
BRAD ANDERSON

Brad Anderson was born on February 18th, 1961 in St. Boniface, Manitoba and grew up in Edmonton. He attended the University of Alberta where he obtained a BSc degree in Geology in 1983. He joined the Alberta Research Council as a junior geologist. He was seconded to the Alberta Oil Sands Technology and Research Authority (AOSTRA), where he initially undertook contract work and then became a full employee as Technical Information Officer attached to the Alberta Oil Sands Information Centre. Anderson next became Technology Transfer Officer responsible for communications, engineering and geological studies as well as making sales pitches. In 1996, when the Alberta Department of Energy took over AOSTRA's role, he moved over to the Department and became Director of Oil Sands Policy. His time in the Department included the era of the National Oil Sands Task Force (1995) and he assisted his boss Richard Masson, Paul Precht and others in determining the Royalty Rates and lease tenure policy that resulted in the enormous growth in oil sands development from the mid-1990s onwards. Anderson authored or saw through publication a number of key studies including one published March 2nd, 1994 titled "Applicability of SAG-D Technology to the Athabasca Basin." In 2000, Anderson became Executive Director of the Alberta Chamber of Resources and the Construction Owners Association of Alberta on the retirement of Don Currie. The Alberta Chamber of Resources is a resource based cross-sectoral industry association that provides leadership for the orderly and responsible development of Alberta's natural resources. The Construction Owners Association is an owner organization for large heavy industrial projects that promotes construction excellence and safety in Alberta.

Date and place of birth (if available): 1961, Saint Boniface, Manitoba

Date and place of interview: Feb 28, 2013 in the Alberta Chamber of Resources Boardroom.

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Executive Director

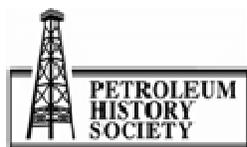
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Name of interviewer: Adriana A. Davies, CM, PhD

Name of videographer: Jimmy Bustos

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

Consent form signed: Yes

Transcript reviewed by subject: Yes

Interview Duration: 2 hours and 9 minutes

Initials of Interviewer: AD

Last name of subject: Anderson

AD: It's Thursday the 28th of February and its 9:10 am and I'm interviewing Brad Anderson, the Executive Director of the Alberta Chamber of Resources and the Alberta Construction Association.

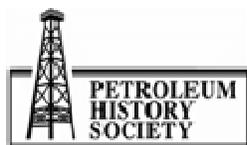
ANDERSON: The Construction Owners Association of Alberta but close enough for government work.

AD: Thank you. This interview is part of the Petroleum History Society Oil Sands Oral History Project. My name is Adriana Davies and I am the Researcher/Interviewer, for this interview. Brad thank you so much for agreeing to be interviewed.

ANDERSON: My pleasure.

AD: Can we begin with some biographical information? When and where were you born, and then can you provide just a summary biography with highlights and then we will drill down, excuse the pun, once we have done the summary biography?

ANDERSON: Okay, well drilling down, I am a geologist and a member of APEGGA [Association of Professional Engineers and Geoscientists of Alberta] so I will start with that. I think your question was where I was born? I was born in Saint Boniface, Manitoba; in the St Boniface Hospital where a whole bunch of people from Western Canada seemed to be from, as I'm discovering. I was born in 1961; I am 52 years old. I grew up in Edmonton, and went to school here and university here, Geology. I graduated in 1983, from the Geology program. Then I started immediately after I graduated with the Alberta Research Council, in the Alberta Geological Survey, and I worked there for about a year. I stayed with the Alberta Research Council and I was transferred to the Oil Sands Research Department and worked there for a number of years, closely with AOSTRA - Alberta Oil Sands Technology and Research Authority. Then, I was seconded to AOSTRA in sort of a technology transfer and commercialization role and did that kind of role, and progressed in that role



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for a number of years. I was officially made an AOSTRA employee at some point, I think about 1988, or so. Worked there, happily at AOSTRA for a number of years – an extremely exciting outfit to work for, and then in, I'm going to say, 1997'ish, transferred into the Alberta Department of Energy and sort of worked my way up there to be Director of Oil Sands Policy. In 2000, I came to the Alberta Chamber of Resources and Construction Owners Association of Alberta. So that's 12 and half years ago.

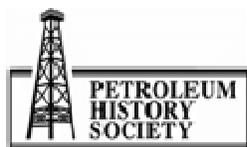
AD: Excellent, thank you. So can you tell me about what your initial work at the Alberta Research Council involved?

ANDERSON: Yes, well I started off initially as kind of like a Junior Geologist and so I did some analysis of some gas plays in Northern Alberta, that sort of thing, I worked in what was also called the Aggregate Division, looking for sand and gravel, which I just loved doing. But then I moved into the oil sands side, in about 1984. I started off ... it was a time when it was pretty hard to get, you know, a decent geology job, so I found a really great little home in there where I got to do a bit of combination around working in geology and oil sands geology. I did, for example back then, I did a geological assessment of the old Bitumount Site, for a client for the Alberta Research Council, and it was a client out of Utah, so I did that piece. And I worked for what was called the Oil Sands Information Centre and that was set up by the Alberta Government to sort of disseminate research in oil sands and share it around industry and shared around the world. A very, very progressive sort of thinking outfit that was tied into what AOSTRA was doing, AOSTRA was developing technology and this group was disseminating the technologies as best we can. I had that kind of split role there and I really loved that because what I got to do, at that point, was meet all the players in research and development in oil sands and, actually, it turned out to be quite a great thing to do; sprinkled in a little geology here and there; and a little technology licensing here and there. It was a great way to start my career as it turned out. I always thought I wanted to go back to the Alberta Geological Survey and I still do, kind of; but that didn't happen.

AD: So, can you tell me the greats of that period, you know, and how you connected with them, some anecdotes?

ANDERSON: Well, yes, the greats of that period. As I took that job, I'm working right in the AOSTRA office; I'm sort of entering into my secondment into AOSTRA, and AOSTRA was led by Clem Bowman and there's the first great. Wow! There I got to actually see one of the great leaders of oil sands in action and Maurice Carrigy - oh my gosh - who is the Vice President and a geologist. Those guys really knew the business and they knew what needed to be done so that this vision from Peter Loughheed to develop the oil sands - a very clear vision it was. Go figure out how to get the oil out of the Athabasca, Peace River, Cold Lake deposits and, then, once the oil is out of the ground figure out how to upgrade it and ship it. Figure that stuff out and, then, you know, here's 100 million dollars a year budget; get that matched by industry. So that was great to be a part of.

I was very junior when I started there but I got to work with these great, great guys. I remember very vividly when they were planning the underground test facility – UTF. I wasn't on the project at



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that point, but I was called “Field Pilot Co-ordinator” so I was gathering up all the information on it as we were getting ready to do it. We were all a little bit nervous about whether - at the time it was a lot of money, government money, all AOSTRA money, a couple hundred million was going to pay off.

I think we ended up being about 180 million dollars into that project, at that time, before any industry came in, and so we were all nervous about it. Just to be a part of that. I’ll never forget. I presented a paper on the applicability of SAG-D to the rest of the Athabasca deposits. I looked at the geology, and this engineer came up to me after - he worked for a big Oil company - and said, “You guys are so lucky at AOSTRA to get to work on this new stuff. All we get to do is apply what is already out there. You guys are kind of figuring out the other ways to look at things.”

Anyways, that was in the early part of my career, just to be a part of that, I wanted to be a part of that. I got to be a part of that. I got to learn a whole bunch and work with, I think, with some of the greatest pathfinders that the province has ever had, honestly. I just kind of soaked it all in. That to me was – through the 1980s and early 1990’s - that whole period was a tremendously exciting place to work, and I kind of think that, in the end, we changed the scope of oil sands technology with SAG-D - steam assisted gravity drainage. We kind of rolled that out and commercialized it, and licensed it. I actually got involved in the licensing part which was incredibly interesting. It was all good.

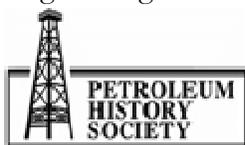
AD: Now, who were the researches involved in charge of UTF at that point?

ANDERSON: The Underground Test Facility. There are two components to the research. There was the preliminary work, you know, you hear Dr. Butler sort of generated the first concepts around it. I think it came out of, from my understanding, the thought came from the Potash Industry, I believe. And he worked for AOSTRA at the time, Dr. Butler. I think he planted the seed with Clem Bowman. So that research part, the invention, if you like, came from Dr. Butler. The application of the technology was with the engineers and geologists that worked on the UTF Project. So, there were a number of leaders on the UTF project. I can’t remember all their names now that kind of built the thing, but behind them were these incredible guys like Neil Edmonds, who was in my opinion one of the great Reservoir engineers that the world’s ever seen; Harbir Chhina, who’s now with Encana/Cenovus. Those are the guys I think that really pushed the bounds of engineering; there are others too, I guess.

AD: Dave Redford was the manager of Engineering for AOSTRA and I believe he was involved.

ANDERSON: Yes, Dr. Redford was a big part of AOSTRA. He wasn’t directly involved with the Underground Test Facility. It would be more on Rick Luhnig’s side of things [Vice Chairman of AOSTRA], in terms of the upper management.

There were two components to AOSTRA - an Edmonton and a Calgary component. I started in Edmonton and then moved to Calgary. In the Calgary side, it was kind of where the Reservoir Engineering was done and, really, the home of the UTF project, so I was in that group. My role at



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that point, in the late 1980's and 1990's, turned to the commercialization of the technology, or getting partners to buy into that project. I wasn't involved in the technology development per se, although I was on the Management and Technical Committees of the UTF Project.

AD: Now, I want to ask you to continue and talk about how you recruited partners - industry partners - to become involved. But I want to backtrack a little, as we both know and one wants the historical record to reflect this, when AOSTRA was doing this, under Peter Lougheed's direction, this was a period of economic downturn in the industry, a worldwide recession. Yet, the government took a giant leap of faith, committed big bucks and didn't require industry matching at that point. Is that fair, do you want to talk about that, the economics of doing this?

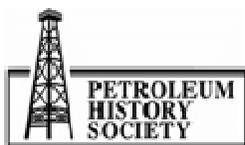
ANDERSON: Yes. You know, give full marks to AOSTRA but give full marks to the Alberta Government for sticking with AOSTRA, for planting the vision, and sticking with it, because you are right. If you turn the clocks back to the early 1980's you have the National Energy Program on top of a bad economy. Things weren't too good in the oil patch in general. If you look at the rate of returns for companies working in the Western Canada Sedimentary Basin at that point, it's grim.

The governments didn't have a lot of money coming in but they stuck with the investment in AOSTRA because they knew. I don't think they could do it today. There is not that kind of vision and strength of character in our system, and I just don't think it could happen anymore. But, even during these tough times, we had a big budget and we did a lot, a lot of research. We did try to match money, dollar for dollar, with industry. But, you are right. For example on the UTF project, we didn't have any industry buy-in until we were 160-180 million dollars - and that was a lot of money back then - into the project, until we actually had oil flowing at pretty good rates from those first SAG-D well pairs.

The government took a leap of faith and stuck with it. The "stick-to-it-ness" of the Alberta Government in oil sands and, then, sharing that information was absolutely incredible. I don't think governments anywhere in the world have ever done a smarter, bolder thing that paid off as big a dividend as what they did at AOSTRA.

We had an *Oil Week* article done about us in about 1989 and we were flabbergasted. They spent about a month with all our researchers, the *Oil Week* team, and they came back with this assessment that AOSTRA was like NASA, in terms of its scope in braveness, in research and somewhat in dollars too. We spent more than a billion and maybe close to 2 billion on various things, what a payoff. On just the SAG-D part now, today, and I am way out of scope of even understanding how the technology has advanced in the last 13-14 years since I have been out of it, I do know there is something in the order of around 100 billion dollars of SAG-D projects, either built, planned to be built or under construction.

The dividends to the province and to Canada are something like that. The Alberta Government hit a jackpot with that research, but what a brave thing that they did; that's Peter Lougheed. But, then, the government changed and they stuck with it for a long time during those really terrible times. We



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used to sell - we did all our project economics on the UTF and we were hoping, we thought everything would be great, if we could see \$18.00 a barrel, WTI [Light Sweet Crude Futures] in Chicago. And, of course, we had a bit of a bitumen bubble back then. Bitumen was selling for \$12 with a projection of \$18 for conventional, so that's another perspective to remember - nobody thought oil would hit at \$100 a barrel. We were hoping for \$18 a barrel and we probably could make a go of it. Every 10 cents that we could save on the cost of production, we did. We spent a lot of money on research to reduce our cost of producing a barrel of oil and 10 cents was a big thing, a buck was huge, \$2 was make it or break it.

AD: Now you get the hard-core private enterprisers saying. "Oh well, government has no business in research," but of course this is the second generation of major government-funded research. Since the founding of the Research Council of Alberta, in the 1920's, and it was discontinued during the 1930's, the Depression.

ANDERSON: I didn't know that.

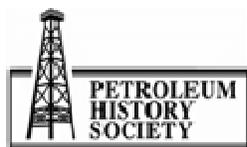
AD: Yes, it shut down, and Karl Clark, basically, was able to be kept on because he was given a full-time appointment at the university.

ANDERSON: Okay.

AD: But you had nearly 30 years of government-funded research that tied the development of the resource industries into the development of the province. And, of course, with your current position, you know about the setting up of the Alberta Chamber of Resources. It had a different name at that point but it worked hand in glove with government and the research establishments in the universities as well the U of A at that point, and the Research Council of Alberta were really seen as an extension of government.

ANDERSON: Yes, and it's funny you say that. I'm awfully proud now to say that I worked for the Alberta Government, because I do view now AOSTRA and the Alberta Research Council as part of that. I've got to say, at the time, I was pretty happy that we were a Crown Corporation; we had a separation, because I didn't really understand the leadership that was coming from the Alberta Government as much as I do now.

But, to your original premise there, I do believe there are times when government can make better calls than industry, in particular, around research where industry just can't necessarily afford to do the kind of research that will materialize in 10-20 years or 30 years, to your point. They can't do it as well, sometimes, as government with a vision and commitment. You know, it's hard and my experience - I worked on other technologies, other than the Underground Test Facility - some failed. They didn't do so well. That's okay. We were criticized very hard for the failures. We were even criticized for our successes to be honest with you, but there were a lot of industry doubters about AOSTRA and, specifically, around the UTF Project.



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If you would have believed that industry always makes the right call, I don't think that technology would have been developed in the timeframe that it was developed in at all, and maybe not developed. That's my personal belief that AOSTRA stuck to it. It took 1600 barrels a day of production from some of these early well pairs, over several months, and showing that data to companies before they grudgingly accepted that this may be working.

So, I give full marks to the Alberta Government for doing that and, I think, to me it's an example of where governments can call things right too, especially on the strategic things, and especially on things that they own. The Citizens of Alberta own the oil sands resources; they own all of the resources in this province so who better to unlock it than the actual government. It's really in the vested interest of Albertans for that to happen. So, perfect match, and a very strategic match. If you are going to spend a lot of money in research and development, spend it on something you do own, and your inherent advantage.

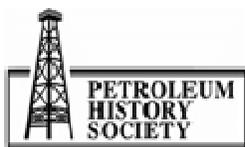
Again, I don't know how Peter Lougheed and all those guys figured it out but they were very smart. I think the lesson is today, trust your smart leaders and know who to trust, and trust your researchers, and know who to trust, and ignore the outside noise. Maybe it's easier said than done. But that's what happened with AOSTRA; all that outside noise during the 1980's when prices were terrible, a lot of noise to shut that AOSTRA down. Industry could do it if it needed to be done so don't do it. You know what, that was all wrong. Actually, what was right was to continue it and get those one or two really big wins. There is personal opinion there.

AD: Now, you started to talk about how you move that SAG-D technology from the test facility, out there, to the field. Now, do you want to address that?

ANDERSON: Yes, so you know, I think I'm a good salesman. I am an Okay geologist, but I think I kind of connected a few dots, and I did that because I just listened well. I listened to my leaders. So, when we had the SAG-D technology, and we knew it was working, we went to all the big oil companies and we said, "Here's our results!"

Sort of one by one they kind of came on, and we actually sold the technology and a slice of the interest in the project for - I think at the time was about 8 million dollars per 8 and a third share, something like that. That was a big investment in those days because that was probably at a time that Shell had two people working in oil sands. But they bought into the Underground Test Facility, and were part of the technical team and part of the management team. And, so, taking the UTF Project which kind of grew from, say, 1,600 barrels a day to 2,000 barrels a day, and I'm not sure what it peaked out at. I don't know, but we had results from a reservoir that was average.

A lot of people think that UTF was put on a reservoir that was easy pickings; actually, we got a crappy lease. I call it a grade-B lease. Enough pay but it wasn't as thick as other leases, and it had some other characteristics. It had some shale going through it that was tricky. So, we didn't have the best lease but we did market it and it was very neat.



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And this is where I think, as a geologist, I made my biggest contribution I'll ever make. We looked at - here's the UTF Project; here's how it's producing; here's the kind of reservoir that it has; and I worked with my former colleagues at the Alberta Geological Survey and what was the Energy Resource Conservation Board folks as well. We had some data from all of the well logs over the 50 years that had been drilled in the Athabasca area in general. I think some 5,000 well logs; detailed information. And we just asked - here is the criteria that worked at the UTF - at least 15 metres of bitumen pay times percent of bitumen in place. I can't remember the numbers; seems to me, 8 mass percent of bitumen or something. It jumps out of my head; it's been a while since I've done that kind of stuff. But, anyways, it had a certain characteristic of thickness, of richness, of shale in there, of water at the top or the bottom, and so we knew what kind of characteristics based on our UTF project would work. And then we had this computer system that nobody else had, and nobody else was actually looking and we mapped out the whole Athabasca area and said "Okay, here's a bunch of areas that have better geology, essentially, than the UTF Project. Here's our economics, and those involved in a lot of the economic studies as well, and we were shocked at that. It was very cool, I remember a couple of, and I'm not sure if I should mention specific companies or not.

AD: I'd like you to. Who came on board?

ANDERSON: Well, I remember a number came on board. I, mean, eventually we sold all of the interest in that project and off it went to industry. But the ones I remember most vividly, Suncor studying it to death, and we worked really hard and they had some good leases and it became Firebag. And they were also looking at Burnt Lake at the time, and they studied it pretty hard and they had some very sophisticated ability to study it and they bought in.

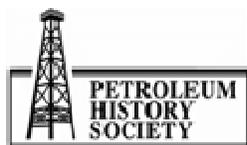
So that was an interesting, and every company was different. Japan Canada Oil Sands [JACOS], that was the biggest pleasure and dealing with those folks. You know, I remember taking their - I guess it would be the President of Japan Canada Oil Sands - up to our site and they had a pilot at Hangingstone at the same time but they were using different technology and theirs was struggling a little bit. Walking them through the UTF Project and then sort of describing to them, and actually pointing to "Over there guys is your leases and you've got, we can tell by this particular geological study, you've got 3 or 4 places that are particularly applicable to SAG-D, and here's the results that we got. You can expect these kinds of results; you'll have to pilot a little bit and play around with it, but expect these kinds of results in your leases." And they bought in and they became real leaders.

AD: And who was the president at that time? If you can't remember, don't worry?

ANDERSON: Junichi Matsumoto.

AD: Okay.

ANDERSON: I don't know why I remember that but he became a friend of mine after that so I guess that's why. I haven't seen him in years. Junichi Matsumoto, brilliant guy, very brilliant guy and, you know, there is only one other jurisdiction that has more commitment to the oil sands, than the Alberta Government and that is the Japanese; unbelievably committed to the Alberta oil sands in so



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many great ways. The one that I remember - and they are all different - we had a similar kind of sales pitch to all these companies, and all of them received our pitches differently. Gibson Petroleum was an interesting one, where we kind of just presented it to their president in their board room. He basically said at the end of the meeting, "Cut them a cheque," to us, "We're in."

AD: And do you remember who that gentleman was?

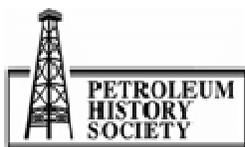
ANDERSON: No I can't remember who that was but, where some took months and months of discussion, he saw a different kind of opportunity. Gibson's actually ended up running the UTF Project eventually. He saw an instant connection to market. We weren't so tied into - he was tied into the value of bitumen and they were in the transportation and marketing side of bitumen. They got into the production side, and they saw a completely different win than some of the companies. It was interesting their reaction. That's my recollection of their reaction; it happened that fast. We made the presentation and, boom, cut them a cheque for 8 million dollars, which was a lot of money back then.

AD: And if you hadn't worked with a team to put together this database of information about the formations and their potential and their applicability to the use of SAG-D technology, you couldn't have done the sales job.

ANDERSON: No, we couldn't have done it. Not only was the Alberta Government rather smart in creating an organization like AOSTRA to go after the technology, they were equally smart in having the Alberta Geological Survey and Energy Resource Conservation Board be the real experts on what the resource basket was exactly. They knew better than any industry, I think generally, what was in the ground and where. I would say a lot of that knowledge is maybe captured in reports but the expertise has floated to industry now. And maybe that's Okay, but at the time they knew what they had and they knew what technology they kind of needed to go after, and some like SAG-D was very successful. There were other technologies that were really successful too.

AD: So, if I understand correctly, this last point is that some of the research leaders then went over to the oil companies and some of them have ended up in denior management positions. Can you name?

ANDERSON: All of them; they are all gone. Neil Edmonds, I'm not sure where he is at. Harbir Chhina is with Cenovus, and heading up Cenovus' great SAG-D operations. It's just phenomenal. I mean SAG-D doesn't even look like SAG-D anymore; they have changed it all. It's still called that, but they have advanced it to their reservoirs beautifully. The whole team of reservoir engineers that were with AOSTRA have all moved to industry; had moved either before or shortly after I left AOSTRA as well. We all kind of migrated out. It was a good thing that expertise kind of moved ashore. And the Alberta Geological Survey got away from a lot of oil sands research and they got kind of swallowed up by the Energy Conservation Board, so they have expertise in that but it's kind of, I think, industry come up to speed on knowing on a broader level what's in the ground.



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Let me tell you something that may shock you a bit. When we first published, and to me as a geologist, I had two papers that I'm very proud of, and one is called "The Applicability of the Steam Assisted Drainage Process to the Athabasca Deposit." It doesn't sound like much of a marketing phrase does it? It's a technical paper, but it was a good sales piece, trust me. So we had mapped out the entire Athabasca Basin where the rich zones were, and we had them in red; and we mapped it and showed it, and so if you were CONOCO at the time, you suddenly had, and it went public this data, "I got a red dot, that's good on my lease, maybe I should be looking at this."

But, when we first presented it, I might have had - it was at a Canadian Heavy Oil Association meeting in Calgary - and I had presented it and, I think, there were a lot of yawns and "not really sure what to do with this information" reaction in the crowd, but I wasn't too disheartened by that. Some were getting it and we knew it would catch on. We all knew at AOSTRA we had something that was going to change the world, just so you know, we all knew it. We just didn't know how long it would take to really catch on, and we were really concerned with the price of oil and how hard it was to ship it out of Athabasca at that point.

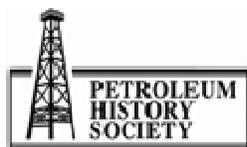
It was too big a challenge but we knew we had the technology in place to probably make a go of it. But I wasn't too disheartened by the reaction that I got because, at that same conference, Don Riva who was with Suncor presented Suncor's move to truck and shovel in front of six people. I think three of us were from AOSTRA. And those six people in the audience, and I'm exaggerating to make a point, but there weren't many people, knew the world had changed on the surface mining side of things too and, I think, Syncrude had done something similar too. But that was the first kind of public exposure that I had seen and it was on the Suncor side and we realized, "Oh, my gosh!" And there were six people at this particular seminar. Over in the "whatever the trend of the day" was, they had 300 people listening to another story on whatever it was, but oil sands were a non-interest.

AD: And what year would that have been that conference?

ANDERSON: That would probably have been the early 1990s, something like that. So, we were still kind of struggling along there. We had probably eight or nine companies signed on to the SAG-D UTF Project at that point, but still we were working pretty hard to communicate what it might mean beyond the UTF Project. And, honestly, that's, in terms of my career, I enjoy what I do now but that was incredibly exciting to be part of that world. We solved something and we would have to go forward; we have a project that works but we can't figure out how to get our bitumen to market, sounds familiar today?

AD: Yes, the parallels.

ANDERSON: The only way we could sell the UTF Project, well, initially we couldn't really sell it to Syncrude and Suncor because they would only give us what they called their "marginal cost per barrel." They wouldn't really give us enough to make it worthwhile. We did sell bitumen to them and that was helpful but we realized we had to get bitumen south to find a better market. We



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trucked it all that way. Can you imagine trucking bitumen from Fort McMurray to Hardisty? And that's how we did it to start getting bitumen into the "bigger system," from our perspective. Cold Lake Imperial was doing fine on their marketing of bitumen, but we were just learning the game. And we realized very quickly, the only way this was going to work was if we have a pipeline.

So, actually, that was my tie into ACR [Alberta Chamber of Resources] on this piece. That became a big focus of my job: "Okay, so we are done with the geology bit and not done with the technology, but we got a good story on the technology, a good story on the geology; what about the market access? Oops! So, let's go after that one." We worked with ACR to develop pipeline scenarios out of there, and they were very great to work with. They costed out various pipeline options, like heated, hot-bitumen pipeline to Syncrude; various pipeline options to Edmonton or Hardisty; various dimensions of pipelines, anywhere from 20 thousand to 60 thousand barrels a day of pipelines; costed them out and per barrel fee. So, we realized, "On my gosh, if the price of oil does hit \$20 a barrel, we are in; this is going to work because it only costs a couple a bucks to ship it, if you have a pipeline."

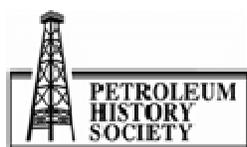
We went talking to pipeline companies and that's where I became involved with ACR. They had a Black Oil Pipeline Committee which I helped get them going on, and I presented. I was the first presenter at this particular committee and I presented it in front of a bunch of pipeline companies and oil sands potential producers. The kind of reaction, in particular from pipeline companies, was "Well, once the production is for sure there and the market is for sure there, then, come back and talk to us." Yawn, yawn.

AD: They were risk adverse where they?

ANDERSON: Yes, until Neil Camarta from Shell a few years later said, "I really am going to build something; I really want you to scope out a pipeline." I remember people flying out of that room with their cell phones going, "Yay, maybe we really do have that connection between a for-sure supply and a for-sure demand on the other end." So, we actually went so far as to work with our Assistant Deputy Minister at the time, trying to convince him. We didn't get too far with it but, trying to convince him that maybe we should build our own pipeline out of Fort McMurray, like have the government actually build the pipeline....

AD: And who would have been the Deputy Minister at the time?

ANDERSON: Terry Roberts, he was very kind and patient with us young bucks thinking about this thing. I think he did float the idea a little, and it very quickly got killed. But I think it did cause a bit of stir in industry, like "Wait a minute." I think government at this time had gotten out of the business of being in business; I remember all that. That was one of the other things that I did, which was kind of fun but kind of sad in a way. I helped with the divestiture of our Syncrude - you know the Alberta Government used to own parts of Syncrude - and by the time they decided to sell out of Syncrude and OSLO (Other Six Lease Owners), there wasn't many people left that had any oil sands experience, or economics of oil sands, or geology in oil sands, so, I was kind of it. Fingers pointed at



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me to help them get rid, divest out of their ownership which I did. I really, actually enjoyed doing that.

AD: What year was that, do you remember?

ANDERSON: Mid-1990s.

AD: And, of course, the Syncrude investment was very fruitful for the Government of Alberta. It was a major economic success and economic driver for the province.

Anderson: Not always.

AD: Well, because it had its ups and downs.

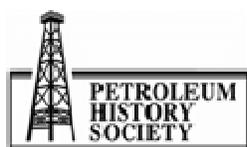
ANDERSON: Yes, absolutely you are right. Long-term, what a great investment that was and they sold it and they got some money out of it when they sold it. And they got money out of OSLO when they sold it but, more importantly, they nurtured it along so it never died during those critical growth periods; again, part of this overall strategy.

So, they had research on one side and then actual equity positions where they felt they needed to take equity positions to kind of keep these projects alive and healthy and vibrant, and they stuck with it. That was pretty amazing. It was interesting to sell those pieces back to industry; of course, we thought they were worth more than what we ever got for them, because we saw the UTF stuff and we sold at a time when still the prices were long and it was hard but we got a fair deal for the citizens for Alberta, when we sold it all.

AD: So you were around with AOSTRA was wound down and maybe you can talk about that process but also begin by answering why did the Government of Alberta shut down AOSTRA.

ANDERSON: I don't know if it's been officially shut down; I think the active legislation is still in place. So, there are some aspects of AOSTRA that have continued but on a really reduced scale, much less aggressive fashion. There are still some really good people, like Eddie Isaacs, that are kind of looking after what I would call the old AOSTRA. It is still doing really good things, but it's not the AOSTRA of old that was building 200 million dollar pilot projects, or funding multimillion dollar projects all over the place, and actively involved in 3-4 different deposits and 5-6 or 10 different technologies, and supporting university, and supporting UNITAR [International Centre for Heavy Hydrocarbons]; the United Nations - we worked with to communicate the oil sands story around the world. Sharing technology back and forth between Venezuela and Canada. You name it, we did it all. So that kind of scope is gone.

What was it like to be part of AOSTRA as we all knew it might be wound down when the government sort of had a think they were getting really short of money? I don't know? I presume



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this notion of getting out of the business of being in business kind of became pretty topical. It was sad. I sure didn't want to leave AOSTRA. I still thought there was a lot to do and a lot of value from AOSTRA, and I don't think there was a single person at AOSTRA that thought different than me. We were sad on one hand and, on the other hand, some of my colleagues got some of these big offers from industry to go, and we had packages available to leave. So, it was very sad to see it all kind of go. I fully expected I would stay my whole career quite happily at AOSTRA. I was lucky, I got sort of handpicked by Paul Precht, who worked in the Department of Energy, and someone that you should talk to. I think he is the father of the royalty system.

AD: I have already.

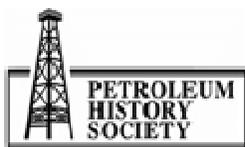
ANDERSON: No matter what anyone says.

AD: I have had a fabulous interview with him.

ANDERSON: I am probably consistent; he's probably modest, but he was the guy that invented the Generic Oil Sands Royalty System. Now a lot of us, including me, were on project teams that kind of refined it, and put rules all around it, but he is a pretty modest guy. I think he came up with the 5 and 30% one. And, again that's another interface that I had. Then, I became the Director of Oil Sands Policy under Paul's watchful eye. And I worked with a fellow named Richard Masson, who is now heading up the Alberta Petroleum Marketing Commission, which had come back to life. Richard was kind of it, in Oil Sands Policy, in the Government. I kind of did the tenure side, the land side and he kind of did the Royalty side, which was way more important at the time. They are both important but the Royalty piece was a particular interest to industry and it was part Alberta Chamber of Resources/National Oil Sands Task Force work. We were working very, very closely with ACR and realized the great leveraging we could have with ACR in a whole bunch of ways because they were the connection to industry, and they could push where we couldn't in government. But we all wanted to get to this Generic Oil Sands Royalty level-playing-field kind of a situation.

AD: So, basically in the 1980s, other than the strong research that was happening through AOSTRA, that in terms of SAG-D technology helped in the next era of development, the industry was pretty depressed and it needed some stimulus to set it on its next course of development, a catalyst and that was the Task Force. Do you want to talk about it? When did this begin? Who were the key organizational players? Who were the key individual players? And what did it involve?

ANDERSON: Okay this is where I kind of bridge a little bit between you know the tail-end of my work in government, and the beginning of my relationship with the Alberta Chamber of Resources. I knew the Alberta Chamber of Resources; I knew Don Currie. He was a professor of mine at University, in subsurface methods, so he ran the Alberta Chamber of Resources before me. He is an incredible guy and, if you talk about why, from an industrial point of view, why the oil sands got to where it's at, you have got to include Don Currie in that mix. Erdal Yildirim, who was with Canadian Oxidental at the time but very involved in chairing the National Oil Sands Task Force, and



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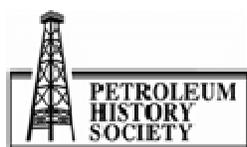
I emphasize this was the Alberta Chamber of Resources, not other associations. In fact, other associations were totally uninterested in what ACR was doing at that time. Guys like John Nichols from Finning and others, Bert Lang from Suncor, these were the guys that kind of created the concept of a National Oil Sands Task Force. It caught on and, of course, Suncor's leadership at first and Syncrude, Eric Newell, Jim Carter, all those guys, it coalesced into some sort of magical combination but through a ton of work.

On the government side, we were working the tenure piece. At that point, around the late 1990s, companies were holding their leases for 40 years without doing anything; and, remember, the "use it or lose it," we were careful with that because, you know, "use it or lose it" but, if you lose it, who does it go to? Might as well have Shell keep that lease.

So, there was that piece and there was the royalty side of it at the same time, and technology coming together at the same time, and this magical Oil Sands Task Force by ACR at the same time, and a willingness and sort of realization at the time that conventional oil and Alberta was hooped if that was going to continue. We did oil sands to make up that. It all coalesced around the time the National Oil Sands Task force came out, and we rolled out the Generic Oil Sands Royalty thing; we tweaked the oil sands lease tenure a little bit to give some companies an opportunity to hold on to their leases more. Really, they were supposed to give them back if they weren't going to do anything, and the government was really smart at saying "You really have to do something or show us you are going to do something or pay a fine, or pay the equivalent of something but we want to see some movement here."

It all came together and that became Shell, and the Albian Project and others. I remember my bosses in the Alberta Government asking me, "But who is this big long list of people that are even going to be interested in surface mining activities or SAG-D; were's the list?"

"Don't worry, they will be coming, but let's start with one." So that's how it all came in, but there is a lot of really great interplay between the government and the Alberta Chamber of Resources, between the Provincial Government and the Federal Government. The Federal Government changed some of their rules to align with the overall fiscal policy. It was all really good. And, you know, since then it seems - I would make an observation that maybe the Provincial Government and the Federal Government have continually chipped away at it. They haven't destroyed it by any means but they have kind of chipped away at the cohesiveness. And that moment in time when we really had everything together, thank goodness, that we got to that moment in time, because it seems robust enough to withstand the chipping away. But it is something that we really need to be careful about, because a price dip and we could be in a bit of trouble with the whole thing. I think it's something we need to be aware of - how hard it was to get there; it wasn't just luck. It was a lot of planning; a lot of years; a lot of "stick-to-it-iveness;" a lot of companies that invested a lot of money and research; and the government also investing money and similar research or co-operative research. It took all of that and it just seems to me, once in a while, we get a bit complacent, and think "Oh well, that was easy. I think I'm just going to up or reduce this particular fiscal feature now



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because environmentalists are saying it's a giveaway," or something like that and that's a dangerous game we could be getting into.

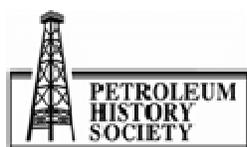
AD: Now, you mentioned at various times, leadership within government, within the research establishment, within industry; but, I think, if I understand it correctly, the Oil Sands Task Force, this joint venture really, made it possible for the next era of development, which we are still in today. But there was government leadership as well, and I think that the rapprochement between the Provincial and Federal governments, which happened, and everyone mentions the Honorable Anne McLellan, who was appointed by Jean Chretien as the Energy Minister, this newly elected MP with a legal background, no knowledge of resource industries being given this portfolio. Do you want to talk about that?

ANDERSON: ACR is not political but often worried about the Liberal Government but, if you look at their actions in Oil Sands, in almost every regard, they knew they had a national treasure there. I give a lot of credit to Anne McLellan. I didn't know her back then; I know her a bit better now. I think we can't give her enough credit for what happened there, because I think without the federal piece it probably wouldn't have come together. It definitely wouldn't have come together without industry and it definitely wouldn't have come together without the Provincial Government, but it really did take all three of those kinds of folks co-operating on this to push it over the edge at the time.

This is where, and in my sort of understanding of the history maybe, I wasn't part of the ACR at that moment when they were going down to Ottawa and lobbying, but I think that's where, in particular, Eric Newell when he was President of ACR was very influential in meeting with Anne McLellan. She was open to listen and challenge back. So, my spin on that is that I remember vividly being on the Provincial Government Generic Oil Sands Royalty team and we would get on the phone bi-weekly with the Federal Government figuring out how to mesh these things.

I don't know if that kind of co-operation happens today. I'm not in the governments at all but it was pretty remarkable. Where did that come from? That came from Anne McLellan saying, "Go work with the Province of Alberta and make this work." And why did she get that idea; it came from some pretty good thinking from the Alberta Chamber of Resources and their National Oil Sands Task Force, and all the leadership in there. I mentioned Erdal Yildirim; that's a name that should be remembered in the history of this province in terms of oil sands development. That man was incredibly insightful and he had a real way of winning people over, and he chipped away at issue by issue, very strategically. I think he is kind of a bit forgotten in the story. Maybe you can interview him.

AD: He has been interviewed already. He was right at the top of the list. Now, do you want to talk about anything else in respect to your career within government before you made the move to the Chamber of Resources, and then talk about what interested you in the job that you currently hold?



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ANDERSON: I think I have kind of spilled my beans on the government. It was a really nice little career and, again, as a geologist, I can't think of anything more satisfying than towards my last days, if you like, in the Alberta Government presenting this Steam-Assisted Gravity Drainage story to the Edmonton Geological Society here in Edmonton. I was living in Calgary and a professor had brought the Geology class and Geophysics class into my lecture so I gave them this pitch about, "Here's what we got for the technology; here's the geology; here's how we are rolling it out across the whole Athabasca deposit. If you think this business is really a sunset business, what do you think now? You are geologists; look at this, if you don't think there is a career here, think again."

I got a standing ovation from the students and that was a really nice way to kind of leave government because that was about when I moved to here. It was a very, very neat thing to kind of cap my geology career. The only other bit in the transition that I was very proud of, was Jan Boon who headed the Alberta Geological Survey and, by the way, I did get in trouble every once and a while from the Department of Energy for speaking the way I did about the oil sands. It wasn't always without some friction. And, so, I was detecting a little bit of resistance in my story, not from my immediate bosses but from adjacent.

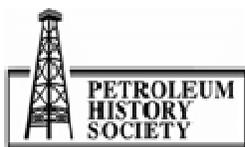
AD: Because you were championing?

ANDERSON: Yes, we were championing and we were kind of told not to be doing that so much anymore, I think, by some groups. Jan Boon was a great leader, and there's another guy that you should be talking to, I'm not sure where he is at now, I think he is in Ottawa. He was the head of the Alberta Geological Survey; he became head of the Canadian Geological Survey. When he gave a paper to a worldwide geology conference, he called me up and said, can I use your paper from the SAG-D Applicability Paper because I want to show how governments can actually take real geology and make it really applicable, and really relevant. "Oh, man, that's very, very cool; go on and make your presentation in Spain," and he did. He had another geologist in my report and he combined them and made this presentation to a "hoity-toity" think tank of folks on geological surveys around the world. I was pretty proud of that piece too. What was the next part; coming here?

AD: Yes, what enticed you to become the Executive Director?

ANDERSON: I was ready to move out of the government at that point. I really became interested in marketing bitumen for sure and just wanted to leave government. I had had enough at that point. It was very exciting working what I was doing in policy development and I was in charge of a lot of big commercial agreements between industry and government, as you can imagine. Crown agreements - big ones! But I was ready to move, and I wasn't sure where I was going to move, and Don Currie phoned me and said "You should really apply for his job," and I did. After some convincing, I decided to come here. I had always loved the Chamber of Resources, always, and thought the world of Don Currie and still do. He attracted me and the organization attracted me, and I was ready to go; so they offered me a job and I came.

AD: When did you start?



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ANDERSON: In August of 2000.

AD: So, what were the issues then, when you came over here?

ANDERSON: Well, first off, ACR is broader than oil sands, so my first president was a forestry guy. So, I had my eyes opened wide that, "Gee whiz, the whole world doesn't revolve around oil sands!"

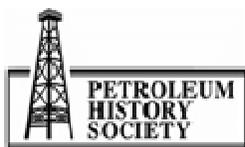
What were the issues? Greenhouse gas emissions hit us like a ton of bricks as soon as I started. We had issues around opportunities, still in oil sands research, and driving that agenda, and we did; issues around Aboriginal engagement, Aboriginal participation.

Suddenly, it kind of changed from these very technical issues around, you know, fiscal side of royalty agreements or tenure things, easier stuff for me. What I used to joke with my bosses about, Friday afternoon math is a dangerous thing but let's go ahead and play it. Let's count up the barrels of bitumen, make some policy based on that. It became, when it came to ACR, rather overwhelming with the breadth and depth of issues. There is no end to it. But, what I also got out of ACR very quickly was what were the major issues. Well, we had a number. The trick was a great executive that would, as Jim Carter used to always tell me, "Look at this field of poppies; those were all issues; just pick the tallest one that is going to make sense for ACR to go after. Pick carefully, because we can't go after them all. Let's go after the ones that are going to make a difference to the ACR members, to the Province and that sort of thing."

AD: Can you, in a nutshell, summarize what the Alberta Chamber of Resources has been in the last 10 years?

ANDERSON: You know, I'm going to go back 77 years first. I'll get to your question. So, 77 years ago, the Alberta Government received a trainload full of documents called the Resource Transfer Act. Hubert Somerville, the sort of Minister of Energy [the first Deputy Minister of the Alberta Department of Mines and Minerals], picked them up personally and said these are really important to Alberta's future, and brought them back to what was the Department of Energy [the Department of Mines and Minerals] and carefully stored those documents.

He knew what Alberta got and he set up the ACR [then, the Alberta Chamber of Mines] and our bylaws - he wrote them. The reason he did that was so that ACR could be a big strong voice to protect Alberta's resources, even though, the Government was also going to do the same thing. He saw the co-operation way back then. So, 77 years ago we were kind of created by that and, I think, today and throughout our history, our strength - and in the last 10 years there is no difference - is in our ability to work for Albertans really, about maximizing carefully, responsibly the resources in the ground. And that has never changed. So, what we have done in the last 10 years is the same as in the previous 67 years, sort of nurtured the best we can, at whatever the moment in time, whatever we need to do to address that.



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I think, in the last 10 years, the big home runs here include things like the Oil Sands Technology Roadmap which we did in, I think, 2005. That was a really personal one for me because it was a culmination of my career in oil sands. But, we had an incredibly bold vision of what it would take to get to five million barrels a day in oil sands production. And that came out of our board and some challenging meetings at our board, and some comments I probably shouldn't have made to the press in Washington where I actually said I think we can do five million barrels a day in the oil sands, and sort of had to justify it.

So, we created this Oil Sands Technology Roadmap and what came out of that - because that was two years of work of a lot of very smart researchers - was, "You know what, we can get to five million barrels a day of oil sands production at some point in the future. Here's the kind of technologies we need to address to get there." And, I think, it changed the world. I think it got people thinking that oil sands isn't just [where we were at that point]. People thought that ACR was crazy when the National Oil Sands Task Force had a vision of 1.2 million barrels per day. We've passed that; we are pretty close to being past that, that vision was for 2020. We kind of did the same thing again. "Wait a minute, we can actually go to five million barrels a day," at some point with these technology advances. It was pretty cool to get there because it changed everything about how the world perceived oil sands. That little report is still a relevant report.

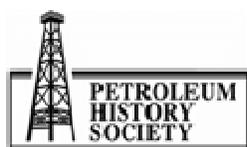
AD: Would you say that it created positive attitudes and very negative attitudes?

ANDERSON: Yes. So, combined with that you had Murray Smith, an unforgettable man and a fantastic Minister of Energy; he is going around as the Minister of Energy saying "We got 150-175 billion barrels of reserves because of SAG-D. By the way, that is exactly the number we had at AOSTRA too, and that's where the number came from. It was very good that we had a politician marketing that, and kind of around the same time as the Oil Sands Technology Roadmap, we had this coalescence.

I went down to Washington a few times. I had some folks from the US Department of Energy come up here a few times, very senior people, and talk to me about it. "Is this real?" "I think it's real. Why don't you go talk to Pat Daniel from Enbridge, and ask him, or talk to some other guys do they think it's real?" And their answer, by the way was, "Yes, it's real." I actually went down to Washington once; I was supposed to have a half hour briefing with the guy that reported to Dick Cheney, in the US Department of Energy. I was so thrilled to go there and be asked and all that. And that half hour meeting became three hours, and more and more staff kept coming. I was just on a roll. I was pretty good at selling oil sands at that point. I had seen the picture from government to industry and I just told it.

AD: But you were drawing on 25 years of in-depth involvement.

ANDERSON: It was pretty neat and they came back, and they tried to learn from Alberta. How did you do that? And I told them the story - Lougheed and Clem Bowman; "stick-to-it-iveness;" leadership; research; different areas. Because they have an oil shale resource which is kind of equal to



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ours but they had more than a few hits and misses, and I'm not sure that resource is all that different from oil sands but they have not concentrated effort on what it will take to develop it. Now, maybe, they will get there; I don't know.

You were asking about the positive and negative. Positive is that people became really aware. Our particular Oil Sands Technology Roadmap Study is featured very prominently on Pembina's [Pembina Institute] website. I'm proud of that. It stands up there and they actually acknowledge that it's a pretty decent piece of work. The 150 billion barrels resonated and, when we hit a million barrels a day of production that resonated around the world. Suddenly, "Okay, there is something here and, of course, that drew in both good and bad, and it made the environmentalists start looking. I think it also, at that point too, Google Earth popped up, Google in general. Information in general became much more readily available. So, it sort of exposed the industry. We were kind of flying under the radar screen for a long time and, probably, around 2005-2006, that sort of environmental negative push came into place.

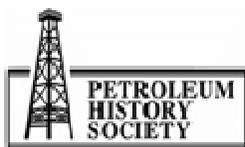
AD: So, tell me in terms of the Syncrude, the infamous "Ducks and Tailings Pond" story. What role would the Chamber play with respect to that?

ANDERSON: Not much on that. I mean that was Syncrude's responsibility to play a role in dealing with that. Not that we didn't have a million conversations around it, but I was not a spokesman at all for Syncrude on that. You know, that was certainly another, a few years after 2005. I can't remember exactly when that was, but it was a little bit after that. But there is yet another one that certainly brought the oil sands to the forefront worldwide, legitimately or not. I don't know. We don't typically play an active role in company-specific things but what we would have is media, "Whoever, please look at our Oil Sands Technology Road Map" that addresses the technology to eliminate the tailings ponds. Please have a look at our particular industry basis for reclamation remediation: here's how we do it; here's our successes; here's a whole bunch of examples; here's where we need to do more." So, that would be the kind of role, and we have done a lot of that in the last 10 years.

AD: So, you see that the issue is that the environmentalists, and the reporting of these issues in the media, cast great doubt on the companies' honesty in respect to all of that. So, the Chamber addressing it in its Road Map Strategy doesn't get it out there.

ANDERSON: No, except that it's good science and it's real and its accurate data. But, you are right, I mean, we have not been successful in sort of pushing back and having people go "Oh no, but just read what the Alberta Chamber of Resources says, just see what they said." You are right, the data is there and its rock solid data about our challenges. The acceptance by the public isn't there yet. You are right.

AD: So, you have lost the public relations war, or nearly lost the public relations war, I think that, as a historian of science and technology, for many, many years, any innovation was once considered good. So, now, an organization that is basically an industry association is facing this backlash that may have some element of truth but not entirely. These are new challenges for your organization,



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not that you will speak for the companies, because that is an important clarification, but how do you address those larger issues?

ANDERSON: Well, we do our best. Clearly, what I think does work is action and actually doing the right thing. One of the things we did in the early 2000's because it lasted the whole decade and still is going on, things like integrated landscape management planning. So, one thing that we can do is have our members kind of co-operate and kind of work together where you have one patch of land and your forestry companies and resources underneath, whether its oil and gas or coal or whatever. Do one seismic line instead of four; do one road instead of eight; and those kinds of activities. Start addressing it. I mean, I think you are seeing a different kind of action too in groups like COSIA [Canada's Oil Sands Innovation Alliance] that are kind of co-operating on oil sands Environmental things. That's a nice thing. It's very similar to what AOSTRA did before, pulling in industry, but this one is more industry-driven then pulling in government.

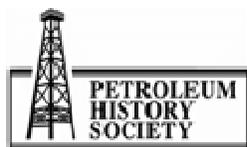
I think those kind of actions are frankly the only way we are going to get through this, and have real things to show that we are doing. But I have to say that we are in a bit of a box, in a way, because it just seems that we are accountable to what we say we are. We can't make stuff up; it's got to be truthful. And I don't think it's exactly the same on the other side of the coin and that is frustrating.

Just as an example, Dr Suzuki did a canoe trip down the Athabasca River and did a press conference. His words were along the lines of, "Industry is doing absolutely nothing to reduce its footprint of this region and I'm concerned."

We have done a lot and we put that out in the press. It's not like we don't. Stories don't get picked up in the same way. So, I must say it is a little frustrating. I think there is a purpose for environmentalists; it's good and there is some that we need to work with. But it's difficult when we can't sort of respond to assertions that are made. So, you know, it's a struggle for ACR; it's a struggle for all the industry associations. It's a struggle for particular companies right now. I think it's changing our behavior a little bit. I think more and more associations are looking much more at the communication side of things, and we are still just a small organization. We aren't quite there. I'm not sure we are going to get there or take that role. I think for now we are going to focus on continuing to do the right things; continuing to think of ways to co-operate; continue to develop technologies to reduce, improve and be efficient; that sort of thing. I don't know if that answers your questions around the environmental side.

AD: It does. It's interesting that you went back 77 year because at the root of the foundation of this organization, and you mentioned some of those specifically, was that, of course, it was the transfer by legislation from the Federal Government to the province, responsibility and ownership of not just energy resources but all resources. So, that early vision and the organization has continued to re-invent itself.

ANDERSON: Yes. We are kind of reinventing ourselves back to somewhat what we did in the 1940's now. We were a bit of an employment outfit for mines and now we have a little project



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going on trying to directly employ Aboriginals into mines and other resource, and development things, move around as per the needs.

Our priorities certainly have changed. You were asking, in the last 10 years some of the other significant things. There are a number of things. One other bit that stands out for me is kind of on our softer side. We put a whole bunch of work on Aboriginal participation, Aboriginal engagement, a whole bunch. And we don't just fool around with that stuff. We take it really seriously. We have had Aboriginal folks on our board of directors; we have aboriginal companies on our board right now. We are working together. One of the really neat things we did a few years back was a report called *Learning from Experience*, where we shared; we went out, had five researches spend a few years going to all our members and asking "What worked for you in Aboriginal engagement?" The idea is so that an Enbridge Pipeline could learn from Al-Pac. "What did you do as a forestry company that I could possible borrow and learn and apply?" I think we looked at the 85 of the best practises and put them on our website, and shared them around and opened it up to the world. And it is very useful, not so much for the companies that had really rock-solid programs, but they were all willing to share. But, in particular, those that didn't or those that became aware that they should actually have an Aboriginal Policy, or have a strategy for engagement, or have a strategy along these lines. It really caught on.

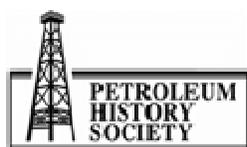
One of the coolest things that I've ever experienced was another trip to Washington, DC. We were asked by the Canadian Federal Government to go and present our findings to the World Bank. They had a Worldwide Aboriginal Conference so I dragged along Dave Tuccaro, who's a Cree from Fort Chip, a very successful oil sands businessman; in fact, he was on the National Oil Sands Task force. You really should talk to him too. He just got named our Resource Person of the Year, as a matter of fact.

AD: Wonderful.

ANDERSON: Anyways, we went to Washington, him and I, and a couple others, Doug Golosky was also there. And we told the story of what was going on in Alberta. We told the story to these stodgy officials from the World Bank, who weren't sure they were expecting to hear what we were saying.

We were talking about full participation and engagement in resource development of oil sands and other resources. They wanted to talk about lending money to improve Eco-Tourism in Columbia to Aboriginal groups. It was pretty interesting and clearly we were causing what I thought was discomfort. Not among the Aboriginals from around the world, but the World Bank. So, anyways, Dave Tuccaro and Golosky gave really good presentations, just on their own personal experience developing multi, hundred million dollar and even larger companies, and in the resource development.

I think Doug at the time had 1000 employees, and Dave wasn't too far behind with 300-400-500. So, a comment from one particular fellow, and I don't know the names here, someone stood up in the



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audience, an Aboriginal guy from South America, a leader said, “ I really like what I’m hearing about those guys in Alberta and Saskatchewan as well.”

There was a fellow, the Vice President of Cominco, an Aboriginal fellow, was talking about Northern Saskatchewan and Uranium development. He said, “I kind of like what I’m hearing from those guys from Alberta and Saskatchewan, and you know what, World Bank, we kind of want to do that. We want to develop our copper resources in our native lands, and we would like to borrow money to do that. We don’t want to just do Eco-Tourism or basket weaving. And, by the way, World Bank, what gives you the right to say which kind of priorities you should or shouldn’t lend to? And what gives you the right to say only environmental activities are good to lend money to?”

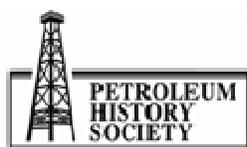
It was really interesting. I was so proud of Dave Tuccarp and Doug Golosky at that moment and actually the work ACR had done. I think it raised more than a few eyebrows in Washington. We left and I felt pretty good about that. I’m not saying we had done a lot in Alberta; we are still working away at this. If there is another boom coming along, we better bring all our communities with us, whether it is rural or Aboriginal. Everyone needs to benefit from resource development. We have a long ways to go but we are working really hard at that and, I think, we have done a few things that are really good that we can learn from; build on success. So, I think for me that was another pretty powerful moment, kind of makes the time at ACR really quite meaningful when you get that kind of reaction.

AD: Now you mentioned that term “boom” and I like to go back to economics and politics and to go back to a remark you made earlier about the AOSTRA period when you had meetings with ACR in terms of pipelines. Now, pipelines were not political at that stage. Yes, there was the Mackenzie Pipeline, Berger Royal Commission but that was a long time in the past, early 1980’s, I think. What makes pipelines such a big issue, because you have the same issue that you did before? You produced this bitumen but then you can’t upgrade it all in Fort McMurray, or in the areas where it exists; therefore, you need pipelines for a variety of purposes. This same issue applies today, so can you talk a bit about that?

ANDERSON: I don’t think people think too deeply. I don’t think they care to try to find out deeper anything anymore, so, when they are barraged with one side of the argument and maybe an easier side of the argument to comprehend, it’s really hard to fight that.

A couple things on the pipeline side, just how different things are. One of the presentations I made when I was still with the Alberta Government was a presentation to the Alberta Chamber of Resources Board. We thought we would need a pipeline corridor going along the Cold Lake Air Weapons Range. We were, already, back then starting to see some pushes for what was a precursor to the LARP [Lower Athabasca Regional Plan] stuff, the Athabasca regional planning. Remember in the 2000’s, they were turning 6% or 12% of the province into parks. What was that called?

AD: Oh right, yes that whole study.



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ANDERSON: Well, it was a study but it actually happened right. So, we knew that we needed some corridors going north and south, so we asked the Chamber of Resources, “What do you think; do you think so; and if you think so maybe come talk to us more about it?” And they did, in fact, the Alberta Chamber of Resources sent a letter in to the Minister of Energy at the time that said we should probably put corridors in, which they did. It didn’t go; it just happened; it transpired. Today, I don’t know if that could happen. So, specific to pipelines, “Oh, my gosh.” It’s the safest way, if you believe the world needs energy and needs to move energy around.

AD: Well, some people even question that.

ANDERSON: And I don’t. I think the world needs energy and I think it needs to be moved around. I think this part of the world is known now as having the biggest basket of resources around that are still freely available to get. So, the world is demanding these resources; we aren’t knocking on too many doors. It’s the other way, people are knocking here, and those resources need to move. Pipelines are a safe way to move the resources. They are also, I guess, an easy target because we have very good regulatory processes put through the National Energy Board to ask for permission to do those things. And, so, they become maybe an easier target. But I don’t think there is a better way to move it.

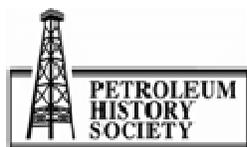
For the life of me, I don’t understand why. For example, that sort of argument around pipelines and pipeline safety, doesn’t spill over into other areas. Why is it that we are letting rivers be dammed and that’s okay, and letting other things happen and that’s okay? We actually do it because our economies depend on each other co-operating with each other. It gets pretty easy to be pretty specific; it gets really hard to kind of rise up and go, “You know what, we kind of depend on each other here. My pipelines go through and roads and rails go through your property, and yours go my way. Let’s do our best to keep it all safe, but let’s understand that we need to do this collectively.” And I don’t think that people think about that very deeply. I think it becomes a one-issue thing for a very short period of time, and opinions made and solidified.

AD: So, that is going to continue to be an issue for the industry and the Chamber of Resources and government isn’t it?

ANDERSON: Yes.

AD: To continue along this economic track, it’s basically oil petroleum economics, the whole “bubble” which of course is the terminology that has been coined to refer to a particular economic situation. Do you want to talk about that?

ANDERSON: I’m not sure where the term “economic bubble” actually came from. I was reading something in the *Edmonton Journal* the other day that Neil Camarta coined that a while back. I suspected it has always been there; it comes and goes. When we first started doing analysis of bitumen, for example, way back in the late 1980s of where our markets could be for oil sands, we had some really smart companies to look at.



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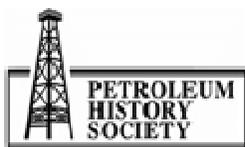
It became very apparent that if you flooded the market at any time with too much bitumen, and there was only a limited amount of capacity to handle the bitumen, the price would go down relative to West Texas Intermediate. It just would happen.

I think over the years that capacity to take oil sands product obviously has grown and grown and grown. But we have a little bit of a pinch in terms of shipping it and some other factors, and I don't understand them all anymore; I'm not in the marketing game. But just an observation, that's always going to be with us; how to address it? I think the economics of the location will rule and things will happen and pipelines will be built. Prices will ultimately be such that suits the world's demand for our resources here and resources around the world, so it will settle out. It's kind of a bit of a scramble right now for companies and government to realize we are subject to factors that we didn't quite necessarily think about, and that it would unfold this way. I don't think that is unusual. Those things happen and things get built and they get settled out, and other things will happen.

AD: It just appears, at the heart of it, is the fact that the government had predicted revenues coming in at a particular price per barrel and that this hasn't been realized and a major deficient is being forecast; and the whole exercise in cutting government budgets, etc., is happening. But, to go back to the point that I think you were making is, in the development of both the conventional industry and oil sands, the price points are crucial. If there is an oversupply and a decrease in demand, the price drops, and if, like the situation today, that we have a single market, which is basically the US market, then the industry is not diversified to an extent that it can get the world price. How does that happen because, when you reduce it to pipeline politics, because we are looking at one pipeline that will take it through B.C. and out of the country to be able to access world markets? The other one is taking it to the US, to fuel their own underutilized refinery capacity. How is this dealt with when you have got environmentalists "dissing" oil, as some describe it, and particularly the oil sands, and you have the general public who doesn't really have a clue and a world recession?

ANDERSON: Wow, those were a lot of factors that you laid out. I think, in the way you kind of rolled that question out, is why it's such a difficult thing to actually answer and deal with. I don't think, as I was sort of describing to you earlier in our discussion here, that we had the same issue when we had the UTF project. We don't have a market for this, given where we are currently at in our choices to sell it to Syncrude or Suncor at a rather low price or build a pipeline or ship it out to Hardisty where you capture a different marketplace. You just have to go and do those things. The complication today is where you capture a different marketplace. You just have to go and do those things. The complication today is that to get those pipelines built has become a very public thing, and a lot of pressure from various groups question that and fight it. If you go back to the basic principle of, "we have the resources and the world needs the resources and pipelines are the safest way to transport it," those problems will resolve themselves. It will just take longer than it has in the past and, conceivably, that could impact the timing on some things and the investment on some things. But, probably not change the course of what will happen in 20-30 or 40 years.

AD: Does the Chamber's Board feel that they need to revisit the 2005 map and strategy in terms of these things or not?



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ANDERSON: No, I think the Oil Sands Technology Road Map holds its merit and still survives today and is still worthy of another read by almost everybody. We aren't looking at reviving that. But we are getting kind of sophisticated at what we are looking at, at the board. So, for example, back to picking the tall poppies in the field of poppies, we are kind of zeroing in on a couple of really critical things. One is on Aboriginal participation, bringing along the full community in this resources-based opportunity, bring everyone along. And that's a complicated piece and will require an enormous amount of leadership.

The other one is around this concept of capturing the highest value. So just to jump a little bit away from oil sands, it doesn't just mean an upgrader at Redwater. It means we've got a basket of resources; what can we do differently? What are we doing now, and what can we do differently to capture the highest value? How do we look at that? How do we even make a determination that what we are thinking about even makes sense that way? And who do we present that as a tool for the government and the public to understand how we make some of our decisions around what we do?

It may not necessarily be the worst thing in the world, for example, to have a suite of products coming from the oil sands including raw bitumen going out to the States. That, actually, may be a very good way to capture, overall, that spectrum, the highest value. You have a spectrum of bitumen to synthetic crude oil or something beyond; and, similarly, in the forestry areas, similarly in coal, in all other [resource areas]. Then, you start looking at that and you can get a bit of framework of "If we got a little smarter yet, how do we co-operate with each other in different sectors."

For example, what is some product flowing out of forestry that could be milled with oil and gas to capture the highest value a little differently? So, those are kind of areas that we are working on. We don't think anyone is playing that field and really has the ability to really play in that field, but we do because of our diverse structure.

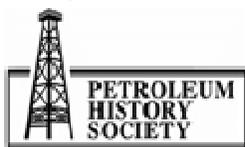
So, that is where we are going opposed to let's just off the Oil Sands Technology Roadmap report and see what we need to do. I think we are moving ahead, maybe getting even a bit more mature at looking at a broader scope of resources.

AD: An integrated resource development approach. Now, you have a different set of responsibilities with construction owners. I want to ask a question specific to the importance of the oil sands with respect to the construction industry of Alberta.

ANDERSON: Okay, what is your question?

AD: Well, basically in the early years you had the Bechtel's and other companies. They were international, may have had Canadian subsidiaries but there has been a lot of "born in Alberta activity" to do with the oil sands. Do you want to talk a bit about that?

ANDERSON: So, when I was interviewed for my job here, as they offered me the job as I recall, or if they were close to offering me the job, they said, "Oh, by the way, a quarter of what you will be



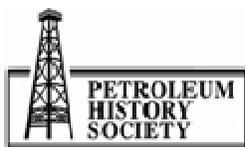
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doing is as the Executive Director of the Construction Owners Association of Alberta.” I said, “What the hell is that?” I honestly didn’t know. I certainly knew what ACR was but I had no idea I also had to look after this Construction Owners Association. As it has turned out, that has been one of the most enjoyable pieces of my work, and I couldn’t of picked a better time to watch the industrial construction world in Alberta unfold than in my last 12 and a half years. I’ve seen it go from the tail-end of a boom in petrochemical construction into oil sands and pipelines-dominated heavy industrial construction.

You know, I think in the last 10 or so years, there has been more than 100 billion dollars’ worth of heavy industrial projects; it’s in that range. It’s absolutely world class. Not too many places in the world have this many major projects going on. It’s been really interesting to watch that but, you know, we are a province with just over 3 million people and we got a lot on our plate. Despite the fact we have got 75 thousand engineers and geologists, and I think we have 40 thousand people in the apprentice program right now, so a lot of people coming into the trade; we still have only 3.5 million people, or whatever the number is at today. It is pretty hard for us to imagine. Looking back, I don’t know how in the heck we did it. You hear a lot about cost overruns and there is truth to that. On a lot of the big projects, they have been more expensive than anticipated; the schedule has gone out. We have learned a great deal. There are probably not too many places in the world that have had the practical learning lessons in the last 10 years around heavy industrial construction than Alberta. So, being part of the Owners Association, they are really interesting, because the owners really care about the cost of construction. They don’t build the projects but they pay for it to be built. Their board, at the other end, they just want to know when you are going to be producing stuff again, “Make that as soon as possible, and okay.” And, yes, we know we only have X amount of people but, “You can do it better than any other project, we know you can.” And, of course, the reality is that it is really hard.

We are doing not too bad when we look back. The reason I say it is, for example, when Shell came on the Albian Project, the first big new oil sands project, they were a little over budget. I think their budget was 3 billion initially and I think they came in at around 5-6 billion and maybe your interview with Neil Camarta could get those numbers exactly right. At the time, that was quite expensive and quite a few things took a little longer than expected. Similarly, the next project was Suncor and, then, Syncrude with UE-1 [Syncrude Upgrader Expansion], kind of a similar story there.

I would argue a couple of things. One, while there was some learning there, they didn’t do that bad. In fact, it’s difficult to match their performance; they actually did okay. So, we are learning these projects are incredibly complex and a lot of things have to be done before you start construction. You have to have all your engineering done to a certain extent, but they take a long time to do. And things happen that don’t happen in projects that you can do in two years. When you have a project that takes six years to build, stuff happens and things slow down for various reasons, and so we are learning to get better at all that. But the fact that we’ve been able to do these projects successfully is amazing to me, and I think we lose sight of that a little bit. We built this fantastic infrastructure , a range of manufacturing plants, oil sands plants and pipelines and, you name it, that are going to be around for the next 40-50 years making good money and good GDP for the province. We actually



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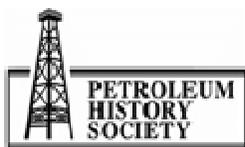
pulled it off and maybe they didn't quite all go to plan, and I'm sure a lot of people lost their jobs over them, but we got them done.

Maybe I tend to look at the half full side of the glass on that one. I personally haven't been fired for going over budget and over schedule; many of my board members have, and they always come back to another project and they do fine. But it's been really interesting to watch that. For example, in the oil sands, I sometimes wonder a bit back then, if we'd known, if we really had known what it would cost, and I won't single out a particular project, but just for example if a project was estimated to cost \$5 billion and all the economics were run on that and it actually ended up costing more, would we have ever made that decision to go ahead, if we really knew what it would take? I don't know what the answer would have been back then because the prices were a lot lower. We wouldn't have had today what we have, which are these great economic engines.

It's an interesting world. The Construction Owners side are a bunch of, typically they are Vice Presidents of Construction Owner Companies that are a little bit action-orientated, a bit high-strung, want to get stuff done in 12-18 months. and really care. And ACR is much more strategic in what bricks do we need to move out of the way to make this happen in the future. I honestly thought I was a better fit in the ACR world but, you know, I love the world of those kinds of characters, and I love watching all that happen, and so much has happened.

I was in Australia last year; I was invited to a big construction conference in Australia. I have been down there a few times because they like the Canadian perspective. We are like kissing cousins; they have LNG [Liquefied Natural Gas] plants that are 50 billion dollar projects, bigger than us but the same issues. And they wonder how we pull it off. So that is kind of my perspective on the heavy industrial things that have happened in the last 12 years. Been really interesting to see it go from one sector, the petrochemical, to oil sands and pipelines; and they wonder how we pull it off. It's going to go to another sector; before that it was forestry. And I don't know if petrochemical may be coming back from all the recent reports I've seen now. Certainly, in the United States they are projecting 100 billion dollars' worth of new petrochemical plants to be built because of the new energy marketplace in North America. So, I don't know what's next there.

I think the other consideration around and beyond oil sands is, well, we thought that conventional oil production would dip in 1972 and it did; it's come back big time and that's because of horizontal drilling and technology, and fracking and all those kind of good things. So, I think the conventional oil play in the Western Canada Sedimentary Basin, in particular Alberta, is being reinvented as we speak. It's tremendously exciting and I don't know where that is going to go, but we are going to see more gas across North America, and more oil across North America. I think what is going to happen is, just like it did in the first go around in the 1940's, the States kind of caught on first about conventional oil but we actually have the best deposits here. It will be really interesting to see as the Pembina Oilfield, which has been around and Dr. Stelck probably found that field. I think it will have a resurgence; it already is starting to, and those kinds of fields are going to come back.



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I don't know how that might impact the construction side of things too. It will certainly impact the energy side and the resource side in Alberta and North America, but I don't know where that is going to go. I find that pretty exciting; I think we are on as much of a cusp now as we were in oil sands back in 1988-89 when we were starting to see 1,600 barrels a day from SAG-D. I'm seeing people react and look at things the same way now, back to conventional oil and gas the same as we used to see way back in the oil sands back in 1988. It's tremendously exciting; we are ready for a big old change I think.

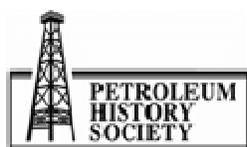
AD: In the last 30-50 years on the construction side, you have seen a lot of home-grown companies like, for example Poole Construction/PCL that had previously been started in Manitoba or Saskatchewan and has grown with the industry, and the modular construction techniques that have been innovated, and even a company like City Lumber, again started in 1949, got a Bechtel contract and now provides specific, bases for the heavy equipment, and that there are niche markets that Alberta industries have evolved to meet those needs and PCL has gone, is international.

ANDERSON: Aside from the owners, who spent the money and risked, but similarly the contractors, engineering companies EPC [Engineering, Procurement and Construction] firms have grown in their capability to deliver on these projects. Whether its engineering or construction, they are pinched like crazy when there is more work than workers, and more engineering to be done than engineers, but we deliver and we learn each time. It is developing an interesting expertise in Alberta and I think we have truly developed; we haven't quite set it yet, a resource knowledge economy that's second to none in the world. It's unbelievable, it's like Silicon Valley, but we do heavy industrial construction.

We have more engineers and geologists per capita here than anywhere else in North America, maybe the world. We are a concentrated, knowledge-based economy. We just choose to develop on our strength, which we developed in itself through all the good planning. But we got this knowledge economy now that is unbelievable. Imagine what that might mean for the future, if we export our expertise to build these big projects or engineer something, or whatever. It's kind of like how we have evolved from years ago, how the Alberta Government recognized the oil sands and they owned the resource, so they went after that.

Well, on this whole different level around construction, we developed this expertise and it's gone from owners to contractors to labour providers, union and non-union. And we have learned how to do this, made mistakes but I can guarantee everywhere else in the world that have gone through this same boom would have experienced the same problems. I see it in Australia; I know there are other areas. There are probably things we can learn from around the world, and we are not immune to not making mistakes here at all but what we have done here, we should be really proud of. And what we have is this thing that is remarkable and unique around the world; an expertise to develop mega resources. No one else has it.

AD: That is why so many of them are not only doing business abroad but also contracting out that expertise, the whole consultant's side in this area. Now, is there anyone that you would recommend



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in terms of the construction side that has been involved in oil sands work. In terms of PCL it would be Ross Grieve, because his predecessors are deceased but are there any other people like that that you would like to mention?

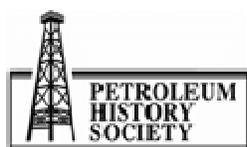
ANDERSON: Well, he would be one for sure. I'm thinking Ian Johnston from PCL is from my generation, same age and he is on top of all that stuff. He would be one to talk to. Let me think about that a little bit and get back to you. There are some remarkable stories like Bird Construction here in Alberta. You mentioned City Lumber, an interesting little niche there, but a pretty successful little niche. And there is a whole bunch of those kinds of examples of how we've sort of captured the value to this whole thing.

One of the things that really strikes me, I'm a geologist not an economist, so, when I talk about economic rent, question everything I say because I don't really know what I'm talking about but I kind of learned a little bit when I was doing Oil Sands Royalty System. The economists that we worked with that were on our team always used to talk about, "we want to extract the appropriate economic rent and so we had a 25% royalty rate." And, theoretically, it seemed to work and I think it did, but I think one of the reasons it really worked is that we have had all of these investments and people are learning how to do these things, and making great livings doing it.

So, sort of a side line to having a successful royalty system is it's developed this infrastructure of knowledge and the wealth has been spread all over the place. It's not just royalties; the money is going to welders; the money is going to contractors; the money is going to labour providers; it's been spread all over the place. It's just amazing what has happened with that and I don't, maybe I just wasn't smart enough or informed enough to think about all that when we did the royalty system but I think we hit the mark on that side. I think Paul Precht probably thought about those things but I didn't. We were thinking, "Well this translates to - 25% translates to X billion dollars per year of projected royalties, story's over." There is way more to it than that; that's the neat thing.

AD: And I think it's that capacity not only with primary industry, the whole mining side of the oil sands, but it's the secondary. It's all of the manufacturing that happens in the whole extraction process and then the building of the plants, all of those elements. Industrial diversification in Alberta hasn't been about creating IT, although there is an IT component in all of this. It's been about all of the manufacturing side created in the construction, the specially designed equipment, Trans Canada Gas Turbines, all of these things that are based in Alberta industries, which is an amazing story. Now, to just get back to the ACR, there is the Task Force on Resource Development and the Economy which is a new product. Do you want to talk about that?

ANDERSON: It just fits in beautifully with where we are at in our conversation because we put this piece of work together at a point, 2008-2009, at a bit of a crash. It kind of gave us some breathing room is what it did. It didn't really kill us; it just let us take a deep breath for a moment. And while we were taking a deep breath, and while we were thinking anyways, we started thinking about the future.



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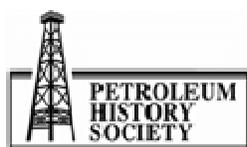
At the time there were some comments made around the Western Canada Sedimentary Basin, and resources in general in Alberta may once again be at a sunset stage to be filled with smaller producers that really know how to make those last little bits count. Our board universally felt that was not the case, but that story was starting to come out. And, so, we launched this look at, “So what’s the future for Alberta Resources collectively,” kind of along the lines of capturing the highest value, piece too, that I mentioned, but a bit broader. What we did with this study was we looked at what has been the value of resources in the province, and it was all resources, all nine sectors, forestry, oil and gas, coal and oil sands, and the service sector, minerals, etc., etc. We looked at what it has been and we had Dr [Robert] Mansell from the University of Calgary and his team do all the economics with Stats Canada and they put together probably the most sophisticated look at it that has ever been done.

So, the answer was, as you expect, the resources in Alberta have been huge and profound to Alberta since Charlie Stelck found the Pembina Field. It’s just been profound. No other way to describe it. And it’s all resources, by the way. In some years, there’s a term Dr Mansell tried to drill into my poor geological head (he’s an economist), around negative covariance something. So, I argued around that, resources, that he should sometimes diversify. Actually, you want to diversify a basket of resources so that, when natural gas is high, and oil is low, it’s okay. And we kind of have that in Alberta. Sometimes we forget that. I’ll never forget that story in diversifying within our strength and our strength is natural resources.

So, we took all that stuff about the past; it’s all really good information and we kind of knew that but we got numbers for you that are pretty cool when you read that [report]. It blows people away. But what blows them away even more is our look into the future. This was pretty exciting stuff. So another piece, to answer your question about what made me feel really good was this work. Just as an example, when we roll out what we think we could build on incrementally. If we kind of cruise along and make a bunch of average decisions, we will have a pretty good economy here in Alberta because of the resources. If we make a few different choices, and get a little lucky, and get more people in, 700 billion dollars more of incremental GDP over the next 10 years, and we can justify those kinds of numbers, those are mind blowing numbers. It’s quite an increase over where we are but that’s a big old number and so that’s a specific one in there.

And there have been some other really interesting ones. Forestry has a new road map out that kind of goes, “We think we can grow this industry a little differently by being quite a bit different and smarter in how we market things and what we choose to actually build at the front end. We do things a little differently and we have a different kind of product and completely different marketplace and we see a growth. That’s interesting, so let’s add that one to the increment of nine different sectors.”

Just as one example that really made me feel terrific, my current president, Dave Middleton is with PennWest [Exploration]; I think he is the second in command there now. So, his expertise is drilling and production and drilling conventional horizontal wells, and oil sands wells. He was the sector lead; we had the best. We take pride in saying we hardly hired a consultant do to this work for us.



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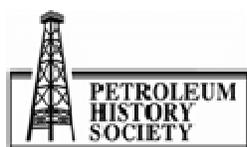
We rolled up our own sleeves and had the best people around our board, and people that they knew roll up their sleeves with real working stiffs in those companies projecting the future. Then, we had an economist turn it into projections. As an example, conventional oil and gas was one of the sectors, and the sector lead was Dave Middleton. This was before he was President of ACR. They started working away, and CAPP was involved, and the small producers and us, and Dave had all the people that he thought were all of the smartest guys around. They started scratching their heads and they realized, “Oh my gosh, with this horizontal drilling, fracking we are actually seeing an increase in production, but you know if we just tweak that royalty system just a tad, we could be like Saskatchewan.”

They were doing much better than Alberta at the time, and so we didn't have the ink dry; the ink wasn't even written for this report so straight to the Provincial Government. “Here is something we found, right now it's this and, if we tweak that royalty system just a tad, we could have as much growth in conventional oil as you see in the neighbors in Saskatchewan. We are all using the same technology.” So they did; they tweaked it before this report even got finished, and the last I saw of the growth curve on conventional oil in this province is phenomenal. I believe it has grown something in the order of over 100 thousand barrels a day in the last year or two, which is as much as the oil sands have grown. That's a resource that we thought back in 1972 was on its way out. So, there's another little “Aha,” almost a bit of an eureka, and that's what ACR does so well, those kind of little things that you kind of, “hum.” I remember Dave Middleton putting up his hand and saying, “I think I got something here.” I said, “My god.”

AD: There is a theme through all of this, the importance of research at every level. From the pure science to the technology, to understanding the resource and international markets, all of this stuff; but the necessity for that kind of research to happen, to anticipate the future.

ANDERSON: So on our board, why we are successful at ACR, we have 30 people on our board, and they are from the different sectors of resource development, and they are all like Dave Middleton. They actually know how to produce something. They know the business inside out and backwards, and maybe are even the best in the business. When you start having them hanging out with each other from different sectors, we all so roll in Dean [David] Lynch from the University of Alberta, Dr Mansell, a great economist from the University of Calgary. We have Eddie Isaacs attend all of our board meetings; Stephen Lougheed, the head of the old Alberta Research Council, they are all here. We have drop-ins by the head of the National Research Council, John McDougal comes in and “do you mind if I just listen to one of your board meetings?” “Come on in.”

When you have that kind of expertise and leadership you tend to make a lot of good decisions. We are a small group; we pick our tall poppies very carefully, but, boy, do we have a powerhouse of people steering us along, ever so slowly sometimes, but still steering us along and when we do something like the National Oil Sands Taskforce, before my time so I'm not bragging, change the country.



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Now I haven't had one of those in my tenure. Don Currie should be the Association Champion of the World for what he did there. But it's very cool to have those little wins along the way. We don't fight a lot of fires, but once and a while we change our history, our future, I guess in Alberta.

When I took the job, in my interview, they were asking some questions around, "What's driving you?" Well, Albertans own these resources and I want to see them developed properly and the reaction from the executive was, "Which planet is he from exactly, like what do you mean?" But they got it and they came around and said, "You know that's right, if we are going to bring this population along with us, and I'm not trying to discount what you said earlier, we have a lot of work to do there yet, but I think we are developing the resources orderly and responsibly and I think that story will come around eventually because we keep doing the right thing. We continually do the right thing, bit by bit. We will make mistakes here and there, but we fix them.

AD: Gosh, that sounds surprising like a summative remark. Is there anything else that you would like to share with us?

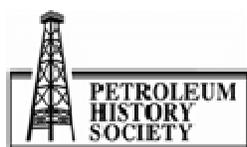
ANDERSON: No, that was a good one to end it on. Thanks for bringing back those memories, my gosh!

AD: Thank you for sharing them with us. It was a great interview, thanks so much.

ANDERSON: Well I hope it's helpful.

AD: Yes it is actually.

[END OF INTERVIEW]



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