will be. Not that large of one, anyways.

AD: So echoing a couple of things that you've said that -- one of them is the environmental waves ...



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DIXON: Yeah, yeah.

AD: ... and that we are currently in a particular one that you mentioned started in 2006, but it has particularities that I want you to address -- social media, you know, those tools to galvanize opposition; and, secondly, the whole transport to market against the backdrop of very international forces that determine, you know, the market ...

DIXON: Yeah.

AD: ... and price.

DIXON: Oh, huge. Okay, what's interesting -- because I did the presentation to Cabinet on the green waves a few years ago and one of my best papers I've -- I'd like to revisit and publish it now. Like I was never allowed to publish, yeah ...

AD: Yeah, it was internal.

DIXON: It was internal, yeah.

AD: Yeah.

DIXON: But it was ... it was one of the fun and one of the things that kept the attention of people in Cabinet is that there's a political consequence to every one of these green waves, right? And, in other words, if a government didn't deal with it effectively, the green wave could crush you, okay. So it's like, see, another lesson that was learned is that every time the green waves come down, they never come down to the same spot they were [before]. It's always a bit higher. So what does that mean in practicality? Well, what it means -- and we're seeing it in this green wave -- is that, in previous green waves, it's always been environment or jobs and that people will always, if the economy is poor, they'll choose the economy over ...

AD: The environment.

DIXON: ... environment. Well, that's not the case here. In fact now, since the work of, oh, Este out of Yale University and others, it's now environment and the economy. Okay? It's a combination and so that's part of the nature of this green wave it's changed that thinking and there's people that have not caught up to that yet. I mean you still see the argument saying, "Well, this is about jobs for Keystone Excel," and, you know what ... it's not selling as well as it used to, right? It's -- and so you may want to re-write your thinking on that; so that's part of where the oil sands -- some of the advertising on ... has been absolutely stupid.

Like one of the things I do to measure is advertising; I'll take my son and some of his friends to the movie theatre; so I've got, you know, 25 year olds and they're saying that that's where you see advertising -- where you can get a group reaction -- and you'll get a gut reaction. So I phoned up CAP here -- couple years ago CAP ran some commercials and was using this -- and, in Edmonton,



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people were scoffing at this in the movie theatre. So you go to movies, which is predominantly 25-year-olds, so like Star Trek in the darkness. Well, there's a lot of Trekkies, older Trekkies, so not the best example, but you got -- what happens is that these people, these 25-to-35-year-olds that we're trying to influence, in fact, are scoffing at the very commercials that think that they're hitting it, because they're using old arguments and don't understand the importance of what this green wave really means, okay. And, as I say, that's a real key change in the green wave. Is it about climate change -- absolutely, you know; but not only, not only; so that's the first part of that question.

The second is on the access to markets; now, there, Joseph Doucette and myself have done some major work on looking at what makes an energy company sustainable, and that's quite important; so access to markets is a key. You need to have access to markets. That means regulatory approvals; it means getting in and having the market structures; having the infrastructure to get there -- quite, quite critical. You have to have access to technology, okay, because energy now is actually -- if you look at the oil sands and why the oil sands is successful is -- when Standard Oil started out, what it was, was not a technology; I mean you're basically sticking a pipe in the ground, turn on the valve; get some oil; isn't that great? And, as it evolved, they understood more and more the dynamics and everything going on; but that was the easy oil. As the world's easy oil is drying up, and that is true -- I mean there's still lots of harder to get to oils.

Subsals in Brazil -- we were there last year -- or sorry, earlier this year. You know, we've gone to places to look at these issues and we're seeing harder-and-harder-oil to get at; and that's now where the theme is -- what does that require? It requires technologies; so, actually, what we compete on in the world is our technology. In the oil sands -- [this] is a particular type of technology not easily duplicated anywhere else, and, as we continue to get it better and better, we will move away from being "dirty" oil, and the worst nightmare that environmentalists can have is what happens when we're no longer dirty oil, right? What happens if we solve the GHG issue, which we will! We solved the tailings issue -- we go back to continuous reclamation thinking and have processes; now, all of a sudden, it's no longer dirty oil. Whoops, now they got a problem; they'll have to -- and I've shared that actually with the head of the Natural Resource Defence Council, who's in charge of the campaign against the oil sands here and he says, "Yeah, we'd have to start looking for something new"

AD: Now, looking at the dead birds in the tailings ponds -- why do you think that resonated so much? Because I think that the images on the web, because I was going to-- that's an ...

DIXON: We were trying to, yeah, yeah.

AD: ... and this is ...

DIXON: Yeah.

AD: ... that the images of the birds and, then, the images of the extent of the oil sands development -- and there are whole sites that have aerial photography of the plants themselves; tailings ponds, you know, and ...



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DIXON: As a visual, it's incredible, isn't it?

AD: Yeah.

DIXON: Yeah.

AD: So, why do those things resonate; whereas, I mean, we know Rio Tinto, you know, any strip mining operation is ugly. There are any number [of examples], you know -- clearcutting in the Amazon -- you name it, but why are those particular images, which have become iconic representing Alberta as the "bad guy" of the environment, and the oil sands industries, why do they have this grip on the public imagination?

DIXON: Okay, first of all you have to understand -- I don't know if anyone's talked to you about "iconic" environmental campaigns - a little bit?

AD: Talk about them ...

DIXON: Okay.

AD: ... only passing, not enough ...

DIXON: Okay.

AD: ... so go for it.

DIXON: Okay. We've studied that and I bring Dan Johnson up from the West Coast, who is the lawyer negotiator that solved the "Great Bear Rainforest" issues, so I mean he's a leading expert in this subject; and Dan and I spent a lot of time talking, doing stuff together. Now, one of the things that Dan's tract is, is what is the life cycle of an iconic environmental campaign, okay? And one of the things that the environmentalists -- and so what you've got is groups like the NRDC [Natural Resources Defence Council] with Susan Casey-Lefkowitz, very intelligent lady. You've got Sierra Club; you've got WWF [World Wildlife Fund]; you got all these groups and they'll spend a lot of time thinking about what is the campaign that we need that helps bring in money, okay. So it's like the "offering plate" going that will help further our objectives in terms of our environmental objectives; and the oil sands, with all our oil companies -- international oil companies -- is a gift in heaven for them, okay. And some of the very archaic attitudes that you see, you know, politically -- like when Smith [Wildrose Party leader Danielle Smith] came up with the fact that, well, the science is undecided. I mean that was -- she might as well as have given the gift to the environmentalists; I mean it made their day so much easier when she was making those comments. Glad that she was never elected, you know, as Premier of this province. Whatever political bent we are, it doesn't matter, the issue is the campaign.

So if you understand from an iconic campaign perspective, there's a life cycle and one of the things they will look for is images, okay. Now, with the advent of social media growing so much -- your



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Facebooks, your Twitters, everything else over the Internet -- it's become a natural evolution for them. So they're looking since -- November 2005 was the turning point. Pembina comes up with the *Oil Sands Fever Report*, okay. You're seeing a lot more -- you go from two or three people, or two or three environmental government organizations focused on oil sands to today 35 of them are now focused on [this]. So part of it is -- they know it's a money-maker for them; two, it's an incredible opportunity for picture taking -- I mean it costs you \$120 to take an air flight around the oil sands and you can take all the pictures you want, and let me tell you, you can't miss by taking incredible pictures. You know, I take students up and see this.

And, so, now you have the -- for the ducks, I mean, for heaven's sakes, you know, that was -- there's a story behind that I'll share in a minute, but so now with the iconic campaign, now you move to this next stage of -- you do the reports; you do the studies; you continue to do those, so that keeps the **layer**. Next, you find the images that you want, and the next level is you find the phrases, okay? "Dirty oil."

AD: Mmhm, and "tar" sands ...

DIXON: And tar sands, yeah.

AD: ... and you're going back to re, reintroducing the old terminology.

DIXON: The old terminology but now in a negative way ...

AD: Yes.

DIXON: ... and giving it a negative nomenclature and, then, what you do is you globalize it, okay? And so the Europeans who have none of our oil, don't buy oil sands, are now looking at changing rules just so there are rules that would exclude any possibility of oil coming, which never would, into their marketplace.

AD: Well, Germany in particular and then ...

DIXON: Yeah.

AD: ... the Institute, the partnership with the U of A and not wanting to see oil sands research as a part of that.

DIXON: Yeah. Yeah. It's an interesting issue. We just came back from Helmholtz [Institutes].

AD: Okay.

DIXON: And we are sitting looking at what we could do for evaluations, and we talked to them directly, you know, about, okay, what was going on there and what, how the Green Party there is driving their policies and research agendas, and that kind of thing, and many of the issues they have



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with reclamation, especially in East Germany -- or sorry, the former East Germany -- it's huge. I mean you buy a piece of ... you buy an old house there and you got topsoil, if you're around Leipzig area, you're looking at soil that's 500 times the arsenic, permitted arsenic level. You're looking at lead that's thousands of times the permitted level, you know. Like hundreds of thousands -- it's, I mean, their environmental issues are -- they're not so better off than what we're doing, I mean -- but it's not as visible.

AD: They trade on that ...

DIXON: Exactly ...

AD: ... green image.

DIXON: Yeah, which may not be quite as green as -- and in fact that's the lesson we were learning. Going into a brown mine -- brown coal mine? It didn't look a lot different from going into an oil sands mine; you know, in fact, a lot of the engineers that were with me are like "What's the issue here?" Yeah. But, anyways, it's how this is portrayed -- so the environmental campaign -- and so to understand these, go through these types of -- and at some point we'll see a potential negotiation between key environmental groups and the Alberta government and the oil sands people saying, "how can these be done and how can we do this differently?"

AD: Do you see that happening?

DIXON: Yes. When? Going to be a while but that gets back to the access to markets issue. I mean, some of the -- like the NRDC and these people -- I mean they're economists; they understand access to market; they understand technology; the social license; the, you know, the access to social - or to capitals, human and other capitals; so they understand these issues and they think these through very clearly. Yeah, so, like the idea of "raving lunatics" is not at all fair and their driver is, is climate change. They want to deal with the climate change issue. They know we're not a major contributor to climate change, I mean we're less than 1/10th of one percent. I mean we're not a major contributor.

AD: Although you wouldn't think that from ...

DIXON: Wouldn't think that from the advertising, no.

AD: ... yeah, from, and ...

DIXON: You know, and you get people like James Hansen out of former NASA making these hugely exaggerated claims, but part of the problem is -- who has credibility to make those claims? And, so, you know, one of the problems is having people that can stand up and say, "You know what, that just doesn't make sense."



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AD: But you see, in terms of government, you know ... you've described these iconic environmental campaigns and how they manipulate people to think in certain ways, and to donate to their causes.

DIXON: Absolutely.

AD: But then you look at the companies and I mean you look at Syncrude and how it dealt with the second-wave of, of dead ducks; you look at how CAPP, in terms of its public service announcement types of campaigns; and you look at politicians, both at the federal and provincial level who haven't taken any of that into account -- they're still spouting the same old, same old. They're spouting jobs; they're spouting, you know, how it benefits Canada as a whole -- so Thomas Mulcair is messing around with the competition between the regions, Central Canada and the West, etc.; and the industry's just, you know, basically rubbing their hands and sort of moaning.

DIXON: Yeah, but that's -- if you look at the research we've done on environmental campaigns ...

AD: Yeah.

DIXON: ... that kind of responses are fairly normal; it's, if you think of it from -- now here's my pastoral side -- if you think of it from death and dying, it goes through the same processes, right? So, when you've got denial and, you know what, "We just ignore them; it'll go away."

AD: Go away, yeah.

DIXON: Right? And then we'll, you know, we'll get angry about what they're doing to us and they'll go away. And we'll just deny them; they'll go away. And we'll maybe bargain a little bit with them, and then they'll go away. And ...

AD: But it's not working.

DIXON: It's not working; it's not.

AD: I mean and of course it isn't just, you know, the tar sands as the poster boy of bad environmental practice and ...

DIXON: Which it's not.

AD: ... global corporation's greed, I mean which is the way it's presented.

DIXON: Yeah.

AD: And then you look at the two pipeline debates and, again, it isn't about facts; it's about -- it's about emotion; it's emotion that has been ...



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DIXON: And it's old thinking. I mean you take, for example, why did we get the ducks in the first place? What happened in the corporations? So this is the question. Well, who took over management of Syncrude? It's Exxon. Exxon does not have a good track record environmentally.

AD: No.

DIXON: And they don't really care and they've never really gotten on the bandwagon of saying, "Hey, we really care about the environment." They've never dis-eluded people from that perception of themselves. So what happened is, as we saw with the court case, they had no intention of putting ducks out because I remember I sat with the Minister when he got the news about the ducks and he said, "Well, I guess it must be the snowstorm." I made the comment -- this is the other side of Strategic Intelligence -- I made the comment and I said, "Well, yeah, we never get snowstorms in April in Alberta, never happens." And the realization hit him. He said, "Yeah, okay, there's something else going on. So when are you going to Fort McMurray?" "I guess this afternoon, sir," so I went up and dug around. They had no intention of putting out the duck bay, no intention. And I think, if you talk to the old Syncrude leadership, you would hear to a fault from them that they were very much -- that would never have happened on their watch.

AD: On their, yeah, and I've heard this.

DIXON: You've heard that, yeah, and it's true; and so what you've got is this attitude and it carried through with White, the Exxon lawyer, and what was interesting is that he was portraying that they were defending industry by going to court; and I phoned around and asked a lot of the executives in several corporations, "Is that true?" They were pissed off and angry.

AD: Exactly.

DIXON: Yeah, and should be. I mean if, under Exxon management, Syncrude said, "You know what, we screwed up; here's three million dollars to Ducks Unlimited; here's our commitment for the future -- it won't happen again; and ducks matter." There's several of us feel that when Exxon was taken to court that they thought we were worried about the three million dollars they got fined and didn't, and never came to them that the ducks matter. For a lot of us, the ducks matter. Yeah, and Stelmach missed the boat on that too. You know his comment about "Well, we lose more ducks in windmills." Not the point, you know, and I think Ed lived to regret saying those words, right? So, yeah, the ducks do matter because it does come out of an environmental legacy in the seventies in this province that the Albertans were very -- and the polling showed that -- Albertans were very proud of an international environmental reputation. And so Lougheed very much pushed on that and carried that through; and Klein was very aware of it, right? And so that needs to be recaptured and it's going to have to be done differently.

I've already made suggestions. You've heard me on media and other places, so, we've got a GHG emissions program. Now, having written it and helped write it and being involved in it, I could say it was -- I thought it was really good -- but that's kind of self-serving. But I think the mistake is that we never made it bilateral. We should [have]; there's seven provinces that are basically in China that



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are using a similar methodology that we're using. Why aren't we partnering with them, right? I mean that's where you show leadership, you know. Nobody has a GHG emissions program with China. We can be the first.

AD: But you could say, and others have said it that, you know, the Syncrude incidents and pipeline spills within Canada and within the US by Canadian-owned companies, or largely Canadian-owned companies, really are a part of a perceived disregard of the environment ...

DIXON: Totally.

AD: ... on the part of gov ...

DIXON: Yeah.

AD: ... on the part of government, right?

DIXON: Absolutely, yeah; and, is it unfortunate timing -- absolutely. Is it incidental? I mean you look at the long-term trend -- that long-term trend is actually pretty good on pipes, you know, but that doesn't matter. In fact, you had Plains [All] American [Pipeline] down in Red Deer; you had -- Enbridge buys an old pipeline, the regulator screws up; they screw up and pull it to Kalamazoo. The Exxon pipeline carrying quote/unquote bitumen in Mayflower, Arkansas, you know, all of these, I mean, add up to images.

AD: And then you link them to ...

DIXON: Yeah.

AD: ... the Harper government's position on Kyoto and so ...

DIXON: Yeah, and Joe Oliver [federal Minister of Natural Resources] making the comment that we've got a really good track record; we don't need to improve it. I mean, what an arrogant statement to make; and, you know, when you're in this and you're thinking of it from an engineering perspective, you're thinking of it from this type of arrogance. Not going to solve the social license issue; not going to get there and not going to happen, you know.

AD: Now, in terms of your work in the Department of the Environment, were there other issues that you were involved with? And maybe you can talk a bit about that related to oil sands or environmental protection.

DIXON: Oh, name it. What do we want to talk about?

AD: Well, talk ...

DIXON: Give me ...



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AD: ... about other oil sands issues in terms of the regionalization of the review and approvals process, say; I'll throw that one out.

DIXON: Ah! That was interesting. That was interesting. Again, one of the key drivers was regionalization; you know, how do we do this and the realization that Wood Buffalo, as a municipality, was trying to now become more involved -- and this growth with CEMA -- that was a huge issue for them, and trying to get that to work properly was the main driver and it was part of a trend that we were seeing. So you're seeing the rise of -- particularly of Wood Buffalo as a municipality -- and the work that they were trying to do for their own credibility and move forward; absolutely key in all those things, yeah; very interesting meetings that went on.

AD: So then, in a sense, if I hear you correctly, you're saying that that region, which was a huge economic driver -- I mean in the old municipal structure of government, you know, had no powers around this huge resource that was being exploited on its doorstep ...

DIXON: Yeah.

AD: ... so that you create this new entity ...

DIXON: Yeah.

AD: ... with some additional powers, including some environmental powers ...

DIXON: Exactly.

AD: ... and then you've got -- they want to have more control.

DIXON: Yeah, essentially, yeah, and a good example of that is you see Ken Chapman went up on the Oil Sands Developers Group -- great job, their ... time; he's still up there now but stepping out of that role; but where he's involved in -- Wood Buffalo -- in the municipality because there's more grass-rooting of the issue, you know.

Another one that was interesting to me was royalties, okay; now, the royalties issue and this is fascinating because for the oils sands, the original thinking -- I don't know if you've come across with others on this - is that the orig ...

AD: I've interviewed a number of people who were involved in ...

DIXON: Yeah.

AD: ... the setting up the royalty regime, you know, that was ...

DIXON: With the oil sands, yeah.



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AD: Yeah.

DIXON: And did they mention to you the original -- what I heard from probably, maybe the same people, is that the reason they kept the royalties so low is that, one, was the attraction of companies, but the main reason was that the resource was so large it was seen as worthless.

AD: No, nobody has ever said that ...

DIXON: Yeah.

AD: ... that, which is an interesting ...

DIXON: Isn't it? Yeah.

AD: ... you know.

DIXON: Yeah, it was seen -- and it came up in the courses I had with Rick Hyndman and we had those discussions -- is that the resource, I mean the massive size of it, even though it wasn't recognized as a resource for the books -- it took 2005 -- and then all of a sudden Canada's oil reserves jumped from, you know, this to like this in one year; much would happen in natural gas after shale in the United States. Okay, so they had that problem, and, so, essentially the giving it away was an attraction to companies but also it was seen as like it was -- we've got so much, it's not worth anything because -- and, you know, if companies can get it out of the ground. So, it was a different attitude as opposed -- and one of the people that then started to shift that attitude was actually Lougheed, okay? And Lougheed said, "No, this is valuable; maybe not today but it will be, and let's not give this away.

AD: Well, you see, I mean the whole issue of the development of the natural resources of the Western provinces, as you know, the geological surveys happened in the 1880s and 1890s.

DIXON: Yeah.

AD: The Mines Branch drilled the first three test wells in the 1890s and that the delay in actually giving Alberta and Saskatchewan rights over their minerals

DIXON: 1930s.

AD: Exactly.

DIXON: Yeah.

AD: 1905, they became a province and that, as you know, the preamble to the legislation states that to bring these two new provinces into line with the other provinces and their rights, etc., I mean so



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that there is that statement that it is redressing the imbalance because they had to wait 25 years to get the mineral rights.

DIXON: Yeah.

AD: But that basically the government, both levels of government, the University of Alberta under Henry Marshall Tory saw the University in service to the economic development of the province.

DIXON: Yeah.

AD: And so, you know, he [Tory] hired Clark and brought him out here ...

DIXON: Out here, yeah.

AD: ... because he had seen the critical report that Clark and a colleague had written about [Sidney] Ell's huge disjointed report on the oil sands and their potential; so, the province wanted to see this and that, when you look at Manning and the 1951 symposium, I mean it was a giveaway to the companies.

DIXON: Oh, yeah.

AD: I mean, they still felt that it was conventional oil that was really, you know, and agriculture, I mean those were the ...

DIXON: Oh, yeah.

AD: ... the two underpinnings of the Alberta economy and so for them, the potential of the oil sands had not manifested itself, and not made itself evident so, therefore, you could go with those dirt cheap lease prices, which were staggering ...

DIXON: Mmhm, yeah.

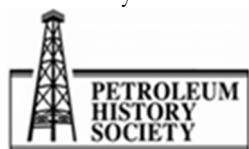
AD: ... and I mean it was a giveaway.

DIXON: It was, absolutely; and you saw that within natural gas and you saw that within the oil sands, right? And the only reason royalties and natural gas went up is because we were selling most of it to the United States, I mean made them pay for it, right? But with oil sands that thinking never really came in because, again, the resource was so large, technology needed to be developed and so it was seen as a freebie and a cheap giveaway, right; and fascinating, you know, isn't it? How ...

AD: It is.

DIXON: Yeah, it's absolutely delightful.

AD: But you have to have that distance.



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AD: Okay, now that the new card is in the camera, do you want to revisit the whole issue of royalties? We were talking about that fact that it was a giveaway ...

DIXON: Yes.

AD: ... in that there was so much of this resource and that it was unproven, and if you could continue that ...

DIXON: Yeah, so ...

AD: ... train of thought.

DIXON: So, when it came to the Royalty Review, so you had Bill Hunter [Review Board Chairman], Andre Plourde, and they went and did the homework and the Royalty Review basically didn't touch the oil sands people, and part of the reason for that is the oil sands realized we were getting a freebie; and, yes, we should at some point be paying more. And so you had the Eric Newell's, the Jim Carter's at that point were still in charge with Syncrude; you had the Rick George's at Suncor saying, yes, we need to renegotiate but, yes, we should be paying more. Okay, and so there was that realization among the early participants, yes, we're getting over this hump; as we get over it then, yes, the royalty question, and there was a willingness to look at that. That was never the issue.

The issue with the Royalty Review, and that was the original impetus though, was looking at the oil sands. If it had stayed there, that's fine. The biggest pushback came, actually, and this gets back to when you give someone something for free is Encana. The biggest pushback came from Encana, and Encana was from Alberta Energy days from the old, you know, where they were created as a corporation and basically given a whole bunch of natural gas rights and making all this money, and they were the ones that petitioned hard-and-long against this, and really misinformed Albertans, right? They said, "Well, we have to shut down because of this." No, they had to shut down because the price of natural gas dropped off, right? And so they did a tremendous disservice on that, on our fair share, you know, and our own group has looked at seeing in the next, oh, five, six years we're going to see that being revisited; you know, you'll see ...

AD: Well, you have to re-examine the royalty regime.

DIXON: You have to, yeah, and that's going to come up again ... in a ...there's no appetite for it right now ...

AD: But, I mean, certain ...

DIXON: ... but Albertans themselves will drive it within five to ten years.

AD: But, in terms of Premier Stelmach, I mean that was really a huge wound to his personal self-esteem and vanity, but also then the oil companies really did turn against him.



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DIXON: Oh, they really did, yeah, and ...

AD: Making it untenable for him to continue in his position as Premier, I mean one ...

DIXON: Yeah, and ...

AD: ... could go that ...

DIXON: ... and then we ran into the interesting problem of what was good for the company was seen as good for the province ...

AD: Yes.

DIXON: ... and when we get -- we lose track of these two things.

AD: Public private interest, right?

DIXON: Exactly. And we lost track of that and, at some point, it comes back to my “reffing” -- sometimes you have to pull out a red card and pitch somebody out, you really do. And, you know what, it takes a lot of courage to do that because for a referee you’ve got 22 people on the field; none of them think you’re doing a good job; and sometimes you’ve got to pitch someone out and nobody agrees with you and you’ll have no respect but you’ve got to make the right decision. And, and that’s where -- it wasn’t just Stelmach, it was the Cabinet and they confused that interest and you see a lot of the ..., you know, there’s a lot of materials at that time and they lost track of that one.

AD: And I mean the threats to drill elsewhere -- I mean in terms of drilling in Saskatchewan -- certainly did gain an impetus and even in BC ...

DIXON: Yeah.

AD: ... as a result.

DIXON: Yeah, and that was something that we pointed out in our E-scan reports is that you needed a -- Alberta, BC and Manitoba really need to have a unified royalty structure and a unified tax regime because otherwise they’re going to be played one off the other. It’s pretty easy to put your rig on a truck and drive, you know, 300 miles and start over. It’s not that hard and ...

AD: But do you see that happening?

DIXON: Yes. Oh yeah, it already has.

AD: Okay.



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DIXON: Yeah, that process is already in place, and this realization that you get played one off the other. And, you know, from a company perspective, fair enough, I mean they should do that, you know, that's the incentive of the system. So deal with the incentive, and I mean, for example, the oil and gas industry puts about \$6 billion into BC each year for energy development and I daresay that we'll see a gas pipeline from north-eastern BC to the Coast sooner than we'll see Gateway -- won't be an issue for them.

AD: Now, of course ...

DIXON: And ...

AD: ... you -- it's an interesting career trajectory. So you move, you actually do your MBA and you focus on natural resources and energy specialization. What prompted you to do that?

DIXON: Ah, okay. Well, Mike Percy more than anyone -- I came back and decided I wanted to step back from the church, okay, for a while, and wanted to have a job where I could have evenings free to raise my children; okay, so that was it. I won a scholarship that took me into the MBA program and Mike Percy was trying to get this natural resource/energy/environment specialization going.

AD: Okay.

DIXON: So here's -- now have you interviewed Mike?

AD: No.

DIXON: Okay. Now Mike might not tell you this story but he had gone to the faculty and said, "Okay, we need to have this specialization area be a program; we're the heart and centre of energy development in this country and we don't have an MBA about this." In fact, there, at that time there was only about two or three universities in the world that had it. Okay, now there's five. And Mike said, "Okay, let's have this." So he turned to the Faculty, "Who wants to take the lead?" And there was a resounding silence; none of the Faculty would do it at that time. So Mike got a guy named Rick Hyndman, who had been recently fired by Steve West [then Minister of Transportation and Utilities] over the electricity deregulation and the Alliance Pipeline issue, which Rick had stood up against Steve West, and Steve's solution was to get rid of him.

So Mike Percy picks up Rick Hyndman and says, "Can you help get this program together?" Rick says, "Absolutely." So they do a couple things; when they get an economist named Andre Plourde -- we talked about him in Royalty Review -- to move from Eastern Canada. Andre turned to another economist, Joseph Doucette, who's our Interim Dean now, to come in. And so Joseph came in 2000; I'd already graduated when Joseph came. Fact, I was in his -- now here's the humour -- I was on his interview committee where he has to do a lecture in this very room. I sat over there. And so that was the history of this; I was part of the first class looking at -- part of the drivers for me is I had an economics background, had a transportation background, had an offer to go back into the



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railway if I wanted to; wanted to get into something different. Had -- when I served a rural parish here in Alberta -- had a really good chance to see the movement of energy, what was happening, how it impacted and had a sense of the importance of where this was going, a sense of where the oil sands were going, and said, "Yeah, want to be on the ground level here."

So, I had a chance to be with six other people on the very ground of the NREE program [MBA – Natural Resources, Energy and Environment Specialization] as it started out; and the fun part of it is that, as I mentioned before, is that Rick Hyndman turned to a couple of us mature students and said, "Well, you got to help us out." So in the 563 program, which is the introductory course, we actually made the course up in that we said, "Well, let's do site visits. Let's go out and visit and understand energy." And so we went over 30, 35 places, right? And we went to welding shops, machine shops; we went to the pipes, the Shaw pipes; we went out to Genesee [power plant]; we went out to a lot of places looking and understanding.

And now we did that for two reasons: one, for us to learn; and the second reason was to advertise our program because nobody knew who we were, nobody – "Oh, we got this new program." We went up to the oil sands. Suncor gave us a chance -- we went right into the mine site, mean right up and I actually -- we were taking pictures and we were standing beside one of the big buckets, put my foot on the bucket and it melted the bottom of my railway boots I was wearing. I mean, you learned about -- oh, these things get really hot, you know. Never occurred to us, right? So we had a really grassroots meeting of people and really got to know the industry quite well.

Most of us in that original group stay in touch with each other. One -- interestingly enough, three of us ended up in the Strategic Intelligence side; two of them in corporations --one is Enbridge, for example, that looks at these kinds of strategic foresight, strategic intelligence type of work. So, when we graduated with Rick Hyndman and in doing this work and then a lot of us stayed in support of the program. I moved into Alberta Environment, actually right in the internship; I was still a student -- was hired in even as a student and helped to be on the ground level of a lot of this stuff with the oil sands. So what was happening then, you know, 15 years ago, so lot of fun, lot of fun.

AD: So, then when was the Centre for Applied Business Research in Energy and the Environment established?

DIXON: Ah, CABREE -- okay, Joseph established it in 2000 and what it was, was just a centre with no staff, and he would do some research and the idea was eventually to try and build it up. And, so, here he's working as an energy economist doing a lot of great publishing, but having this little Centre of which he was the academic director and then trying to bring in more professors like Andre and others to -- Andrew Leach, **Ivan Ivankovich**; now we have Dr. Emilson Silva, who's our new academic director; we have Mike Maier, we have an accounting aspect now, and so we've expanded in number of PhDs that are doing energy, environment type work. And so that was one aspect of it.

Another aspect was to improve the quality for the students of the courses, so now we do international trips to study energy worldwide; and we have relationships with Colombia, with



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Germany, with Brazil; we're looking at one with Australia, ... one with, we have with George Washington; we have a lot of expansion in student.

And then we -- the other side -- the third one was advocacy. So, in other words, we enter in and help the public debate on issues. As you know, I'm in the media now four, five, six times a week explaining the "energy literacy" part of it, but also saying, this program makes no sense, or this works; and so Andrew Leach does that; Joseph does that; I do that. And, so we're quite involved in that program.

I became its first director. I came over on a secondment in 2008; I had already been invited a couple years previous to actually teach the course I helped develop as a student, and I continue to do so to this day, which is an absolute delight. And meet a lot of fascinating international students, very exciting. Then, I've become the director, executive director of this program and now we've expanded -- we have more staff -- I hire; I work with grad students; I have grad students several times a year. I've got other staff. We have a lot more PhD people now doing research. We do a lot more publication, and as I say, we carry -- what makes us unique among centres, not just for this University but for most universities in Canada is we have all three mandates. We have the advocacy; we have the students; and we have the research. Most will have at best two of these, you know, most have one, maybe two, but we have all three.

AD: It's been fascinating how the oil sands have impacted on academe and I've interviewed a number of department chairs and former deans, and you have talked about the engineering side, you know, technological challenge and so on, overcoming those with respect to the industry, but you know, when I interviewed Fred Otto, the Dean of Engineering, you know, eighties, nineties and so on ...

DIXON: Yeah.

AD: ... head of the department etc.; he started -- he created the first environmental course within the Engineering Faculty that looked at emissions in 1981.

DIXON: Mmhm, yeah.

AD: You know, so ...

DIXON: He had **Randy Engle** and others, yeah.

AD: Yeah, I mean ...

DIXON: ...of that, yeah.

AD: ... and so ... and then of course we've seen the specialization in all aspects of oil sands technology, but I mean not just about the separation process, I mean now there's computer modelling used in all sorts of ways.



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DIXON: Oh, yeah.

AD: I mean, Jacob Masliyah and so on. So that it's interesting that, on the humanities side, you know, this MBA was created that looks at resource development, energy; it looks at economics and then the environment because today and, you know, we've talked about the iconic campaigns that governments and industry at their peril don't take into account what's happening and to re-examine -- and that there's a tremendous opportunity for a whole range of science and technology involved around the mitigation of environmental impacts, the treat -- you know, going back to sludge and what you you were saying before, and that an institute, well, an MBA that is specific to resource development, resource management, energy and a centre like this, I mean seem to be leading-edge.

DIXON: Mhm, very much so; yeah, and it's part of the natural evolution. If you look at what happened with the development in the North Sea, it went through its heavy technology, focus on the engineering side, and as that progressed more dollars were available; then it -- they started to pick up on the economic side, and so you take what Saïd [Business School] at Oxford has done. We're actually catching up to them quite quickly in terms of their MBAs around energy. Now they obviously have drawn a huge name, which, you know, iconic name, but it's an interesting process that they go through. And we're smack dab in the same kind of process.

AD: So ...

DIXON: ... an evolution, as these things grow ...

AD: So, do you see your students being hired by oil sands companies, by CAPP, and so on, which appears to be failing in terms of the public relations war?

DIXON: In terms of CAPP, we don't have students in there yet; I mean they've tried to take a couple of our professors.

AD: But that's okay, too, I mean ...

DIXON: That's okay too, yeah.

AD: ... they move between ...

DIXON: They move between ...

AD: Yeah.

DIXON: ... but there's certainly been much more awareness, I mean, Dave Collier, Janet Annesley; the discussions we have back and forth and the challenging that we do with them, yeah, and the influence and the impact we can have with them, absolutely. In terms of oil companies, we have a number of oil companies where we have ... graduates of our program are vice-presidents; and so ...



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AD: In what, in what areas -- vice-presidents of what, what portfolio?

DIXON: Well, it depends what the portfolio is at the time, right ...

AD: Okay.

DIXON: ... today but we've had, in terms of -- well one that comes to mind is the development of the Voyageur Project, okay, with Suncor, and then moving into other things that also involve social license development. So what we're having is that this influence of the social license aspects to an engineering ... and stuff, yeah, we're seeing our students becoming in those positions now, and approaching those quite differently, you know.

AD: Well, you talked at the beginning about being an ethicist in terms of your divinity degree and do -- I know that universities now have positions -- bioethics, you know, whole range of, of stuff. Do you want to talk about the social license to operate? And is it just a buzzword? And specifically relating it to the oil sands.

DIXON: Yes, is it a buzzword? In one way it is in that it's very intangible. I mean, the best academic work that's been done on social license is at UBC for the mining industry. Okay, and so there they've made it a lot more tangible. Americans that come up here that we've had -- American professors that come to Canada now will often comment the first time they heard about social license is when they came to Canada.

AD: Interesting.

DIXON: Yeah, very, very interesting that we, our understanding this and are ahead of this. I think where the big jump has been made, and we'll see this with Pat Daniel and discussions he's had with our students, we've seen it with (Ella market?) and others where they will come in, and we asked Pat, if you had a regulatory approval for the movement of bitumen to the West Coast through Gateway - - you got the tribunal saying yes, would you go ahead given the circumstances that you don't have a social license of any kind, particularly from the West Coast First Nations. And his comment was, "You know, it would piss off Ottawa but we wouldn't go ahead and develop."

AD: It's fascinating.

DIXON: Yeah, so there's a realization in companies that -- and it's risen with the social media -- is that there is a sense of permission-giving that one has to have in society as a whole. Now, if we had that for some time, absolutely; does it show up in regulatory? Yes. Does it have to show up in regulatory? No. I mean the classic story is actually here in Alberta ... with Hinton. Okay. Pulp-and-paper mill. Huge, I mean *Victoria's Secret* publishes a million catalogues a day. That paper was supplied out of Hinton, okay. And they were in a forest agreement that thought, gave them this social license. Well, it didn't and Forest Ethics and others were able to convince *Victoria's Secret* that these forests were not managed correctly and that they would end up with all these campaigns



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against them, and it would cost them from a marketing perspective, and so they cancelled the contract.

AD: Wow.

DIXON: Right.

AD: Now ...

DIXON: And so ...

AD: ... can ...

DIXON: ... so it's a very -- so going back to your point, is it a buzzword? No, I think what it is, is it's a description of the kinds of things we're seeing with the rise of environmental organizations.

AD: Okay.

DIXON: Right, and we're now trying to put word to a power that they have within the context of our marketplaces, and because it's outside the -- oftentimes outside the regulatory regime, right, ... but yet it has real power.

AD: So, in other words, if I understand correctly, that, you know, this third wave or it's even a fourth wave of environmental activism is now promoting this notion of -- we've had other buzzwords -- stewardship, wise use, all of this -- now ...

DIXON: Yeah, sustainable development.

AD: ... it's -- exactly, and that it's the social license to operate. Can you define that in layman's terms what, and who originated the use of this terminology?

DIXON: UBC again was really the best academic work and that's where you see the first use of it being used; and the understanding was -- is the permission of community, which included First Nations, to be able to operate within that community. So, if you look at the approach of primary industries, okay, here's a sand and gravel company on the West Coast and what they have done is gone through a social license approval with the community long before they started actually applying for their approvals so that the community supported them through the approval process.

AD: So, in other words, that kind of social impact assessment that aims at getting community support for the enterprise that will then -- I mean ...

DIXON: The proposal.



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AD: ... and when you look at the long history of the industrial revolution, I mean this would've been anathema to the investors, you know, the entrepreneurs ...

DIXON: Yeah.

AD: ... who started those ...

DIXON: Yeah.

AD: ... enterprises.

DIXON: Exactly, yeah. Well, even in the sixties, okay, like I was branded in, when I was in grade 11, you know, so 16-years-old and I was branded a Communist because we were part of a group that stood up against the pulp-and-paper mill coming into Kamloops, BC without any pollution removal equipment for their air emissions. And they literally killed the valley; I mean the stink was terrible. It actually, you know, destroyed the quality of life that we had. And we were told that was the smell of money was the way they were selling it. And so we protested and the way we did -- we embarrassed their vice-president because of the -- also the pollutions that they emitted into the river. Yeah, it was ...

AD: The bleach process.

DIXON: Oh, it was terrible, you know.

AD: Yeah.

DIXON: And it just -- it absolutely destroyed the environment and our embarrassment -- their industry response was to try and have us branded as Communists and kicked out of school, right? So that's, you know, so that's why we cut our teeth on these things. So, has social license evolved out of that type of concept? Yeah.

AD: ...which is something very serious; so it isn't just rival media campaigns, which going back to CAPP ...

DIXON: Yeah.

AD: ... is, you know, those three minute -- "Aren't we wonderful," you know?

DIXON: Yeah, and that'll solve the problem.

AD: Yeah.

DIXON: I mean the realization is, is that the environmentalists in a time when the United States needs jobs, okay, wants jobs, has been able to stall Keystone Excel at least five years.



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AD: Yeah.

DIXON: Right, amazing. You know, and the TransCanada response has been an engineering response: “Well, we’ll make the pipeline better or we’ll redirect it.” What’s that -- social -- it’s a social license problem, it’s not an engineering problem because they fixed all the engineering solutions and said, “Okay, now, now let’s go ahead.” Well, you’re still not getting there and you haven’t gotten what the real issue is.

AD: And so would you say then that, in, in terms of the pipeline through British Columbia to the Pacific ports that would then take it offshore, I mean what’s going to happen with that?

DIXON: Gateway is not going to happen. It’s dead in the water. Given what Adrian Dix did was the best gift he could’ve given industry by -- on the road up to Kamloops and he just changes the policy of the NDP government; and Kinder Morgan. Now it’s interesting, *Vancouver Sun* interviewed me when he made those comments and said that, you know, he didn’t want Vancouver to become a major oil exporting port. And my comment was, “When did it stop being?” Because it already ships five to seven million tons of oil out a year already and has been since the, you know, into the fifties, for God’s sake, you know.

Our next-door-neighbour in Kamloops where I grew up was air -- helicopter pilot that flew the pipeline route to make sure there was no leaks. And so we grew up with that.

AD: And, of course, that technology was developed in Alberta ...

DIXON: Yeah.

AD: ... the infrared scanning.

DIXON: Yeah.

AD: You know, which, which again ...

DIXON: But see, we had the wrong conversation; the Alberta government should’ve not realized is that, if you think of it from a social license perspective, okay, think of it from an engineering perspective, what do you do? Go get a project and you go through a regulatory process and you deal with your social license; wrong conversation; wrong conversation. What we should’ve had was a province-to-province discussion on the energy corridors that not only exist today, how they might be improved and what others might be envisioned. That should’ve been the conversation of the day. So, have an energy corridor conversation. Now we’re having that conversation, maybe in two-week’s time with Christy Clark having a new mandate and Redford. And given what -- why Clark got the election -- but we had the wrong conversation. Well, why did we have that wrong conversation? Well, it was driven from an engineering perspective -- engineering/economics. And if we had started with a conversation that said, “Okay, what do we have already -- well, we’re shipping 300,000 barrels a day currently. We have been since 1953. It goes down to California to



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the Westminster Refinery -- sorry, Burnaby Refinery -- and that's what that oil is used for and we've had ... this is the kind of track record. Oh, by the way, we've been shipping petro-chem -- petro products, CN and CP, for how long and this is the record we have with them, okay."

So, we already have two energy corridors; we have an electricity corridor that needs to be thought about and we have natural gas already. Okay. So that should've been part of the conversation in history, much like what the work you're doing -- understanding the history of what's already there. Instead, we've got this apparently new conversation of "Let's build Gateway and ... "

AD: And let's ram it down, you know, the community's throats.

DIXON: Yeah.

AD: And it's really going to change the hearing process. I mean if you have to do this front-end work of working with communities ...

DIXON: Oh, yeah.

AD: ... it's going to make it less combative and, you know, quasi legal.

DIXON: Oh, yeah. Very much so, and Enbridge had a sense of that and they tried to hire me on to actually do that ...

AD: Oh.

DIXON: ... ten years -- almost 12 -- when I had graduated.

AD: Yeah.

DIXON: I was asked to interview for that but I realized I'd be living in Northern BC basically out of a suitcase to make it work for ten years. And, really, it's like the Berger Commission; you've got to go live in the community.

AD: Yeah.

DIXON: You know, if you're going to go build a pipeline through this thing, guess what? Top people have to go live there.

AD: Now ...

DIXON: And Enbridge had a sense of that, they did -- were they successful on all fronts with it? No. And that was a mistake that they needed to realize that they thought they had tacit agreement -- needed far more than that. You, you needed a proactive agreement, right?



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AD: Now, you mentioned the Berger Report because of course that was, you know, the consultation with the Aboriginal people -- I mean all, you know, the whole McKenzie Pipeline stuff. But it's interesting now that you've had emerging this notion that perhaps Aboriginal communities can have more say about what happens on their land by actually becoming entrepreneurial in their own right, and that you then look at the nurturing of Aboriginal companies through Suncor and Syncrude and, and Shell, I mean, I mean all of them are now doing this kind of thing. Do you see that as a trend ... in terms of resource industry?

DIXON: Oh, totally. Yeah. Yeah, so, is the train going continue? Actually it will continue even -- I think we'll -- much more it will become part of our understanding of it... that it'll become more and more. It's already a bit of the regulatory process that we see, for example, companies have to prove they've done community consultation. That is going to have to -- where the company doesn't have to come in and prove it. What's going to happen is you're going to have -- to see the community say, "Yes, we've been informed; yes, we understand this; yes, we'll be supportive of it." So, for example, the same communities that are objecting to Gateway have already approved another pipe -- energy pipeline. And that was with the Galveston Pipeline and that's the natural gas pipeline out for an LNG plant in Kitimat. They've already approved it, right, and that's the First Nations and others have already said yes. I'm not sure if you're aware of that, but ...

AD: No, I wasn't.

DIXON: Yeah.

AD: But you've seen proposals coming forward ...

DIXON: Well, this ...

AD: ... from Alberta First Nations in terms of an upgrader or whatever.

DIXON: Yeah, economically ...

AD: Iffy. But still ...

DIXON: Not, no, it's just not doable.

AD: Yeah.

DIXON: Yeah.

AD: But they're looking at these.

DIXON: Yeah, you've got **Blackhouse** on the interview with David Black, who is the new newspaper person who wants to get into the oil business.



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AD: Yes.

DIXON: And is looking at a refinery in the West Coast ...

AD: Yeah.

DIXON: ... and doing exactly what you're suggesting. Is it possible? Hm, might be. Is it good for the country? Absolutely. Is it a tough economic sell? Yeah, not easy; but it's good for the country, particularly BC and Alberta.

AD: But so the Aboriginal people should not be passive and just being consulted for their input ...

DIXON: Yeah.

AD: ... and traditional knowledge that now they're actually looking at as economic agents and wanting to ...

DIXON: Yeah.

AD: ... take part in this ...

DIXON: Yeah.

AD: ... resource development.

DIXON: You know, who's a leader in that? Syncrude. Syncrude was a leader, so for example, the bus companies that does a lot of the transport of workers was First Nations. Right?

AD: Well, the whole range of companies ...

DIXON: Whole range of ...

AD: ... transport, cleaning, you name it.

DIXON: Name it. And Syncrude was very much involved in them saying, "You know, let us help you to be more entrepreneurial so that you end up with benefitting from these things that are happening on your land, and let's explore ways that we can do that." Yeah, there was -- there was a huge understanding of that social license aspect then, right? And, in other words, they worked with the community, you know. It's -- we're giving name to something that we've had for a long time; it's simply that we're -- and some people just do it much better than others.

AD: Yeah, and that it makes business sense not to tick off the community that you're going to be doing ...

DIXON: Yeah.



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AD: ... whatever it is that you do. Is there any other issue because it's interesting to talk to someone who had taken -- who has worked within a ministry and understands the politics of energy, but also then, as an academic, being able to take that time to reflect and to look at trends. Is there anything that you feel the oil sands are going to have to address?

DIXON: Mm, in other words, if we look into the ...

AD: Future.

DIXON: ... into the future. We've done that. One of the things that I teach is energy scenarios and how you develop them. Now the reason you do scenario working and not forecasting -- and forecasting is interesting but it doesn't get you all the way -- is the trouble with forecasting is what's the price of oil going to be? Right? Nobody can -- if anyone says here's what it's going to be six months from now, I mean maybe you're the head of OPEC maybe, but other than that it's not going to work. So you're going to invest in a project that's going to be around for 60 years and it's going to develop oil and it's going to cost you 12 billion dollars, and you don't know the value of the main product you're selling? You know, so ...

AD: It's the worst business case, isn't it?

DIXON: Yeah, it's like -- and you're going to the bank to get money for this? Uh, you better have something other than forecasting. And, so, what we teach is scenario and scenarios to think about the future. Say, what are the drivers today and what are the potential drivers of the future? I think part of it is Alberta needs to deal with its self-image. You know, we've bought into this somehow we're the conveyors of bad, dirty oil, which is somehow bad and we've lost a sense of our own history around the environment. It's those things we need to recapture. You know, like one of the things I point out in papers and otherwise is that we're very much -- our incentives and driver is OPEC, but we live in an OECD country, right? So we're not an OPEC country. So we've got this almost schizophrenic kind of thing.

Energy literacy will continue to be an underlining issue that people need to grasp onto, understand that, but the real future is going to be as we look at what we can do that others will benefit from. And we've lost track of that. So, going to back to air emissions -- like we have a program and the reason we got into air emissions was not really to reduce GHGs; 15 dollars a ton doesn't do it. That was actually not the key driver. The key driver was to learn how to do it so that, if an emissions program does come up from the federal government, which it didn't, then we would be in a position to, you know, to match it and deal with it and understand what the issues were. That was the real first original driver.

However, now we've got a very good program, but we're like Sony with Beta -- we're holding onto it for ourselves. So, how do we use that and say, "Okay, you know, China is increasing the emissions; how can you reduce the intensity? How can you move someday to being in a cap-and-trade program, and do that effectively?" So, it's a lot of these things that we have developed. How can we sell those into the world? And how can, then, we promote those people in the world that we're



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benefitting that they can turn around and they speak up for us. That's where we'll gain our credibility. We're not going to gain it by us standing up and saying, "Hey, we're incredible." Doesn't work, right?

I told one of the deputies when he came over to speak here – "You come across the river, your credibility comes to university here; it goes up by 20 percent." So, I'm consulted several times a week by media and others on energy issues of the day. Do I feel that different -- that I've gotten all that much smarter coming into academia? No, but it's the credibility that comes with it and hold onto that. So, how do we regain that credibility? Well, it's got to come from who we're partnering with and how it benefits them, and that's the next evolution of the oil sands, and we're not there yet. No. And I see [Boris] Jackman [EVP Suncor] and I see others thinking about it, but I don't see any real processes in place.

AD: So, basically, it's taking the social license to operate from something that you spout about and you embed in your corporate mission statement or vision statement or whatever, which is there, but really actualizing it, making it a reality.

DIXON: Yeah, and then part of the other evolution is we take the phrases that we feel branded with and, "Yeah, you know what, we do produce dirty oil but here's what we're going to do about it; and here's what we've done about it."

AD: Yeah.

DIXON: And so you take that which has been -- like kids that were bullied because they're nerds -- well, the nerd revolution has occurred.

AD: Exactly, you make it into a positive rather.

DIXON: Yeah.

AD: But you see, I mean, you know, entities like ... and these restructuring and with the whole environmental focus and the research, having an environment ... all of these things, right?

DIXON: Yeah, COSIA [Canada's Oil Sands Innovation Alliance] is interesting, like OSLI [Oil Sands Leadership Initiative] which is the precursor; now it was five companies. COSIA's not fully all the environmental players but you're moving up there, and we're studying that very closely. Now, the danger with COSIA, which obviously doesn't have -- COSIA is not telling -- it's not the same sharing of the technologies, but it's still very much in-house.

AD: Okay.

DIXON: Okay? And the other problem is that they still -- I think there's a real danger and there's some discussion among many of us on this -- is that COSIA can get to the point of saying, "Well, what's good for the company is good for the country."



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AD: Ah.

DIXON: And for the end-pit lakes, for example, somehow we've become convinced that these end-pit lakes, instead of just reclaiming the tailings ponds, just capping them with water is going to be okay, and it's a good science. Well ...

AD: It's still, you know, it's still laboratory science, isn't it ...

DIXON: Yeah.

AD: ... you know.

DIXON: And, and they're talking 200 years to prove it out?

AD: Yeah, none of us are going to be around, of course, so

DIXON: Exactly, yeah.

AD: Yeah.

DIXON: That does not buy you social license.

AD: Yeah.

DIXON: No one's going to be convinced ...

AD: Yeah.

DIXON: ... you know. And, in fact, one of the papers we're working on right now is that we look at these kinds of concepts and we've got pictures of lakes that have been used, like in other mining operations.

AD: Right.

DIXON: And they're filled up with water, yeah, and they're full of arsenic.

AD: Yeah. Yeah, so you can't ...

DIXON: Yeah.

AD: ... make them into a liveable, viable ...

DIXON: Viable ...

AD: ... envir ...



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DIXON: ... ecosystem, yeah.

AD: Yeah.

DIXON: I mean, "Sorry, you haven't convinced us," so.

AD: Yeah.

DIXON: Yeah, so I think we need a different vision and it needs to be more provincial and where companies need to recognize that they're -- that they lived not to their vision but they have to live out a provincial vision and ...

AD: Yeah ...

DIXON: ... and that leadership.

AD: ... well, and it also brings up the whole issue of Canadian ownership and Canadian -- or if not Canadian ownership, Canadian management -- because, of course, I mean I've had people who were involved since 1967 saying that, at some point, there should have been a greater assertion of Albertan and Canadian interest.

DIXON: Yeah and ...

AD: And that the model that because such huge resources were necessary, you have to have partnerships.

DIXON: Yeah.

AD: But you didn't have to give away the family farm.

DIXON: Yeah, and the point of having a national oil company.

AD: Yeah.

DIXON: I mean you look at -- and you've probably heard this from others -- is that 75 percent of the world's resources -- energy, oil resource -- are controlled by national oil companies.

AD: Yeah.

DIXON: Used to be 25 percent. That 25 percent that's left, half of that's in Alberta. Right. And, so is that -- what does that tell you? Well, it tells you where the angles are going to focus.

AD: Yeah.

DIXON: Right, because it's that last 25 percent that they can impact.



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AD: Yeah.

DIXON: Right, and so we got that 12 ½ percent and we haven't figured out our own image enough to deal with that 12 ½ percent; yeah, exactly the problem.

AD: So, I think this is a wrap.

DIXON: Good.

AD: Thank you so much ...

DIXON: Oh.

AD: ... for agreeing to be interviewed.

DIXON: Yeah, well you're more than welcome. Seemed like I rambled a bit, but ...

AD: No, it's all a part of the primary resources that we're creating.

DIXON: So you're getting a wealth of this stuff. What are you going to do?

[THE INTERVIEW CONCLUDES.]



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