## DAY 1 - THURSDAY, APRIL 12, 2007

**Opening Prayer** by Gail Anderson.

**Review of Agenda**:

Lindsay: What I like to do if I could, is have you turn to the front page of you binders which lays out the agenda for the next two days and take a few moments to walk through the agenda to establish that we are all comfortable with the approach here and we're all of like minds with respect to:

- what it is that we are covering for the next two days; and
- what it is we are trying to accomplish.

I would like to walk us through the agenda briefly and then take any questions or comments that you might have on it so if we need to make any adjustment on the front end then we can do so. It's fair to say that we've got two days, three would probably be ideal for what it is we have to accomplish. There is a great deal of information that is going to be presented over the next two days and we want to make sure everyone involved here is getting the best information that they need before they leave the room tomorrow afternoon.

The intent of this workshop is to be collaborative, and so it's about sharing information between all of the parties attending this workshop. It's not so much as one group presenting and the others listening but, rather we would like this workshop to be interactive as much as possible. The overwhelming constraint, as I see it, is that there is a tremendous amount of information that is being presented here. I will try to ensure that we cover the material the presenters have brought forward and preserve enough time for questions. When it comes time for questions, if people don't have as much time as they would like, I would suggest you seek out the presenter and follow up with them one-on-one. There will be lot of opportunities to engage in discussion at lunch break and later this evening at dinner tonight.

With respect to outcomes of the workshop, there are a couple of outcomes that those who are in involved in organizing the work of the APC and are quite anxious to see the workshop turn it's collective mind to over the course of the next two days, and particularly tomorrow, what are the next few steps coming out of the workshop. The workshop is to provide some direction and some guidance in respect to a workplan for the 2007-08 year for the APC. The thinking in the room here is what the APC could and should be doing for the next year is a very important question.

Let's walk through the first day of the workshop. The morning is establishing the broader environmental context. When I say environmental, I don't mean biophysical, but I mean - if you will - the state of affairs with respect to the oil and gas supply and demand scene and what it looks like in North America and what this particular project can contribute. As well, we know that the Alaskan circumstances are very important on a significant portion of this pipeline. If built, it would come through the state of Alaska and so - if you will - the fit between Alaska and the Yukon and other neighboring jurisdictions and adjacent jurisdictions is a very important question. For those of us who live in the Yukon we read a lot about the state of affairs in Alaska

but don't really have an opportunity to get a first-hand or closer look at what's going on there so we have an opportunity through the presentation to get a better understanding of what the Alaskan picture looks like.

This morning is setting the picture of this external environment with respect to markets, supply and demand, and the Alaska US circumstance.

In the afternoon, we're shifting gears a little bit and moving into some very basic information about the project and the status of the project from the advantage point of industry and in particular the producers. The Key Presentation after lunch will provide for an Industry Panel that will be speaking to the project fundamentals and the project schedule, as its best understood and conceptualized at this time. Following that, will be a presentation on the role of Yukon Government with the respect to the Alaska Highway Pipeline Project over the last couple of years. I understand that we will get an update from Brian Love and he will explain the work to date and where people see the work going. I should add that where and how the work is going is probably one of the most important questions to be answered in this workshop. So it's not just a question for YTG, it's obviously a question for industry and of course the First Nations who are in attendance here today.

The theme of the workshop is of preparedness so that includes a dynamic set of conditions that are evolving, that everyone in the room here has an interest or a stake in – to be well prepared – by moving the interests and concerns forward. So today, is setting the context and a state of the status of the project and tomorrow is broken down into four topic areas:

- regulatory authority;
- environmental issues;
- socioeconomic impacts; and
- employment and business opportunities.

These are the four areas that the APC had identified from the outset when it was established, as areas to concentrate a program or work or a program of studies that could conduct or carry out on behalf of the First Nations. The information would be available to individual First Nations to assist them in their internal discussions in advance of engaging with the producers and other governments. It's important to understand that the APC is not a substitute for direct discussions between the First Nation governments, other governments and industry. The APC is only mandated to undertake a body of work as directed by the First Nations, for the purpose of providing technical advice and support to the First Nations in their respective discussions with other governments and industry.

In respect to environmental assessment:

- what is the process of the review going to look like; and
- what is the permitting going to look like.
-

Given that this is a linear development of tremendous extent and its going through multiple jurisdictions and the question arises with regard to regulatory matters::

- how will the multiple jurisdictions line up with one another;

- does it align with traditional territories, state boundaries, international boundaries, or inter-provincial boundaries; and
- what is the regulatory process going to look like and how will it be integrated so as to avoid gross levels of duplication.

That is part of the interest on this particular topic. What we would like to see at the end of that particular presentation and discussion tomorrow morning, is that if there was a follow up workshop with the regulatory affairs matters and processes - what would that workshop look like, how would it work, who should be there.

Another major area was environmental issues. At this point in time and based on past experiences:
- what are the range of environmental issues;
- what are that areas of work that should be done to prepare for the workshop; and
- suggested materials for review in preparing for the workshop.

Similarly with respect to socio-economic impacts, this is a large area of concern and of priority for many First Nations along the corridor. The discussion around it
- what are the key issues that we can learn from the past that are unique to this type of project; and
- what further work needs to be done to move this discussion forward for a workshop.

With training, employment and business opportunities there are a number of mechanisms and instruments for capturing those types of opportunities such as access and benefit agreements; socioeconomic agreements; cooperation agreements; and/or participation agreements.
- what are the key challenges associated with the opportunities in employment, business and training opportunities during construction.

Those are the four areas to focus discussion on and the intent would be to identify what the next steps are for pursuing discussion. We are here to learn and set the direction for the next year and beyond. All representatives are here to find out what it is that they need to do in respect to consultations and discussions between industry, First Nations, and other governments

No questions or comments at this time on the Agenda.

**Macro-Economics of Oil and Gas Supply/Demand** - Paul Martenson (NEB)

Paul Martinson: The NEB is the main energy regulatory board in Canada and I work on the upside of that - the oil and gas supply – that is in charge of supply analysis. I have been on the natural gas side of things for the past just under twenty years and look forward to sharing what I have picked up over those years, in terms of an overview of how the natural gas market works and the discussion afterwards.

The two main roles of the NEB are:
- on the regulatory front, we regulate oil and gas pipeline imports and exports; and
- having a role on the electricity side.

My job is to provide information to Canadians. We do a number of analyses and assessments and then these get put into reports and provided to inform Canadians, industry and the Minister on activities in oil, gas and electricity. These are all available and free on our web site. The reports include outlooks from shortages over the next few months to twenty five years. I encourage you to look at the website (www.neb-one.gc.ca).

I would like to speak to the Alaska project in a generic sense in consideration of the technical, economical, and other aspects of such a project, that would be kicked off with the filing of an application. There is no application before the Board at this time and so can only speak from a generic point of view and how the North American market would have an opportunity for potential projects like that. I would like to be clear, that I don't speak on behalf of the Federal Government, the political and policy aspects of this project involves other agencies such as Natural Resources Canada, DIAND, Environment Canada, and these departments have representatives in attendance, and so I will be speaking only in regard to the National Energy Board.

My role is to give a bit of an overview and provide a setting for some of the detailed discussion you are going to get into here regarding the project. The overview is on natural gas itself - why there is interest for the north that was discovered more then thirty years ago; how natural gas markets work in Canada and the US; the long term outlook because this is a long term project given that construction wouldn't start for a number of years and it would be in operation for decades; a longer term look at markets; and finish up with liquefied natural gas (LNG). LNG is gas that can be imported to North America from overseas and is also a potential new source of supply.

Natural gas is the second most used fuel in North America – two-thirds as much as oil is used, more than coal, and more than twice as much as nuclear. It's a big part of Canadian industry. The value of the gas is over $35m per year. Natural gas requires a greater volume to produce the same amount of energy that you get from a liquid fuel like crude oil. Gas is not as transportable as oil and so it is most efficient when moved around through a high pressure pipeline.

The main uses for natural gas are space heating in homes, buildings, in industry, particularly as a heat source where you need a clean burning fuel which is a significant component of the volume consumed in a year and is stored underground.

North American markets, in total, just to look at the northern projects as a means of setting the scale to the rest of North America - both the Mackenzie and Alaska projects have significant volumes of natural gas. The Mackenzie gas was discovered more then thirty years ago but has still not been produced. The Mackenzie project is in the regulatory process now and ongoing. Alaska is a bit different in terms that the gas is associated with the oil developments in Prudhoe Bay. As the oil is produced, the gas comes up along with it what's been happening is that the gas is then injected back into the oil reservoirs to provide pressure to help the oil move to the oil wells - that process has been ongoing for decades. The thing that is changing is that as that oil is produced out of Prudhoe and the amount of oil is depleting, that frees up some of this natural gas for use.

Why is gas from the north, after over thirty years, now very much in the forefront of people's thinking? One of the reasons is that production, from traditional areas in Western Canada and the lower forty eight states, in many of the fields are over the half-way point in their production and that means it is difficult to grow production out of those areas. So we see a flat production and declines in production in many areas while at the same time the gas demand is growing. Key areas of growth is in fuel for electricity generation, and we are also seeing significant components being targeted to provide energy to extract oil from the oil sands resulting in higher prices for natural gas. The generic oil prices in recent years has had an influence on natural gas prices all of which improves the economics of gas from more remote areas.

How natural gas markets in Canada and the US are integrated and how operation takes place affects pricing. Both countries are transparent and developments will impact prices in both countries because of the similar procedures and operation practices employed.

Starting with the natural gas supply in North America, the amounts that are produced are represented by the height of the blue bars on the slide. The one thing you notice is that most of the gas is produced in a strip that runs along the continental divide from northeast BC all the way down to the Gulf of Mexico. The vast majority of it is on that strip that runs across North America. The other thing you notice is that the development of offshore reserves is very restricted and is in the central and western Gulf of Mexico, and a small amount off the east coast of Canada. The other areas of offshore development are under moratorium - there is no development of natural gas even though the industry would like to have access to develop as potential sources. The lighter blue arrows (in the slide) along the east coast of the US and as well as the Gulf of Mexico, those represent the very small amounts of gas that are imported from overseas.

If we look at gas demand, we see that it's much more widely dispersed and the major demand area is in the midwest US, central Canada. The east and west coasts are a long way from the natural gas supply. Over the course of development of the natural gas industry over the last fifty years, major pipeline systems have been developed to move the gas supply to these markets (yellow arrow in slide). The natural pipeline networks, all of these inter connections, is one of the ways you get this really integrated natural gas system in North America - gas going in on one end of the system and moving through all of theses interconnects. As an example:

> Look to the hurricanes in the Gulf of Mexico in 2005 that was a major disruption to offshore natural gas and oil production. At that time, the impact of these volumes going off the market was felt all the way back into the Rocky Mountains, all the way back up into Alberta. And so the price impacts the volume - you pull volume out of one end and it changes the distribution of how the gas has to move to meet the markets and impacts elsewhere affecting the pricing, to some extent, even as far away as BC.

That's important when you think about Alaska. Alaskan gas would be coming in along that coast; it would have impacts in terms of pricing, and in terms of flow all the way through all the way to the Gulf of Mexico. Look more closely to the components that make up the natural gas market in North America, look at supply - you always want to start at the amount of gas

available in the ground. The gas available, that's what these pies represent - the darker blue pie charts represents gas that's already been produced and in western Canada and the lower forty-eight. That's about half of the conventional natural gas supply that we think would be available. The light blue is the remaining reserves - so that gas in discovered fields, hooked up to pipelines that are ready to go and that gas is available to meet the near-term needs of the market. The black pies, that's gas that is discovered. You see it predominantly in Alaska, in Mackenzie, and the Beaufort Sea, areas on the frontier with discovered gas but there is no way to get it to market - no way to produce it - there is no pipeline connection, and so we know its there but is considered not available to the market. The red represents the speculative part of the resource, this undiscovered gas is based on best estimates of geology, based on the drilling in adjacent areas that would suggest reserves will be there in the future but are unknown at this point.

The easiest gas to access has already been produced and what that means is that you need to put more effort into producing the remainder, as reflected in the amount of drilling that is required and the number of wells that have to be drilled every year to produce gas and oil. In this graph, the blue represents the drilling activities in the US and the red is drilling activities in Canada. Also on this chart is a black line that represents the pricing index in the US that generally is a reference point for all of North America and just to show how drilling activity in North America responds very closely to what happens on the pricing side. We see that the drop in pricing in 2002 resulting in drilling activities dropping along with that. Since that time, prices have been rising fairly steadily and the drilling activity has gone up accordingly. You see a real spike in price, that is due to the hurricanes in late 2005. Since that time, prices have largely, due to two warm winters, come back down to relatively flat to where they were before the hurricanes. That has resulted in a flattening in the drilling activity. You look at how steady the activity has been in the US and how jagged the profile is in Canada - that reflects the temperature conditions in the two countries. In the US, you can drill pretty much year around and in Canada you've got a spring break up road bans that go into effect so you can't move rigs around, so every spring the drilling industry goes on the sidelines for a couple of months and then recovers and then builds up to a peak in the winters. The winters in Canada, as you can get onto marshy areas where you need frozen ground to move equipment in and out, result in a very significant rise in activity.

Since 2002, and you would suspect that that the events would have a big impact in terms of gas production, things are as flat as they can be. There is no direct impact in terms of production of natural gas despite that very large increase in activity. So why is that going on, what's happening is that new wells are less productive then older wells - you have to drill more of them to get to the same point you were before - so its often described as a treadmill that moves faster and faster. It's been a very flat profile for a number of years since 1999 with some minor adjustments. The significant component in Canada represents almost a quarter of North America's supply. The jagged portion at the top of the graph is due to the hurricanes. The gas demand in North America is very weather-sensitive, it peaks in the winter as gas is used for space heating largely and comes off again in the summer, so you got this flat supply.

A very jagged demand profile is due to demand and the answer is in storage. Gas is stored in underground reservoirs that can either be old oil and gas reservoirs - where the oil and gas has already been produced and you've got some pour spaces that can be filled on a annual basis and pulled out. There is also the use of salt deposits and in that process you pump water down and

get salt water on the way back up and out until you've removed enough salt so that you have pour space again. The underground gas represents 5% of the gas that moves on a annual basis. Look at the periods when the red supply is greater than the green demand - that's a period when you are putting gas in storage and in the winter time - when you got that peak when you got a demand that is greater than supply – that's when you pull the gas out. This is represented by the columns either above or below the zero line. Gas storage is a key indicator and a key driver in near-term natural gas prices. It's hard to get a real gas price on a real gas basis - of all the users, different producing wells in North America - the tabulations for statistics would take months. It's a very slow process to get an indication of what the supply is doing and what the demand is doing - the amount of gas that is moving in and out of gas storages is tabulated on a weekly basis and is very much an indicator to the industry and to the market participants as to what the balance looks like if you get extra supply which goes into storage and if you get extra demand it comes out when there is more gas in storage. Those blue columns when they are above the zero column line then you tend to see prices go down as represented by the red line - the converse is true as well when you are short in that more stored gas is coming out than you would expect – that's when you see the price spike.

You don't really care what is happening in Alaska weekly, at a natural gas price when you are looking at a project that is going to be in operation for decades. It gives me a better indication of what price I should be looking at for a long-term project when I look at oil prices as a long-term indicator. Where natural gas prices tend to be in the blue band represents a change in oil prices, at the top end of that is diesel fuel oil - the higher quality fair price oil is at the bottom end of the blue band is lower quality heating oil. You also see the Alberta price and the US price move fairly close together - there are some differences but they tend to track one another very closely. If you're looking at Alaska gas - where is it going to market - where is it going to hit on the index into the Alberta market - that's part of the pricing index you're going to look at - the long-term, where do gas prices tend to go? At the far end of the chart, it shows the futures market and that's a mechanism where market participants look towards the future, up to five years, and make commitments for purchasing and arrangements for natural gas as indicated by the red dash line. That follows this pattern very closely, being at the lower end, looking forward to the future. The NEB, every four years provides an update on the outlook for energy in Canada.

The middle profile is what is called a continuing trans-case, that is more of business as usual in the amount of drilling that goes on in a day - how the industry operates and responds with a gradual decline over the next 25 years of Canadian gas production at a price of $7 using 2005 dollars. The green line indicates a more abundant supply, but it is coming from overseas as liquefied natural gas and with less supply - it drops off more quickly.

Looking at the middle line - the supply line - supplement domestic supply compared to the Canadian demand. The demand on gas is for power generation and oil sands use. The blank space indicates the amount of gas for export to the US and that amount shrinks over time.

Here is a representation of the US and it shows in relative terms a more gradual approach in demand - in absolute terms, it's a larger amount of growth in terms of natural gas - the supply profile is flat for the US. The dashed red line shows the supplement coming from overseas and the dark red comes from Canada and shows how the gas supply will diminish over time.

Within the gas, there are some impurities consisting of propane, butane, pentane; and the closest to methane is ethane. As Canadian gas production declines so does the natural gas supply. The purple represents the amount of ethane that is used in the major petroleum complexes, such as shopping bags, plastics, and major industries in Canada. We aren't able to meet the demand so this is why the industry looks towards liquids that contain in gas that might be coming from Alaska.

Regarding liquefied natural gas (LNG), it is a gas that has more than a thousand times the volume than oil, and so you need a big pipeline to move it through. The thing with natural gas is that when you chill it, you can shrink the volume. When we talk about liquefying this natural gas we are cooling it down to -100˚C and the gas will shrink by a volume of 600 times and now you can ship the LNG.

If you look at the amount of reserves that are available world-wide and you see how large the amounts of gas locations are outside of North America, roughly 240 tcf (trillion cubic feet) available for our current use and you contrast that with the overall world scale and you see that North America has only 4% of the proven gas available for use, it is a tremendous opportunity to access this gas source. In the current market, there is a well established trade in LNG, about 20 mcf (million cubic feet) a day - there is a computation of projects that are under construction to make more LNG available on a world-wide basis. There is an increase of 40 bcf (billion cbic feet) a day potentially of natural gas. Compare that to the six bcf per day of gas in terms of Alaska. Some component of this will be made available.

The cost to produce in a place like the middle east - liquefying it, transporting it on a ship, turning it back to a natural gas and making it ready to go into a pipeline across North America is about $5.30 which compares closely to the numbers for the northern projects. The US is building for more capacity for natural gas to be imported in the next few years. The amount of LNG will be less than what the market may want but you won't be able to fill up all the imports you might like.

Most of the major markets that import gas that's been liquefied are places like Korea, Japan, and Europe. They are all in the northern hemisphere and that means that winter time is at the same time for everybody. The strongest demand for liquid gas is in the winter - so it tends to be less available in the North America. If in Japan, you're entirely dependent on the source so you'll pay whatever you need to, to get it. Whereas in North America, you have domestic sources so you can let it go. These other markets have limited ability to store the gas in the summer, what we will do as more natural LNG arrives in North America in the summer – the gas will fill up the sources. There is a high interest in northern gas as it's been lying idle for a long period of time, it has to do with demand growth in North America and the inability to satisfy the demand from traditional areas and with prices being stronger and also the issue of the decline in oil production from Alaska that frees us up the gas used for pressure maintenance. The longer outlook - the widening gap between traditional supply sources and where demand growth is going – provides the opportunity to access new sources of natural gas.

Lindsay: Next, we are going to be looking at the US/Alaska context of the proposed Alaska Highway pipeline project and Karen Mathias of Department of Foreign Affairs and National

Trade (DEFAIT) with the Canadian government is with us. She is located with the Canadian Consulate in Anchorage and has been there for a number of years and is working on a number of bilateral or international issues in Canada and the US and Anchorage, and clearly the oil and gas file is no small part of her job.

**Alaska/U.S. Context of Proposed Project** – Karen Matthias (DFAIT):

I am based in Anchorage, Alaska in a Consulate. I am Canadian and originally from BC and I work for the federal Department of Foreign Affairs and International Trade.

The US is Canada's most important ally and trading partner; and over the last few years have opened up more offices so that we would be able to work with the Americans not just at the upper level with the administration in Ottawa. But rather with the Congress, and also very much at the Congress level particularly in neighboring states because the decisions that are made by State Legislators and by Governors can often have a very profound impact on Canada and certainly the Alaska pipeline is a very good example of that. We opened up new offices and Alaska was one that was opened in 2004, so I've been there for three years.

What we do is raise awareness about Canadian issues. We educate Americans about the facts that:

- Canada is the largest trading partner;
- that the US buys more oil from Canada then anywhere, Saudi Arabia.

The States aren't aware how interconnected our energy relationship is. That we have a defense relationship and as an example, we have three dozen military personnel posted at the air force base near Anchorage working on NORAD, the North American Air Defense. We also defend Canadian issues. There is a lack of knowledge about Canada in Alaska, in particular fish and salmon and it is important to provide Canadian policies and backgrounds and at the same time we encourage business to work together. There is a lot of great cooperation in many sectors of the Alaska Highway economy either in oil, gas, and mining. Canadian mining companies are involved in 75% of the investment dollars in exploration and development of mining. The Alaska White Pass Canadian Route is a Canadian-owned Whitehorse- based railroad company that is providing a very important role in the tourism industry as an example of how we encourage cultural links.

(change in tapes)

The Governor introduced legislation to both Houses on March 2. The House and the Senate referred the legislation to Committees in the House, it was the Sub-Committee to Oil and Gas and in the Senate it went to a Committee on Natural Resources. Each Committee looks at this identical legislation and starts to make changes to it. The two items of legislation then work through their respective Houses. Currently, the Bill is in House and has to go through the Sub-Committees on Oil and Gas and Natural Resources to the House of Finance and then for overall approval. We are a long way from having a piece of legislation and the more they change the Bill, the more the two Houses then have to work together to make a decision on one final Bill. If they can't agree, then it can be done through something called Conference Committees, which is also done at the federal level. The leadership of the two Houses - the Senate President and the

House Speaker - have said that they are doing their best to see that this legislation passes by May 16 which is the date that the session ends. If they don't agree by May 16, then the Governor can call a Special Session which allows thirty days to do the work that wasn't finished in the regular session

Under Governor Palin's, timeline - her administration is pushing hard for the Legislatre to approve the Alaska Gas Initiatives Act (AGIA) by May 16. Then there will be 90 days for applications between July and October for any company to step forward and say we can build a gas pipeline and here is what it is going to look like. There is 60 days for a public comment from October to December (this is the scenario that the administration would like to see) thirty days after that the Commissioners of Oil and Gas and Natural Resources to make a decision. In the Legislative Review, the Legislature would simply accept or reject the Application. If they did not already agree with it, the Legislature said they should have the opportunity to approve or reject it. A license would be granted in March or April of 2008. The State needs this timeline to stay on track in order for fieldwork to proceed. The whole process is to begin in 2008. It may be difficult to reach an agreement by May 16 but the Governor can call a Special Session.

The bottom-line here is to give you a sense about the request for an Application through the AGIA. Their request for an application is a timely process and we are at the beginning of it, because first the Legislature has to agree on the specifics, and then the administration has to agree to the form that the legislation takes when it passes through the Legislature. This process takes a certain amount of time and there are challenges as they go along.

The State has a web site on the AGIA and FERC has information about the open season process.

Lindsay: With the FERC approach, there is a consolidated assessment process, with a Federal Coordinator. How do you answer the Americans when they say what does the Canadian approach look like in respect to consolidated review process that ensures expeditious delivery.

Karen: I am not asked that a lot. The State is focused on the decisions in Alaska - of what the framework is going to look like. People are aware that there is a distinction between the Northern Pipeline Act and Northern Pipeline Agencies as the regulatory process and the National Energy Board and they are waiting to see what decisions are made. There isn't a strong view from Alaskans on one or the other - they say they have confidence on the Canadian process and that they are looking forward to working with Canada. Federal Legislation does allow a project to go forward under ANCTO (which was a 1978 Act) and through FERC as a new project. There are two options available on the two sides.

Lindsay: You've talked about Federal legislation and State legislation and arrangements, between the federal and state views, are they in agreement? In aspects or are there inconsistencies with respect to the project - how it will proceed and what the range of options are.

Karen: We have to wait to see what happens to AGIA and what the final form is - they want to see the pipeline built to get Alaskan gas to market.

Ian Robinson: Could you comment on the extent of Alaskan Native participation in this process you've been describing - perhaps the legislation and the FERC organization.

Karen: the US Federal Legislation, the 2004 Act, has a section that specifically says that the State should look at ways Alaska small businesses, the Alaskans in general, and Alaskan Natives could be involved that's in the US Federal Legislation. Alaska settled their Land Claims in 1971 the US Federal Government With the Alaskan Natives claims settlement an Act in 1971 which created 12 regional corporations in Alaska and the 13th corporation for Native Alaskans outside of Alaska. Those corporation have all become very successful. There is a lot of involvement in oil and gas, service companies, drilling, and mining, with expectation for full involvement in pipeline construction activity.

Ian Robinson: In Canada, there have been developments around the duty of the Government and of industry to consult with Aboriginal people. Specifically talking about consultation with Alaskan native's organizations, aside from economic participation, does consultation provide for how the pipeline is routed?

Karen: In Alaska, they see it as a duty to consult with everyone; the public process is an opportunity for any interested party to give their assessment and their concern.

Mary Jane Jim: You are probably aware that in the Yukon we have an environmental process, did you speak to environmental process in Alaska?

Karen: For the Alaska context, a lot of land is under federal control. There is a federal process, which is the NEPA under the Environment Protection Agency and other agencies are involved - depending on the project and also depending if activity is on federal or state land. The highway pipeline follows the route of the Trans-Alaskan oil Pipeline and there is already a clear right of way where the pipeline goes.

Mary Jane Jim: Is there an environmental process attached to that in legislation - is there a consistent environmental process that the companies and the state have to apply to.

Karen: When we talk generally about permitting, we talk about the environmental assessment and all the regulatory work that has to go through in order to get the approval to go foreword. The State Pipeline Coordinator, who would be established as a result of AGIA, their job is to work with state agencies to ensure that the processes go as smoothly as possible.

Lindsay: You have laid out Governor Palin's timeline, do you have any observations on that timeline and what that means for Canada.

Karen: It is very difficult to predict how things will go over in the Legislature. There are 40 people in the State House Representative, there are 20 in the Senate, and there are so many steps yet to go through. For example: the State House has said instead of 30 days for the Legislature to approve a license we should look at having 60 days - elements of that time line could change.

Ruth Massie: I'm looking at this time table and it says 60 days for public comment, then it goes to the Commissioners decision and this is after they pass the Act, so if the public comment comes back on the negative side or strongly mixed is there an amendment process to go back to the Act - because the way it reads - the legislation is going to be approved prior to public comment.

Karen: In approving the legislation the Committees have hearings, and they hear from a wide variety of interests before they pass legislation. But in terms of the actual public comment, it is a request for applications - it's not an negotiation so the applicant puts forward a proposal. The State would then consider all of the proposals and the public has an opportunity to comment and the Commissioners have 30 days to consider the comments and to make a decision.

Jon Pierce: 30 days for the Commissioners decision and a 30 day legislation review, does this mean the Legislature will approve a successful application, what does the review entail?

Karen: The way the Governor has approved AGIA is that the Legislature has 30 days to review the decision the Commissioners have made. If they are not satisfied, they can vote to reject it - in which case - the State starts from scratch. The legislation in the House Committee has already changed - the 30 day rejection to a 60 day process, that would allow the Legislature to review the decision by the Commissioners on the application and to either approve it of reject it. They would have testimony hearings - that has to be put forward in the House legislation but it still has a couple of Committees to work through - it still has to be reconciled with the Senate version.

**Lunch Break**

**Project Fundamentals / Project Schedule** – Rick Allen (ConocoPhillips)
- Jim Campbell (BP)
- Ron Moore (Exxon)

Rick: I spent a number of years with the Mackenzie Valley Pipeline Project, primarily on the commercial side dealing with early regulatory commercial issues on Parsons Lake, which is the Conoco Phillips Exxon/Mobil field development.

When ConocoPhillips makes decisions, they look at five factors:

1. Safety: it's a yes or a no - if we can't do it safely, we just won't do it

2. Technical Feasibility: looking into different options because there is always more then one way to do things - so we look at a variety of options. We need to make sure that it works safely, well, and reliable. We feel uncomfortable when we are doing things for the first time because you just don't know it they are reliable. We like to use things that have been proven and tested and works well elsewhere.

3. Community: taking community input - their thoughts, concerns and input - and incorporate that into our decision-making and into our designs.

4. Environment: what are the impacts? Whenever we do a project, we look at the environmental implications. We look at what the trade-offs are and we look at how much we are going to use the various resources and factor that into the decision.

5. Costs: finally, what are the total costs of the project?

The project is a series of different things. Obviously, there is a resource and we are trying to develop the resource. In the North Slope of Alaska, there are also undiscovered resources and there are projects in the Yukon and having a pipeline from Alaska running into Canada would allow for additional resource development both in Yukon and BC.

There is going to be a gas treatment center in Alaska because the gas has to be treated before it can go to market where it is sold eventually. The treatment center is a very large facility.

Then, there's a piece of pipe that will take the gas from the Yukon, from Alaska and bring it elsewhere. At this point, it will be brought into Alberta. This pipe will be very large, say in the range of 48-52 inches and will have to withstand fairly high pressure.

A trench is dug into which the pipe will be laid after the pipe has been welded together and inspected. The steel pipe will have walls about one inch thick and will be built in sections or spreads. Then the right of way is prepared.

In Alberta, we expect to extract the natural gas liquids like methane, propane, and butane, as these are used for heating. Petrochemicals are for making gasoline. Once the gas is in Alberta, the gas has to go somewhere so there may be another pipeline that brings it to market and you might have a pipeline that goes to Chicago or you might connect to pipelines that already exist. There may be limited space available to move the gas so you might have a combination of transportation systems which may involve the building of new pipelines and you expanding existing pipelines.

The Alaska Gas project is a series of mega projects how do you find the stuff and what to do with it?

First, you have to figure out if there is gas or oil there. This involves conducting seismic work where you put a sound wave into the ground. The sound wave travels down until it hits some rocks and then the sound bounces back to the truck that is generating the sound waves that are transmitted through microphones. The microphones are listening for echoes and the echoes are recorded to a computer that is programmed to read the information and turn it in to readable information that may indicate gas pockets. Using the big seismic trucks is sometimes not feasible and another source to generate the sound waves may have to be used.

Once you have the seismic information, it may take more then a year to process the data, it is then studied for the possibilities. If the companies are comfortable that they actually found something, then they will start the process of applying to be able to have permission to drill one or many exploration wells. If they find something, they will try and figure out how much is there and this might involve doing some more seismic work - to get a better idea of what's

underground. When you drill a well you get additional information from using different types of measuring equipment that goes into the drill hole. This helps to understand the rock types underneath the ground and also to see what comes up from the drill hole. Drilling of more wells is undertaken to determine the size of the field – whether it be big or small. Once this is complete, a number of factors are reviewed and if there is enough information, we may develop and produce what's underground.

Facilities would be put in place to extract impurities, things like carbon dioxide and water. In the areas we are talking about, we would also have to compress the gas and make sure the gas is kept cool so that it doesn't disrupt the permafrost.

(Reference to slide) This is an example of an exploration well up in the North Slope of Alaska and the rig is sitting on an ice pad that is well over a foot thick. The rig and other things weigh somewhere in the order of 3 million pounds. The equipment came in on an ice road – it was built, conducted drilling program later in the spring. After the project was completed, the only way you knew someone was one there, was by looking at the box on the well head. That's one way of exploration type drilling.

ConocoPhillips development on the North Slope of Alaska, is as far west as development goes in there. This is what it first looked like (referring to red dots on the graph). It shows how you can reach all locations from one location, from a single drilling pad - drilling somewhere in the neighborhood of 15,000 feet and up to two to three miles from one spot.

(Reference to next picture) The facility that was put in place in alpine was to reach these various wells. This is the first one which is used to support small drilling pads that have a rig that can reach out to many different areas and connect to the facility. There are accommodations for the operators and the maintenance workers, a processing facility, and, if you notice, notice no roads leading to the site. There is an airstrip to allow for transportation of crews.

This project (AHPP), if built, will require a lot of movement of a lot of people, equipment and machinery and as a result is to be thought of as a transportation project. Whomever builds the pipeline will use any type of transport they can find be it: air, rail, sea, they will have to move things that are very large, things like: trucks, (250 metric ton and a metric ton = 1000 kilograms) on ships and special land transportation equipment that can move up to 12 – 1400 metric tons at once.

With this project you will have to move the pipes and big pieces of equipment, and so you have to think about roadways, bridges and airports as they are important in order to build a project this big. We have a process in place so you can understand the design of things like the roadways. This is in place so that people who are planning the project will know how to bring things in, to know if there any changes that need to be made. Another thing that would be helpful would be to understand if there were improvements required to the roads, bridges and airports.

In Alaska, where we will have a large gas processing facility, there is the opportunity – because of living close to the coast – with living close to the water to move some very large pieces of equipment.

The flowing are some very broad steps in constructing a pipeline:

1. You will need pipe, and to get the pipe you have to get it made somewhere in the world. It will take 5-6 million tons of steel, depending how long the pipeline is. The pipe will be for high pressure and the walls will be one inch thick.
2. The right-of-way is prepared, and then a trench is dug in so the pipe can be put into it.
3. In the field, the pipe will be able to bend to match changes in direction. The pipe will be tested and cleaned before it is put into service.
4. Shut off valves are installed along the pipeline at defined lengths.
5. Most of the pipeline will be buried and some of it will be above ground for a variety of different reasons; such as,: a compressor station requires that the pipe be above-ground.

The economic factors influencing the decision to construct a pipeline take into account:

1. the amount of time and money required before construction of the pipeline gets started. This is money spent that may never have a return.
2. How much are you going to make from the project/
3. Shipping commitments: pipelines require people that want to use them to make commitments for transportation of volume and length of time.
4. How much gas are you going to actually get out of the ground?
5. How much are you paying in royalties and taxes.

These are some of the big picture things that will impact the economics of a project.

When a producer takes oil and gas out of the ground, at the end of the day, he hopes to make some profit. How does he get there? He has to sell the gas somewhere in the market. Once you have that bucket of money, you have to pay for transportation through the pipeline and the production of the oil and gas.

Additional costs include the use of some of the gas in the compressor, and the facility, to clean up the gas to make it dry and cold. If you have a 100 cf of gas coming out of the ground, you won't be selling that same amount as there are finding and development costs, as well as operating costs.

When you look at the economic risks that a shipper or producer faces when oil and gas is produced, they both share a risk at the front-end of any project, due to pre-development costs. The reason being, you will never know whether or not the project will actually happen. The producer and the pipeline will have to pay taxes. The pipeline will be able to pass some of the cost onto the shippers. The operating costs will also have to be paid by the producer and shipper. The producer will pay for capital costs that are part of the toll. The pipeline may share some of the risks in capital costs if there is an agreement with the shippers. The producer pays for the gas he is shipping.

You think you know how much gas is underground – but you don't know until you've gotten it all out. There is a different a driver for a shipper and producer than there is for a pipeline.

Natural Gas Forecast - There is a supply and demand for gas. You may have a higher cost on gas in one area, simply because the balance is a little out of whack in that area. In the longer term, these are the things that will influence the pricing:

a. increased imports of LNG;
b. bringing gas on from Alaska, NWT and Yukon will bring the gas prices down because there's more supply;
c. the loss of market share, much of the gas that is produced today is used for electricity. Natural gas cannot compete with other sources of electricity such as: clean coal or nuclear;
d. there are on-going efficiencies being improved in all sorts of equipment transmission, etc. on the side that tends to increase prices.
e. if there is delays in bringing on supplies, that would tend to push prices up.
f. replacement costs from others bringing gas on that will replace the existing gas that we use and will tend to support a higher price;
g. if there are mandated $CO_2$ controls in US and Canada - that will tend to increase the demand for natural gas, because it generates lower emissions of carbon dioxide and that will tend to support a higher gas price;
h. you would use a great deal of steel and steel prices have more than doubled since 2002 world-wide, that is due to increase in demand. The ability to move that steel about is very difficult. We don't know where steel and natural gas prices are going to be in the future, they are very volatile. They can move quickly and a lot.

In considering large infrastructure projects, it has to be looked at under a variety of different pricing terms or options and the following are some of the questions that arise in the review:

a. will the project work in a very low price environment? in a very high price environment? somewhere in the middle?
b. We look at a variety of pricing, because in reality supply and demand do set prices. Lower prices for natural gas, is because of new facilities of coal coming on, that's a possibility.
c. Hyper-cost inflation, which we certainly are experiencing in Alberta, just because there is so much activity and so much demand.

I will summarize what I have just talked about, and what I would like to get across is:

If a project does proceed, it will be a very complex project in consideration of the size and scope, length of pipeline, the location of it, and the cost.

Again, when we make decisions, we look at a variety of things: Is it going to be safe? Can you do it safely? Is it feasible? Will it work at the end of the day? What did we learn from the community? What does it do? What are the impacts on the environment? What are the costs? What are the benefits?

It's a large pipe, mainly buried. It could provide gas for local markets, and it will open up opportunities to open up for new gas to be produced - gas in places that cannot produce, because they have no way to get to a place where it can be used and sold. There is a great deal of work ahead of us as a group before any decision is made. I am very grateful full to have that opportunity to start that today. We need to start talking with one another to find out what we need to do.

**Project Fundamentals / Project Schedule** – Jim Campbell (BP)

I've been with BP for the past 5 years and my main role at BP is Director of Government Affairs, and I've also been serving another role for about eight months, which is the Canada Team Lead. We are responsible to external relations on this project. I would like to introduce Carylin Greatbanks, she is the Director of Aboriginal Relations for the project.

I've been asked to speak to the project schedule and an overview. Numerous Alaska natural gas developments projects have been proposed planned and studies since oil and gas were discovered in Perdo Bay in 1968. Options have included various gas pipelines proposals, liquefied natural gas, and gas to liquid concepts. In 2001 and 2002 BP completed a comprehensive study in constructing a natural gas pipeline for Alaskan gas to deliver to North American markets. The conceptual design for the main line in Alaska & Alberta pipeline was developed by the producers was part of the engineering work completed during that study. During that study, we spent about 125 million dollars US, 110 owners on the team along with hundreds of contractors and spent over a million man-hours doing the study. So as for the route, the route begins on the North Slope of Alaska, follows the transit Alaska, about 1168 km to the Yukon & Alaska border. In Canada the route follows the Alaska Highway from the Yukon border to the north east B.C. border, the distance in each region, in the Yukon 819 km, in B.C. is 700 km, and in Alberta 632 km. The final portion of the project would be from Alberta to markets on the lower 48. We anticipate a 48 to 52 inch pipe, about approximately about 2500 pounds per square inch. In regions of permafrost the gas will be chilled to manage mechanical strains on the pipe, and to ensure the permafrost remains frozen. There would be a gas treatment plant on the North Slope, we studied this in 2001-02, and it will be about a 2.5 million dollar project. It would remove carbon dioxide and hydrogen sulfide and other impurities. Chill the gas and compress it to 2500 PSI. The B 2 C pipeline from Alberta to markets in the mid west or other areas in the United States, that decision has not been confirmed. (Slide shown on gas facilities on the North Slope). We first discovered oil in 1968, and developed a tap system and was in completed in 1977. To give you an idea of why we get concerned about costs, the TAPS pipeline was originally projected to cost 800 million dollars US, and it ended up costing 8 billion dollars US. The challenges that we will be facing when building the pipeline is steep terrain, because the elevation changes from Alaska to Alberta, and the pipe will cross 5 mountain ranges in Alaska alone. Here is an animation of the highest point of the pass. There is seismic activity discontinuous & continuous permafrost alone the pipeline route. There are tons of river crossings, and very concerned about skilled labor when this pipeline is being built. As well as pipe availability, it's 5 to 6 million tons of steal and this is a pipe that has not been built before. (Animation being shown on the highest point of the pipeline) This pipeline is focused essentially on what happens after IGA, I've not shown IGA on this pipeline is one of the reasons is IGA has not been approved by the Alaska State legislature. Until it's in final form the timelines are uncertain. The IGA could be passed sometime this summer and could see a license awarded by 2008, but I don't want to speculate about timing. Right now we are in the project planning phase and conducting technical studies. For example field trials for high strength steal, field-trenching trials, testing automated welding
Equipment, and working towards cost estimate phases. We are developing plans for access for regulatory and permit applications for both in Alaska and Canada. We are building relationships with the First Nation communities along the right away in the Yukon and other jurisdictions to

lay the foundation of working together. This includes information sharing on the timeline, which is what we are doing today. Phase two is when we prepare the applications and formal consultations & discussions on related to access & benefits such as TK protocols with aboriginal communities. At this point we do field data collection; detailed engineering and environmental work would be done to define the project to meet other regulatory requirements. The data collection would take place in all four seasons over an estimated 14 to 18 months time frame; this would include air, climate, soil, and water collection. There would be information about traditional culture, activities and traditional knowledge. We would also develop an environmental protection plan to minimize all environmental impacts during all phases of construction. Consultation with aboriginal communities is crucial component of these studies. Shortly after the studies are complete, the information package will be filed with the NEB, the NEB is the regulator responsible for the approval for this project. The NEB has the authority to ask for additional information. The pipeline operator would file the application to the NEB after the close of the opening season and the updating of project design. At that point we move into phase three, permit approvals, for major projects such as this one, the national energy board holds public hearings following procedures such as the court. The decision to approve the application or not looks at economic, environmental, technical and financial feasibility to decide weather the facilities and services applied for are required. If the NEB approves the project they issue a certificate of public convenience in necessity or CBCN. The NEB process will take approximately 2 years in the US, once the NEB makes it's decision, the pipeline operator will consider NEB decision and any conditions around it and to determine weather or not to proceed with the project. That is the decision mile stone right there. Finally we move into phase four, the execution, if the CPCN is granted its decision to proceed to execution is been made, we would undertake detailed design, complete detailed engineering, fabrication of equipment, pre construction of pipeline right away, prepare compression sites, setting up construction camps, coding & delivering pipe, and finally we would move into construction. The work would depend on seasons and skilled labor; we estimated the construction to be about 3 years. We will then move into commissioning phase, project personal would work closely with operations personal to prepare the equipment for actual operations and eventual delivery of first gas. We expect the pipeline to be in operation for about 30 years, but really it depends on the volumes of gas that are committed, the exploration that goes on in the Alaskan North Slope and in the Yukon, and maintain the pipe full. When there is no longer any gas being shipped, the pipeline would be commissioned in accordance with regulatory requirements. That's all I have.

**Project Fundamentals / Project Schedule** – Ron Moore (Exxon/Mobil):

We are quite pleased to be here and talk about the Alaska gas pipeline project. I've been with the company for 34 years, and am hoping to continue to work on this and get a lot of work done before I retire.

What this gas pipeline means to Exxon/Mobil, is it increases our global gas production by a little over 10%, which means it's not insignificant. From the perspective of our presence in Prudhoe Bay, I think we are the largest working interest owner in that area, about 36%. This shows where we've been and where we see ourselves going. We have studied this gas opportunity many times over, and have considered LNG, and GTL (gas to liquids).

The key piece, in 2001, was the three companies or producers coming together to do a major study effort. A lot of money was spent and we saw it as an opportunity to try and bring forward the project. The next important step was when Alaska went forward, and legislation was passed which would allow them to negotiate an opportunity with the producers. That took two and one-half years and was a long process. Then we had an election, and now we have a new government and a new process. That new process is before the Legislature and the observation is still kind of uncertain.

We are ready to work on this issue, but are not entirely sure what it is going to look like. One of the most important issues that we see necessary to bring about a successful project is that there is an alignment between the producers and the State, in establishing the right approach to go forward. This is, by far, the most important activity. If we could get this amended in the Legislature and the State, we would consider that a very good event. Right now it is too soon to tell, but we are ready to work and progress this issue.

The producers' study we did in 2001, tried to identify a lot of things to the projects success. One was to get a defined US permitting process, and that has been accomplished. The other key piece is to have alignment with the State of Alaska on fiscal terms. In Canada, we want to have a very efficient regulatory permitting and access process. The US and Canada have different processes. We have a variety of jurisdictions to work within. In the past, we have brought panels together to try and have a streamlined approach to move on an efficient and timely basis.

The size of the project is huge. The cost in 2001 was $20 billion dollars, and 6 years later the inflation has been incredible and the cost has gone up dramatically. This pipeline has a very long lead time on it. On day 1, you begin to spend money, and don't start transporting gas for ten years.

We need to have a clear consultation process between the Crown and Aboriginal communities. We are going need to understand how this project is going to work, all the governments and agencies are thinking about that. We need to keep all our regulatory options open, and at the end of the day, the one that is the least costly will probably be the one to proceed.

We will continue to work with the State to progress the development of the North Slope gas, and we are ready and willing to do that. The fiscal framework is a critical area for the commercial viability of this project. This is the area where we believe is the most significant challenge facing us right now. The path forward on AIGA is unclear right now. We are all sitting and waiting, and we need to work and understand how the Canadian process will proceed.

Gail Anderson: The access to gas, when it goes through the communities, would it be more efficient and what would costs of conversion to natural gas cost.

Rick Allen: As I recall in the State of Alaska, one of the requirements in AIGA is that gas be made available to a number of communities. I would expect that in Canada, if there was a market for gas, the producers as marketers would want to sell gas. The tricky part is how much gas can a community actually consume? Because what we are dealing with is gas in a pipe under very high pressure, when you take the gas out of that pipe, the first thing you need to do is

measure it so you know how much you have used. The cost of the metering is pretty high, and then you have to take that gas from a very high pressure to a pressure that you can actually use in your home, so you will need some facilities for that. You will also need to add something to make the gas smell a little bit for a safety feature. There are a number of things to consider for accessing gas, beyond having a pipeline and putting a valve on the pipe and connecting it to the communities. There is also a cost to move the gas from the pipe to where each individual lives. So if you have a very small community that won't use very much gas, then it is likely that the cost of this infrastructure would be so high that it would not make sense for a community to want to actually use gas. It would be better and cheaper for them to continue to use fuel that they use today.

Jim Campbell: The important point that you've mentioned is, it is a high pressured pipe and the pressure does have to be brought down. The gas that comes from Alaska is very rich, what we call in our business, 'liquids'. It would also have propane in it as well, and some of those liquids would have to be removed before it would be safe to burn in your homes.

Lindsay: Who would you see bearing the cost of converting to gas beyond the installation of the block valves?

Rick Allen: Communities could get together and forming a co-op, and the coop would build those facilities and charge out to each person that uses the gas. The various levels of government may think that it is a good idea to provide gas to the communities, and so the governments might participate in something like that.

Ruth Massie: You mentioned that there was a competing challenge between the North American Pipeline ACT and NEB for the regulatory process. Who is going to be determining the commission of the project, regulatory wise?

Rick Allen: I think that what we have asked the government to make all options available and then the proponents of the project, who are the ones that are bearing the risk of the project and the cost of the project, would be the ones that would be able to determine which options will provide the least cost and best alternative.

Ian Robinson: How do you anticipate the producers organizing themselves? I believe in the Mackenzie Valley there is a consortium of companies including an aboriginal group, is that the future? Are we looking at some type of consortium between the major producers?

Rick Allen: The short answer would be yes. The way that a producer views economics and the things that influence their decisions as owners of the resource, we have some common ground. We would bear common risks and would want to be able to manage those risks. It would make sense for us to work together on that.

Lindsay: Ron, in your presentation you referred to the project as a base and opening project. Can you explain to people that term? Are there any characteristics or challenges with the base and opening as distinct to other projects?

Rick Allen: What base an opening really means is the first venture of it's kind to bring about that business. In this particular case in Alaska, it would be the first time that a gas pipeline was built to take that gas to the market place. The base and opening is who actually takes the risk on building the pipeline and paying for it.

Ron Moore: The first infrastructure of the project will encourage more exploration on the North Slope of Alaska and in order to keep this pipeline full, exploration will have to happen.

Mary Jane Jim: Are there any plans in place for skill labor shortages in Canada? When do we get an idea of what that is exactly?

Rick Allen: We have a pretty good idea, and we will have a presentation on that tomorrow. We know what the requirements are; but we don't know what the capabilities are in the communities. We need to talk to the communities to find out what the gaps are.

:

Steve Smith: What are the expected impacts and resources that are going to be required to build the pipeline? Do you have an idea of the resources that you are going to require, I'm talking about available land to set up various camps.

Rick Allen: In terms of the resources required in staging, I'm not aware that we have looked at it in that level of detail when we did our work a few years ago. That is a huge piece of work that needs to be done. It's very much an infrastructure project. What programs are already in place? What programs could be developed to increase the level of skills? Today, we could be targeting grade 8 and 9 students; they could be working on this project if they had the skills. The focus is how can I encourage my 14 year old to stay in school, and go on beyond regular school? How can I encourage them to pick a trade? It's hard to make a living and you must have the skill to do that. One of the beauties of building a pipeline, is the other work that is going to happen as a result of the project. We have worked closely with the Aurora College in Inuvik to develop programs.

Jim Campbell: We haven't really formed a project team yet to actually start working out these types of details at this time. We are basically working on the opportunities, but when we do start that type of detail we would certainly share it.

Lindsay: On one of your slides you talked about stakeholder involvement, community input, and tapping into traditional knowledge as it relates and contributes to project design, can you comment on which areas of project design?

Jim Campbell: In consulting with the communities and sharing traditional knowledge with us to identify areas that may be sensitive, we may be able to change the location to avoid disturbance.

Ruth Massie: Because industry will want input from the communities, I think it's just as important for the proponents to know some of the details in our Final Agreements and Self-Government Agreements. Do you have anyone on staff that's reviewing our agreements?

Rick Allen: We do not have anyone dedicated to that. We have reviewed and continue to review the Final Agreements, so that we are knowledgeable. It's all pretty new, perhaps we all can sit down and you can tell us what you think it means, and we can tell you what we think it means. We will be prepared and knowledgeable when we are there.

Jim Campbell: Yes we do, a lawyer and her name is Judy Daniels - she is reviewing the Final Agreements, all legislation, and various court cases.

Rick Allen: I did not mention the various stages of the timeline for a pipeline. Essentially, in my view - the gas will come on-stream in 2018 and is based upon:

a) phase two taking 2 ½ years;
b) phase three taking 2 ½ years; and
c) phase four taking 5 years.

Lindsay: Today we have heard a lot about the challenges in the environment that you are faced with today in establishing long-term economic certainty of where we are today and where we are going to be at the end of the process. Do you have general observations with regard to economics and the factors affecting the economics today as they compared to 30 years ago?

Jim Campbell: I wasn't around for that project; so I don't know enough to talk to that. Maybe Trans Canada can answer that question tomorrow.

Rick Allen: On the market side, it is completely different. The market place, 30 years ago was regulated and pricing was determined for you, whereas today it is an open market.

**Yukon's Pipeline Strategy and Key Interests** - Brian Love (EMR)

I'm the Director of the Oil & Gas Business Development and Pipeline Branch for Energy, Mines and Resources. There is a need for First Nation engagement and we can use the time now to make sure we build the capacity.

Clearly our pipeline objective is a two-prong strategy - not just on the Alaska project, but also on the Mackenzie project. I will talk a little on the Mackenzie so you will know how it will fit in our overall plan. We want to make sure, as Yukoners that we benefit from these projects. We need to make sure that it is done in a safe and environmentally friendly way. We hear - why would we allow U.S. gas to be piped through Canada - and - what's in it for us? We continue to work with all proponents on the project. We've talked about the Northern Pipeline Act; certainly the Yukon Government sees that as a significant asset.

The Yukon Government is very interested in the Mackenzie project as well; we're participating with the NEB & Joint Review Panel (JRP). I won't get into the timelines because clearly there are some issues there. In terms of the NEB side, why the YTG is interested is we want to make sure that the North Yukon Gas would have access into that base and opening to that pipeline. On the JRP, we're interested in education and skill shortage. Based on a geopolitical survey of Canada, the Yukon has over 17 tcf of gas and over 800 million barrels of oil potential.

We have developed seven key interests which I will talk to as a go-forward plan. How much time, effort and money do we put into this as Yukoners and what's the down-side, if we don't? We clearly want to benefit from these projects. Here are the seven interests and I will go through them quickly.

1. fiscal advantage, through the Formula Finance Agreement we have with the federal government, the economic activity resulting from these types of projects, must be of benefit to Yukoners and we want to make sure that's a key corner stone.
2. social investments, these projects have social impacts on communities, but they also provide the opportunities to enhance social programs.
3. environmental issues, clearly we want to make sure the projects are constructed in an environmentally friendly manner. A key one for the Yukon Government is community and First Nation interests, and we've been funding the APC from the beginning, essentially single- handedly. We are pleased to see other parties coming to the table here as we see the advantage of having the APC to generally make sure the First Nations have the capacity now and knowledge & information that as the project proceeds, so as to avoid a similar situation as is occurring in the Mackenzie.
4. clear and efficient regulatory process. If you ask a lot of people in Alaska, and you talk to the producers, often what comes up is how are you are dealing with First Nations in Canada. They see the issues in the Mackenzie; they are asking how is that being dealt with? These are very legitimate questions, so we see it as important to have a clear and efficient, but also a rigorous environmental & socio-economic assessment of the project.
5. access to energy - that's clearly one of the important corner stones of our strategy. Whether it is economical today or not, it's important to have a longer term vision in terms of making sure you negotiate access to that pipe. We will have to work out the details of whether communities like Whitehorse, maybe, only have the economics today, but looking at other opportunities like Wild Green in the Kluane country for energy to undertake mining activity. We have to think broader than just thinking furnaces and thermostats. We have to look to the longer term.
6. connecting Yukon gas - if you want to develop this, I often refer to this as pipeline economics. Without pipe as the way to get it to market, we are not going to see the development of our base and maybe not even for a local use.

There has been some confusion here that no one has talked about - what is the role of the APC? This is something that we heard and I've been down to Ottawa, and some of the Chiefs and others have continually created some confusion. The First Nations are going to be involved as regulators, but workshops like this general awareness, those types of things are very, very important to make sure we have a common understanding, so when we are moving through the phases we can actually understand and ask the right questions to deal with the issues. It's very important to use this time now to address it, and the APC, in our view, is a good mechanism. We've been working in terms of getting ready in Canada. We have signed this action plan which lays out eight key interests, which is basically our seven and one other that Alberta has introduced. In developments, such as this, you have to make sure that you are dealing with all the pieces of the jig saw puzzle. One of the challenges that I believe that is going to happen to the Alaska process right now is when companies have to go and put a proposal on the table and commit to certain things and don't know how they're going to get through Canada, and believe

the overland route will win the day in terms of economics. If you don't deal with the Canadian piece you don't have a project - it is key to work with; B.C., Alberta, and Alaska.

There are two key areas,
a) one is First Nation engagement; and
b) the second is the EA regulatory process.

We continue to meet with other jurisdiction in terms of; what they are doing? What we are doing? We are in touch with Alaska on a regular basis. We clearly see that their process over there, that's their process, but if we don't deal with our piece here, there will not be a project. The producers have not mentioned that there has been some frustration with that process in terms of does it get us any closer to actually building a pipeline. I guess we are just going to have to see how that plays out in the coming months.

Industry has continued to express to us how important First Nation engagement is and what are you doing in getting the regulatory process ready. That's what our job is. We see a number of challenges. I talked about First Nation involvement clearly through settlement land claims, land ownership, First Nations are regulators, the environmental assessment process, and at the moment traditional knowledge.

Another challenge is these projects are not getting any cheaper and the timelines keep extending. We hear $20 billion, now we hear $30 billion and who knows - they are clearly risky projects. We talk about take-away capacity in Alberta - there may not be a lack of take-away capacity depending how long this plays out. There are issues of building new pipe and filling existing pipe, so that will affect timing.

The regulatory efficiencies - I think that a lot of us have beaten that to death today, but the Mackenzie is behind and we should be learning from that, why is it behind? What are the issues that we could apply and learn from? Everyone has a role; First Nation governments, ourselves, and other areas in Canada have a role to get ready. Our job is to provide the regulatory certainty in our own backyard, and we've got to be prepared. In our view, other jurisdictions should be stepping up to the plate and they are to some extent. The coordination between our levels of governments is key for a project.

We've been advancing our pipeline work in the Yukon whether it be our action plan, again here it is to build capacity - particularly in the First Nation area. We want to get ready, but not too ready because we don't want to get ahead of the project. We've heard about shortages of skilled labor, we continue to do our part here; the issue here is the transferable skills. People have to be prepared to leave the Yukon in some cases, depending on the type of work. It's not a lost opportunity even if the project does not proceed; we have a lot of training offered at the Yukon College on the exploration side.

Those challenges that I talked about, I think that it is time now too get ready so that we can make sure that we benefit from these large projects.

Jackie Bazett: In terms of in First Nations in the Yukon Territory, are there other organizations in British Columbia & Alberta that the APC is coordinating with. There is ongoing land claims throughout Canada and as those land claims evolve, would those First Nations become engaged as well?

Brian Love: Our focus has been working with Yukon First Nations and developing a model that we've been sharing with B.C. and Alberta. We are trying to deal with our own area and champion that model with the others to understand the importance of getting ahead.

Desiree Jones: When pipeline preparedness work started in 2001, CYFN was undertaking the work and efforts were made to work with all First Nations along the corridor. This time around, with the formation of the APC, there was recognition of the need to work with other First Nations, but first it was necessary for Yukon First Nations to get on-side. Yukon First Nations have settlement agreements and other jurisdictions have other arrangements that depend on their treaty rights. As the project proceeds, it is anticipated that all groups along the corridor would come together more regularly to talk about common interests and issues.

Jim Campbell: As a point of clarification, on one of the slides where we talked about costs being $1m, that amount included the costs of work in Alaska.

Mary Jane Jim: A quick question on training and preparedness, everybody is looking at training and education and recently I read a report prepared by Yukon Government about skills and labor shortages. As we move ahead for the next 10 years, there's not only going to be a skilled labor shortage, but a professional labor shortage as well. Has that been taken into consideration? What we heard from BP earlier is that we should be focusing on the grade 8's and getting them ready for this pipeline. It's one thing to prepare tradespeople, it's another whole ball game to prepare professional and technical people, so when Brian Love decides to retire, what should we be prepared for?

Brian Love: To be honest, what we've been looking at is on the trade side, rather than the professional side of the equation. We've had discussion with Yukon College, to move into the operation phase, the number of the longer term jobs that exist in pipeline are fairly minimal. Most of the work is on the trades side, the key here is how do we get ready, but not to ready, and how do we focus on something that's longer term? We've focused on the trades side, because of the sheer volume and transferability as a point of specialization in the pipeline business.

Mary Jane Jim: I have a comment to add to that. There is a lot of focus on the trades, well we're not about that anymore. If you are going to keep those people in the Yukon they've got to have far more skills than that. These aren't the days of when you had people on the end of a shovel, our expectations here is we want trained professional people. These are well-paid jobs. We are trying to provide meaningful long-term opportunities for people, rather than just focusing on your own traditional territory - looking broader - across the Yukon.

Jim Campbell: Engineering is a very transferable skill, and if a Yukoner wants to get this education, you would have to go and leave the Yukon to where the Universities are, but once you've done that and received your education, in that field you are able to work in a number of

jurisdictions. You can then bring those skills back. With the infrastructure today available to us through the internet and computers, it gives people the opportunity to bring the skills back here and get into doing some business here. So, I certainly hear where you are coming from Mary Jane. I can understand where Brian is coming from as well and why the Yukon Government is focusing on trades.

Bob Dickson: A quick question on the cost of putting gas into the line opposed to taking the gas out?

Rick Allen: Having an economy of scale, with something like a pipeline - let's say you have a 100 units of gas flowing through the pipe and you have to design the pipe for 100 units. It will cost you a certain amount of money. If you then wanted to change the design so that you could put 200 units through it, the cost of changing that may not double or triple - most of the time it will go up, but not so much. With respect to putting the gas onto the system - what would be involved is you have to get it out of the ground; and clean it up so that you can put it into a line that is available for consumers to use in different market places. That really depends on whereabouts' you are located, because there may be some distance between where you are located and the where the pipeline is. It depends on what that gas looks like and what it contains as that will dictate what type of clean up work you will have to do before it can be put on the line. Once it gets into the line, you have to put in a valve, some metering equipment, and measurement equipment. Because you are going to be putting a large volume of gas into the pipeline, the costs to put the gas in can be offset because of the larger volume - in comparison with taking a small volume of gas off for a community which would result in less volume to spread the costs over increasing the cost for providing gas to the communities.

Bob Dickson: My question was the cost, and you are talking about a whole different thing. If Alaska can meet the 12 initiatives, and the gas had to come off in Alaska, and if the Yukon's got gas, why can't the Yukon Government go to them and say we want gas in the Yukon?

Lindsey: Correct me if I am wrong in terms of Alaska, I believe they are going to have five take-off points and they haven't said that they are going to pay for the distribution – that's one of the sixteen requirements - to just make the gas available.

Rick Allen: As I understand the proposal, that's correct?

Lindsay: What were saying in the Yukon is - I don't know where the locations would be for these valves, but to make sure that we have access to that gas. The secondary question is, is having access to the gas economical? Maybe that's a benefit for the Yukon. Maybe we say, we don't care whether it's economical or not, that's one of our benefits. We can ask for that, whether or not we get it, is another matter. Right now, we are doing the same as Alaska and we don't know who's going to pay for it. We can't let a pipeline go through our back yard and not negotiate terms for access. The next step is whether or not it is economical, we still want it.

Bob Dickson: No, but I think that you are doing that, because you're putting gas in and not taking gas out.

Brian Love: One of our interests is both to put it in and take it out, and that's one of our seven interests. One of our key interests is, we want access to energy. Now we have to negotiate those terms with the proponents, and we haven't gotten there yet. We are still at the 30,000 foot level but we want to access energy.

Rick Allen: It may well be, Bob, along the lines of the interest you are expressing that with respect to the work of the APC – to undertake some preliminary analysis work done on what are the key factors that one would look at. The point that you raised is what a lot of the communities have an interest in and the feasibility needs to be better understood.

Mary Jane Jim: This is regarding Yukon Government's investment with respect to the APC funding – is the APC entirely Yukon Government funded or is it funded from Industry Canada, or DIAND and funneled through the Yukon Government?

Des: Since 2003, the primary funder has been the Yukon Government; however there have been a lot of people supporting the work and to date, there has been some funding received from INAC, TransCanada, BP, Enbridge, and Conoco.

Walter: One of the things that we could do is talk about funding for the APC. We've got all of the people in the room and let's see if there's a commitment to carry this further on down that road. I think that it's a good time to talk before we break tomorrow. Let's put it on the table.

Lindsay: I think that's a really helpful suggestion and tomorrow there is a number of work planning type issues. We've talked about the challenges of being ready, but not to ready. How do you advance your work, while at the same time not over-committing to a level of work with the expenses associated with it. Do you have any views with the respect to the minimum threshold of readiness at the end of the day? What are your preliminary thoughts to the work in the next year or so?

Brian Love: We've already committed another $200 k for the APC - we are the only party that I am aware of that has made a commitment. We'd like to see the workplan that's going to be driven and what's the pot of money? What are the resources that we have? In our budget, we've got $1 m, for work related to the Mackenzie and Alaska pipeline projects. Every time you go back to the trough to ask for additional funds, some Cabinet Ministers say you are getting a little bit too ready in my mind. What are the risks if you are not ready and the lost opportunities if you are not? Let's not just look at it with blinders on here, this is my personal opinion. There is too much to lose, especially in First Nation capacity, to not get ready. I don't have the magic number; again it's managing expectations.
Walter: The way that I see it - there's a lot of gas in the North Slope and it has to go somewhere. I'm sure they are not going to sit on it forever; at some point, they are going to make a decision to move it. We've heard from the different presenters that it's going to cost more every 10 years to move it, so doesn't it make sense to move it now while it's still cheaper to do it?

Brian Love: The producers are the ones that are paying the cost here, and they should be addressing this question. I've always been optimistic about the project for many years, and for the reasons that you are mentioning - we've got this large reserve of stranded gas - the largest in

North America - and it has to get to market at some point. The economics is going to drive it, not passion. I certainly think that the economics are there to drive the project, based on projected gas prices. I think the route through Canada is the best option still, but I think that there are other options on the table. As time goes by, the cost is going to increase and other options could become much more economical and there might not be a pipeline through the Yukon.

Lindsey: I would like to suggest that for tomorrow, we all think about what could and should be done over the next year in the four topic areas being discussed tomorrow.

**End of day one**

## DAY 2 - FRIDAY, APRIL 13, 2007

Lindsay: Today we are really focusing down on four areas that the APC identified back in 2003 - regulatory issues - environmental impacts – socio-economics – employment, training and business opportunities. So we are going to have four presentations today and follow-up with discussion on each of these. These topics are viewed as very critical and essential to work through in preparing to work through this project.

Brian, we talked about your project yesterday the work that needs to be done. Part of the discussion today isn't just about, what are the issues are in each of these areas but rather to have a discussion on what needs to be done to be ready to engage in each of these particular areas.

I would like to remind everyone again, why the APC was established - it was established by the First Nations along the highway corridor to assist them, collectively, in preparing for this project. The APC is a facilitating body, as I mentioned yesterday. It wasn't there to replace any direct negotiations between First Nation governments, individual governments, producers and transporters. There was recognition that there was a body of work that the APC could do collectively for the First Nations and those products would be made available to the First Nations to use on their collective behalf to assist them in their own individual discussions and negotiations with other governments. That was the thinking behind the APC and the work needs to be done and what needs to come out of this workshop, the APC really needs some direction with respect to the next year on how it organizes it's activities in each of these four areas. The APC is a tool for the Yukon First Nations along the corridor, but as well to industry and other governments, and so the views of the parties that are present at this session are really quite critical and could be quite helpful and in the very broad strokes in defining activities or actions the APC could carry out in the next year with respect to these four areas.

As we go through each of these four areas, I would like to reserve a little bit of time to talk about what are the fundamentals that the APC could do in the next year in each of these areas. We don't have a lot of time here to go down and drill into the details; we are talking about very, very broad directions.

The final thing I would like for you to think about today, with respect to these four areas, the APC in 2005 identified some tools to assist in moving the discussion and moving the information and the awareness of the project along in each of these four areas. One of the tools was to convene four workshops - workshops that will drill down into more detail, to specifically set out what needs to be addressed.

Today's discussion is meant to be an introduction, to simply establish the big picture and try to give people a sense of context before going into any of these particular topics. Some of you may be aware that about a year ago that there was a suggestion or proposal from the federal government to move directly into a workshop on regulatory matters. A number of First Nations weren't ready for that discussion and in part to that response; it has given rise to this particular workshop - to frame out the big picture. These workshops are one tool and I'd ask you to keep

the following in mind as we work through these topics…what are those matters that need to be explored…what would those areas look like? I will be asking you those questions as we go through each of the topics.

Secondly, the APC performs some community liaison function, hiring on someone to perform this role between if you will this party and working with the communities and start a two way

process of information exchange in communications and to lay out some basic work and information that will benefit all the First Nations.

Thirdly, it was thought to be helpful to hold information sessions in communities on topics of interest to the First Nations. areas, the idea was as I understand it, the information sessions could be in fact organized and the information for those sessions would be essentially identified and the focus would come form the work that was done in these workshops and the community liaison. The notion is in part the notion is in part that the information could be quite focused and ideally responding to the interest and issues that the people have been raising.

Finally, in the past the templates have been used and the, idea there was based on all this other work, that in each of these four areas there would be essentially an information package, so the First Nation would have a temple and something that the First Nations could work form that could assist them with their own discussions with other governments and industries This is something that would be generated by the APC for the benefits of all individual First Nation. Clearly the idea isn't to force anybody or to straight jacket anybody with respect to this. Any First Nation could take this and modify it and do anything with it. It would perhaps give you a place to start appose to ground zero, and this is what all these tools are attempts to do in each of these four areas. It will provide some mechanism for the First Nations to assist them in their discussions with other governments and industry. So those are some of the tools, and I would like for you to keep them in mind as we go through each of these topic areas. As we go through each of these areas, if you think that there are special areas that need special attention - today is the time to identify that.

**Environmental Assessment / Regulatory** – Jon Pierce (CEAA)

Jon Pierce: Just to introduce myself - I live in Ottawa and don't hold it against me too much. I used to live in Whitehorse a dozen years ago, so still feel that this is still my home and am quite proud of this place. The organization that I work for, Canadian Environmental Assessment Agency has a one of its main roles - to set out environmental policy for the Federal Government. I am responsible for reviews for large projects. We're involved with the Mackenzie Valley Joint Review Panel and we've been involved with others in setting that up. Most of the Reviews that we do, are with other parties. It is very rare that there is a Review Panel that it is only the agency involved.

So what I want to do today is give you a notion of what a Review Process would look like. I am going to dance on eggshells a little bit, because it depends on the Final Review Process and what the project is - but we will get into that. I will give you as much information as I can, the

infrequencies, and give as much details as you would like. The following is the outline of the presentation:

1. I will talk about what an Environmental Review would look like for a large project in Canada.
2. Discuss some of the challenges that we are facing for the Alaska project and what might happen.
3. Present some suggestions as to what work we might doing here in the near future in getting ready for a Review Process. I think that maybe at the end we could focus a little bit on what would be helpful to move that forward.

The main steps include:

1. the ***submission of a program description*** by the proponent. The AHPP is not at this stage, as yet.
2. Based upon the program description, a ***determination of the type of environmental assessment*** and the various levels of environmental assessment that are applicable based upon the federal system.
3. for a large project, we would have to ***establish a coordinated review process*** with the other parties involved - it could be a province, a regulatory board or National Energy Board - it all depends.
4. holding of ***Public Hearings***;
5. preparation of ***Report by Panel*** for submission;
6. Government to review and make ***decision on Panel Report***;
7. ***regulatory permits are issued***.

1. The main purpose of the project description, Preliminary Information Package (PIP), is for the proponent to allow people, agencies, departments, and governments to figure out what their roles and responsibilities are with regards to the project. The information in the project description would address some of the following questions - if this is in the Yukon, is this on Settlement Land? Where on settlement land? How is this project going to cross streams? Are we going to be in a position where we are going to have to issue an authorization? That is the level of knowledge we need. The PIP is not a detailed engineering description, it is not an impact analysis - it's enough information so that people can organize themselves to respond to the project proposal. This usually happens at a fairly early stage, and usually happens within the first six months to one year - the project definition stage. This allows us enough time to get organized.

2. There are three levels of environmental assessments in the federal process system - screenings are low-level; comprehensive study is a thorough review, but not by a Panel; Panel Review and it is likely that the AHPP would fall into this level of environmental assessment.

3. The next stage is the establishment of a coordinated Review Process. The reason for this coordinated Review Process is that we're operating from the principle of - one project, one assessment. We would like to have one Review Process for a project like this, and not just one review process in the Yukon but rather one that includes the other two provinces through which this project would travel – the Review Process would cover the entire section within Canada.

4. Public Hearings are held, and the proponent is issued a set of instructions as to the type of additional information required and proponent prepares its Environmental Impact Statement (EIS). Hearings are held to test the information that is provided in the EIS. This is the current stage at which Mackenzie is involved.

5. Following the Public Hearing, the evidence that's filed by the public is reviewed by the Panel and from which the Panel prepares an Environmental Report that is filed with the government. The Report includes a summary of the evidence that the Panel had heard

recommendations that the Panel has regarding mitigative measures for the project, and may include a recommendation on "go or no-go", dependent upon federal requirement.

6. Government undertakes to review the Report and make decisions on the recommendations – which are acceptable to government, how government will accept them, and what government will do with them.

7. Should it be agreed to proceed with issuing a Certificate, both the Certificate and the Report would have to go to Cabinet for final approval.

8. At this point, the proponent has a green light; however, there is still other permitting that has to be done but essentially the proponent has a larger green light to go ahead and this is usually when the proponent makes the decision to proceed with the project.

It doesn't quite end there as there are various agencies that will monitor the construction, operation, and decommissioning of the project

Specifically for the Alaska project, the federal government has been asked at different times, by different parties – "What is the regulatory process?" The fact is, we just don't have enough project definition to respond to that question – who is going to build it? Where it is going to go? What it looks like? After we can answer these questions, we can design a regulatory process. Ottawa could decide, but at present Canada hasn't taken the position of making that decision. I think it's safe to say that the government is not going to make that decision in the near future.
.
The project will be assessed and regulated under some mix of Canadian statutes, including:

- the federal environmental regulatory acts either under the NEB Act or under the NPA - I don't think it can be both, but we haven't explored that yet;
- CEAA may apply;
- YESAA will apply, it is the one Act that will apply under NEB or NPA;
- any further federal, territorial, and/or First Nation regulatory requirements and these include – land use permits, water licenses, stream crossing authorizations.

I must admit that I don't know very much about resource and land management plan that the First Nations are applying to their lands, but one must assume that some of these might also be a requirement. It all depends on where the project is in relation to the lands. \

The Review for the project will more likely be a Public Review by an independent Panel. It probably will be a joint panel of some form. I'm not sure which of the bodies from the previous Acts mentioned will be represented. The purpose of the Panel is not to make decisions; it's to provide advice to the government and regulators, which includes the territorial governments, provincial governments, and First Nations governments.

I mentioned, before, that the principle of having one assessment is to join the regulatory effort of the main regulators to the environmental assessment - so that it's combined. From the time the Application is filed, we have about 18 to 20 months to finish the Review which involves going

through the hearings, preparation of reports, through to certification. Now why is it 18 to 20 months?

Someone could say, how come the Mackenzie JRP is taking so long - they couldn't make it within this timeframe - I think that we could talk about it a little bit. The reason why for the Alaska pipeline to be completed within 18 to 20 months is because otherwise it will be out of whack with the U.S. process. That, frankly, is the main driver on this. If you go right back to the Certificates for the Foothills projects, Canada undertook to expeditiously construct this project, in part because of the Certificate and the Agreements with the U.S., so the project could proceed at the same pace on either side of the border. A U.S. and federal time line has been shown to all delegates. A discussion on the U.S. project is under discussion on field work for 2008 to 2009, and other future projects.

The Hearings will not start until 2009 or almost 2 years. This is a fairly optimistic timeline, some people are agreeing that this is the timeline Canada would be working with. The Mackenzie is due to finish construction now in 2014. Talking about the 18 to 20 month process, FERC starts its clock ticking when it judges the completed Application.

In Mackenzie we spent the first year trying to get to what is called a completed Application. Part of the difficulty is, when you start the Hearing Process before you have a completed Application, you do not have all the information you need and through the Hearing Process Information Requests are made and the proponent is required to provide a response. It's like having to go to court to get information - standing in front of a judge and waiting for a decision - this can be very time consuming. I don't think that is a very efficient method of getting there.

FERC works with the proponent ahead of time to ensure that on the day the Application is filed, everybody is going to be satisfied that there is going to be enough information to proceed. I think that is what we are doing here today and probably something we should continue, so we will know that when we start our process everybody here would feel part of that definition process, we have the information that we need to do the work – both in preparing an Application and for proceeding with the Hearing Process.

The other thing that I wanted to point out about this timeline again is the note that they have put at the bottom "Timeline assumes Canada completes permitting within the same time frame." Alaska is probably preoccupied with getting their stuff together, but when they get their stuff together they are going to turn their attention to us and it will be an issue - it is an issue now and continues to be an issue - and a growing one. So again it ends up to be a shared responsibility between all of us.

To conclude and in order define our regulatory process - we need more information about the project; we need more commercial decisions - who the proponent is, where is the project going to go? I think the other thing that's becomes obvious to any of us who have looked at the Mackenzie process and what's coming ahead of us, and frankly why I'm delighted that APC organized this Workshop and perhaps will organize more, is that we are all going to have to work together on this. I don't think that we can afford to not put a good amount of effort into

preparing and designing the regulatory process - rather than waiting until we receive an Application. The designing of a regulatory process requires quite a bit of up-front work and I encourage us to move on with this work and to start to set out a pace that is workable.

Lindsey: I guess this discussion is really just scratching the surface of a very complicated area and maybe that's the reason for the reluctance to go further today - recognizing that you turn

over one rock and awful lot crawls out from underneath it. We are all approaching this with some sort of sensitivity. What would be helpful to know is - what are your views with respect to follow-up workshops, specifically on this area. As I mentioned to you there were several interests expressed in 2005 to do such a workshop and I think that the APC certainly had an interest in a workshop of this type. So, I guess the questions before s are

- is it important to proceed with a workshop in this area?
- if so, broadly speaking, what would that workshop try to accomplish?
- Jon, you have identified some very significant uncertainties associated with the process - is their enough certainty to proceed with a workshop to have this discussion?

Speaker Unknown: I agree with you, Lindsay, I'm not sure it's worthwhile to spend everybody's time on all the "What if". We've had this discussion within the federal government and colleagues and we could go on for days talking about the "What if" - I'm not sure that's the best use of time. However, I think that there is more useful work that could be done, because if you just step back from the question of whether - it is a Foothills project or an NEB project? It's a big pipeline going through the Yukon and that's what it is. There will probably some sort of Public Review of this pipeline project. So what sort of public information do people need to know about this? Deciding that when the Applications are filed and knowing that everybody is satisfied and this is what the Review Process is going to cover. These are the issues that could be examined. This is the information that we need and we have it and that's all in place. Well, that needs all of us to do work ahead of time and, frankly, I think that work can start tomorrow or today.

Ruth Massie: I think that a workshop on environmental assessment process is going to be very, very important. Our environmental process is going up for review as to it's success this far - I can't say there aren't issues with it. I really think that prior to undertaking this review, it would be really good to have a workshop on this topic - so that people have a common understanding of the federal legislation and our own legislation here in the Yukon.

Rick Allen: I think that it would be useful for us to have a workshop to do as you have outlined Jon and get an idea of what sort of things we will have to look at. I know that the work that we have done internally has identified a number of tasks that require some early planning and so having a sense of scope of what an environmental assessment would be - might be helpful to us. As well, I think it is useful to point out some ways to speed up and/or stream line the process to ake it more efficient for the work that has to happen. So, I would certainly support doing some of those things along those lines.

Brian Love: I guess the comment that I would make - I think what would be useful is to gain an understanding of the First Nations perspective and out of that develop a common understanding of how the Review Process would apply in any scenario.

Jon: I've dealt with Panel Reviews and there are a lot of regulatory decisions that have to be made by a lot of agencies both by the federal and territorial governments. I would like to gain a better understanding of how the First Nations governments are working, and managing their land, and the type of authorizations that they would be giving. Partly why I say this is because a lot of these authorizations apply to any project and this goes back to determining what information is required. So if you know that you are going to need information for the review

process to deal with regulatory authorization or not, having that information up-front - helps to define what needs to be done for the regulatory process. What you don't want to do is get into half of the Public Review and Hearing Process and discover that there isn't enough information on a subject.

Speaker unknown: One of the first things that we will need to do is be out on the land to do studies and technical work for engineering, preliminary design, routing type stuff - so if there is a presumption that there is going to be an Application Process here in Canada parallel to the U.S. process, the U.S. process presumes that they will be out doing fieldwork next year. It will be a bit problematic - it's critical that we have a good understanding of what stage First Nations are at in developing their own regulatory process for their lands and initiating that discussion as soon as possible - because we won't be able to get out on the land, if we don't file an Application.

Jon: Thank you for that, I take your point. It's a very, very important area - the relationship between the regulatory requirements and process as they relate to the environmental assessment process and the initiation of preliminary fieldwork. In some cases, preliminary fieldwork does proceed in advance of regulatory review, to determine whether or not the larger project has merit to proceed. I take the point, however, that the sooner people can start to sort through their relationship, the better.

Speaker Unknown: I think that it is probably important to keep the preliminary fieldwork separate as a distinct piece because it certainly is an urgent piece that needs to be looked at and the authorizations that are required. It also fits into some of the other discussions we had yesterday, knowing what sort of work that has to be done in the early project definition stage. This is good for other First Nations and other people to know, because there is certainly interest in participating in that work.

Ian Robinson: With regard to these proposed workshops, one of the really critical things is capacity at the First Nation level to participate. I think that it is an underlying factor in connection with this in any of the topic areas. It has been brought up before and APC has been faced with this issue, because when we go to Ottawa and try to seek resources - we've been told several times that there isn't a project yet. Therefore, there is a bit of reluctance to fund APC to the level requested. I think that there is a lot of delaying in connection with that and it has caused us to lose time already. Here we are in 2007, the timeline is there, and it makes me

nervous. Those of us who are on the frontlines of this, we are the ones who have to explain why we didn't do something, when we could have and part of that is a capacity issue. We hear it from the community I work with, and I hear this from the people I work with, and people around the Yukon. I just want to comment that, we all need to work together on this capacity thing and I know this move is being made on the community liaison workers and I hope that goes through. That is a good start, but it's only a start – there's quite a bit more to do.

Jon: Thank you for that and I could speak for my federal colleagues here in the room and I think we would probably agree with you. We have certainly made efforts, but it certainly is an issue. I'm not sure how many energy initiatives are on the books with Canada right now in terms of planning stages, much like this project. It's something like $200 billion worth of projects. It's hard and is a timing issue and how much do you do now for a project that is still illusive. You are completely right, however; if you don't do it now, when are you going to do it. I think that if anybody here can draw attention to these needs - it would be welcomed.

Michael Phillips: I want to add to Ian's comments because I have worked on this project for several years and it is one of my biggest fears and one that I have heard from the First Nations - we are going to get a green light and everybody is going to expect us to hit the ground running and just go and that is not going to happen. So it had taken a great deal of time for me and others and the companies to even convince our own companies that we need to put to put some of our own money at risk before we have a project and do the work. That view has to be taken by other parties as well that - yes it's going to take some risk taking on the financial side in putting some resources into pre-planning. But if we wait for Governor Palin to say here's a license for this particular company to go do a project - that timeline is not going to be met in any – time, shape or form. I would agree that if we could respectively encourage each other to move forward and progress on some of this planning that needs to be done it would be worthwhile.

Brian Love: I think yesterday you made the point with the folks in your government that you made the pitch for additional resources what comes back is, we don't have the resources and why would we commit. I think that everyone in the room is on the same page with respect to the concerns and maybe when are trying to finalize the workshop summary this is the point that we get down so that there is a common view, here in the room.

Summary of Session: (***refer to Outcomes Paper***)

1. To work through the environmental assessment part in consideration of the regulatory relationship;
2. To hold a discussion on the fundamentals of environmental assessment and how it applies in the differing scenarios in consideration of the uncertainties of each scenario;

There are some process scenarios that could be explored and these also might be quite independent of the scenario process, fundamentals, or requirements, that should be in place with respect to information, requirements, scope, and issues to be addressed in order to determine what is desired and required in a process. Recognizing that the discussion is required, one could look at a number of processes.

3. With respect to the regulatory discussion, it is complicated - the timing and the relationship between regulatory reviews and permitting as it relates to environmental assessment review is an important one;

4. There is interest in the views of First Nations as regulatory authorities. The question is how First Nations exercise their authorities, in what manner, and within what time frame. In some cases there are First Nations that are looking to establish or pass legislation that would in fact allow them to occupy the field that they are not currently occupying with respect to the regulatory authorities. There is probably a lot to be discussed there. I take the point that this is a very large area and it's important to break it out into workable pieces so as not to overwhelm people; and
5. To be better prepared for the environmental and regulatory reviews and processes and the financial risks involved in delaying this area of work.

I think the main recommendation is to convene multi-day workshops with Yukon First Nations, federal government, industry, and territorial government and to break down the discussion into two components addressing:

- Component One - environmental process scenarios and process fundamentals - including scope of matters that need to be addressed, information requirements, key issues and requirements, coordination and efficiency;

- Component Two - regulatory authorization and permitting and their associated processes.

Obviously, the two (environmental and regulatory) are related but there is also the need to understand the First Nations preparedness and their requirements as regulators and as well, the fieldwork requirements and regulations associated with that.

Brian Love: I would add into the discussion - the roles and responsibilities of each party. I assume you will have federal and territorial parties there - you have the political side of things - but all the agencies and regulators involved should be included.

Jon: I neglected to mention this before, but we should include Traditional Knowledge (TK). I think it would be good for everybody to start to have that discussion - how we are going incorporate TK into the process.

**Environmental Impacts** - Bill Trefanenko and Darren Cleveland (Enbridge)

Bill: I'm a pipeline engineer and I've been involved in the pipeline business in design, construction, operations, and management for the last 30 years. I haven't personally built any pipelines in the north or in permafrost, but Enbridge has and I will be talking about that. I have spent a few years in the north - three years in the Mackenzie Delta in the early 1970's in the exploration side when all of the oil and gas was discovered. So hopefully we'll see that get to market in my career.

Some of the topics I will talk to you about today are the Enbridge northern pipeline operations and we have a couple of operations there. We'll talk about some design and construction issues - some of the challenges and successes in building and operating pipelines in the north. We'll talk about the maintenance and monitoring programs that we use, as well as our risk and integrity management - some of the reporting to ensure that we comply with the requirements of operating pipelines in the north - and also the people that make it possible.

Enbridge has two pipeline operations north of 60 - we have Inuvik natural gas pipeline system and distribution system, and also the Norman Wells pipeline, which goes from Norman Wells to Zama, Alberta where it goes to market. The Inuvik gas system was constructed in 1999 and takes natural gas from a gas field 50 km north of Inuvik to Inuvik where it is distributed through a 25 km distribution system within Inuvik. We have 825 customers to this system and continue to add customers to the system. We own this system with the Inuit Regional Gas Corporation and Delta Gas Services. Inuvik was interested in creating the first natural gas line to be buried in permafrost and discontinuous permafrost, and was the first buried gas distribution system in the north of the Arctic Circle in Canada.

I know yesterday there were a number of questions regarding cost of taking gas off the pipeline to supply gas to residences. I have some numbers here from the Inuvik one and in regards to converting homes from fuel oil to natural gas, it averages out to $3,500 a home, and that depended on the home – its size and the equipment they had in the home. This cost in that situation was not born 100% by the resident - the Northwest Territories Government provided incentives - and in the end, the home owner paid about a one-third of the cost. It was quite economical for them and I have some more numbers there. In Inuvik it cost the home-owner about $19.35 a gigajoule, previous to that the home-owner was paying $26.71 a gigajoule. The home-owners are seeing about a 28% saving, that is about $ 500 – $2,000 dollars per household.

The Norman Wells Pipeline system to Zama was constructed in 1983 to 1985. It is 323 mm diameter pipeline, 869 km in length, and this pipeline was designed using limit-stakes design and what that is – is we look at the conditions the pipeline is actually going to experience in it's lifetime, and we design it on that basis - versus designing it to specific codes that may not apply. We make sure we meet the codes and the situations that it will encounter. In the Norman Wells System we knew, because of the discontinuous and continuous permafrost, that the pipeline would be subjected to movements because of the freeze-loss cycle. We designed the pipeline so that it would be able to move somewhat depending on the stresses. The pipeline crosses 140 water crossing, two major river crossings, 150 significant slopes, and as we have talked about before - it's an ambient temperature pipeline - so, we operate the pipeline so that the oil is chilled and maintained at zero degrees, and we adjust that seasonally to keep the permafrost from thawing.

We ship 30,000 barrels of oil from Norman Wells per day.

We have three pump stations on the system - one is powered by natural gas, that's the one in Norman Wells - the two other ones are powered by diesel fuel, so diesel fuel has to be trucked in. Gas pipelines have benefits over crude oil pipelines, in that natural gas pipeline we use turbines, so the fuel source is in the pipelines and we don't have to truck fuel to the sites.

We operate our pipeline system at our main control center in Edmonton, and typically a pipeline system can be operated from anywhere in the world. The Alaska Pipeline System can be operated from any location in the world with the state of technology we have today. From our control center in Edmonton we operate by blinds, they are 3,000 and 4,000 km from the control center.

Pipelining north of 60 has some neat issues and we have talked about some of them here in the last day. Capital cost is a big issue as the cost and timelines keep changing, because of factors such as labor, materials, and the geography of the north. We talked about the permafrost. Remote access is also an issue. Seasonal weather is another big issue – lack of daylight in the wintertime makes it is very difficult to operate in bringing in materials and people by helicopters.

The Enbridge experience has been that we feel that we are quite successful in what we did. Our construction in the permafrost - we are very proud of the results of that, we haven't had any issues and I will talk about that a little more. As well another area is after the pipeline is constructed - how do you monitor the movement of the pipeline and I will get into that a little further as well.

In regards to permafrost, the big issue in pipeline – you want to keep that permafrost in its most natural condition as you can. You want to ensure that the temperature of the product that is going through the pipeline is very close to the ground temperature. As I mentioned earlier in the Norman Wells Pipeline system, we adjust that temperature on a seasonal basis. We experimented with different temperatures to see what the right temperature is so that we don't

affect the permafrost. Some of the design and construction involved selecting a route to minimize the impact to the environment as well as impact to wildlife and communities along the way. That is something we talked about here and that's still something that has to be settled. I talked about the limits considered in the design concept and that concept will be used on the design of the Alaska gas pipeline.

Stream crossings and slopes are a big concern, especially in a permafrost area. On the slopes, you end up disturbing the natural cover, so we have to prevent the subsidence of the permafrost and I've got some slides on that a little later. Stream crossings as well, the issue with the approaches - a lot of the work today with crossing the streams is done with directional drilling versus open-cut to prevent a lot of those issues. Unfortunately, we did a lot of open-cut because the technology was not that advanced at the time. The environmental design and construction plan in the north - there are a number of areas that needs to be looked at before this pipeline is actually built. There will be studies to death and these are the focus areas of study will be on: geology, soils, and permafrost.

Yesterday somebody mentioned seismic activity in Alaska - that will have to be studied and designed for. Pipelines have been built through areas of seismic activity, unfortunately it is not know how successful they are until an earthquake happens and those don't happen for 50 to 100 years.

Water resources - there is going to be a lot of river and stream crossings, and the pipeline will go through some sensitive habitats and these are high consequence areas in determining the pipeline route, study area, and the design of the pipeline.

There will be a number of studies done on species and migratory routes, and will require monitoring.

Construction issues that were talked about when we did pipeline 101 last year - scheduling is a big issue - given the size of the project and the different geographical areas that it goes through - the logistics of men, equipment and materials - there will be a lot of pipe that's going to have to be moved and that will be done in a number of areas by road, railroad, and sea – pre-clearing will have to be started as early as possible, as soon as the approvals are received and that usually starts a year in advance - we have to ensure there is enough solid ground and it is very critical here on this pipeline because of the size of the pipeline and the heaviness of the equipment that will have to be used. Because the pipeline is in a remote area, camps, staging, locations of pump stations, and operation facilities, will have to be determined before construction. Construction will be done all year-round, and in Alberta construction will be done when we don't need to work on frozen ground. Pre-construction involves the clearing of the right away such as burning of the timber, camp preparation, stockpiling of material, development of access roads, and an infrastructure system. We have, in the past, experienced problems with the permafrost when removing trees and topsoil, the sun melted the permafrost and that was a big concern. So what we did at that stage was use wood chips as insulation which was a very innovative technique. There are also other methods that are being studied.

After the pipeline is constructed, restoration is very important to get the pipeline corridor back to what it was before the construction. Ground temperature is continuously monitored. With the Norman Wells Pipeline, they had to come up with a method because of melting permafrost

which was causing movement of the soil. They came up with a method using a particular tool and I will be talking about that later.

I've talked about slopes earlier and this will be a big concern on the Alaska Highway, it is much more severe than what we've experienced with the Norman Wells Pipeline. The banks and slopes have not subsided, and the slopes are monitored continuously, to see if the slopes are moving and if they are we take immediate action to repair the problem. I will talk about the tool that was developed because of the worry of the movement of the pipeline; it's called a geo-pig. In the pipeline business, we use the term pig for any type of tool that is inserted into the pipeline and runs through the pipeline to either clean, monitor, and measure the stresses and strain of the pipeline. We can determine when the pipeline is exceeding what we want to see. We then are able to remove the stress on the pipeline. In 20 years, we have not yet had a failure using the geo-pig tool.

Risk management is a big concern on any pipeline - we develop integrity management plans and this includes the tool I talked about. Other monitoring of the pipeline system includes looking for corrosion and construction defects.

Enbridge, on other pipelines, have a very strong community relations program – working with the communities so the impact is kept to a minimum.

Third party crossings and mechanical damage are always an issue for pipelines. It's not very often that we see failures by things such as corrosion. Some of the areas where we don't have much control are in the mechanical damage caused by others. We have put in place procedures in regards to third parties crossing pipelines and in that way are able to minimize damage. In the areas where procedures are not followed there are always issues of mechanical damage by third parties. On the Alaska Highway pipeline, procedures such as first-call systems will have to be put in place. Maintenance and monitoring will be extremely important on this pipeline because of the permafrost - electronic tools will be used to monitor. The pipeline is monitored every two weeks by walking, driving, and helicopters looking for subsided areas and third party damage. Training is very important and we continue to learn from past experience. We look at issues that we had and ways to prevent them in the future.

Pipelines in Canada with our regulatory system, typically our regulator sets out things that the pipeline operator must do and the operator does it. In a lot of cases, we are not required to file a report except when requested. In this particular pipeline, we are required to file annual reports covering areas of maintenance, conditions, monitoring, performance, and integrity management programs.

Field personnel are very important in the pipeline business; the employee's that we use in our system are permanent residents of the communities, so there are job opportunities for community members.

Speaker Unknown: Regarding the pump, what is with width of the right-of-way for a 15-inch pipe.

Bill: Typically about 100 - 125 feet wide, and during construction you may need a little more than that depending on the area required for stockpiling equipment and materials.

Lindsay: With respect to construction scheduling in the Yukon, given you are going from northwest to southeast, what do you folks know of ground conditions in the Yukon? How do the ground conditions affect your seasonal construction going through the Yukon?

Bill: The majority of the construction would be done under frozen conditions in the winter.

Jackie Bazett: About employment opportunities for the local people - What about training local people? Are you unionized and is there a willingness to train in that area?

Bill: As I mentioned earlier - we use the local resources pretty well exclusively on pipeline systems. In regards to training individuals, I think it is important to start training programs now, because when the pipeline begins or doesn't happen, there are always other opportunities in other areas like in the southern part of Canada. There is a tremendous amount of work and there is a lack of skilled labor. In regards to our pipeline system – no, our employees are not unionized; we do have in some areas where we have a joint bargaining group but not a unionized group.

Bill: With the Alaska Pipeline we have had complications with the aboriginal groups, and we haven't done anything on the technical studies in regards to permafrost. Based on our past experience and past learning it will be very helpful to us when we get into the discussion process.

Jon Pierce: On the last go-around on the Alaska pipeline, permafrost was one of the major technical issues. Since then, we have gained a better understanding about climate change, the change to permafrost that is probably going to happen. What happens through climate change when the permafrost around the pipeline starts to thaw? How exactly do you manage that?

Bill: If it ever comes to that, we will have big issue with the pipeline because the permafrost will thaw, it's full of ice and basically will shrink and settle, those changes will likely not happen very quickly. In regards to the pipeline, those changes affect the life of the pipeline and it will probably be finished.

Dan Lindsey: There are test facilities associated with the Alaska Highway Pipeline Project that have been operating over the past years. There was the frost- heave test site established well over a decade in the Calgary area. The reason Calgary was chosen was because they had the most severe climate change. Moving to the north, we had a full-scale 56-inch pipe and various modes of test facilities operated for 15 years in Burwash Landing. There were test facilities in Fairbanks, Rainbow Lake, and the Sahtu Region over the years with regard to insulation.

Ruth Massie: How deep is the pipeline buried in the Norman Wells line?

Bill: The code requires that the pipe be buried 90 cm, maybe a little bit more.

Ruth Massie: Is the gas pipeline in the Inuvik area buried?

Bill: Yes it is.

Ruth Massie: What depth?

Bill: Similar depth as well.

Gail Anderson: You talk about 56, 42, 48 inch pipe, is that in circumference?

Bill: That's in diameter, as tall as I am.

Gail Anderson: Because the pictures don't show it being that big.

Bill: No, the Norman Well pipeline is much smaller. Being crude oil and a small amount, the pipeline is only 12 inches in diameter. To bring the gas down from Alaska, a 48 - 52 inch pipe will be required.

Bill: The technology in pipeline design and construction is continuously being developed. The Alaska pipeline we talk about is probably ten years away, and even though we are using state of

the art technologies now, new technologies will be developed. A number of companies are looking at different things and some of the areas be considered are the strength of the pipe that will be used - when this pipeline is built, high strength pipe will be used. Another area being looked at is not using a totally steel pipeline, but using a pipeline that is reinforced with a fiberglass or carbon. There are many areas in the technology side that will be used. New technology will be specifically developed for this pipeline - just as they did for Norman Wells.

Jon Pierce: Can you scope out what a study program would look like for – geo-technical, wildlife, and TK studies that would be undertaken for the purposes of filing an Application, based on the work from the 1970's and the state of information that you have to work with now? What needs to be improved on?

Bill: I'm not familiar with the work that was done in the 1970's. There will be a number of groups studying, monitoring all of the different areas. There will be a lot of need for help and information from community resources. It will take time and involve hundreds of people.

Lindsay: This is a preliminary discussion on environmental matters - is there any broad guidance you want to express at this point in time?

Brian Love: I would like to see TK studies done in early planning, and being well prepared to conduct TK studies before or with the environmental studies that are done in the field. Also training for First Nation people to take part in the environmental studies that will be done in the field and monitoring. Thirdly, to the aspect of reclamation and restoration blending all of that together that I mentioned on TK to make sure that we have a good model for reclaiming the right of way. There is some planning that needs to take place there and there needs to be some thought of how it needs to be done.

Walter Carlick: In regards to your presentation, you mentioned that employees are permanent residents of Norman Wells. What percentage of these are First Nation peoples? And can you tell us what type of training you've done to get First Nation peoples involved, because I heard you say earlier that training is really important.

Bill: On the Norman Wells side, I don't have the exact number of the aboriginals that are employed - it's very high, probably about 80 to 90 percent. In regards to training, Trans Canada is going to talk about that, but we provide training for our people in Norman Wells and they undergo the same type of training programs as we do for all of our operations staff whether they are in Norman Wells, Alberta or across Canada. We provide the programs to them by bringing them into our operation and work with our operations people in other parts of Canada.

Walter Carlick: Do you have First Nations people in management positions?

Bill: In Norman Wells, yes I believe we do, but I am not certain.

Walter Carlick: One of the things First Nations people are looking for in the Yukon are management positions. Whoever is going to build the pipeline is going to have to start training our people now, and I think that's the message that needs to be here. We all agree that the work

needs to be there, not just the labor jobs, there has to be more. This world is changing. Back in the 1960's and 1970's, we might have gotten away with it - but today the world is different, our people have a say in whether or not this pipeline is going to go through and that's why we're here. We need to hear from you and hear that you are willing to train our people for management positions - if this project goes ahead, that's what's going to have to happen.

Lindsay: Brian identified TK studies - what they might look like, who might do them, and how they might be incorporated. How could that information be utilized? It might be interesting to hear the views from the different First Nations with the respect to - wildlife compensation. What are the people's perspectives?

Walter Carlick: I want to respond to that - how do we put a value on a way of life that people have known for thousands of years - this is very difficult to do. If we try to do that in today's dollars, our people don't have that concept. To me, it's a question of how do we pay First Nations people for loss of a way of life, because that's what the impacts are, sometimes. We no longer are able to hunt where we once used to, and how do we replace that? It is really difficult to put a value on it.

Lindsay: If one looks at compensation as an absolute last resort, in other words a mitigative measure, the very questions that you have raised, are the questions people will be raising at that time.

**Socio-Economic Impacts** – Rick Allen (ConocoPhillips)
***There seems to be an omission in the Transcript and is de to a problem with the taped recording. My apologies – however, the following are some notes from the discussion at the end of the presentation and as well, the Outcomes Paper sets out the recommendations for going forward.***

Ian Robinson: Going back to 2003, the APC identified four topic areas, in particular, socio-economic impact benefit agreements. I recall those discussions and what distinguished it from this topic, was that it was more to do with opportunities in the previous topics - environment and regulatory. There is a great need for us to look at what is the most efficient way, collectively, to reach good agreements that are going to last – that are going to be effective - and last for the duration of the project.

Mary Jane Jim: If you're looking at suggestions for the next short while, we've heard a lot from industries and governments, the people from Tuktoyuktuk, Deh Cho and all of those communities have been impacted, it might be to our benefit to talk directly to those communities in terms of what works and what doesn't work, such as - how to negotiate with industries and

governments - and in saying that, we are not reinventing the wheel. Who are they? Where are they? And how will we start taking with them? This is what I would like to see happen.

Lindsay: Great idea – to bring the people together to speak for themselves, as opposed to speaking through a write up of someone's case study.

Mary Jane Jim: It's time to start talking government-to-government and have discussions with those communities on a technical level – that is the next step.

Jackie Bazett: The impacts on the community and the employees? Are all employees required to take an alcohol and drug test, how does it impact your family, what about tax incentives - you make to much money and lose over 40% of it in taxes.

Lindsay: It will be important to understand the policies and programs of industry as it relates to a number of these areas, so that you have an understanding in this very early stage as opposed to down the road. That's something to think about in a workshop – to start laying out who is responsible for what - what might fall to industry, what might fall to government - those kinds of questions and the over lapping areas.

Rick Allen: Get an understanding of where people are at to get the ball started and rolling.

Lindsay: Just a brief recap - we talked about consultation requirements, key issues and interests from the First Nations perspectives, a study program and what it might look like, information requirements, traditional use studies, industry policies, shared responsibilities of governments and industries, enhancement and mitigation, project benefits, review of case studies, and networking with those who have relevant experience.

**Training, Employment and Business Opportunities** - Dan Begley, Mel Johnson and Steven Jakesta (TransCanada)

Mel: 26 years ago, I was hired by the Foothills project to be a trainee to work on the Alaska Highway project. I must be a very slow learner because I am still learning. I've worked overseas for a number of years in Turkey, Malaysia, and Indonesia where gas pipelines were new to an area. I've developed programs - so I get excited when I think about projects like this. It's exciting to see potential developments - if good will could make a project move ahead, it would definitely move head.

Dan: We will be talking about scheduling and the four stages – development, pre-construction, operations, and detailed labor estimates.

Mel: It's important for First Nations to know what kinds of opportunities that are going to be available during the project and after the project. This will benefit the First Nations and communities in the north. There are a lot of jobs and roles that come and go. This is our view of the schedule.

Once there is a commercial agreement - whatever that means, in the context of where we're at today. That could very well be that there is a license with AGIA to move ahead with the project

and there are shippers for the pipeline. The important aspect here is - there is a significant amount of time at the front-end of the project.

Once there is a project defined that's moving ahead into the development phase it involves environmental studies, and the potential for training and for First Nations people to be involved in those kinds of studies - that happens in the first three to four years.

When we talk about pre-construction, there are opportunities that are directly related with the project and then there are support activities. The activities that will take place will require a certain amount of skill sets. This is the kind of work that you are doing to prepare for construction of the project. A project like this requires access roads and a lot of gravel. There is a certain amount of work that you can do, there are stockpile sites, campsites, and this will happen in the first year. This can give the First Nations an idea of what's going to happen. During the pre construction period, you've got pipe that is starting to arrive and there is a start to do some development. You're starting to haul and stockpile, and clear the right-of-way where the pipeline is going to go. Keep in mind when we talk about jobs and opportunities - a lot has happened at this point through the socio-economic, environmental, and regulatory side, but again I am focusing here on the project.

After that year of pre construction you are into the construction period, whether it's two or three years - that depends on how the final planning takes place and that dictates the kinds of jobs and how many people are required for these kinds of activities. There is also a lot of support work that goes in - from environmental sub-contracts or specialized contracts for river crossings.

Going back to the pre-construction phase, the type of work that is going to be taking place is a major element and the cost estimate of the project, so that reflects our current thinking. During pre-construction there will be between 550 to 700 people working and these are: pipe fitters, trucker drivers, laborers, support staff, camp cooks and so on.

One of the benefits of the Alaska Highway is, there is summer and winter construction and that works out to be half and half, and it is continuous work. Overall there will be about 6,000 people working in all the different areas. There will also be a lot of support services that will come from other places. These numbers are just estimates and these numbers will probably change in the future.

You won't see a lot of engagement from industry and government in terms of setting up training even that has risks. Even though you won't see industry actively engaged until there is a project defined, it's not as though there aren't opportunities. In terms of time on the individual First Nation how much of an investment, not in terms of money, how much time do you want to see people away from the Yukon to do some development. There are skill shortages right now everywhere in Canada.

Dan: We'll talk about construction and operations training. The key feature of construction training is everybody has to get into the tent and cooperate. We must have a discussion on how to do this work and how to make it work better?

Essentially the responsibility of the owner and operator is to forecast the labor project - how many people are you going to need, where, what is the future employment outlook and what it looks like, identify what are the skill capacities, what are the education prerequisites - and this

information has to get out to the communities. Additional information required - what is the normal entry steam, how do you get these jobs, how do you get the training that you need, what is that training, where do you work, and when do you work - all that information already exists and is available to you. The important thing is to use that information correctly.

The next responsibility the owner and operator have is to evaluate the adequacy of labor supply. We have labor supply issues right now in Canada and have escalating labor supply cost issues. We are bringing people by the boatload into the country to work in places like Fort McMurray. There is a labor and skill shortage now. This project is going to offer a lot of opportunities here and now.

The next step is education, and on the job training programs. I see an immediate role here through the APC to promote information. The specific contracts will offer space and time for actual on-the-job training on construction sites and the reason they do that is to develop the workforce. We need those people and that type of thing is very typical.

We now are going to talk about trade unions, because people have a lot of concern with unions. Trade Unions have carved out roles of being the actual trainers; they are the folks that actually get the skill development going with contractors and with us. They do this through close partnerships with departments of education. People are encouraged to get their certificates so you can work anywhere. The federal and territorial governments are responsible for the delivery of academic or other pre-employment educational programs in an institutional setting. There will be a certain standard to enter into the program, because the standards have changed and the expectations are higher. The federal and territorial government's responsibility is to provide financial assistance through Human Resources Development Canada.

Last, but definitely not least, the First Nations need to contribute effectively by first of all, assessing the training needs of their membership, we need to know - who wants to work and what they want to do? We can provide counseling and guidance as to the way they might want to look at things. We really need the cooperation from the First Nations and understand what it is they want to do. We need the help of the First Nations in designing a program that is going to work. It is really important that the First Nation participate in recruitment, selection, and placement of trainees.

Last, but not least, retention. For example, if somebody walks off the job and if we had a problem, we don't want to lose them - we would want to get them back and keep them. These things happen, and we want to make an investment and it is important that we keep those people. We will go to the last stage to keep those people, so we need your help in designing programs that would encourage retention.

We need your overall support, your thumbs up in saying this is good for your community and this is something that you would like to support. We all have to agree with each other, and we all have to work together.

All the survey and grubbing work that will be done, is usually done locally done during the pre-construction stage. Typically this is done one year before the pipeline is built. We have an extremely long length of pipe to deal with here in the Yukon and B.C. There will be temporary roads built from the highway to the right-of-way and to other sites. We also have to look at the

temporary building of these roads and the removal of these roads. Also, the temporary building of bridges made of logs and soil. We are going to need a lot of gravel, the requirement of gravel is quite large, and this is for various grades of gravel. This will be a big local contracting opportunity.

Post-construction, to meet typical standards involves clean-up after construction which will include re-vegetation, shrub planting, and this is usually carried out for a couple of years. Then there is the ongoing maintenance responsibility that is usually contracted out. There is road maintenance off the highway, such as clearing of snow on the non-public facility access roads.

Who knows how that is going to shake up?

Suzanne Belanger: For the future workshops, we talked a lot about transferable skills - I think it is important to talk about transferable businesses, more than just employment - but developing opportunities. I know it's in the mandate of our friends in the Yukon Government and it definitely is in our mandate at DIAND. It's not only about finding jobs for people - it's about aboriginal contracting. In all the years I've been working, there has always been a little bit of reluctance from industries to contract or sub-contract with newer companies - so the timing with us working on those economic issues has to be now - not five years from now in order to build the trust and the capacity - to have more than little catering contracts. I really liked this workshop because it provided a focus for us to move forward, not just in terms of training, but in terms of the rest of the mandate. I appreciate the comments on the retention issues - in my experience it's true. This is a whole new discussion that we will need to have in the future.

Dan: I've done a lot of agreements and what typically happens is that, First Nation would like to get first preference to opportunities. In other words, if they have a settlement region or whatever, they like to identify that as a district for which they will have first preference. I think that works fine if you have a small development. In my opinion – this is a limiter rather than an opener. Essentially what happens is when a First Nation requests preference within their traditional territory – it overlaps with a neighbouring First Nation who argue they have the right for first preference. The more intelligent thing to do is to work together – there are lots of opportunities to cooperate, and develop joint ventures together – to share the work and try to really make it work for you and expand your horizons.

Luke Johnson: There is quite a bit of work that leads up to the decision by the proponents as to whether it's a feasible project. There is a lot of work on environmental assessments that are kind of overlooked as business opportunities. Something like environmental assessments are near and dear to all First Nations hearts as well, and is usually the turning factor on whether or not they support the project. This would be the first wave of opportunity and it needs to be looked at quite closely. Another comment, you see a lot of opportunities for laborers, equipment operators

- but I didn't see anything in there with government inspectors or anything like that – are these types of opportunities reflected in the project labour and services requirements?

Dan: We are not identifying any of our government inspectors - there will be a lot of inspectors. There will be environmental, TK, and technical inspectors involved at different phases of the project. It's quite common for First Nations to request inspectors of their own. They certainly keep an eye on things. One of the best jobs, through a project like this, is to hire an environmental inspector, and here are the reasons why - it's a job that you can train somebody in reasonably quickly, it's a job making sure people are doing the things that they are supposed to be doing, it's a white hat job, you've got some responsibility but it's a very clear demonstration of environmental standards that we have to keep up on the job. The people that do that go back to their communities and inform community members about the standards that have been followed. It's a job that is involved throughout the entire construction project. We try to encourage First Nation people to get involved.

Lindsay: I think that's a very important point, and actually is good that we've got it here. We've talked about it briefly this morning - about a study program in environmental monitoring and the training that needs or could be done to prepare people for that opportunity.

Ruth Massie: In your employment and labor force forecast - do you know what the labor force on the U.S. side is going to be?

Mel: If you look at 1000 miles on the Canadian side and 700 miles on the American side, you would have to look at it in that proportion. In general terms, it would be sort of similar.

Ruth Massie: So if there is a U.S. work force at the beginning of this project, would it follow the project right through Canada?

Mel: A lot of that depends on how the project develops. It's quite feasible that you could have a different entity that's looking at the U.S. pipeline side versus the Canadian pipeline side or there could be a joint venture project. There would be a certain amount of segregation.

Dan: I don't want any misconception here, - it's important to understand that when a pipeline is built, while there is construction going on in Alaska, there will be construction going on in Canada. There are different sections that will be built and the idea is to maximize the workforce. It isn't like going from one end to the other - construction will be happening in all the given locations. There is a demand in the labor force in all the given locations.

Jackie Bazett: When Yukoners go to the NWT to work, they have to pay a labor tax and I think it is 2% of their income. Will non-Yukoners pay a tax like this here in the Yukon?

Dan: We don't impose tax on anybody; it's the government that does the taxing. This is what I've been saying to all of the governments - I think they should all work together on the labor force issue to maximize the labor force. It's time to break down the barriers in these different jurisdictions; and no, I am not aware of this 2 % tax, this is the first I have heard of it.

Brian Love: Have you looked at what your own staffing management would be?

Dan: Yes we have, and I can get the numbers to you.

Brian Bean: The reason I bring this up is because you have all these different groups, whether it be engineering or environmental contractors and the work opportunities.

Dan: In terms of our regulatory needs - in the good old days, we had to differentiate our labor force to that level. We had to find out who were going to be our employee's by crew and right down to crew size. I thought this was a bit of a nuisance and after it was all done, I was glad.

Brian Bean: Because this is an international project and there will be an opportunity for Alaskan's to work here and for Yukoners to work in Alaska, is that through the original treaty that was signed or the North American Free Trade Agreement? Is there is an opportunity for sharing employment across the border?

Dan: I don't think it is through the U.S./Canada Agreement. I do believe it's an aspect of the Free Trade Agreement. The demand for labor is going to be so significant that there is going to have to be some sort of visa system. To my understanding, we will have a Canadian workforce working in Canada and a U.S. workforce working in Alaska.

Brian Bean: I think industry could help First Nations better understand the contacting side - what are the requirements for contracting - whether it be health and safety issues. I think this could be something we could talk about in the future - what are the contracting standards of individuals and companies? In fairness, to gain an understanding of what are the First Nations interests and extent of involvement in the area of Economic Development?

Mel: Our expectations on health and safety continue to rise.

Ian Robinson: I think that it would be useful for us to know more about your current suppliers working in other places. Why should we go and look internationally for suppliers, when you have suppliers that are good in your eyes. I wanted to touch on transferability; we need more detail on transferable skills. If there is transferability of business and industry, so I think for a workshop topic – we should have a much more detailed look at transferability.

Dan: In the old days, a lot of this was done. It was essentially an encyclopedia of jobs, there were codes to identify and define jobs. We really thought about this and it is something that we can share.

Dick ?: We need to look at the barriers First Nations businesses face.

Lindsay: We will briefly review (***refer to Outcomes Paper***) The workshops are covering a lot of ground and the notion is to put together some working committees in planning those workshops, and the work that would follow those workshops. At the end of the day, it's the

written deliverables that the individual First Nation is going to need for them to engage in their own discussions. That's the logics between the actions or tasks.

Brian Love: We talked a little bit earlier about funding - the federal government is very supportive with what the APC is doing, the issue here is getting the right political support in Ottawa to fund the APC in doing its work. There's a bit of frustration that has been coming out and I've been working with Des and others. The $200,000 the Yukon Government has contributed in each fiscal year has often gone towards writing funding proposals, and not doing the work. All that I am saying is - we have to set a reasonable workplan based on funding. We have to make sure the funding commences with the work.

Walter Carlick: We all agree that there is a lot of work that needs to be done. There are still a lot of questions out there - we don't have the capacity, and the government says they are going to wait until there is a project - by then I say it's too late. Our people want to prepare now, we want to be ready, and we want to make that decision when that day comes. Is there going to be a

project or are you going to have to wait for us - it may take years longer if you don't do it now. I think if you invest a little bit of money now, and convince the federal government and the producers to get the information to the First Nations now it will support the First Nations in making an informed decision.

Lindsay: In summarizing, I regret that we did not have more time to discuss the funding issue - this is really a significant issue. Will people support that characterization?.

**Closing Prayer** given by Chief Eric Morris