ROBERT W. (BOB) TAYLOR

Date and place of birth (if available):

Date and place of interview: Taylor's home in N.W. Calgary; August 22, 2011

Name of interviewer: Peter McKenzie-Brown

Name of videographer: N/A

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

Consent form signed: Yes

Initials of Interviewer: PMB

Last name of subject: TAYLOR

PMB: Would you like to say something?

TAYLOR: Good morning, Peter. It's a pleasure to be here with you this morning.

PMB: And today is the 22nd of August, 2011, I'm meeting with Bob Taylor in his house, on Varcliff Road. Today two very important things happened and I'd like you to comment briefly. One is that Jack Layton died…. Oh, you hadn't heard that?

TAYLOR: No, I wasn't listening to the TV.

PMB: Jack Layton died this morning.

TAYLOR: No.

PMB: And for anyone in the future that reads this, Jack Layton was the leader of the New Democratic Party and he took it to becoming the Official Opposition in Ottawa a few months ago. So, you're obviously… Well, you're welcome to say what you want about that, Bob.

TAYLOR: No, just I wasn't listening to the news this morning. I saw something on TV about other stuff, but I didn't pick up that news.

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PMB: The other thing is that today seems to be the day that the Civil War in Libya is to be resolved.[1] Would you like to comment on that?

TAYLOR: Well, I think that that's good news and hopefully other oppressive dictators or dictatorial regimes will take note that people with today's communications technology are not going to stand for long for that kind of oppressive regime. I look forward to resolution but I think it's going to be a tough go in places like Libya to move from where they've been to a stable, democratic regime – peoplee that have never experienced democracy before. But it's a good day.

PMB: From that perspective, it's a great day. Okay Bob, I'd like you to begin by giving us a brief summary of your career. It encompassed the private sector, the government sector and the consulting sector. Maybe you could tell us about that.

TAYLOR: Well I graduated from university in 1970 with a chemical engineering degree, University of Saskatchewan, and in 1970 there were jobs for about three chemical engineers in the whole Province and like a lot of my classmates, I came to Alberta where I began work with Amoco, Amoco Canada, up in a field operation at Whitecourt, Alberta. I spent five years in various roles with Amoco, including a stint in the Calgary office, a year and a half with the off-shore drilling operations off Newfoundland, a year in New Orleans with the Gulf of Mexico operations, at the end of which I came back to Canada because Dome Petroleum was looking for drilling engineers and when I read their job advertisement in the paper it was like they had described me to a "T" as probably only one of two or three Canadian engineers that had the experience they were looking for, so I came back to join Dome Petroleum in Canmar field operations.

PMB: What year was that, Bob?

TAYLOR: That was 1975. The drill ships for the Beaufort Sea were still under construction in the Todd Shipyard, in Galveston, Texas, so we moved back to Canada for a few months and then ended up back in Galveston, Texas while the drillship construction was completed and then immediately went to the Beaufort Sea where the first of the drillships had arrived. I went from one week standing on the dock in Galveston watching a drillship sail away, and then a week later I was in the Beaufort Sea on one of the other drillships. So I spent a lot of years in the Dome world from 1975 through to 1988 in various drilling and fracking operations both off-shore in the Beaufort Sea and on-land for all of Western Canada, but I kind of bounced back and forth between those two roles and then in 1988, Amoco bought Dome Petroleum and I ended up being in the resource development area, first looking after the Plains area everywhere from Manitoba to Pointed Mountain, Northwest Territories and then, from 1995 to 1998, in the oil sands operations of Primrose, Wolf Lake and Wabasca.

PMB: Okay now your first job with Amoco was at Whitecourt, is that correct?

TAYLOR: Yes.

[1] Note: In some places, final defeat of the old regime dragged on for more than a month.

PMB: The big natural gas operation?

TAYLOR: It was but my first operation was actually Canada's first hydrocarbon miscible flood at the Ante Creek field. It's up in the Simonette area northwest of Fox Creek, and that was Canada's first hydrocarbon miscible flood, so I was playing at the leading edge.

PMB: Miscible flood means injections of solvents?

TAYLOR: Yes, mostly methane and ethane, to sweep, instead of using water flood to try and push the oil out. It uses hydrocarbon solvents to try and sweep the oil out.

PMB: Was this a heavy oil?

TAYLOR: Not particularly heavy.

PMB: So it was conventional oil when you were using miscible flood for that, okay.

TAYLOR: So then I ended up at the sour gas plant, at the Windfall Field and was one of the process engineers there when it was going through a major retrofit of piping as we discovered the different metallurgies were required to avoid the rapid corrosion and erosion from the sour gas fluids.

PMB: Great. Okay now, you said that you were the oil sands manager at Amoco from 1995 to 1998, can you tell me a little bit about that?

TAYLOR: Well I'm going to take you back a little bit earlier, when I was working in Calgary in the early 1970s, Amoco was already dabbling in the oil sands, and had the Gregoire Lake Fire Flood Project under way and so they grouped the off-shore group, which I was part of with the oil sands group under one team leader and so the two Canadian engineers that worked on that were Mickey Abagoush and Brian Noble.

PMB: A-B-A-G-U-S-H.

TAYLOR: No S-H, I think.

PMB: Sorry, do it again.

TAYLOR: A-B-A-G-O-U-S-H, Abagoush. And Brian Noble, N-O-B-L-E. And I can't for the life of me think of the name of the guy from Tulsa that was up here, but they were doing fire floods, vertical well to vertical well and trying to use that as an oil sands stimulation technology and having great, probably the biggest challenge is that you get a permeability streak between the two wellbores, one part of the zone that allowed the air and the fire flood to move through faster than the general flood front and it would end up burning up, melting the casing in the production well. So that was a project that Amoco pursued for, I would guess at least a decade before suspending that operation due to, I guess a combination of low oil price and technology failure. But I say that because it's interesting that as you roll forward into the end of the 1990s into the 2000s, you have the THAI Process which is the Toe to Heel Air Injection, THAI, which is injecting oxygen. It's using a combustion front and the last time I was given a detailed technical presentation by the folks at Petrobank, they were actually counting on the fire flood front hitting the toe of the production well and actually collapsing and that was would allow the flood front to move forward along the length of the horizontal well.

PMB: So in a way they had found a solution that would have been the THAI process.

TAYLOR: Reports are, it seems to be working. So it's interesting, I wasn't directly involved in the 70s but I was having coffee everyday with the guys that were working on that and you would hear all the war stories, if you will, about their challenges. So fast-forward then to 1995. I was very happy working on developing what you might call the miscellaneous properties that Amoco held in the conventional oil and gas and in proactively working with a team to look at these miscellaneous properties. We were actually adding more reserves to the company's books than were either the major properties group or the exploration department, just by going and finding the small pools and reservoir extensions that existed out there, across Saskatchewan, Alberta and North Eastern B.C.

PMB: So this was not oil sands activity, this was the Plains group.

TAYLOR: This was the Plains' business unit and we just had a highly talented, motivated group of people that were picking up rocks to see what was under them, where other people had missed, if you will.

PMB: Do you have any idea, in order of magnitude, what kinds of reserves you added?

TAYLOR: My memory's not that good, Peter.

PMB: Okay, fair enough. And then, that took you from the time when Dome was taken over in '88.

TAYLOR: '88.

PMB: To 1995 when you took over Amoco's oil sands division.

TAYLOR: Right. And it was kind of a curious announcement; two Amoco executives were retiring at the same time.

PMB: Who were they?

TAYLOR: Jim Allard and Dean Geddes; and it was at a reception celebrating their retirements that my boss, who at the time was Jim Davis, kind of took me behind the potted palm tree and said, we've decided that you and Bruce Lounds are going to swap jobs, and Bruce had been hitting up the oil sands group at Amoco and I said so when is this going to take effect? He says well it's up to the two of you to kind of figure out what a convenient transitions and hand-off period would be. So that was in the late spring of 1995 and full credit to Bruce Lounds for the work that he did, taking the oil sands strategy as far as he did.

At that time, Amoco had purchased the hundred percent working interest in the Wolf Lake, Primrose area. They had had at one time Ranger Oil and Petro-Canada as partners, and Bruce and his team had masterminded acquiring a hundred percent of those assets, they had a small operation going at Wabasca that was ready for prime time development, if you will, and at the same time there were the Lindbergh, Elk Point projects, one of which had been an Amoco project, one of which had been a Dome project and they were literally across the highway from each other, in an area to the northwest of Lloydminster and they had, at that point, in fact, Mr. Johnson, I'm trying to think of his name, they had just the day before I took over, received the sale from selling those lands to another company, to Elan Energy.

And so they had the cash from the Elk Point, Lindbergh and were ready to move ahead with major expansion of the development of Wolf Lake, Primrose and at Wabasca. So Bruce did, you might say, a lot of the heavy lifting, getting the corporate approval to move forward with that shift in oil sands strategy and I had the opportunity and really expand and implement the strategy that Bruce Lounds and his team had put together and the two or three team leads that really helped with that was Bill McCaffrey, who is now the president of MEG Energy. And so his team had really put the business proposition together and he and Brian Wittmack headed up the Primrose, Wolf Lake team with Brian being in Bonneville leading the field implementation operation and Bill being in Calgary. And then Ron Johnson, who headed up the Wabasca, both the head office design, business end, as well as the field operation. At the time that I took over with Elk Point production gone, we were down to about 8,000 barrels a day of production and our first target was to restore the production levels to the same 17,000 barrels a day as there had been before the sale of the Elk Point, Lindbergh operations and to continue to grow beyond that.

PMB: The reason for the decline was that you'd sold...

TAYLOR: We'd sold 9,000 barrels a day of production and so our first goal was, how fast can we get back to 17,000 barrels a day. It was probably in less than 12 months we were back to that production level I still have the sweatshirt upstairs that we handed out to everybody when we reached that level.

PMB: What does it say?

TAYLOR: It maybe just has numbers on it, I don't remember, it wasn't anything outrageous. I've also still got the shirt, although it's only worn in the garage these days, that celebrated the world record horizontal well that drilled at Wabasca at the time.

PMB: What year was that?

TAYLOR: That would have been 1997.

PMB: And how long was that horizontal well?

TAYLOR: I'd have to go find the... if you want to put that on pause, I'll go find the shirt.

[PAUSE]

PMB: So with shirt in hand, Bob has returned.

TAYLOR: So this was a well drilled at the location was 14-34-80-22 W4 and the vertical depth of the well was 407 meters, the horizontal section was 2,318 metres.

PMB: Wow! That's big even by today's standards.

TAYLOR: It is. I mean, next time you're driving and you've got a piece of road that's straight, 2.3 kilometres and if you think about drilling down from the... putting your drilling rig at the top of the Calgary tower, and drilling down to ground level, a little bit further, about twice that deep and then going 2.3 kilometres along 9th Avenue.

PMB: That's impressive! Now you drilled this at Wabasca. What was the purpose? Was this meant to be a production well, an injection well or what?

TAYLOR: The reservoir characteristics at Wabasca allowed for cold production of heavy oil.

PMB: Cold production of heavy oil.

TAYLOR: Cold production of heavy oil, and we were quite successful in producing cold heavy oil, but the key to being able to do that and get decent volumes out of each well was to have a long horizontal well section so the oil could basically ooze in and then you would pump it out using progressive cavity pumps.

PMB: So this was a heavy oil project, not yet an oil sands project?

TAYLOR: I would say, well, when the government drew up the map for royalty purposes they drew up an area that said, this area is oil sands for oil sands royalty purposes, so from that standpoint and from a viscosity of the oil standpoint, Wabasca was an oil sands project.

PMB: And what was the viscosity of the oil?

TAYLOR: I think it was in the 10,000 centipoise range.

PMB: In API terms what would that be?

TAYLOR: It would have had a gravity of 11 to 14, depending upon which well.

PMB: 11 to 14 degrees API.

TAYLOR: Degrees API.

PMB: And the expression you used was centipoise which is C-E-N-T-I-P-O-I-S-E, isn't it?

TAYLOR: Normally I put CP period.

PMB: Okay, so whatever number that was, CP period.

TAYLOR: Over at Primrose, Wolf Lake, we had the old plant that had been built as part of the BP pilot plants, when BP was in Canada before they sold out and became Talisman. They had done a lot of the initial work at the Wolf Lake field, using cyclic steam in horizontal wells. In cyclic steam you would pump steam into the wells for at least 30 days, leave the wells to soak and let the heat from the steam reduce the viscosity of the oil and then you'd put them back on pump using a conventional pump jack until production rates declined. You get an initial flush production and your production would be typically 90 percent water, hot water, and ten percent bitumen and you would produce that until production rates dropped off and then you would turn around and inject steam, let it soak and you would repeat that cycle. And progressively over the life of any individual well, you would be pumping more and more steam and getting less and less bitumen back and you would continue that for awhile until you reached a point that it was no longer economical and then those wells would be set aside.

But you were leaving a lot of bitumen in the ground. The Wolf Lake team thought that they could drill a bunch of little vertical wells in between the horizontal wells and use those to inject steam and flush the oil over to those horizontal producers and no longer cycle them but use them as a variation on the concept of SAGD by using a set of vertical wells and we had some really early indications that it would be highly successful. However at the end of the day it turned out that the steam/oil ratio, the ratio of steam you had to put in the ground for each barrel of oil you got out was unacceptably high and we abandoned that project at Wolf Lake.

But at the same time that we were doing those experiments we were into full blown commercial development of the Primrose Field, and the Primrose Field was using the cyclic steam operations but in a more sophisticated manner and we were drilling eight or ten wells from a single well pad, drilling out horizontally to east and horizontally out to the west and we were doing this well pad after well pad so we were creating this continuous row of wells east to west, all up the northward running set of leases and then we would move over to the east of that, and do the same thing and create a set of intersecting wells. Without a piece of paper, it's hard to describe. As you drill down, of course, you end up missing a bunch of land that's right underneath the lease you're on, so that when you drill the wells from the pads to the east, they would come over and catch the wells, the reservoir underneath where your original well locations were, so you drilled out this way and then you came out and you caught in between, so you tried to minimize the amount of unexploited resource.

PMB: Bob, Primrose is part of the Cold Lake, what we now call the Cold Lake Oil Sands Deposit, isn't it?

TAYLOR: Yes it is.

PMB: Okay and so you...

TAYLOR: It's just to the northwest of the Esso Cold Lake Project.

PMB: Right, and so it was because of the geological, if I recall correctly, it was because of the geological features of that deposit that cyclic steam made more sense than SAGD. Is that correct?

TAYLOR: Yes, and also why we used horizontal wells, whereas Imperial Oil, at Cold Lake, at the time was using exclusively vertical wells, and just a little bit on the difference in the geology, Esso had been fortunate enough to identify and purchase land where the reservoir was extremely deep. So if you think about a river valley, absolutely full of sands, at the peak of a glacial age, that's what Imperial purchased. The reservoir up in the direction where we were...

PMB: So that sand had all filled with oil.

TAYLOR: Sand all filled with heavy oil, bitumen.

PMB: And that's what Esso managed to map out and acquire.

TAYLOR: And so they got these deep river valleys, historic, geologic time river valleys, full of sand, what we got was, when the rivers would overflow, they would lay sand out in broad sheets of sands, ours were still quite thick, but not nearly as thick as theirs and didn't really lend itself to vertical wells because the production per well would have been too low. So the horizontal wells allowed you to access more reservoir from the well and the steaming then would...and so you drill your wells out and try and be right at the bottom of the reservoir so that as the steam basically melted the bitumen, it would run down with gravity, the cyclic...to the wells.

So, similar again in concept to what we do with SAGD, except the difference being with SAGD you need a reservoir that's thick enough to be able to put a steam injector well in parallel to your producing well and higher up in the reservoir, but you need a minimum thickness of reservoir for that work. We didn't have sufficient reservoir, given that drilling technology of the time. And I say that because as time progresses, we got more precise in being able to place the wells, right at the bottom of the zone and above it, you know, within controlled distances. With the technology we had 12 to 15 years ago, you had to keep the wells separated by five meters, so that as they wobbled along the well bore, they didn't accidentally intersect because that would short circuit the well and kill the production.

PMB: So you were describing to me Primrose, how you developed Primrose and why you used horizontal wells there, whereas Esso never, at least early on didn't feel the need to do that.

TAYLOR: Well, for most of that development, through the first 15 or 16 stages, so Primrose is also interesting in terms of the fact that all that Primrose development was taking place on the Primrose

Air Weapons Range and the Primrose Air Weapons Range is used by the Royal Canadian Air Force today – yes, the Canadian Air Force as well as American and International. In fact, each year in June, they would run Operation Maple Flag, where they would have fighter pilots from all over the Allied Nations coming and using the air weapons range for practice, both for live munitions practice as well as they would use that air space up there for their "dog fight" practicing. So the four wing of the Air Force was our unwilling partner, if you will, because they would really rather have had the whole place to play by themselves but at the same time, the leases had been granted to the oil companies, initially to Alberta Energy Company and then through them to other companies. And so every operation we did up there had to be done in consultation with the regular communication with the Armed Forces and we had, as our crews were out there clearing roads and building leases, they had to be on the lookout for live munitions that hadn't exploded from some of the prior air training.

PMB: Did you ever have any accidents?

TAYLOR: No. The only thing that was, I would call an incident. There was one, and you've got to remember the age and the testosterone of your average fighter pilot. One of the pilots from one of the allied countries came in and did a very low level pass at supersonic speed, above one of our construction sites and actually blew some guys off of some scaffolding. Fortunately they were working about four or six feet off the ground and they weren't injured, but it buckled in some of the sheet metal walls on the buildings. But other than that, a very amicable relationship with the people at...

PMB: You have to tell me which allied nation that pilot was from.

TAYLOR: I don't think so.

PMB: He was American, right?

TAYLOR: No he was not. He was from an allied nation that is on an island just off the west coast of Europe.

PMB: I wonder who that could be. Okay, thank you.

TAYLOR: But it could have been anyone, they're all cut out of the same cloth, I think. But full credit to our Armed Forces. During the period I was active there, they won the Top Gun Competition for Fighter Pilots, like the Canadian team did. So, and we were on a first name basis with the Colonel that ran that and so that was just an interesting extra-anomaly. The other is that we got to know the people from, particularly the Cold Lake First Nation quite well and the history of Cold Lake First Nation is where the Primrose Air Weapons Range is now, was their traditional territory and they hunted, fished all through that area and worked with G. Francis Scanny and also with...

PMB: How is that spelled, please? It sounds like S-K-A-N-N-Y.

TAYLOR: No, it was, I think it was S-C-A-N-N-I...N-I. I cannot remember, he was the Chief at the time. Also there was Alex Janvier, J-A-N-V-I-E-R, the renowned Canadian Artist who has his gallery in Cold Lake and has paintings in the National Gallery, has paintings in the McMichael Gallery, if you're ever in the pyramids in Edmonton, the interior of the common area space where the cafeteria has his paintings all around the outside rim.

PMB: This is the new art gallery?

TAYLOR: No this is the Muttart Conservatory.

PMB: Okay, M-U-T-T-A-R-T.

TAYLOR: Yes. And also the administration buildings in Sherwood Park has his paintings all up the spiral staircase. So it was a pleasure to get to work with him and work on consultation issues with the Chief and council because they had been displaced so some of the interactions were of course, we were on their land, they wanted some work, so we hired Cold Lake Cats to do a lot of our dirt work construction.

PMB: Cold Lake...?

TAYLOR: Cold Lake Cats, C-A-T-S, the government had a program where they taught a lot of the first nations across Canada, how to run heavy equipment. So we hired Cold Lake Cats in conjunction with Layton Bros. L-A-Y-T-O-N Bros Construction to do our lease clearing, road building and their operators were superb. Tracy Layton, he was admirable in working with the Cold Lake Cats because while they had really good field operations experience, their administration and maintenance of their equipment was substandard.

PMB: Before you go on from here, Cold Lake Cats, was that the name of the company?

TAYLOR: Yes, it's a band-owned company from Cold Lake First Nations. And, so we worked with them and one of the protocols we'd had with the First Nations is whenever one our cats was out clearing a cut line or path, if they saw an old trapper's cabin or any other kind of First Nations artifacts, we would record that and put it on the map and report it back into the folks at Cold Lake because they were assembling their land claim documents because they didn't feel they'd been...and they were eventually successful.

PMB: How many people were in the Cold Lake Band at that time? Was it a few hundred?

TAYLOR: It would be, probably, I'm going to say in the one to two thousand members. So we worked with them and, you know, in a relatively collaborative fashion, you always hit your rough spots. One of the highlights is, there was a young lad, young by my standards, Walter Janvier, but he went by Wally and not to be confused with the Walter Janvier who was the Chief of the Janvier Band which is north of the Primrose Air Weapons Range. But this is Wally Janvier came to us and said look, I want to start a business and how can you guys help me start a business?

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He wanted to be in the welding and maintenance business, so we helped him get a business started and our part of the help was affording him some work to do and started off with some pretty mundane welding tasks because he didn't have Class B pressure welders. He had more structural welders, and initially he started off just as we drove pile. You would end up with pile cut-offs and in order to use the cut-offs you needed to weld them all back together into longer pieces of pipe, so we employed Wally doing work of that nature, and I still recall the first time I went onto one of the leases where he was doing this welding and I looked at his crew, and he introduced me to his foreman who was from a first nation from Saskatchewan and he introduced me a to a couple other lady welders and then there were two welders that were black. Wally, I said, you know, these guys don't look like they're from Cold Lake. He says, in his little bit of an accent, he says, no, they're family from the south end of the reserve [laughs]!

PMB: [laughs]!

TAYLOR: So he was good humoured. I remember when we were having dinner one night and he says, oh bring these guys another rum and coke. We've learned how to do this: Get them drunk before we make a business deal! [laughs]!

PMB: [laughs]!

TAYLOR: But Wally then turned that into a pretty viable business and yes he was employing people from off-reserve but he was developing business skills as an aboriginal business person and whether it was First Nations from Saskatchewan or others, it was developing the business capacity of people in the community and learning how to run a business that didn't count on a paternalistic… somebody coming in to make sure they administered and ran it right. So, that was just some of the highlights of working in and around Cold Lake. You had Cold Lake First Nations, you were dealing with the Air Force and at the same time, you were trying to run a normal oil and gas business. We were on a significant path to success with that, at both Wabasca and at Primrose at the time that BP bought Amoco. I do want to roll back a little bit in terms of our relationship with the rest of Amoco corporate, because Amoco had its refining and marketing business in the U.S. and its one heavy oil refinery was the Whiting Indiana Refinery just south of Chicago.

PMB: Okay, just quickly describe Amoco at that time. It was headquartered Chicago wasn't it?

TAYLOR: Yes. Amoco was probably one of the top largest six or so international oil companies, and I would say Amoco was an American oil company working internationally. I don't know that we ever crossed the mental mindset to being truly a global, multinational company, but Amoco had three main streams of operations. It had its oil and gas exploration and production business, it had its refining and marking business, largely in the United States, and it had a chemicals business that was really the part of the company that was the most global in nature with world scale petro-chemical plants around the world from Belgium to Australia to South East Asia to China and in Canada. It manufactured everything from early stage petrochemical feed stocks that would feed into other chemicals manufacturing, right through to manufacturing Styrofoam cups and woven carpet vacuum. In fact, at the time that I was at the carpet vacuum plant, if you bought a carpet in North America there was a 60 to 70 percent chance the carpet vacuum would have come from one of our manufacturing plants.

A lot of our peer companies said, oh you're so lucky to have the supply chain all the way through to the gas pump from the oil well. You know, you've got your refining and marketing, but for a large part, we didn't really act on or realize that value of having the line right through to the refining part of the company, and it was only, I would say in last months of Amoco's existence before BP bought them that we actually had one of those "Golden Fridays" where there was nobody in the office except us and the worldwide head of Amoco Refining and a couple of his senior people. We were in an un-air-conditioned office with hardly any lights on in one of Amoco's offices and finally the light clicked with him as to how we could build a better business together, and unfortunately, we didn't get a chance to realize that. but Doug Ford, all of a sudden, he says, okay, here's the opportunity, how we stream our heavy oil and reconfigure our refineries to make the most of this business.

PMB: And now, you started this, but I got you off that explanation. You were talking about the heavy oil refinery in Whiting, Indiana.

TAYLOR: Well, and it was one where Amoco had some pet cokers, some cokers, 1940s technology, they had the cat-crackers, the catalytic crackers, a fairly complicated refinery and the question, what else could you do at the front end of that refinery to make more value from the heavy oil coming in the front and we knew that our main competitor in the area, Joliet Mobil Refinery at Joliet was making a lot more money than us.

PMB: Joliet, Illinois?

TAYLOR: Yes. It was making more money per barrel than us because they were able to take more heavy oil into the front end and heavy oil can be purchased by a refinery at a significant discount to medium to light oil, and therefore, if you're got your refinery configured properly, you can make what they call a "crack spread", the spread between the cost of your feedstock, crude oil company and the refined products going out the other end of the refinery. And Whiting was also a fairly sophisticated asphalt manufacturer and of course one thing you get from heavy oil is lots of asphalt. So it would have afforded them the opportunity to expand the asphalt but also if we put some more equipment in at the front end, to be able to accept more heavy oil in the front. Anyway, that was an opportunity that wasn't realized because BP was buying Amoco and as we met with the BP executives that would be coming into manage the Canadian operations, the person that was going to be heading up the oil business unit had been in London, had been very close to the top of the house at BP and he said we have a maximum of six months to convince Sir John Brown not to sell the oil sands business.

PMB: Sir John Brown was the Chairman and CEO of BP.

TAYLOR: He was.

PMB: Now this occurred, if I recall, in August/September 1998?

TAYLOR: That's correct. And the man that came in to run the oil business unit was James Dupree. I asked him why, and he said actually when Sir John Brown was just plain John Brown, he actually did a period of time working as a reservoir engineer in Canada with some responsibilities for the Wolf Lake heavy oil, the oil sands that the...the same oil sands that Amoco was now managing...

PMB: That would have been in the 1980s or thereabouts, would it?

TAYLOR: Yes it would, I couldn't put an exact time frame, but somewhere in his time looking after the reservoir aspects of oil sands in Canada, he learned to hate oil sands. So it was kind of one of his top ten things to do when he bought Amoco, was get the heck out of the oil sands business. And as a result, BP almost immediately put the oil sands, well basically all of the crude oil assets up for sale, and eventually Canadian Natural Resources Limited (CNRL) purchased all of the heavy oil assets and the oil sands assets, with the light oil assets going to Penn West.

PMB: Okay, I'd like to hold on for second here... [PAUSE]

PMB: So, Sir John Brown was not really a strong supporter of oil sands development.

TAYLOR: Yeah, and in fairness at the time that BP bought Amoco, crude oil prices had dropped into the $14 dollar U.S. a barrel for West Texas Intermediate oil and the one thing I can say I'm proud of is on an operating cost basis, we never were in red. We never lost money a single month that we were running, even at $14 dollars a barrel for light, sweet crude and we were producing our oil at a significant discount to that. We were probably getting less than ten dollars a barrel. Now we weren't paying much back on our initial investment, but we did not lose a dollar on operating expenses and a lot of credit goes to our field operations personnel for how they ran the operations.

We also didn't make the mistake of stopping injection of steam, and I say that, just as a story that I had heard that Imperial at one time, when prices were low, said well let's cut costs and stop injecting steam. Well what happened is, the whole period of time that the price was low they continued to benefit from the steam that they'd injected when prices were higher, and they continued robust production all through the low pricing cycle and about the time prices picked back up nine months later, the production had dropped off from the lack of injecting steam and so prices were back up and their production was low, because whatever you do in thermal oil sands has a nine month, six month to nine month time lag before you see the impact of it. It's one of things that makes doing technology development difficult. You do something, you've got to wait for nine months to see if anything happened. But that was the low price environment at the time that BP bought Amoco, all future planning decisions were going to be based on $16 dollars a barrel, WTI crude prices, and at those prices the Canadian oil, conventional oil and oil sands operations did not seem to make sense to BP, so I think it was a visceral piece from John Brown, having not liked oil sands and just looking at it as a difficult commodity type play. He was unable to see the enormous upside potential that other Canadian producers such as CNRL saw.

PMB: That was also around the time that The Economist released its famous issue which had a special supplement arguing the oil prices would remain at around $10 dollars into the foreseeable future. I believe it was roughly the following week, or maybe the day the magazine hit the newsstands that oil prices started to rise.

TAYLOR: It's tough to be a good economist. So just to go back a little to where we were at Amoco with the strategy. We had, and high credit to Bill McCaffrey for helping look at the longer, bigger picture, we had put together a presentation for our senior management committee in Chicago, so this was the chairman and all the division presidents which we put together a package that showed how Amoco could raise its oil sands production to as much as 250,000 barrels a day, and a bunch of that was going to come from in-situ production but some of it would also come from a lease that contained 8 billion barrels of reserves, once developed, that was a mining lease.

PMB: And where was that?

TAYLOR: It's the lease that CNRL now has developed as the Horizon Lease. It's further north, up the Athabasca, it's in the Athabasca Oil Sands, it's on the same side of the river as most of Syncrude's operations, but 40 or 50 kilometres further north.

PMB: And Amoco owned that lease?

TAYLOR: Amoco owned that lease along with quite a few other undeveloped leases. It was a tough sell in Amoco because Amoco had been in the minerals/mining business on four or five occasions and not one of those had turned out to be a happy experience – somewhere in Africa, somewhere in Australia, I believe. So when we talked about this in our presentation, we refer to it as a surface extraction lease. Never once did we use the word mining because we knew that there would be some of those historic memories pop in people's mind, and we actually had a very warm reception. We didn't get funding for that, but we didn't get discouraged from further developing some of that thinking. What we did get, and this was back in a period where a dollar bought a lot more than it does today, but we were given approval for half a billion dollar expansion of the Cold Lake, the Primrose/Wolf Lake expansion. And I still remember, of course, you had to do community open houses, First Nations open houses, and there was a writer by the name of, journalist by the name of Jim Bentein.

Well, Jim phoned me up one day and that point he was working for the Calgary Sun, and he explained that he had previously been the owner of the Grand Centre Sun, and Grand Centre was a little town that was between the town of Cold Lake and the Armed Forces base in that Cold Lake area. It's now part of the City of Cold Lake, but Jim had had one of his friends, that he'd sold the Grand Centre Sun to, had been at the open house and so he phoned Jim up and said there may be a story here. So Jim, building on what we'd presented at the open house, asked me a bunch of questions – like, how many wells are you going to drill and this and that, so he never really said what his conclusion was, but the next morning, I left the house that we're in today and I got up to the corner where the Calgary Sun was in the box at the corner of the street, and in two-inch, bold letters at the top of the Calgary Sun said, "Amoco to Invest $500 Million", and as I drove down to the office I said, today's not going to be a normal day. And I later worked with Margaret McLachlan.

PMB: She used to be my boss. M-C-L-A-C-H--L-A-N.

TAYLOR: And she was the head of communications for Amoco Canada at the time, so we spent the rest of the day handling phone calls from other media outlets, and afterwards I was given a tutorial about, if you're going to release information we should do it so that it goes out to all the media outlets equally. But you know what, I give Jim Bentein full credit, and I've worked with Jim on a couple of other stories since then, for being able to suss out the details and really assemble the facts himself without having to wait for the company press release. Just a couple of things that happened. But we did get the approval from Amoco corporate to proceed down a fairly ambitious path with oil sands development, not as far as the mining operation. And so it was a real disappointment to me, when...

PMB: So at this point, we're still in 1998.

TAYLOR: Still 1998, this would have been mid-1998, I mean we were...

PMB: It would have been toward the end of the year, because BP would still be amalgamating the two companies.

TAYLOR: Well this was before the BP purchase, so it would have been maybe in the June period. And then we had our struggles with our people in Houston as prices were low and I had a conversation with, at that time, the operating structure, we had four bosses, that...there was the North American Managing Directors, and one of them whose primary experience had only been in west Texas, he never did get the oil sands and so his solution when prices dropped off, and was before the BP, was hunker down and lay off staff and I said no, Dave, this is Dave Hamrick.

PMB: H-A-M-R-I-C-K.

TAYLOR: Might be two M's, I'm not sure. I'd have to go back to some old files to look. It doesn't matter.

PMB: It doesn't matter.

TAYLOR: And I said no, you know prices aren't going to stay here. We've got some incredibly talented staff. We should be investing in our staff, investing in trying to understand new technical opportunities so when prices come back up, we can hit the road with our feet our running and let's just say he and I never did come to an amicable resolution of which way that should go. I never did lay off any of the staff, and we did slow down our investment activities and I think the long term probably evidences that my approach would have been more appropriate. But it's just interesting to try and explain oil sands to people aren't willing to invest the time to learn. Even on a field tour up to the oil sands with the same group, he stopped and he says, sure seems to take a hell of a lot of iron to pump a little bit of steam in the ground. But again, not understanding that this isn't just like producing a well, it's more of an industrial process than it is a typical oil and gas operation. So anyway, it was with disappointment that I saw BP immediately throw the "For Sale" sign in the lease and I've kept a copy of their promotional video and brochures because it was really speaks quite well to the work that we'd done.

After I left Amoco/BP at the time of merger. I left the company, I was working with another colleague, in general conversation trying to find out and he was Dennis Sharpe who had been the head of, President of, CS Resources and he had sold CS Resources, his company, to Pan-Canadian, after which he became the largest non-institutional shareholder of Pan-Canadian, and I believe eventually of EnCana, as well as that succession. He took over as Chairman of UTS Energy, and he was trying to figure out how to grow that company. They had a small interest in what is the Fort Hills lease and I looked at Amoco's sale's package and saw that they didn't include in that the leases around the Kirby area, which is just at the north end. In fact, we had bought leases that went from the south end to the north end of the Primrose Air Weapons Range and they were very high quality leases, so on behalf of, informally on behalf of UTS, on behalf of Dennis Sharpe, I approached Amoco's Jim O'Keefe and said Jim, I said, I'd like to go over and talk to you about putting in an offer on the Kirby leases.

Well they were having an issue called "gas over bitumen" at the time, where some operators of the gas properties were asking to have the – oh, sorry, of the bitumen properties – were asking to have gas shut-in above the bitumen because blowing the gas off the top might impair the ability to recover the bitumen and Amoco had the Kirby gas field that I had helped develop when I'd been in the Plains business unit and they were damned if they were going to sell the oil sands lease only to have the oil sands owner ask to have the gas shut-in. So that was...

PMB: But geologically and from an engineering perspective, that doesn't make sense anymore does it?

TAYLOR: Yes it does. In fact, over time the first gas shut-in over bitumen was at the Surmount field, ConocoPhillips/Total project, and subsequent to that, the Energy Resources Conservation Board did an area wide study and shut-in gas over a wide area, which came back to be part of my life in my government days. So that pretty much ends my time working in and around industry and the oil sands.

PMB: Okay now Bob, before you leave that, just finish that story please. Roughly when did BP finally sell all of its oil sands assets?

TAYLOR: That would have been in 1999.

PMB: So they didn't own the properties for a year?

TAYLOR: No. Because I recall, a bright sunny day, it must have been somewhere in June/July, having one of telephone conversations with Jim from my cell phone, sitting in...

PMB: Jim O'Keefe?

TAYLOR: Jim O'Keefe, sitting in the area over in Market Mall here one day, and so I also approached… There had been a lease that Amoco had had 20% of, Suncor had 80% of, that was to the east of the Primrose area, on the south end of the bombing range, but further to the east and I also recall the day I went in to meet with Al Mark and the President, or the Chairman of CNRL, someone who I had worked with as a field engineer back in 1970, in Whitecourt Alberta. So I just phoned up Al as an old former colleague, went over and chatted with him in his office and I said Al, you've got 20% of this little project over that Suncor runs. I said, you know, I've got a colleague who is interested in buying that 20% because he thinks he'd like a little bit more exposure to the oil sands. And our strategy had been if we could get the... because it wasn't a core asset for Suncor with all their main assets at Fort McMurray, that if we could get this little 20% piece from CNRL we could then go to Suncor and maybe buy the other 80%. But Al being pretty astute and strategic, whether he'd thought it before I came in to make that proposal to him or not, he says oh no, I'm going to buy out the other 80% from Suncor, which I believe they subsequently did. So that was one of my few forays as an entrepreneur and it would have been interesting if either of those had succeeded to stay in the oil sands development business.

PMB: I just want to mention one other thing. On the record, I saw a proposal the other day in respect to what's now BP's midstream business. They have it on the auction block. This of course will be a partial response to the horrible blowout in the Gulf a year ago, the Gulf of Mexico. And it was really a gem in Amoco's crown in those days, wasn't it?

TAYLOR: The midstream business in Canada, Western Canada, both Dome Petroleum and Amoco made huge sums of money and at one time they had built a 50/50 pipeline, the Cochin Pipeline that went from Western Canada down to the Sarnia area, Windsor and Sarnia, and they accumulated all of the petro-chemical feedstock, ethane and propane and also ethylene from the ethylene plants in Alberta and they had a captive market. They had the pipeline to Eastern Canada's petro-chemical hub, and as monopolies do, they made a lot of money, but it also afforded them the ability to not only make money on the pipeline, but they would buy product low in Western Canada and sell it in the east and that was a really well thought out piece of business, and I think Don Walcott, at Dome, was one of the inspirations behind that and I think they actually, Dome brought Amoco into the picture, then once the two companies were together...

I'm just trying to think of the name of the guy that ran the midstream business for Amoco after the merger, anyway, highly profitable business, they had caverns for liquid storage in the Fort Saskatchewan region, they had caverns at Regina, caverns at Sarnia, caverns at Windsor and I say these caverns, they were caverns that were in salt reservoirs, big salt deposits and they would use water to solution wash and create these large caverns that you could then store about a million barrels of liquid products in them. So a very profitable business. It was kind of one of our differentiators in terms of what made us different in industry compared to the other oil and gas companies.

PMB: Now after Amoco, you ended up as the Assistant Deputy Minister for Oil with the Government of Alberta. Can you tell us a little bit about that, focusing please on the oil sands?

TAYLOR: Sure. In that period during 1999, I was trying to figure out what the next phase of my life was, and I already mentioned a couple of ill fated attempts to get into the oil sands development business with colleagues and by the way, Dennis Sharpe, UTS, they went on to develop that Fort Hills lease, or not develop it, but procure 100 percent, and it's now been sold to Total and they've done very well out of that, and it was one of the better financial investments I made, was after I left the government, buying shares in UTS. But I was in that period, and I was trying to stay connected to my industry colleagues and going to some of the industry meetings that the Alberta Chamber of Resources organized around CO_2 capture and storage, what do we do with the CO_2 and also, what do we do with the bitumen in terms of west coast pipelines and regional upgraders and you know, it was a group of people from industry exploring different things, industry and government.

And I was at one of those meetings and during a coffee break, Brad Anderson, who was with the Department of Energy, took me aside and said, look, Bob we're looking for an Assistant Deputy Minister for the Department of Energy. He says, you'd be perfect for that job. Why don't you put your name in? And then I was at another meeting and ran into Paul Precht, who was an economist with the Department of Energy and he said much the same thing. I never visualized myself as a government guy, but I put my application in. The Deputy Minister of the day, Ken Smith, was keen to bring in some business type thinking to the Department of Energy and bring in some approaches that you might take in industry that you might not normally approach, because he recognized that the Department of Energy was one of two departments that bring in revenue to the Government of Alberta. Everybody else spends.

There's three ministries, I guess, because gaming... Liquor and Gaming bring in money, Energy brings in money and of course Revenue Taxation brings in money, but all the rest of the departments, the program departments, they're spending money and so he believed, and rightly so, that you need to have a different mindset when you're in the business of collecting money, collecting oil, because oil royalties are paid in-kind, gas royalties are paid in cash and bitumen royalties are paid in a combination of in-kind or cash. But if you looked at the revenue stream coming in and the oil production coming into the Department of Energy, it was effectively the sixth largest oil company in Canada and so you look at the responsibilities of that, and this is a little prejudicial, you need to approach that a little bit different than if you're running a parks department that's running parks and spending money – not that that isn't a big responsibility to run those other departments, but a different mind-set when you're dealing with top executives and their staffs, trying to attract the money into the coiffures through the royalty stream and through the sale of mineral leases. So I went up there at the same as another guy from industry who I had worked peripherally with in my career, and that was Stan Wenger. So we both, May the 8th, 2000, we both showed up in Edmonton to begin a career with the Alberta Government, and mine was a four year career and Stan's was a little bit less than that.

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PMB: Was it a four year career because you signed a four year contract? Or, after four years did you just choose to leave?

TAYLOR: Actually I signed a two year contract. The Deputy wanted me to sign a three year contract and I said, I'm not so sure about that, I'll sign a two year contract and then 18 months out, we'll talk about how it's going and whether I want to do a second contract, so I ended up with twotwo-year contracts. And when I first went up to the government, it was the Steve West era and Steve had been the Provincial Treasurer during a severe downsizing of the Alberta Government and the departments and every department Steve went to...he was veterinarian by trade, so he was Dr. Steve West, but he was more familiarly known as Dr. Death. You know, he went into...

PMB: And so was the Minister of Energy at that time?

TAYLOR: He was the Minister of the Energy Department. He cut back a bunch of funding but he did not lay off any staff, whereas other departments had severe staff reductions.

PMB: Now Ralph Klein was still the Premier at that time, wasn't he?

TAYLOR: Ralph Klein was the Premier the entire time I was with the Provincial Government. So Steve was our Minister, but in...I guess he was the Minister of Energy. It was a month later, after I went up there in mid-June that he became the Provincial Treasurer. So I worked under Steve West's leadership for one month and then we had Mike Cardinal, as the Minister of Energy for a year and then Murray Smith became the Minister of Energy, so it was interesting. Three radically different ministers over that period of time. The shadows of Steve West lingered on much after his departure in terms of, and they weren't necessarily good, no business travel, so we weren't really encouraged or allowed to go visit our colleagues in other Provinces such as Saskatchewan or British Columbia to find out what they were doing, to talk about how we approached the energy business similarly or differently, certainly not encouraged to go all the way to Ottawa to talk to the colleagues in Natural Resources Canada, and I would have to say to the detriment of the Province.

So that lingered on at least until the Murray Smith era, because Mike Cardinal, was, you might say a transition minister. He was enthusiastic about energy but really didn't develop a great understanding, he was more of...and we also had responsibility in the Ministry for management of forest tenure, so the Sustainable Resource Development managed the operations of forests in the field, in the forest, but we actually had responsibility for leasing out the forests and that's where Mike's passion was, and so he didn't get overly involved in what we were doing in the energy side; so, interesting there.

PMB: How long was he there?

TAYLOR: He was there about one year. And so we had Ken Smith, was the Deputy Minister for the four years, and so he really carried, as happens in a lot of ministries, that responsibility for continuity of operations and really was the president and chief operating officer of ADOE Inc., if you will. So my responsibilities when I...

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PMB: ADOE is Alberta Department of Energy?

TAYLOR: Yes. So when I went up there, the responsibilities were split between three assistant deputy ministers. One was electricity and natural gas and that was Stan Wenger, and that was the time that Alberta was going through its electricity restructuring and that was a huge challenge both from an operational and a political standpoint. Don Keech, he had responsibility for Alberta's minerals for the forest/land tenure and for we call it business operations and I.T.

PMB: Do you mean non-hydrocarbon minerals?

TAYLOR: No, coal and metallurgical minerals.

PMB: Okay, non-oil and gas.

TAYLOR: Non-oil and gas. And I had responsibility for conventional gas, oil sands, the land tenure system for oil and gas, for land access and for energy and aboriginal relationships and it was overwhelming, because each one of those five portfolios had significant demands and you'd get to lunch time on any given day and you go whoa! I just dealt with five radically different kinds of issues because in the First Nations we were heavy into this. What does it mean to be involved with aboriginal consultations, on the land access we were in the middle of "Special Places 2000" – what was supposed to be the last ever carving up of Alberta into Provincial Parks. And we had to deal with all the interface issues of existing mineral leases, pipeline rights of ways, in places where they wanted to create new parks and making sure that everybody's existing legal tenure was honoured.

In the conventional oil business we were going through a lot of need to change some of the royalty issues dealing with use of horizontal wells in conventional oil, at the same time as we were reviewing and renewing the marketing of Alberta's conventional oil because Alberta takes its share of conventional oil in-kind, and then it markets its share into the market place. The land tenure system was very, very active at that time. Then we were trying to do the implementation of the Generic Oil Sands Royalty Regime. So it was fun times, and it was very busy and the Oil Sands Royalty Regime that I just referred to, OSRR 97 as it was fondly known as.

PMB: OSRR 97.

TAYLOR: Oil Sands Royalty Regime 1997. And that came as a result of the work of the National Oil Sands Task Force, and I kind of skipped over my involvement in that with my time in industry.

PMB: Please say a little bit about that. That was very important.

TAYLOR: Well up until the mid-90s, oil sands in general were struggling and we were treated like any other manufacturing industry from a federal tax standpoint, which means you could write-off your capital expenditure as a deduction to capital cost allowance at a very modest pace and from an Alberta Oil Sands Royalty, except where Syncrude and Suncor, well, and Esso and others, every oil sands project was an individual contract negotiated with the Crown, with the Alberta Government.

And so no two were exactly the same. So Great Canadian Oil Sands became Suncor, they had their oil sands contract with the government. Syncrude, it had its oil sands contract with the government. Imperial for Cold Lake had its and then, I'm not sure whether it was, let's say in the order of 20 different oil sands, royalty contracts with the government.

That didn't make sense for the government and each guy would come in, would try and get at least as good a deal as the last guy, but really the Royalty Regimes, they were dated and they weren't going to allow for the timely development of the oil sands resource and partly because of just that negotiating and there was only so many government people you could negotiate with, so that delayed it, but also just the fact that the fiscal terms were deemed to be too onerous considering the risk profile, because every time you went out and undertook a new oil sands project, you didn't know whether your technology was going to work. You didn't know whether the reservoir was going to react the way you hoped it would.

So, I will say under the leadership of Eric Newell of Syncrude, and his team with the Alberta Chamber of Resources, that at that point was headed up by Don Currie, and with the leadership of Erdal Yildrim and he was with NEXAM, or Canadian Occidental at the time, he headed up the Oil Sands Task Force and through that leadership formed this National Oil Sands Task Force, and it had fairly broad representation from Syncrude, Suncor, Gulf Canada, Amoco Canada, Imperial Oil and other companies that don't come to mind at the present time.

PMB: [PAUSE].

PMB: So now we're continuing with the discussion about the Oil Sands Task Force, and it was the National Oil Sands Task Force, wasn't it?

TAYLOR: Yes. And there's a great set of, I think, nine volumes of documents that came out of that, and there was other material. I have a copy of the volumes, except for one that I somehow lost and I've only got a Xerox of it, but I've got a copy of the originals and I know that the Alberta Chamber of Resources still has a copy of the originals but I think all of them have been kind of distributed, but it would be good for archives to get a copy of those if they're not there, but I don't know who besides me would have one I'm somewhat reluctant to give it up because I've tried to keep my own little set of historic stuff to a degree. But the reason I mention that is there was a lot of work that went into helping describe, specifically for the Federal Government, how the socio-economic benefits of the oil sands aren't just in Alberta benefit, but it's a Canadian benefit. And a company by the name of Infometrica did the econometric modelling on that, to show how much of the labour, how much of the dollar spent go outside the Province of Alberta, and at the time, it seems to me, something like 40% of the jobs went outside Alberta, primarily to Ontario and also to Quebec, because every one of those buses that you see up in Fort McMurray and hauling people back, they're all Prevost buses. They're all coming from Quebec, you know pipes, valves, a lot of pressure vessels coming from Ontario, that, I won't say that worked, but a recent study has been undertaken by the Alberta Chamber Resources under the leadership of Leon Zappan of Enbridge and Robert Mansell from the University.

PMB: Just a side note on that. I just got a call from my son Rick. He just got a job as a welder in Vancouver, I said hey what are you doing, he said, I'm welding some things for some company called Syncrude. He's been gone from the Province for a long time; he doesn't know who Syncrude is.

TAYLOR: That's a real long time. And so that's just an example, 1995-'96, trying to tell that story across the country and specially in Ottawa, and Denise Carpenter who is now the President of the Canadian Nuclear Association, she was with a company that was doing all of the print materials at the time and D'Arcy Levesque, he headed public relations at Enbridge. They really did a lot of that background work in helping set up meetings, D'Arcy did, and trying to figure out who you would tell this story in a way that was, the people would hear the story, that it didn't just come across as more industry speak, if you will. But part of it was a lot of on-the-ground meetings in Ottawa and in Edmonton and first, was of course, to get a strategy together that the companies wanted to take forward. And I recall a couple of conversations with some of the participants and I asked the guy from Suncor, So what is Suncor's interest, because you aren't playing as much of a lead role as Syncrude. He says well, our main goal is to make sure that whatever we get is as good for us as it is for Syncrude, that Syncrude isn't getting a better deal than we are and I said well that's good.

Then Imperial Oil, they had a guy in the Ottawa, in their lobbying office in Ottawa and he would show up infrequently to the meetings in Ottawa and say well, I said like why aren't you guys here? Well he says we're really, because we own such a big share of Syncrude, you know comfortable with what they're doing. He says, I'm just here to make sure that whatever comes out of the National Oil Sands Task Force doesn't inadvertently screw the in-situ producers at specifically their Cold Lake operations. So it's interesting because it was a joint industry initiative, it was definitely desperate levels of effort put in by different companies. So a typical meeting in Ottawa would be Al Hyndman, and myself, and a Suncor representative and occasionally somebody from Imperial Oil and I cannot remember the name of the fellow from Suncor that went most frequently and I know he's since died, but there was a lot of people in behind the scenes back in Calgary working on the strategies to do the economic analysis, to get the story right.

PMB: And now what governments, who represented the various governments?

TAYLOR: I can't remember the names...

PMB: But it was Alberta and the Federal Government, basically. Is that correct?

TAYLOR: Yes, we were with those two governments, so we would go to Ottawa and you'd wear the shoe leather off your shoes, because we'd be meeting EnerCan and National Resources Canada, then we'd be meeting with Environment Canada and then we'd be meeting with Industry Trade and Commerce, then you'd have a meeting with the PMO Office, the Prime Minister's Office with the staff there, and then there was a group set up that was supposed to be working on the environmental and climate change issues on behalf of all of the departments and then you'd meet with those folks, and then you'd come back west and then you'd go back and you'd meet with all those same ministries again, but with different groups within the ministries. And it was at that time that I discovered that Natural Resources Canada has a group of people working on the environment and every other ministry of the government has an energy section.

So you go meet with the oil and gas guys at Environment and the oil and gas guys at Industry Trade and Canada, Transport Canada, all the different…there was probably five or six federal ministries, and then with the Alberta Government it would be mostly with the Department of Energy and the Department of Environment, but there might be somebody from Treasury sitting in on those meetings, they were more...In Alberta, it's much more likely that you'll have a meeting that will have multiple ministry people involved. When you go to Ottawa you only meet with the people from one department at a time.

The upshot is, we were successful and we had a federal regime that allowed you to deduct your investment as if it were an operating expense so in the fullness of time you don't end up paying less taxes, but it defers the point at which you pay tax because you're able to count that full capital investment as an operating expense up front and that is something the Federal Government is in the process of taking away because they like taxes and I think it's a mistake on their part because it's not... And when you hear people talk about, oh, the handouts and the subsidy of the oil sands industry, that's what they're talking about and it's not really, in my mind, it's a benefit because it's a tax deferral of a couple of years, but it's not a giveaway and at the same time, the oil sands industry and the oil industry in general, while they could deduct royalties from their federal income taxes, their tax rate is a couple of percentage points higher than your conventional Canadian industry. So I'd defy Dalton McGuinty or anyone else to show us where the true handouts to the oil industry are.

PMB: In my interview with Al Hyndman he described a tax rule. It was a capital depreciation rule in respect to mining projects only. The idea was to spread this across all of the mines, all of the whole mining industry in Canada and you know, so it would start with the oil sands but every mining company would have exactly the same tax rule.

TAYLOR: Yes.

PMB: And what has happened since then, is that it's been taken away from the oil sands, but all of the other mining operations have it.

TAYLOR: Well and you can see the same thing with respect to flow through shares that companies that you're familiar with benefit from, that's not available to the oil and gas sector. And that was, I mentioned earlier, the fact that the Alberta Government had drawn a map and said this is the oil sands region, in fact, in that definition of the oil sands region, in-situ oil sands operations were treated as if they were mines, even though they mined with a drill bit, if you will. And that was another nuance of that outcome of the National Oil Sands Task Force. From the Alberta royalties standpoint, what was negotiated there was in this OSRR 97 was that it's a revenue minus cost royalty system and under that system, during the early years of an oil sands project, you're allowed to deduct all your capital and all your operating expense and if the number at the end of day is, and you're allowed to create a balance sheet and each year your net income for the year is deducted against your original investment, and only when you've recovered that original investment do you move from a one percent to a 25% royalty. So right from the very beginning, the first day of production, everybody pays one percent, was paying one percent royalty on their gross production with no deductions.

And so you start with, you know, on day one with a balance sheet that would have all your capital investment to that point in time, you would add to that during the year all of your operating expense for the year, you would subtract from that all the revenue from the year and you would end up with a year-end negative balance. And as long as that balance is negative, you pay one percent. And then you were allowed at the end of that year to add long-term bond rate plus one percent to that as an implied rate of return on your original capital and that would continue on again until such point as you reached payout when you had recovered all of your original investment. At that time you would start to pay a 25 percent royalty based on your net operating income, so it would be your annual revenues, minus your annual operating expense, minus any new capital you would have to put in. As you listen to this you're probably saying, gee that's pretty difficult to understand unless somebody's sitting across the table answering questions.

PMB: Oh, Hyndman explained it to me actually, so I get it, mostly.

TAYLOR: Yes. But your average government MLA, there was an ongoing fear that somehow people could keep investing and never, ever reach paying 25 percent royalty, the fair share to the people of Alberta, and the resource does belong to the people of Alberta. So I had a superb director who worked as one of my staff in Edmonton, Linda White, and she would make periodic trips down to the Hill to the legislator to meet with MLAs to explain to them the royalty system and why it wasn't dangerous or bad and how in fact we would get a fair share for the people of Alberta, but it was always perception that if you, just the day before you were going to reach payout, you expanded your project, that you could somehow keep doing that forever, not understanding that if you doubled the size of your project, yes you might get a deferral before you got to the 25 percent royalty, but now you have twice as much production and so the pace of pay down of that debt would be twice as fast.

And in fact, the best evidence of that was when Syncrude was doing their phase 3 upgrader expansion, that they actually had paid down all of that additional investment before they actually had the upgrader up and running, and so they were already in the 25, they kind of dipped back into it for a couple of months, but that was a problem and it was an ongoing problem and when I left the government, it was one of these things, we need to review the royalties, because I will say, the Ed Stelmach, who became Premier and a bunch of his rural MLAs never quite became confident that in fact the regime was going to work the way that it did work and was supposed to work and asked, you know, part of the call for the royalty review panel. I had put forward before I left the government and then I put it forward in my subsequent submission to the Royalty Review Panel...

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PMB: Okay Bob, sorry I just want to clarify one thing now, you represented Amoco on the Task Force...

TAYLOR: Oh yes, on the Task Force, so...

PMB: And then you did you also, when the Task Force completed its work when you were in the ministry.

TAYLOR: I'll say yes and no. The Royalty Regime, was all legislated and an interesting part of that one in 25 percent royalty, actually was in legislation not in regulation. And the reason that the industry people pushed for that as hard as we did is a minister can change a regulation, only the full legislature can change legislation, so we wanted that in there so that it had an enduring aspect to it. And of course, the Royalty Review Task Force, but when I went to the government, while that Royalty Legislation had gone through at the end of '97 and really enabled a lot of the investments we were making at Amoco, Syncrude, Suncor, other companies had planned, Imperial's Mahkeses, and don't ask me to spell that, expansion. There were a lot of things still had to be, you know, the devil is in the details, and so when I was up there I had a team of people still trying to work through details and some of the details were, if you had done pilot demonstration work prior to filing your commercial application, some of those expenses would be eligible to be included in that opening balance, but they had to be direct pre-cursor pilot things. They couldn't have been an old set of tanks you had from 20 years ago from when you tried something and abandoned that and now you said, oh I'm going to do a commercial project, let's recapture all those costs.

So we had a team of people, had to work with industry, with each of the people doing a commercial project to help establish that initial opening balance. We had issues like our own, when I would've been with Amoco, we put in the first co-generation facility at a steam project, so we along with ATCO Power and Amoco Power put in a gas fired electric generator and used the waste heat from that to help generate the steam, so now you've got a business that's generating electricity using natural gas, and you've got this oil sands business, in effect, buying hot air, waste gas from the gas turbine to generate steam. Now how do you price that hot air? So those were the details that had to be worked out. How do you price and how do you value things so you make sure the right investment costs and the right operating costs are being charged into your oil sands project? And all those were kind of, Article C, Article D, and Article E of that original legislature.

PMB: Okay, and so to put that in perspective, you had the power being generated on the one side, and then you were essentially buying the waste.

TAYLOR: We were buying the waste heat.

PMB: The waste heat and using that to produce oil.

TAYLOR: Yes. And if you're an oil sands producer, you say well, I'm buying so many BTUs and so I'm buying this many BTUs out of the original BTUs of the gas. And as the guy who had put that project in place in industry, I had to attend one of the meetings while I was in government, and I said, come one guys, you're buying used BTUs. They're like used cars, they're not worth the same as the brand new shiny BTUs that you're putting in at the front end of the turbine, and they all looked at each other and they looked at me and they kind of shrugged their shoulders, and okay let's get on with business, how much is a used BTU worth?

PMB: Talk to a used BTU salesman!

TAYLOR: So actually part of the fun I had in government is that fact that I wasn't just another career government guy that they could wave arms and say you don't understand how business works, because I did understand how business works, and so I could, if you will, call their bluff on some of these issues and say come on, get serious guys, we are partners in this business, government and industry. You know, we're in this together, we both want to develop the resource, we both have to work with the First Nations, we both have to deal with Alberta Transportation, so let's quit the games playing so that we can get onto to the important parts of how we work together. What's your next question, before I ramble?

PMB: At the time, now oil prices had begun to climb, I think it was around 1998, and of course you joined the government around year 2000?

TAYLOR: Yeah.

PMB: And so it seems to me, and as you know, I was out of the country for a lot of this time, but it seems to me that would have stimulated a lot of interest in oil sands development. Can you tell me what your experience was in government? To what extent was that just an ERCB, or a Utilities Board matter, and to what extent was your department involved in that?

TAYLOR: It was… One of my frustrations is...and Neil, the chair of Energy Resources Conservation Board.

PMB: Neil?

TAYLOR: Yeah, Mc...

PMB: You'll remember it later.

TAYLOR: I could look in my Blackberry and you can... he was very good each year, at budget time, coming in and saying look we handled this many applications, we've had you know, and so therefore, we need more staff and by the way, we keep losing staff to industry and they actually put together an industry advisory committee that resulted in the ERCB staff being paid 95 percent of an industry job doing the same thing and 95 percent was probably good, because people chose to work at the ERCB for a reason. But nothing like that happened in the government, because all government employees of a certain level get paid the same no matter what department you're in, so it doesn't matter whether you're competing with the oil companies downtown for employees, you got paid at a certain experience/education level, basically the same as a social worker.

PMB: And so somebody working in Calgary or somebody working in Wainwright, at the same level, would get the same pay?

TAYLOR: Yeah. So we had people, there's actually quite a few government energy people in Calgary, the people that actually do the detailed administration of oil royalties are downtown Calgary, and we had, it was a turn-style. People coming in, working, getting experience and going down the street. We had experience with one lady who was a senior land administrator in Edmonton, coming to work in Calgary for twice the salary. We had some really bright engineers would come work the department, and they were people with the right motivation and the right attitude to be great long-term government employees but they just, they'd come and they'd say look, I just can't work, you know, for this salary when somebody in Calgary is offering me 50 percent more. I want to raise a family and I just can't do that to my family, and so it's unfortunate. So we not only didn't get the number of employees, we were losing people because of salaries and basically, every piece of work that they do at the ERCB, there's a mirror piece of work goes on in the Department of Energy.

PMB: What is the relationship between the ERCB and the Ministry of Energy?

TAYLOR: Both report to the Minister of Energy.

PMB: But there's no line...they're dotted lines only, between the area you were in and the ERCB? Or were there even dotted lines?

TAYLOR: No, there's not even dotted lines. I mean there would be issues come up that we would work with them, but no different than we would work with people from Sustainable Resource Development or Environment. No it really, the ERCB is truly autonomous. I mean, we would look at some of their projects and we'd share budget information as to how we were approaching things, but on a day-to-day basis during the year.

PMB: So from an administrative or a management point of view, really the oil sands applications and so on were handled by the Board.

TAYLOR: Yes, all of the regulatory applications are handled by the ERCB and the Environment Department. But...

PMB: And so your ministry did what?

TAYLOR: Well, we leased the lands. We all do the...the ministry do all the lease continuations, because leases aren't permanent, they have renewal dates and every time a...specifically for conventional oil and gas, every five years, the operator has to prove they have production from that lease or else it reverts to the Crown, and industry would like to continue leases without doing much work on some of them and so all of that goes on. Every well, conventional oil and gas well that receives an ERCB Well Licence, the department has to go through and do a check to make sure, in fact, that that leaseholder actually owns the mineral rights. So there's this mirror of activity. Every well that gets drilled starts a whole chain of royalty documents and royalty collections and so the same thing happens with oil sands leases. They approve a project, but that project then just starts that same set of activities in the department including, you know, so while a project's on-going or a well's on-going the ERCB maybe has two go out and do a well site check once every year or two, the Energy Department's meeting with that well every month.

PMB: So the role of the Energy Department was the, technically the recipient of those royalties, it didn't go to treasury? Is that correct?

TAYLOR: It does to the Energy Department and then gets transferred through, really quickly, as Murray Smith once referred, the Minister, once referred to Energy as we're the ministry of leased lands and collect royalties.

PMB: Okay but now the in-kind royalties that you received…I know there used to be a government agency which was in charge of collecting those in-kind assets and then selling them off, I forget what it was called. I know it existed until the 80s.

TAYLOR: No, it still exists.

PMB: It still exists?!

TAYLOR: It still exists, now...

PMB: And it's called?

TAYLOR: Sure, ask me a quiz question! And the history of that goes back to the Peter Lougheed era, when he got into the pissing match with Ottawa over deductibility of royalties and whatnot, so in the 1974 -'75 period, he created the Petroleum... Marketing Agency...Commission...?

PMB: Oh, Petroleum and Natural Gas...Petroleum...?

TAYLOR: Petroleum Marking Commission?

PMB: Yeah okay. Well, somebody will remember it in the future.

TAYLOR: Yes, I know people that could do it today, but in that period, was it then or was it the National Oil Program, anyway, one of those. Alberta in that era took custody of every barrel of oil produced in the Province, because it was Alberta's oil. The development is done through leases and the Petroleum...anyway, they marketed all the oil into the market place and then they gave back to the oil producers their money for their share of the oil. So that went on for a period time. That then is what ended, probably in the 80s, but at that point the government still and today does still continue to take every barrel of its oil royalty from conventional oil in-kind, and then it has marketing agents that market that oil into the pipeline refining sector.

PMB: And the same is true with bitumen and oil sands or no?

TAYLOR: The option was always there to take bitumen royalty in-kind, but for as long as I was, up until after I left, all bitumen royalties were paid in cash and when you were only collecting one percent gross royalty from each project, there really wasn't enough oil to do anything meaningful with.

PMB: But now that's changing.

TAYLOR: It is changing and it was, when we started to approach the 25 percent royalties that we started to look at how you could deal with that oil because, of course, you can sell bitumen but if your oil is coming from Syncrude or Suncor, well it's kind of tough to take it because you're going to take a refined, you know, an upgraded product. But then there was all the other, like even Suncor with their Fire-bag in-situ was going to be selling a certain amount of bitumen into the marketplace. Esso, CNRL, others are selling bitumen into the marketplace, and so to answer the question, so how do you, rather than just selling it at the distressed discounted oil sands price, is there a way that you could do two things: make more money for the Province and also use it to generate a higher percentage of upgrading in the Province. And at one time we had talked about options like just mandating to producers, 60 percent of Alberta's bitumen must be upgraded in the Province, which would be a kind of a regulatory, heavy-handed approach.

The approach that we began the discussions while I was there with two people who were interested in building merchant upgraders and the one that's going ahead with the northwest upgrader, would be to commit a certain percentage or a certain volume of the Crown oil, bitumen, to an upgrader. And then there were different ways of working with the upgrader and I don't know the details of the Northwest upgrading contract, but how you could then share in the value of upgrading that oil, without actually investing in an upgrader, because after the Husky upgrader, there was very little appetite in the government to actually invest in the business, and if you recall in the Klein era, it was we're not in the business of being in the business, we're in the business of...

PMB: The Husky upgrader was constructed around 1990?

TAYLOR: About that period, yes.

PMB: And it was very expensive, and I believe both the Alberta and Saskatchewan Governments participated in it and it cost, I think, a couple of billion dollars. It was very expensive.

TAYLOR: Yeah, and the Alberta Government just had this mindset, we're not in the business of being in business and they sold out at a very modest amount, Saskatchewan held onto theirs for a few years longer and recovered over twice what Alberta did, I believe, when they sold theirs. The part of the story of that upgrader that's never talked about is...

PMB: This is the Husky upgrader?

TAYLOR: The Husky upgrader, going back into why you might want to be involved in an upgrader, is after the Husky upgrader was built there was a robust supply of upgrading capacity and as a result of that, the differential between light and heavy crude was very narrow. At times, it was as little two dollars a barrel, and that's why they weren't making much money on the upgrader is because there wasn't much of a spread between the price of input crude and the output synthetic crude.

PMB: But that was actually a positive thing.

TAYLOR: Well it was a positive thing for Alberta because we were getting our royalties on the bitumen, so the higher the price of bitumen the more royalties Alberta got. The faster those project moved from the one percent to the 25 percent payout, now I don't know that anybody's ever run the full cycle economics on it, but the fact that we didn't make money on a capital investment in an upgrader was significantly offset by the increase in the royalty stream that we would get over time.

PMB: And the prices that oil companies got for their production.

TAYLOR: Right, which flows through into the income tax that gets paid to Albertans as well so and, because that differential was low, there was more activity developing more heavy oil sands projects. So a few of us in the Department of Energy could see there were merits in that and with the approval of Ken Smith, we entered into some conversations. I was only there for the earlier stage conversations with Ian McGregor from Northwest Capital which was the money behind what's now the Northwest upgrader and Columba Yeung who had been the engineer that designed the whole process for the Shell extraction and upgrader system at the Albian Mine and the Strathcona Country Upgrader of Shell's. And he hoped to build his upgrader using some of his novel technology and had it gone ahead, it would have been a great upgrader in terms of its ability to spin out different streams for potential petro-chemical feedstocks, not just a motor fuel.

So we entered into those negotiations or discussions about streaming some of the Crown share of the bitumen to those upgraders and then whether you negotiated a fixed fee with them to upgrade your crude and you would pay them that fee or whether you would do some sort of a sharing fee based on their real operating costs. There was some real opportunity to create more upgrading capacity in Alberta, keep the upgrading here, create the jobs here, create a product that's going to pay taxes at the higher value in Alberta and I'm pleased to see that... and the person who worked with me in those early negotiations was Soheil Asgarpour.

PMB: How do you spell that?

TAYLOR: Just about any way I want [laughs]!

PMB: [laughs] I'll believe you.

TAYLOR: No, S-O-H-E-I-L A-S-G-A-R-P-O-U-R, Soheil Asgarpour and he is currently the President of the Petroleum Technology Alliance of Canada, otherwise known as PTAC. And he was a great, great businessman and really was a... He came up, I recruited him to work at the Department of Energy and I will say, I've said it more than once, of all the people I've hired into my jobs over my life that was probably the best choice I ever made of somebody to come in and fill a role. Just a pleasure to work with, and he took over and headed up the oil sands group in Edmonton for a three year period.

PMB: Bob, I wanted to ask: was there anything else in the oil sands area that you were involved with in ADM? Then I want to finally ask you a question about... the last question on my list I'm going to save for next time. Anything more about the oil sands? And then lastly, I want to ask you about aboriginal relations and how you've seen that develop or how you saw that develop during your time.

TAYLOR: Well just the... I guess it was somewhere, and I could probably go back on my computer files and find the note I sent to the Deputy Minister at the time. I tried to get it through him to the Minister because I discovered a few things early in my career with government, things you do and don't do as an Assistant Deputy Minister. One is don't go to a PTAC meeting and say, you know, it may be a good idea if the government set aside a half a percent of oil sands royalties and put that back into technology development, not recognizing that L.C. Ross form the Daily Oil Bulletin was in the room and that was quoted in the Daily Oil Bulletin the next day, along with another quote that came back to haunt me, and that was the... In a lot of ways government can't, except through very heavy-handed things like regulation, force things to happen. What you can do is you can put policies in place and hope that industry responds and I refer to that as the long wobbly lever of government and so that was also quoted by L.C. in the Daily Oil Bulletin and the next day I was in the Deputy Minister's Office and it was being explained to me very clearly that the Minister puts forward policy ideas he's thinking about, not the Assistant Deputy Minister and I...I said, I think I understand that, much the same as I learned about press releases when I was working for Amoco and as long as I worked with Murray Smith and even today when I run across him he refers to Bob and his long wobbly lever.

PMB: Of government.

TAYLOR: No, no his long wobbly lever, with all the appropriate innuendos [laughs]!!!

PMB: [laughs] I get it!!!

TAYLOR: I still see Murray with some frequency and he was a very great guy to work with and he was able to have that kind of fun around my missteps. But back about that period, and it was before Murray became Minister, I wrote a short essay, if you will, a briefing note for the Minister saying: Look, natural gas volumes have peaked, or are peaking and we didn't know, you know, with the little bit of drilling, this, that, and I wasn't drawing on the whole peak oil, what's the guy's name... I'm not good with names this morning...but it was obvious for Alberta, we'd about maxed out on our gas production.

I said we need to be thinking about a declining volume of natural gas royalties and recognize that oil sands is our future and we really need to be focusing on that and making sure that our oil sands group within the Alberta Government is equipped to handle this growth so that we make sure that we manage these issues, and I have to say, for my full four years that was about a year, not even a year, that was eight months into my time in government, that in my time there, the staffing, the recognition, the importance of oil sands really never was recognized by the Minister, the Deputy Minister or my ADM colleagues, and without naming names, some of the ADM colleague almost went out of their way to undermine the success of the oil sands group in the department through various budget and staffing allocations and again, we didn't get that increase in staffing that the ERCB was getting as activity increased, so we were really struggling across the whole department to do everything in the land tenure and the natural gas across the ministry and I think, now the oil sands has got the recognition, it's now recognized as what's going to be paying the bills in Alberta for a long time into the future.

PMB: And one of the points that you made in a paper or something that I saw that you'd written is that, because of the way the royalties have been created, have been set up for oil sands development, they do represent as gas volumes, natural gas volumes decline, it does represent a much lower source of revenue to the Province unless oil sands production has increased a lot, is that a correct summary?

TAYLOR: Well there are about three things. I guess we need the projects to reach payout and start paying the 25% royalty, but you know, on a barrel for barrel basis oil sands royalties will always be less than what light oil was, and on relative terms natural gas. Now we've got the anomaly now where natural gas is selling at a very depressed price relative to its BTU value, but you're going to need an awful lot more barrels of oil sands production to get the same royalty stream as you would have needed for say conventional and light oil production. But, and I'll say here's the "but", there's a stability to the production of oil sands that isn't there with conventional oil and gas.

I mean typically you put a gas well on production and that's the best day of production you're ever going to see from that well, whereas oil sands you can have a long stable production from the oil sands projects on an individual well and certainly on a project basis where you can continue to add... You know, so much of your investment is in your infrastructure that you can continue to add relatively low costs out of your total capital and keep a stable production through your facilities for a much longer period of time. So I think it augurs well for Alberta, for the future but, those are some of the things that again, in the story-telling with the MLAs to help them understand how the Oil Sands Royalty Regime was working, there was a real mental roadblock because, you're talking really about an entirely different industry type than what people were used to experiencing with oil and gas wells across the Province. I guess that was one of my personal failures, personal frustrations, was I guess because of my closeness to the oil sands and being able to see what was coming, but not quite being able to get that recognized in some places where it needed to be seen.

PMB: Bob, I'm going to call it quits right here.

TAYLOR: Okay.

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PMB: This has been a tremendous interview and we will follow it up. Thank you very much.

[END OF RECORDING]

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