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# BOB TAYLOR

**Date and place of birth (if available):**

**Date and place of interview:** Tuesday, November 1, 2011 at Bob Taylor's home, Vars Cliff Way in NW Calgary

**Name of interviewer:** Peter McKenzie-Brown

**Name of videographer:** Peter Tombrowski

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

**Consent form signed:** Yes

Initials of Interviewer: PMB

Last name of subject:

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## **BACKGROUND:**

PMB: I'm talking to Bob Taylor who is at his home in Varscliffe Way in Northwest Calgary. The date today is the 1st of November, 2011 and the other person here with us is Peter Tombrowski, our videographer. Bob and I had an interview about six weeks ago during, it was in August wasn't it?

TAYLOR: I think it was.

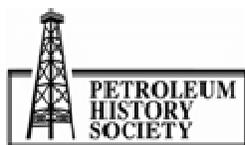
PMB: It was almost two months ago, yeah. And that was the first major interview, so this is the follow-up video version of that interview.

## **INTERVIEW:**

PMB: Bob, last time we talked about how you began with Dome. And then when it was taken over by Amoco, you became involved there and then eventually ended as the manager of oil sands and heavy oil – both, wasn't it?

TAYLOR: Yes.

PMB: Oil sands and heavy oil for Amoco before it was taken over by BP. So would you begin by just talking about the oil sands properties that Amoco had when you managed that part of the company's portfolio?



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TAYLOR: Okay. The day I took, before I took over as general manager of oil sands, Amoco executed a transaction with Elan Energy, in which it sold its, what you might call more classic heavy oil properties. And specifically those were the properties over at Elk Point, Lindberg. And that left Amoco with two properties that were in the beginning stages of development. One was the property at Wolf Lake, Primrose where the major operating asset there was the historic properties that had belonged to BP and Petro Canada and Ranger Oil. And Amoco, at that time, had just taken over full ownership of those properties and had the largely undeveloped Primrose Air Weapons Range properties that were contiguous to Wolf Lake. And so that was one of the two major thrusts for growth and development. The second was a... and those were all thermal properties, steam-assisted properties. The other property was over at Wabasca which was a... some people call it Britinol, Pelican Hills, that area and it was a property that was amenable to “cold production using horizontal wells”.

PMB: How many leases would that have been in total do you know?

TAYLOR: Ah, no. You mean how many acres? Or how many leases?

PMB: Well, how many leases, one, and question two is, How many acres?

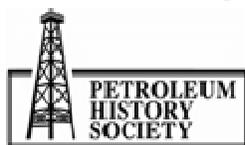
TAYLOR: Well the Primrose Air Weapons Range was a single lease but it was very large, I think it was six or eight square miles, plus then the Wolf Lake properties were another few square miles and up at the Wabasca area we probably had leases that covered maybe eight or ten square miles overall, some of which we acquired as went forward in our development process.

PMB: Now around, in the late 1980s and up until the early 1990s the SAGD, Steam-Assisted Gravity Drainage, was being demonstrated as commercial viability at the Underground Test Facility. How did this affect Amoco’s approach to its oil sands assets?

TAYLOR: Okay, I’m going to back up a step and what was being done at AOSTRA was proving that there was a technically viable scheme for recovering heavy oil using a pair of wells, a steam injector and a producing well, which then became SAGD but it wasn’t really until EnCana went forward and did their first pilot tests at Foster Creek, that they really proved that it could be done on a commercial scale and make money. So AOSTRA was an important proving ground but it took a company to take it out into the field to prove its commercial viability, and AOSTRA was vitally important in that development.

PMB: So this is the Underground Test Facility.

TAYLOR: The Underground Test Facility and the rest of the work that they did at AOSTRA. But it really took going out to the field, building things at commercial scale, with commercial steam generators that proved that the horizontal SAGD wells would work. Prior to that, everyone was using some variation of vertical or slant wells, pumping steam into the ground, letting the well soak with that hot water and steam and then producing back out of the same well bore. And some people call that huff and puff or cyclic steaming, and today, even today that is the primary technology that



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Imperial Oil uses at its Cold Lake properties, and their property is nicely situated for being able to do that technology because they bought the river valley, they bought the deep, thick river valley filled with oil sands so it's really suitable for vertical wells. Whereas SAGD is most appropriate where you've got fairly thick pay, but large area of stint where it's thick enough to drill two horizontal wells towards the bottom of that zone and you know, get the gravity drainage. The acreage that we had at Primrose Air Weapons Range wasn't deep enough, wasn't thick enough rather to be able to employ SAGD, so even in those operations we used cyclic steam, but using horizontal wells. So that, I would say, is the other big contribution that AOSTRA and the Underground Test Facility is the proof that you could produce these long horizontal wells in a steam environment.

PMB: So you were not using, let me see whether I understand that, cyclic steam was really the better approach for the properties that you had, is that correct?

TAYLOR: Yes.

PMB: But what you could do was, is do cyclic steam with horizontal wells.

TAYLOR: That's right. So there's the...if you have reservoirs that are thick enough, then the SAGD well pair technology is excellent, if you're too skinny for that then single horizontal wells are the way that we were developing and some companies are still doing it today where they've got the thinner reservoirs.

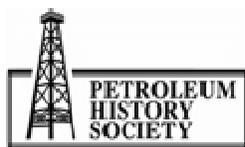
PMB: Now what I find...you and I were both of course at Amoco when it was acquired by BP in 1998. And my recollection is that BP had essentially got out of the oil sands business in Canada around 1990 and it sold its stuff out, and I believe those assets or the shell of that company became Talisman, is that correct?

TAYLOR: I wouldn't say the shell, the main assets and including some of the North Sea assets that were in BP Canada, converted into Talisman and all their Foothills Gas, and so that became the core assets for Talisman. The oil sands assets at that time, I think, ended up in the hands of Ranger Oil and those are the ones that have been subsequently rebought by Amoco in the mid-1990s.

PMB: So Amoco bought them back?

TAYLOR: Yes, I mean BP was long gone from Canada at that time and so Amoco bought and acquired a hundred percent working interest in the Wolf Lake properties, but some of the engineers working for Amoco on those properties had been around and had been the engineers working on them when they were BP assets.

PMB: So it was sort of a little cycle there where they sold them off and bought them but then, and this is the part that I find fairly fascinating, Sir John Browne was the guy that got rid of them in the first place, if I recall, and then he got rid of them again. When he took over at Amoco he basically sold off all of the oil sands assets.



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TAYLOR: I don't know the details. I know he had worked on the oil sands assets in Canada, when he'd been with BP Canada, and he wasn't enthralled with them at that time. When he was now the Chairman of BP, as Sir John Browne, and when I interviewed with the person who actually took over the oil sands and oil operations in Canada, his comments were we have a maximum of six months to convince Sir John Browne not to sell the assets. So the dice was basically cast that they would get rid of the oil sands properties. And if you, the mind-set of the day in BP was we're going to do all our future... and if you remember oil had just been down to below fourteen dollars a barrel for WTI, and that did not bode well for oil sands if prices were to stay at that level. And BP had so many investment opportunities at the time and said, all our future planning is going to be based on sixteen dollar oil. And if you're going to do all your future planning on sixteen dollar oil then Canadian oil sands wouldn't have a place in your mix of assets. I'm sure that the sixteen dollars was revised upwards as oil prices recovered, but that was the opportunity suite that he had at that time. Plus, he just didn't like heavy oil and so the oil sands were sold, well, all the oil assets were sold; the conventional ones to Penn West and the oil sands assets to CNRL.

PMB: So it wasn't a bad business decision, it was a sensible business notion.

TAYLOR: I would say it was a short-sighted business notion, if you'd looked at the resource base that was held, and if you believed that global demand for oil with, I mean this is just over ten years ago, we could see China rising, we could see India growing, we could see a global demand for oil into the future and that was going to drive prices upwards, so I think it was a realistic decision given economics of the day, but short-sighted in terms of a longer term view. I mean BP has re-entered the oil sands, in a very, very expensive way since then, trading refinery assets and spending a lot of money to get back into the oil sands. But, I mean, if you go back to 1998 and you look at fourteen to sixteen dollar oil and you say, this is as good as it's going to be, a reasonable a decision, and I will say that some of our Amoco executives in Houston were equally dismal on the outlook for oil, for heavy oil.

PMB: And that was roughly the time when the Economist put out its famous supplement which said that oil prices were going down to five bucks, and they were going to stay there. And on roughly the following day, the day after it hit the newsstands, oil prices started to rise again.

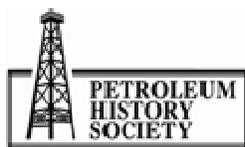
TAYLOR: Well and oil prices are.... I remember sitting with Tony Hickson from Hatch Energy a couple of years ago, at lunch he says, "Oh man, if oil could just get back up to fifty dollars, then some of these projects would come on stream." And he was bemoaning whether we would ever see fifty dollar oil again, and that was, I don't know, probably two and a half years ago.

PMB: Wow, so in 2008?

TAYLOR: Yeah, about that.

PMB: So right after the crash?

TAYLOR: Yes.



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PMB: Now I really want to focus in on your years as Alberta's Assistant Deputy Minister for Oil, and that began around 2000. So as a former oil executive, which of course, that had been your background with Amoco and Dome, what do you think was your impact on Alberta's Energy Ministry?

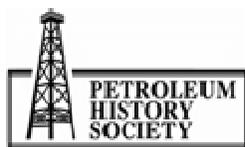
TAYLOR: It's hard to say that you really impact the government, Peter, but you can try hard. The Deputy Minister of the day was Ken Smith, and Ken had been there a couple of years and he had been looking into... and he had come to the realization that as the Deputy Minister of Energy, that he was in fact, and he didn't use these words, these are my words, that he was the CEO of the largest revenue producing oil entity in Alberta. Because of the royalty structure of the land sales, the government was the largest single... and so we were the Ministry of Energy, we were one of two ministries in the Alberta Government that generated significant revenue for the Crown, the other one being finance and taxation, and of course gaming and electric contributes a little bit, a billion a year at the time. But really, oil and gas was a business and as one of our energy ministers said, we were the ministry of leasing land and collecting royalties. That's perhaps a little bit short-sighted and myopic view but it was a nice catch phrase to keep us focused on the fact that we weren't a program, we weren't out spending money, granting money here and there and supporting entities, we were in the business of using our regulatory powers to generate more revenue for the Province from the oil and gas assets that we own as a people of Alberta.

So I was brought in to try and help bring some business focus and one of the first things we did is we renamed each of the section heads from being executive director to renaming him as business unit leader, and that may seem like a simple semantic, but it was really to keep people's focus on the fact that they were responsible for running a business. The second thing we did, and Ken Smith was very much encouraging this and promoting it, was restructuring it so that instead of having a policy department over here and an operations department over here, and the regulations and policy people coming up with all the ideas for gas for oil, for oil sands, for electricity and over here people actually trying to run the operations of leasing land and collecting royalties, and not in big conversation or communication with each other, we entirely restructured the Department of Energy so that we had an executive director for oil sands, responsible for policy and operations and that was the business unit leader.

We had a business unit leader for oil, same thing, policy and operations; business unit leader for electricity, for natural gas, to try to create a business line focus so that the people setting policy, setting regulations and collecting the money at the end of the day all reported to the same leader; and then making sure that we had a common conversation amongst the business leaders, so that we were collaboratively running the entire energy business.

PMB: Okay, who were your ministers during that four year stay?

TAYLOR: Well the minister that approved us moving to the business unit structure was Steve West, and he was the minister when I arrived in mid-May 2000, and he moved over to be Finance Minister on the 1st of July, so I experienced only six weeks of the world of Steve West. And Steve West, as



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you know, is pretty infamous across the Alberta Government as being “Doctor Death” that would go in and slash and cut programs and hollow out departments. When it came to energy, he recognized the importance of it and I would say his recognition of importance is he merely froze their budget and their personnel, he didn’t cut any of them. So we had Steve for six weeks, and then we had Mike Cardinal as the minister for the next year or so and Mike is a really nice guy. We lived in the same apartment building and we would chat, but his real passion was forestry, and that time the Energy Department also was responsible for leasing forestry lands, so I would say Mike spent more of his focus on how he would maximize the annual allowable cut and the value of our forest lands, and let the rest of us worry about the energy side of the portfolio.

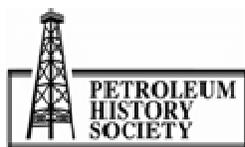
And after that year, we ended up with Murray Smith, as Minister of Energy, and Murray was a passionate, passionate man about the energy portfolio and the hundred and seventy-six billion barrels of recoverable oil sands reserves being recognized first by the Oil and Gas Journal and then more generally globally. (That) can be credited to the efforts of Murray Smith, going down and going to Houston, going to Washington, talking to people and having it recognized that this really was an important resource for North America.

PMB: Before you leave that Bob, Hans Maciej, I think, raised the question in my interview with him, how in the world did you come up with the...or did the government come up with that number? His argument was that somehow this number appeared, and he doesn’t know how.

TAYLOR: It’s not the way that you would conventionally record reserves for SCC or regulatory purposes, because in order to have reserves recognized for securities and exchange commission for the Canadian and final one, you have to have a well drilled that can drain an area of production, so whether that’s a gas well or an oil well, you have to have a well... well logs, proven production and a reservoir analysis that says, yeah, you can drain this much oil from the surrounding area. If you did that for the oil sands, we’d still have very small numbers because what we have is we have a resource that we prove up by going out and a doing a combination of drilling and seismic. So every leaseholder when they acquire a lease is obligated to go out and prove up a resource on the basis of one well per section, or the equivalent of one well per section plus some seismic, so it might be one well every couple of sections with seismic lines connecting them so that you can get the stratigraphy and you can know that the resource is contiguous across that area, but that it would be economically suicidal to go out and say okay, you’ve got to put all those wells on production.

So what Alberta did is they, we’ve had geologists that go out and look at each company’s assets and they have to report back what they’ve got and then the basis of that reserve number is, knowing the resource is there, knowing that you can do this over here profitably, economically and say well, if you can do it over here in that resource profitably, in twenty years or fifty years’ time or a hundred years’ time when we actually move over that far and need the production capacity from there, those reserves are there and we know they’re there.

PMB: So was that calculation made by the ERCB, the Energy Resources Conservation Board?



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TAYLOR: I'm going to plead ignorance on whether that came from the Alberta Geologic Survey perhaps, or the ERCB. It didn't come out of the Department of Energy, specifically.

PMB: So it wasn't just a number that somebody pulled out of the air.

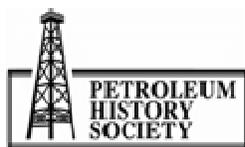
TAYLOR: No, it's certainly not. What it does represent is it represents about ten percent of the overall original oil in place in the oil sands. And I would suggest that all other things being equal over time, that's a very conservative number because typically in a badly managed reservoir you get twenty-five percent of the resource back and so we've recorded, I think we would be able to recover about ten percent of the overall oil in place.

PMB: Now you were talking before I interrupted you about Murray Smith being passionate about the oil business.

TAYLOR: Yes, about the energy business. Not all ministers are passionate about the things they get dumped into, but Murray certainly was and had a, I would say a very good working relationship with the senior leadership across the ministry. We would have annual planning retreats with Murray and he would bring in folks. One time he brought in **Rod Love** to give us kind of government 101 and here is how the cycle of government works at the political level, which really is important for people working in the public service to understand. Running up to election, nothing is going to happen, after an election you've got to get to meet the new minister, you've got to get comfortable, and then you've got your activist period for the first couple of years where you do all the tough decision making and then the closer you get to next election, you do less and less unpopular things because there's an election coming up.

And every government everywhere, democratic, works on that same cycle. So it's important that if you're sitting in the public service and you think there are some important things that need to be fixed, changed, improved that you plan your timing so that you can bring these things to the minister's attention and he can get his MLA support for early in the cycle. So that was one of the things that Murray did was help us improve our understanding. He also brought up a gentleman from Houston who has been tracking oil and gas cycles since the 50s and when we talk about oil prices, he's very articulate about every time oil prices go up, you reach a certain point, you kill demand and demand for oil is going to go down and so your oil price is going to go down and there's self-induced cycles if you will, certainly the world petro-chemical industry does that in spades, oil a little less though.

But he was helping us understand, because one of the important things that the Energy Department does, is it forecasts what the royalty revenue will be so that the government can plan its spending, and we were quite close to some of the early thinking around how the sustainability fund might be funded and how it might be used. In my mind, it's like a surge tank in a chemical facility where at the front-end of the plant, you have a big surge drum so that as your product comes in, at uneven volumes, you can have the surge drum and then flow the fluid out into the steady state process in the plant that would constantly drain. And that in fact is what the sustainability fund should be is



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something that as our oil and gas revenue comes in on an unsteady state, on an annual basis, that it provides a continuous stream of funding. There's a brilliant piece of work done, the Teur Report, done by Dave Teur, the former head of Pan-Canadian, and it really laid out the groundwork for the sustainability fund, with also the idea that if you get the tank full, that your overflow should go someplace like the heritage fund. I would say the government adopted some of that, but very imperfectly, not what I would have liked to have seen come out of... but that's part of the Energy Department's role is to be accurate, as you can be in a volatile pricing environment is what the cash flow. And of course, it's also to set the royalty structure so that it responds well to price changes, and that's some other important work we got started while I was there.

PMB: Now about the time that you got into the ministry, 2000, I believe that was about the time oil was ranging from twenty to twenty-five dollars a barrel, something like that. OPEC was saying well, this is a range of price that we're going to be happy with, but then of course, it didn't stay there, one thing happened after another and then prices just went up and up and up. So by the time you left, 2004-2005, were oil prices up around forty or fifty bucks by then or?

TAYLOR: Probably up around that range. I mean there were wild swings in all the commodities there, and I do remember a twenty-two dollar number specifically because we were in negotiations with one of the oil sands producers around the gas over bitumen and their planning price at that point was twenty-two dollars a barrel and even though it was maybe twenty-five dollars a barrel on the street, they didn't believe, and that was their planning price. We also had that period where natural gas spiked to fifteen dollars a gigajoule, through that one winter, and then came back down to much more rational prices and then the argument there was, well is it going to stay at ten dollars an mcf or eight dollars an mcf and here we are today scratching for five.

PMB: Now clearly at this time, and I'm thinking here of oil prices, with oil prices more or less surging, can you describe the activity, the change in activity in the oil sands during that period?

TAYLOR: Well it was huge. It was really the beginning of the ramp-up. If you recall going back to 1997, or pre-1997, there was the National Oil Sands Task Force, I will say its mentor and leader was Eric Newell from Syncrude and there was a group of oil sands companies came together and we worked really hard to convince both the Provincial and the Federal Government that oil sands investment could surge if we had some different features of the royalty on the tax scheme, and on the federal level that was to allow capital expenditures to have accelerated write-off.

PMB: And you were part of that task force?

TAYLOR: Yes I was. (I wore out) at least one pair of shoes walking around downtown Ottawa, going from ministry to ministry. I think I quipped to you in the other interview, your earlier interview, I discovered that every ministry in Ottawa had an oil and gas section, so environment had an oil and gas section, transportation had an oil and gas section, Investment Canada had an oil and gas section, and Natural Resources Canada where energy lies, it has its environment section, so we're well covered.



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But that, the outcome of that was accelerated capital cost, allowance write-off, at the federal level, basically allowing your initial capital investment to be recovered as if it were an operating expense and the cost to the Canadian taxpayer on that was really a deferred recovery of taxes, because you can write through capital cost allowance, you've got to write-off the value of your investment eventually, it just accelerated that and so the cost was, if you want, a bit of time value of money. For the Alberta Government, similarly instead of having a standard royalty on all the oil production from the oil sands, it established a one percent royalty on gross revenues, as soon as you start a production. And it stayed at one percent until you'd recovered all your initial investment, and then it jumped up to twenty-five percent of net revenues. And what both of those federal and the provincial schemes did, is it reduced the investment risk while preserving the right to collect royalties and taxes once the investment had been recovered.

So it was, I think it was well conceived and it did what it was supposed to do. So by the time I moved to the government, in 2000, we'd gone through that horrible dip in oil prices that really depressed oil investment and now industry was ready to grasp the opportunity that was provided by rising prices and an improved fiscal regime. And that created a ton work in the Department of Energy, and we had scant resources in oil sands because it had been staffed for this low level of previous activity and now we had to try and respond to all the new projects, the full implementation of the new royalty regulations, because while the royalty regulation was approved there was a lot of sub-tasks details that still had to be worked out between government and industry.

PMB: How many new projects were proposed during that period? Do you recall?

TAYLOR: I know from the mining and upgrading side, both Syncrude and Suncor went through major expansions. In the in-situ there was a myriad of projects both in the Cold Lake/Wabasca area, in the Primrose/Athabasca area.

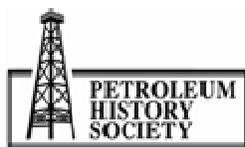
PMB: And didn't...CNRL, the Canadian Natural Resources, I believe they made their proposal about that time?

TAYLOR: Yes, they...

PMB: And Shell went on-stream roughly then didn't it?

TAYLOR: Yes that's right, I mean, Shell's Albion project came on. I should measure the projects by the number of field tours I made with folks because we did take the Undersecretary of Energy from Washington up to see the Shell Albion project and CNRL was going through its permitting stage at that period time. And yeah, I remember a long dialogue with **Frere Doucette** from CNRL about all the things that could be better, if only....

PMB: So there's an argument right now, as of today 2011, that really the mineable parts of the oil sands are mostly covered, there's not going to be a lot of growth there, and the future growth is going to be in the in-situ.



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TAYLOR: I'll say sort of. I mean, of a surface area, only about two and a half percent of a whole oil sands surface area is amenable to mining and maybe twenty percent of the overall resource that we'll recover will come from the mining operations. So we've got the four largest established mining operations today, but we will be adding three or four additional ones to that. Whether it's the Imperial or the ExxonMobil Kearl Lake project, there's the project up at Fort Hills that will go ahead, there's several other mine expansions, there's the Joslyn properties could still get turned into a decent mine, so there's maybe three, four, five more major mining operations might develop. Certainly Shell has expansion for their, at least three additional phases of expansion for their Albion project, so it would be a mistake to think that the mining and extraction operations are largely behind us. There is still a lot of work to be done there. But having that, the vast majority of the future production growth, if you look out more than ten years, will shift over predominately to in-situ development.

PMB: Al Hyndman told me at one point, that in terms of the mineable projects, that oil sands production was going to peak around 2020 or 2025.

TAYLOR: Yeah, I'd say that's about right.

PMB: That seems reasonable.

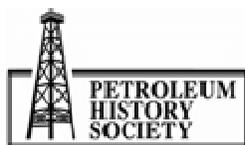
TAYLOR: Well if we build that out, finish the build-out of the mining in the next ten years, you're going to be at more or less the maximum capacity at that point and you'll see new projects come on, new mines come on, but as the new mines come on they're really just replacing input capacity for the extraction plants from an old mine that's been depleted.

PMB: Yeah, okay.

TAYLOR: So I think that's probably pretty accurate.

PMB: One of the things that I'd really like to focus on: We're going to be having some interviews with some aboriginal leaders, we haven't done that yet, but I remember that as ADM you were responsible for aboriginal relations within the ministry. Can you tell us about that and maybe talk about the social and economic effects on aboriginal and on local communities of oil sands development.

TAYLOR: Sure. Our major focus when I was with the Department of Energy was putting in place, developing and putting in place the government's consultation guidelines, because that was a period which there were road blocks, there were sit-ins by First Nations who said, we haven't been adequately consulted and it's the government who has the primary first responsibility to consult and industry second. And so we worked, this was not an oil sands issue but a gas issue up in the very northwest corner of the Province, where the Cho were threatening. And we worked proactively with the government and with CAPP and the companies in the area, to work with the people up in the Deh Cho, sorry not the Deh Cho, the Dena Taa. And their settlement is at Sha Tee, up west of, it's in the Rainbow Lake, Hay Lakes area, in fact the Hay Lakes make up part of their...



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PMB: And Sha Tee was the word you used? I'm going to ask you to spell that.

TAYLOR: No you're not.

PMB: Okay, well maybe we'll just hope for the best.

TAYLOR: S-H-A, T-E-E, I think it is, Sha Tee, and it's in the extreme northwest of Alberta. And so we helped them set up a geographical information based mapping system, to acquire the equipment and bring in some consultants and train some of their own folks so they could, on the land which was both their reserve and their traditional lands, go out and map all the important places. And those important places might be trap lines, those important places might be berry patches, it might be sources of herbal medicines, it might be gravesites, and it was a database that they owned. And then a company coming in that wanted to do activity in the area, could say hey here's where I'm coming in, are there any issues I need to be aware of and if there were, then between the set up with guys with skidoos that they would kind of go with the representatives of the oil company to...

PMB: Now this is in the northwest of Alberta, so out of the oil sands area?

TAYLOR: Absolutely out of the oil sands area, but it's an example of how were trying to develop this relationship and enable communities to be their own land manager, if you will, to have their own database of important artifacts. The goal was then that we would replicate that across the Province, so that all communities would be able to do that. Now that was a pilot project and it had levels of success. The key thing was to work with the communities to train people to be self-sufficient and to be in control and to be able to negotiate on a business-to-business, or a community to company basis and move from this, I feel...I'll put in these words, "I feel like I have no control, so my only way of exercising control is to blockade or to create barriers to business," but to move it into a proactive, "we can both win, we can both come out of this."

The community that's probably, the First Nations that won the most, if you will, by having good leadership, a stable leadership that's been able to create a business focus is the community of Fort McKay. And they are, you might say, ground zero of the oil sands. If you're driving north, you turn this way to Syncrude, you go up the road you turn this way to Suncor and right there at that junction is the community of Fort McKay. Through their land claims negotiation they bought their own oil sands lease that they'll roll out in due course, likely in collaboration with one of the other companies. They are currently doing, I think, a hundred and twenty million dollars a year of business with their band-owned companies. I saw a commercial on the TV the other night, the Boucher Group of Companies and all the business they're doing with oil sands companies.

They're perhaps the organization out of the community that's been most successful; others have from time-to-time had working relationships. When I was working in industry we used Cold Lake Cats, we helped Janvier get started with Primrose well site maintenance, welding. We helped with the, worked with the Wabasca road construction company, we worked with some of the companies there to haul...



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PMB: This is when you were with Amoco?

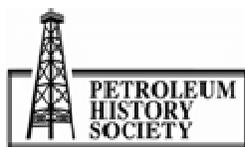
TAYLOR: ...With industry...yes, with Amoco. Paul Beauregard set up an oil trucking company because we needed oil to be trucked; somebody else bought a big tractor to pull our trucks out of the mud when the roads were bad. And we tried to work with the communities to help them develop business that, again, with Cold Lake Cats we teamed them up with another construction company, Layton Brothers, Tracy Layton and his family-owned company and they kind of shepherded and helped the Cold Lake Cats. The actual equipment operators were as competent as any other cat operator, but their business practices were, as best I can say, inadequate. They didn't know how to separate out their business of Cold Lake Cats from the rest of the band administration and the band cash flow.

They didn't know how to manage their safety programs, so we had Tracy and his team. And we worked the same with the folks out at Wabasca helping them bring in some outside consultants to help them improve the quality of their maintenance and their operations, what you might call the backroom activities. In the government our role was really to try and improve the relationships between the companies and the bands and we did that with the oil sands, not with Fort McKay because they're so well advanced on their own, but some of the other communities.

PMB: One of the... I don't want to be putting words in your mouth here, but there's an opportunity for the oil sands industry in the sense that there's severe shortages of labour for the industry as a whole and yet, nearby, the oil sands area happens to have a fairly large aboriginal population. How do you see those two things fitting?

TAYLOR: One of the things that we've encountered, and this was just a reality, when we tried to work with the Cold Lake First Nations, and Lane Wells who I believe you know, worked very closely. I spotted him up in Bonneville to build those relationship and working with Cold Lake First Nations. We offered to help them do an inventory of their unemployed people and the skills, and maybe didn't push them hard enough to accept some of that help, because they would, and I don't deny the facts, say we've got a high level of unemployment, but you could never find out exactly what the skills were of those people. And I tried to offer to send a lady by the name Stacy Postal up to help them build an inventory, build a little database, even just a three-ring binder of you know, here's Peter and Peter's been to welding training and Peter's got this and that.

The reality is, is most of the Peters up in Cold Lake First Nations didn't have a driver's licence because of alcohol related violations, which meant it made it hard to get to work, it made them in a lot of cases, less reliable then you would normally expect. And the people who were unemployed, tragically, are often unemployed for a reason. But we did try to work with organizing carpooling and truck pooling so that people could get to work; nothing like having somebody out on the front street honking the horn, waiting for you, to get you out of bed and get you to the job. You know, jumping ahead to what some of the projects I'm working on today with the oil sands leadership initiative, they've been much more proactive about really getting in and being present in the First Nations communities and really not having just one person developing relationships but having all



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the companies and the teams know relationships with elders and youth, the two powerful ends of the barbell, if you will, in an aboriginal community because the average population is often under twenty-five, and it's those kids that are still in school today that can be...see a wide range of trading opportunities, not just learning to drive a car or doing something, but learning a wide-range of opportunities and the elders who are sitting there looking back, you know, some of them grew up still, a lot of them in a hunting/trapping culture where they were self-sufficient. And in Cold Lake, self-sufficient on what's now the Primrose Air Weapons Range, before they got thrown out by the Federal Government and told, you're not going to hunt anymore, you're going to go down and farm.

And that's only 60 years ago, 55 years ago that that happened. And so that's the cultural change that we've imposed upon Northern Alberta, and so the elders still have that, some little sense of, they remember the residential schools, but they also remember being self-sufficient on the reserve and being able to have viable lifestyles and not being totally dependent on Federal Government handouts. And so it's those elders with the memories and the young people coming up that are the powerful...and that's the group that I'm learning now, we should've been working with more proactively back then, although we did have good relationships with a lot of the elders, Alex Janvier, the world famous artist from Cold Lake First Nation. Just last December I spent two and half, three hours with him in his gallery in Cold Lake, and he's just a passionate, vibrant advocate for his people as well as a tremendous artist.

PMB: Interesting comments, Bob. Now do you want to take any of that back to what you did within the Province? You know, your last idea that maybe you should have been working with the elders from the beginning, is that something that you did a lot of when you were with the Province?

TAYLOR: Unfortunately with the Province, they wanted to deal chief-to-chief, so you ended up dealing with the bands' elected officials more than with the elders. Sometimes the elders would be there, but often you were working with the band chief and council and they aren't necessarily also elders.

PMB: Oh, okay.

TAYLOR: So you were dealing with the more politically minded.

PMB: And a lot of the aboriginal communities are fifty people, a hundred people, so you would be dealing with a very small number. Am I correct?

TAYLOR: Yeah, maybe two hundred and fifty people typically, in the north. Some of them larger and some of them might be fifteen hundred people, but spread around three communities, like Wabasca, I think has three distinct, the Big Stone Band has three distinct populations on different reserves and, you know, one chief of council trying to represent all of them.

PMB: I'm going to leave that unless there's something else you want to say.



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TAYLOR: Okay.

PMB: Aboriginal: I hope that it will become an important part of this project.

TAYLOR: We could spend the rest of the afternoon talking about the “would of/should of” and what we need to do different moving forward but...

PMB: But we won't. In a document that I recently looked at that you'd prepared, you said, “Development of the oil sands is not just a major opportunity for Alberta and Canada, it's a responsibility.” Very nice, ringing words. What do they mean?

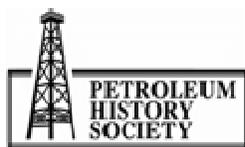
TAYLOR: I made a presentation to a group of Chinese Delegates to Canada yesterday, and as part of that presentation we were looking at projections for future oil demands and as I said, this particular forecast came from the Government of the United States of America, and I said to the Chinese group, I said, “If you can't trust the Government of the United States, who can you trust?”

PMB: Did they get it?

TAYLOR: They did. I think they feel the same way about their own government some days, although they wouldn't say that out loud. But whether you go to the International Energy Agency, or to things published in the Guardian in the UK, or you go to the energy information from the United States or the... all forecasts still show rising petroleum demand through 2030, probably to 2050. And as we agreed with the Chinese yesterday, what everybody really wants is a car. And, you know, we could put hybrid cars on and that certainly improves fuel efficiency, but just the sheer number of cars that are coming on the roads of India and China are going to increase that demand. So if you're going to need liquid hydrocarbon fuels you want it to come from places that are developing it responsibly, and I don't want to get into a big ethical oil overlay but the fact is that we probably have a high standards, or among the highest standards for petroleum development production globally.

The one thing we have is we've got a relatively stable fiscal regime, regulatory regime, government that is stable in its nature if not in which party needs it, federally and provincially. We've got a high ethical standard in terms of you don't have to pay special under the table agency fees to government officials to get approvals. We're the place that if you're an international oil company, or national oil company, you should want to do business. I did a little piece of work one day, a little essay I was writing and if I recall the numbers correctly, the U.S. has about five hundred thousand soldiers, airmen, naval personnel deployed internationally and if only half of those are there to protect the supply chain of oil and the other half are actually out there on legitimate peacekeeping missions, that's still two hundred and fifty thousand people deployed overseas at some ninety billion dollars a year, at least, to protect the supply of oil.

That's people's sons and daughters that are deployed overseas. If instead that oil was coming from Canada, all those people could come home and the world would probably be a safer place because we wouldn't be sending money from North America to places that are supporting terrorism. So I



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mean, there is a little bit more ethical than that, if there's going to be that demand for oil, let's do it in a responsible way and in a responsible place and we've got the resource, we're second only to Saudi Arabia for oil resource. It lets us be replaced, that does it rank and helps meet the global demand. And every barrel that we ship to the United States means one barrel from somewhere else in the World that's available for China or India to import. So we're indirectly, without shipping a barrel of oil to China, we're in fact improving the supply of oil to China and the rest of the world.

PMB: Preston Manning gave me the statistic, I guess he was meeting with Dick Cheney when Cheney was the Vice-President, and he said he was making a similar argument and he said look you know, how much did you guys pay for the Gulf War? When was it, in '91? And I think the number that he came up with was that one war would have taken a week or a couple of weeks or something like that...

TAYLOR: Yes.

PMB: The number was in the range of seven hundred billion dollars. Now that's more than the value of the, I think, the oil that Kuwait shipped for a fair number of years.

TAYLOR: When I did my analysis I said how many people are deployed for you in that two hundred and fifty... per barrel of oil that the U.S. is importing from countries other than Canada and Mexico and the number as a ratio was something like one barrel of oil, or one person for every eighty barrels of oil a day that they import. And I tossed that out as a little teaser at a cocktail party I was at one day, I said, any of you guys have one employee for every eighty barrels of oil you produce? And they all looked at each other and said hell no, and the one guy leaned over to me and kind of in a quiet tone of voice, he says, if we did, he says, we'd have to call ourselves, and he looked around the room, ExxonMobil.

PMB: I think Cheney's response to this, by this way, which is worth noting, is that even if North America were energy self-sufficient it would still be important to guard the Middle East, the Persian Gulf, because it supplies so much oil to our trading partners. If it were shut off, it would destroy the global economy.

TAYLOR: I wouldn't argue with that, what I would say is it would shift the responsibility for providing that security around the world a little bit more evenly than it is today.

PMB: Yes, the Chinese...

TAYLOR: It wouldn't be just the U.S. you know, fleet in their...

PMB: So the Chinese should depend on that oil, but then help to defend the region.

TAYLOR: Yes.



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PMB: Sure. Now I think that you've explained the idea that it's responsible to develop the oil sands, would you add anything else to that?

TAYLOR: Well it's... and there's recent work that was published through the Alberta Chamber of Resources on the importance of oil and gas and specifically the oil sands to the Canadian and Alberta economy and I recall a deputy minister from NRCan coming out a few years ago and just mentioning as part of his speech, that twenty-five percent of private investment in Canada is related to the energy sector.

PMB: Again?

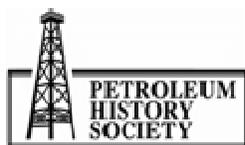
TAYLOR: Twenty-five percent of private sector investment in Canada was in the energy sector. So, I mean, that could be wind mills in Southern Alberta, it could be solar panels in Ontario, it could be hydro projects somewhere else, but that's just the importance of the energy sector to Canada. So for those people who would like to see us get out of the energy sector, the question is then what? And as I pointed out in this little speech yesterday, I said Alberta's GDP would drop by forty percent, but our GDP per capita wouldn't drop by forty percent because most of us wouldn't be here. But that's not just Alberta, I mean, it's the Prevost buses that are manufactured in Quebec that transport all the oil sands workers from town to the job site, it's the steel mills, the valve manufacturers, it's the electronics parts that come from across Canada or through Canadian distributors from around the globe and all of that is part of the oil sands, it's not just an Alberta type story, it's really Canada's oil sands from that standpoint.

PMB: But Bob, come on, get real. The oil sands create so much CO2 emissions. It's an outrage isn't it? Tell us the truth!

TAYLOR: I love to be baited, Peter. The oil sands as we produce them today absolutely have a higher CO2 intensity than conventional oil does. I'd love sometime to see the CO2 analysis if you were to include all the emissions from the U.S. Gulf Fleet and their aircraft in the Gulf added on to the CO2 emissions for the Saudi crude, but it's true, we need to work on that and as part of the Oil Sands Leadership Initiative, the work we're doing with integrative technology we're helping, for the technology breakthrough working group we need to find better technologies for mining. There's a gentleman by the name of King Chung who is working on an innovative way of upgrading bitumen that would reduce the emissions. There's people looking at solvent and steam. Electromagnetic wave, different wellbore configurations and conformances, there's so much going on right now, I'm going to the in-situ meeting this afternoon and I know I'll come away from that pumped because these guys are looking at so many new ways of improving the efficiency of the technologies we're using today. But I want to put it in a bigger perspective...

PMB: Thank you, that's what I was looking for.

TAYLOR: Canada emits about five hundred and fifty mega tonnes a year of CO2. About forty mega tonnes come from the oil sands, so it's between a half a percent and one percent of Canada's emissions. Canada's five hundred mega tonnes, while significant and higher than most countries on



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a per capita basis, still pale in comparison to the six thousand mega tonnes that the U.S. pumps out and the seventy-seven hundred mega tonnes that the Chinese are now emitting. I did some analysis as I was preparing for yesterday and the current growth rate for CO2 emissions from China are such that they are growing at a rate of CO2 emissions that's equal to the oil sands, total emissions, every twenty-one days. So every twenty-one days the Chinese are bringing on new facilities, vehicles, coal-fired power plants that equal the oil sands total emissions each year.

PMB: Isn't it also fair to say that while there's a lot of criticism of the oil industry for all of its emissions and especially the oil sands industry for its emissions, yet eighty percent of the emissions come from jets and automobiles and so on.

TAYLOR: And heavy hauler trucks.

PMB: So when I go home today, I will be generating eighty percent of the emissions that were produced maybe to get that gasoline into my tank.

TAYLOR: But at least you're driving a reasonably small, fuel efficient vehicle. If you walk through the downtown parkade, the Centennial parkade, fifty percent of the vehicles are half tonne and three-quarter tonne pick-up trucks. You know, a four thousand/five thousand pound vehicle being used to haul a hundred and fifty to two hundred pound person downtown to work and back every day on the off hope that, you know, once a year they might throw some two-by-fours and plywood in the back and haul it home from the hardware store. If North America wants to do something serious about greenhouse gas emissions, it's not about shutting down the source; it's about changing how we use it and especially changing how we use it in the vehicle fleet. And I no longer own an SUV or a pick-up truck.

PMB: Good for you.

TAYLOR: I'm a reformed smoker!

PMB: You still, you just own one car don't you?

TAYLOR: Yes.

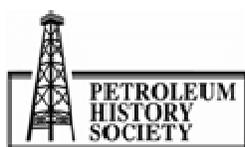
PMB: Or did you buy a new one?

TAYLOR: No, we still...

PMB: You just have the one car?

TAYLOR: We still share one vehicle.

PMB: And just for the record, so do I. Last time we talked, you talked about the royalty system and you gave me a couple of fairly fascinating facts about that.



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TAYLOR: The royalty system after 1997, the standardized royalty regime, set the royalty at one percent during the early years of a field project's production.

And that one percent is calculated as one percent of the gross revenue you receive. So for every barrel you sell, one percent of that goes back to the government. And you start with an opening balance of your total investment in the project, and each year you create at the end of your...you create a new balance, you start with that opening balance. You take off all of the expenses during the year, all the revenue during the year and at the end of that year, whatever that balance is, you gross up by an extra long-term bond rate equivalent. It used to be about six and a half percent, I guess a long-term bond rate now would be about three, so you'd add that plus one percent and you get to add that on as sort of a government style rate of return, not what industry expects as your rate of return, but a government rate of return. And you keep that calculation going forward until the year that that number at the bottom changes colour, from red to black.

At that point, you shift into a payout royalty where you pay twenty-five percent of your net revenue after expenses, and it goes to the government on behalf of the people of Alberta. It kept, as I said before, that structure allowed for the risk of a high investment, of cost overruns, being able to be absorbed before you went to the higher royalty rate. As an aside, it gave the government real incentive to work with industry when I was there, to figure out how to run their projects and have them come in closer to being on budget. Because in fact, between royalty and income tax, the people of Alberta were sharing about forty-two cents of every dollar and project cost overrun. So it was important for the government to play a role and to continue to play a role and try to advocate for better project management.

So that was the royalty system and if you had a project and you decided to double the size of the project and it was still within one project approval, going back to that annual balance at the end of the year, you would add all the capital costs of that project into the bottom line and you would still not be in payout.

PMB: So you would defer your taxes even longer.

TAYLOR: Your royalty payment.

PMB: Err, your royalty payment. Sorry.

TAYLOR: You'd stay at the one percent. But during that period, if you did double it, of course you would be getting double the revenue to pay down that new investment. So if it took you seven years to pay off the first investment, it might take you three and a half years the second time and if you did another expansion, maybe a year and a half. The great fear of some of our, well of the people of Alberta and expressed through some of their elected officials was that somehow a company could keep investing in the same project and never reach payout. In fact, you know there's a project boundary you can only invest so much in and then it becomes the next project.



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It was a point of friction between the government and Suncor when they wanted the Firebag project to be considered part of their mine and as senior official of the day, I said, “No, that’s a SAGD project, this is a mine, they’re not the same project.” And you make your call and there was a law suit that was eventually dropped.

PMB: So Suncor is suing the government?

TAYLOR: The government, because they felt that we’d changed the rules and we said, “No, you’re just trying to go around the rules as they stand.” And whoever was right or wrong, they dropped the law suit over time, whether they were right or not, the courts never got a chance to decide. But that was the concern and that’s one of the things that contributed to the call for a royalty review. The current royalty scheme is a little bit different than it was, it still has that phase nature to it, but now it’s a price sensitive percentage, so at fifty-five dollars WTI, it’s still one percent, but at a hundred and twenty dollars WTI, your gross royalty would be nine percent. It’s similarly what used to be a twenty-five percent flat royalty now is between twenty-five and forty based on the price of WTI. So they did not answer this question of can you keep investing and avoid payout, to which I thought was a relatively simple solution. But they’ve at least got the price sensitivity into it so Albertans can feel better that we are getting a fair share of the royalty at higher prices.

PMB: We as Albertans.

TAYLOR: I had a lady working for me, Linda White. She would go down from our offices, downhill to where the legislature and the offices of the MLA were, at least two or three times a year to explain to yet another group of MLAs how the royalty system worked because they would hear from their constituents or from somebody who was an anti-oil sands advocate and once they understood the system, they’d go, “Uh-hm.” But then you’d have to do it again for a different group of MLAs and sometimes it was the same MLAs.

So to me, and this, if you were to look at my submission to the Royalty Review Panel, my suggestion was, let’s simplify things. Let’s sit with industry and government and say, typically what’s a payout for a project? Okay, it’s about seven years, and you think with low prices its maybe ten years, and if high prices it could be as little as five. So let’s do the same notion of a sliding scale based on price, but typically if you said its seven years, when you bring in a new project, you’re going to get seven years at that low royalty rate. At the end of seven years, boom, you go to the higher royalty rate. And that’s it. If you overspend your project that becomes your project, the people of Alberta aren’t shooting in that pain anymore. You’re the business guys, why should we that aren’t running the project share in your pain?

And I think it could have been worked in. You know, you would have to do kind of an accumulative average pricing and you could have come up with a date at which each project was going to shift from royalty regime to the next. What that would have done, is if from the time you had a project you got seven years, everything would be a new project. Instead of saying, well I want to bring in my friends and my relatives and make them all part of my same family of projects, you’ll be saying okay



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no, this is a project, that's a project, it would have been much cleaner so that you wouldn't be getting this, and it would have taken noise out of the system. You would have had more royalty calculations to do, but that's easy compared to dealing with this continual angst that somehow industry is ripping us off.

PMB: Okay. The role of government in oil sands development: First of all, has it been supportive? Second, has regulation been effective or should it be more stringent?

TAYLOR: I think the government has been highly supportive in developing the oil sands, you know, change tenure rules. At one time the tenure rules said you either...here's a date that you have to have this much production, if you don't have that much production, we get the lease back. Well if we had held everybody to those standards it would have created a, well either a massive turn-back of land of the Province, or a lot of oil that would have killed the marketplace. So the government was responsive to replacing that use it or lose it scheme with one that said, prove it up and pay a rent, an **estimating rent. And if you just, the rent** gets too steep and you still don't have a development plan on the horizon, give it back.

PMB: Can you give me some timeframes around those two...?

TAYLOR: When that happened?

PMB: Yeah.

TAYLOR: That would have happened, just around 2000.

PMB: So up to 2000 you had ten years to develop it or you had to give it back?

TAYLOR: Yeah.

PMB: And then after that you were told that you had to do a certain amount of development.

TAYLOR: We changed it so that you had... well proving up the resource, I call it exploration planning. This is where you had to drill your wells, shoot your seismic, prove up your resource and then start to pay a rent on every hectare of land you held and each year that rent would go up and it would cost companies the same amount. You know here's really the best part, I'll keep paying rent on this but I'll give you this low quality stuff back. So it did create a cycle flow of available leases to a degree and it caused companies to really focus on where their future development was and sooner or later, the rent gets to a point that you have to decide do you keep paying rent, or do you give this land back to the Crown because your development plans are too far out. So it was, I would say, created a balance. The royalty regime, I think, was highly supportive. As we worked through the details of implementing the royalty regime, of course there's always tug of wars as to how you managed this and how you managed that, what was in and what was out. But that's normal business.



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PMB: Before you leave that, was that decision a reflection of the work of the National Oil Sands Task Force?

TAYLOR: I don't tie that one directly to the National Oil Sands Task Force. I think that may have been in the conversations, but the main focus of the National Oil Sands Task Force was really the fiscal terms. So other ways that the Energy Department was supportive is when they went through Special Places 2000. We were forming new parks, if you look at a map of the Clearwater River Park, it's a long, linear park that winds along the Clearwater River, but there's a gap in the park. And I call that the Ken Smith gap, because we had to maintain some places for rights of way for power lines and pipelines to go from the oil sands south and so you could have issue of running it right through a provincial park, or you could say, seen as you were building a new provincial park, this part isn't park, this part is a pipeline corridor.

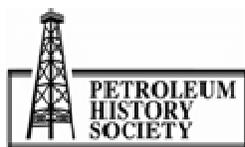
And so the government has worked proactively there and the most recent place that the government has worked proactively is working with Northwest Upgrader where up until now the government has taken all its oil sands royalty in cash, but in fact, if you read the regulations the government can ask for its royalty oil to be delivered in kind. And starting with the construction of the Northwest Upgrader, the provincial government is going to stream a portion of its oil sands barrels to the Northwest Upgrader and provide a stable throughput for the at least a portion of the Northwest Upgrader and ensure the... it doesn't ensure the economic viability because you still have to run an upgrader, you know. Northwest has to run a profit, but at least it means that they've got some dedicated customers, or one dedicated customer with a big volume of oil. And I think that's really important. I'm a supporter of more upgraders in Alberta.

PMB: Because it creates jobs and value added.

TAYLOR: Obviously, yeah. It just seems to make sense. In fact, I think we should be encouraging more Albertans using various tools. I wouldn't slam them all up in Fort McMurray by any means, because it's kind of an overheated economic zone. And I think maybe we can collaborate with others and we can throw one of the Enbridge crossings down in Manitoba, we could throw one Kitimat for the end of the Gateway Pipelines so that we can access more markets with different products out of the Gateway Pipeline instead of just shipping off bitumen to China.

PMB: Anything more on regulation, because it sounds as though... Is your overall impression that the Alberta Government has a fairly enlightened approach to oil sands regulation? That's question (a). And question (b), Is that because it's the owner of the resource, if that's true?

TAYLOR: The enlightened approach to regulation, you're going to get a lot of different answers depending upon whether you ask Dr. David Schindler from the University of Alberta or whether you ask some of the guys down at CAT. You can under-regulate and you can certainly over-regulate. Where you need to regulate is on outcomes and outputs and not on inputs. I think we can do more and I'm currently working with some people in a couple of government departments to encourage oil sands companies to look at their waste streams as potential sources of additional value added



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products. I think the government needs to continue to encourage groups, there was a group called SEEMA Accumulative Effects Management, where industry works as a group to look at what the... and Marlo Reynolds from Pembina Institute used to use a phrase that I very much liked, and that is “not exceeding the regional clearing capacity”, no matter what you’re talking about. Certainly we’re moving ahead on water regulations, not overdrawing water from the Athabasca River, not overdrawing from fresh water aquifers.

Part of it is learning by doing and you need outside critics to sometimes point out places where you should be looking at things, but you’ll never anticipate all the right regulations up front and so I think what I see with the government, and I see industry being very much part of that is, I’ll call it adaptive regulation, changing the rules as you go. And that means the companies going in have to understand the rules they’ve got, they won’t be the rules they have ten years from now, there’s going to be different rules and they’re probably in most cases not going to be looser rules. But they might be looser in terms of dealing with a regional water solution instead of each company having its own permits and its own regulations and we’ve got some regulations that prohibit things that would make good water conservation, good business sense, so that’s where we need to have adaptive regulations that look at those opportunities. Companies have to be more inventive as to how they address those issues.

PMB: And to an extent, regulation, not wanting to put words in your mouth here, but regulation reflects advancing technologies so that you can measure something now to maybe a millionth of a gram or something in the water now and twenty years ago, you couldn’t have come close.

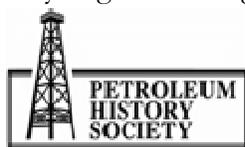
TAYLOR: That’s true.

PMB: And so with a greater ability to measure these things, the ability to regulate needs to change.

TAYLOR: Yeah, that’s well said. And so I call that adaptive regulation. You learn the things as you go, issues that you thought were issues may no longer be issues, but more likely issues you didn’t recognize now need to be managed. You will hear in coming weeks/months of new initiatives amongst oil sands companies to work at a different level of collaboration to try and solve some of these issues.

PMB: Bob, one of the things that I don’t have on my little scratched up notes here on what I want to ask you. It just occurred to me now: you’re very involved in the OSLI, the Oil Sands Leadership Initiative. Can you tell us a little bit about how that originated and what its role is?

TAYLOR: Sure, and that’s the organization that you’re going to hear some transformation over the next coming weeks or months. As I understand it OSLI really started by Rick George picking his phone up one day and inviting another one of the executives from one of the oil companies for lunch and saying, “Look, what we’re doing doesn’t make sense. We need to find different ways of working together.” And the two of them each agreed to phone somebody else, so in a little bit of a chain letter fashion they eventually invited six companies to come to the table to talk about how they might work together differently.



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PMB: And those six companies now are?

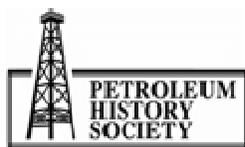
TAYLOR: Well the six companies originally were Suncor, Petro-Canada, Nexen, ConocoPhillips, Statoil...

PMB: Syncrude?

TAYLOR: No, Shell. Now did I...is that six? So Suncor, Petro-Canada... no it was seven, sorry, there were seven initially and then Suncor bought Petro-Canada and Shell was in the midst of a global reorganization, which I believe is a bi-annual event, so the original six companies were Petro-Canada, Suncor, Conoco Phillips, Nexen, Total and Statoil and then Suncor and Petro-Canada became one company, so it was five. And I was invited in early on to be part of a secretariat to support the formation of it and in those early days we did some scoping, like what are the big issues and who cares about them. So a little two dimensional matrix. I worked with Peter Dickey and I kind of created that little bit of a piece over. And as you know, Peter Dickey has since died. He had a long history of advocacy in environmental and innovation in the oil sands and he worked with us. There was another gentleman by the name of **George Green** from Stratos, so they brought a lot of the secretariat practices to the team.

So we were the three kind of background helpers, for the representatives for the companies and out of that work we established that there should be several different working groups, sustainable communities working group, land stewardship working group, a water management working group, a technology breakthrough working group. And so these are the kind of groups that formed. And then my colleague Doug James and myself had the opportunity to conduct a process, lead the group through a process using the challenge dialogue system. And our challenge that was put to the team is, you guys are used to working competitively, everybody sees the guy across the table as a threat. What does it mean and what do we have to do in changing our behaviours so that we're working on issues collaboratively? Recognizing that companies are still competitors, they're still independent companies, but in these areas how can we work differently to accelerate the pace of innovation? So I've been involved in that for about three years now, in different facets. Out of that work we did, we came up with a charter for the group with each of the CEOs or their COOs signed, saying this is what we mean when we say we're going to behave differently. This is the charge we're putting to the people in our company.

You know, we're not giving away our IP for free, we're not sharing secrets that, you know, about the land deal coming up, but we're saying hey, new technologies, new ways of working in the forest, new ways of working with First Nations, those are things that we can collaborate on, get there faster and all of us can win. And what you'll see in the coming months is that invitation to participate in this group being broadened out to probably another eight companies who have shown interest via the CAPP oil sands CEOs group. The group that we're working with must focus right now is this technology breakthrough working group. That's where I'm off to later this afternoon, to the in-situ sub-group of that's looking at new ways of accelerating change. And I have seen remarkable examples of openness and collaboration between the companies.



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And **John Stalder** from ConocoPhillips is one of my heroes because he went all the way up through the management chain in ConocoPhillips all the way to Houston to say, “Can I share what we’ve been doing on this.” And they said, “Well we spent a lot of money doing this.” “Yeah but can I share it and tell them what we’ve been doing?” “Ah, okay.” So he got approval, he shared it with all his peers from the other companies and immediately **Musliem** from Nexen said, “Oh well, you know, we’ve been doing something too!” and all of a sudden around the room began this discussion and sharing of ideas. That is what we’ll be talking about this afternoon and it’s going to build into another workshop later this month. But it takes one person to make that extra effort to be the person, and so then you can say, okay everybody saw how John shared, okay that’s what we’re looking for here. And it then creates a standard for others to live up to.

PMB: And so what this enables the industry to do is be competitive while collaborating on the things that are of collective value, collective importance.

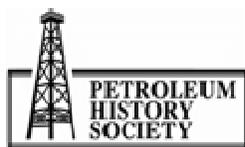
TAYLOR: Yeah. And to the degree they’ve all... all land leases are largely picked up, most of these companies are no longer competing for the next land sale to get their toe hold in the... Now competition is two-fold, being able to perform in such a way that meets regulation and international expectations, and the international expectations are much, much higher than the actual regulations, and the other is, in a volatile oil price, how the heck do you make sure you’re always going to make money in this business, on average. And that’s the prizes that are out there to be held.

Improved outcomes economically, improved outcomes environmentally and as we talked earlier, improved outcomes for communities around which we work, both in terms of their opportunities for education employment but also, that were not messing up their backyard. And that’s what’s really exciting about this and I guess it’s what, like this morning, gets me up at six-thirty in the morning trying to get something done before I have an interview.

PMB: This is a beautiful segway into my last question. How do you expect the oil sands industry to evolve? You’ve just shown a really important part of that evolution right there.

TAYLOR: Tomorrow the oil sands companies are hosting, for part of an afternoon, a group of people that are the finalists in the Virgin Earth Challenge, and the Virgin Earth Challenge was how do we capture CO<sub>2</sub> from the air and create a net negative CO<sub>2</sub> emissions. So that is, we capture CO<sub>2</sub> from the air, you can’t be using more energy and creating more CO<sub>2</sub> at a power plant than the CO<sub>2</sub> you’re capturing. I haven’t seen these six finalists, and they’re probably not really close to commercial implementable solutions. But they’re working on that path; they may uncover some chemistry in doing that, or some processes in doing that that we can adapt to other things in the oil sands in the short-term.

So even though they’re looking at the holy grail of climate change, if you will, or CO<sub>2</sub> reduction, they’re innovators. And so we’re having them in tomorrow afternoon with the technology breakthrough working group and others to see what we can learn. And let’s see what we know, from being industrialized at a scale that new technology is commercial. What help can we give you to



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move your processes to the next level? So that's kind of in some ways, a fringe to the nuts and bolts of improving the oil sands next week and next year, but it is also indicative of a group of people that understands that the solutions are long-term, there's enough resource for us to be in this business for easily another hundred years.

So its generating that long-term thinking about not what's going to happen on the next well pad but what can we test on the next well pad that we might use on the next well pad after that, or the next full scheme after that and a great bunch of people, I am just trying to think, we had recently, there's a book called, "Crowd Sourcing", and I'm just trying to think, but the biggest mistake is not to realize that the smartest people work for your competitors and the underlying statement behind that is, even if you're ten percent of an industry which would be huge, you've got ten percent of the employees, there's a good chance that the other ninety people working for the other companies collectively are smarter than the ten people you've got, even though you may have recruited from the top ten percent of the class, the guys right below them are pretty smart too. And so what OSLI is doing is taking the top ten percent of all the classes and bringing them together in one room to share openly, than to try and...

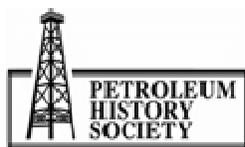
PMB: Even though they work for seven different companies?

TAYLOR: Yes, and honouring everybody's intellectual property, honouring rules about non-competitive behaviour. Treating the suppliers fairly, giving everybody a chance to come and pitch their best ideas to the house, and one supplier's technology may work well over here and somebody else's over there but collectively to find better answers, not the right answer because there isn't one. SAGD was a good answer but it's not the right eventual answer. It's a stepping stone. And so I see this moving forward. The oil sands competition is global. Who supplies a better product, who is more reliable, who is doing it cleaner.

PMB: And who has the best price.

TAYLOR: Well the price...who can make money at whatever price is out there, because we don't get to set the price. We're price takers. But we can enhance the value of what we get by providing a higher quality product, and so that's the challenges. They're all going to be in competition for implementing new ideas faster and better, but it's going to be a different set of ideas that are collaboratively accessed. We're building a little organization that's going to deal with bring us your best ideas, our doors are open, and once we get that up and running for about a year, the second stage is going to be, okay, here's some specifics, we need solutions for this challenge and we're going to offer a prize.

And we're all, I mean, the original ex-prize concept, the incentives, the nine sigmas, we may use some of those tools or we may adapt them ourselves, but to move into that proactive role. And that will be six or fourteen companies working together to co-fund and co-sponsor, and then assess and adapt these ideas. That's such a huge change from the conventional oil and gas building business, which I spent most of my career in, where it was always the next land deal. You had to keep your



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data very proprietary. There was no sharing except between guys at the hockey rink, or in the P Club over lunch.

PMB: Or the scouts...

TAYLOR: Yeah and so you mentioned the scouts. This is a world in which the scout's role becomes irrelevant.

PMB: The oil scouts of the old days.

TAYLOR: The old oil scout, in terms of the oil sands, needs to turn himself into a community relations advocate.

PMB: Well Bob, you've done a... that's a really interesting issue.

I just want to put today's interview in some kind of historical context. Yesterday, October 31<sup>st</sup>, was the day that the seven billionth person in the world was born. Our transcriber is a young woman named Judith Stevens who today is having a baby of her own, so maybe that will be seven billion and one hundred thousandth or something.

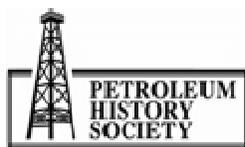
TAYLOR: Seven billion and one.

PMB: Or maybe they were wrong with the statistics, maybe her child is the seven billionth.

TAYLOR: So when you asked earlier about the responsibility about developing the oil sands, that seventh billionth child, whether they were in sub-Saharan Africa or whether they were born in Calgary should have an expectation of enough light to read by in the evening, enough heat for their home and enough energy to provide transportation for them. And there's no single energy source out there that can do all of that without being part of an integrated system, and the oil sands is going to be part of that integrated system for a long time into the future.

PMB: Thank you very much.

**[END OF INTERVIEW]**



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