

**ALASKA STATE LEGISLATURE
SENATE RESOURCES STANDING COMMITTEE
KENAI, AK**

October 21, 2011
10:04 a.m.

MEMBERS PRESENT

Senator Thomas Wagoner, Co-Chair
Senator Bill Wielechowski, Vice Chair
Senator Bert Stedman

MEMBERS ABSENT

Senator Joe Paskvan, Co-Chair
Senator Lesil McGuire
Senator Hollis French
Senator Gary Stevens

OTHER LEGISLATORS PRESENT

Senator Cathy Giessel

COMMITTEE CALENDAR

Presentation: Cook Inlet Producers

- HEARD

PREVIOUS COMMITTEE ACTION

No previous action to record.

WITNESS REGISTER

JIM WATT

Alaska Buccaneer Energy Limited

POSITION STATEMENT: Reviewed Buccaneer's exploration activities in Cook Inlet.

KEITH MEYER

LNG Alaska

POSITION STATEMENT: Outlined LNG Alaska's concept of LNG activities in Cook Inlet.

DAVID HALL, CEO

Cook Inlet Energy, LLC

POSITION STATEMENT: Reviewed Cook Inlet Energy's activities in Cook Inlet and commented on state incentives for development there.

ACTION NARRATIVE

[10:04:13 AM](#)

CO-CHAIR THOMAS WAGONER called the Senate Resources Standing Committee meeting to order at 10:04 a.m. Present at the call to order were Senators Wielechowski, Stedman and Wagoner.

COOK INLET PRODUCTION ACTIVITIES UPDATE

[10:05:23 AM](#)

CO-CHAIR WAGONER invited Mr. Watt forward to update the committee on Buccaneer's activities in Cook Inlet.

JIM WATT, Alaska Buccaneer Energy Limited, said Buccaneer believes there is hydrocarbon potential in the Cook Inlet. That potential plus the attractive fiscal terms and a strong market has led Buccaneer to commit to a multi-year drilling program that includes the acquisition of a jack-up rig for the Cook Inlet to help provide a solution to supplying Southcentral and Fairbanks energy demands.

He said Buccaneer is a Australian public company and was founded on two core principles: minimizing risk and maximizing opportunity. Elements of minimizing risk include enlisting local talent and acquiring majority positions in their projects and managing them. Along with well control, they are most interested in reinterpreting existing seismic and defining opportunities in Cook Inlet.

[10:07:34 AM](#)

To maximize opportunity Buccaneer is fast-tracking its developments using the special incentives Alaska has passed as well as its favorable regulatory environment and strong commodity market; Alaska is also energy friendly and pro-development.

MR. WATT said the Cook Inlet Basin is one of the last proven underexplored basins in the U.S. and it has existing infrastructure that is underutilized (very important). The state's current fiscal regime has tremendous economic benefit for companies and as evidenced by all the new players.

He reported that Kenai Loop 1, the onshore well Buccaneer just drilled, has a firm gas off-take agreement with Enstar which they hope to be able to provide by December 2011. He said two other onshore projects, West Eagle and West Nikolai Creek are both gas-weighted opportunities. Buccaneer also has two major positions offshore, one is Southern Cross and the other is Northwest Cook Inlet; both are units and both are proven in the sense of well control and existing seismic. So they are very comfortable in their opportunity there.

MR. WATT said the jack-up rig is unlocking the potential in Cook Inlet but it's a strategic asset for use in the Chukchi Sea as well and they expect it to be modified and ready to begin operating in Cook Inlet in November. Buccaneer is already operating in the Gulf of Mexico and along the Texas Gulf Coast.

[10:10:20 AM](#)

He explained that a map (slide 5) of Cook Inlet's fields indicates a natural progression in terms of the majors moving out and the independents moving in. Buccaneer's developments and other conventional exploration in Cook Inlet were highlighted.

MR. WATT stated that the mix is right now - the local gas shortage, the underexplored basin as evidenced by the USGS study, the cash incentive, ACES and the premium natural gas prices - to attract all the new players that are coming in.

He said Cook Inlet has a long and successful history of exploration and production. Most of the activity happened back in the 60s, but when Prudhoe was discovered in the 70s all the activity went to the North Slope. Then the 80s happened and along with it a downturn in the industry that didn't really improve in the 90s. During that time, Cook Inlet had very low activity and frankly the probability of drilling and finding gas was higher there than finding oil, so a lot of people simply didn't drill.

He said USGS estimates recently went from 2 tcf to 19 tcf and Buccaneer feels that now the basin is underexplored and very attractive. The last time a jack-up rig was there was in 1994 and next year it will have two jack-up rigs.

[10:13:44 AM](#)

He stated that all the giant fields were discovered in the 60s and that only a couple of fields in the Inlet are in the "sweet spot," but based on conventional drilling that more will probably be found in the structural ridges. The stratigraphic

play is coming on through 3D seismic that has been exploited in other basins but is just really coming to fruition now in the Cook Inlet.

He said Buccaneer leased, permitted and successfully drilled their first hole, Kenai Loop 1, in nine months and pipeline construction began in October with production hopefully starting in December. The Enstar contract will start with an off-take rate of 5 mmcf/day and be ramped up to 15 mmcf/day as more wells are drilled. He related that the terms under ACES favorably impacted Buccaneer with \$9.2 million credits from a total spend of \$22.9 million. Kenai Loop 1 is a little north of the Cannery Loop Unit operated by Marathon whose figures indicate that Buccaneer's reserve potential could conservatively be around 30 bcf; butd once they get more definition from their 3D seismic it could be more.

Their offshore Southern Cross Unit already has "oil-weighted" wells that were drilled in the 60s; the North Middle Ground Shoal Field already has 3D seismic and the Netherland Sewell has reserves of around 12.7 million barrels of oil equivalent (mmboe), an opportunity they plan to pursue in terms of their first well next year. Given success, whether gas or oil, it will likely tie it into the Baker Platform in the south. Both Southern Cross Unit and Northwest Cook Inlet offshore have a two-well commitment and those will get drilled next year with production coming on line in two or three years.

[10:18:43 AM](#)

MR. WATT said that West Nicolai field is a defined gas prospect of about 5,000 acres. It is something they can tie back into the Nicolai Creek field operated by Aurora less than three miles away. Apache is shooting the 3D seismic now and Buccaneer will move forward with that in 2012 or 2013.

[10:19:31 AM](#)

Buccaneer's last and largest asset is West Eagle, at about 50,000 acres. It has good existing 2D coverage vintage data that will get reprocessed and hi-graded. They will probably move forward with a unit application to the state by April 2012 with the idea of a well commitment by September 2012. Infrastructure operated by Armstrong is about six miles away in the North Fork Unit.

[10:20:28 AM](#)

Development schedule

- Kenai Loop - production by the end of 2011 and drilling 2 to 4 more wells depending on interpretation of the 3D seismic
- Southern Cross Offshore Unit - the Endeavor rig drilling 2 wells by next year and production by 2014
- Northwest Cook Inlet - production by 2014
- West Nicolai - production by 2013 and West Eagle by 2012 - both gas prone

10:22:32 AM

The Jack-up rig acquisition is a joint venture with Ezion Holdings (Singapore listed); the rig was named Endeavor the Spirit of Independence. Archer Drilling, an experienced and proven contractor, will be responsible for operating the rig and keeping it busy in Cook Inlet and the Chukchi Sea. He elaborated that Archer operates over 100 rigs globally, has over 7,000 employees and extensive experience in harsh environments, has in-house engineering capabilities, is familiar with the rig and has an excellent safety record.

MR. WATT, in closing, said increased drilling in the Cook Inlet will increase gas reserves and production within the next three years. It will also fuel enthusiasm for more drilling. But the LNG plant closing sent a cold chill through their corporate offices as did talk about the bullet line. Buccaneer is seeking to increase the role of LNG in various applications to increase the market and that will be addressed in the next presentation. He reviewed their founding principles and thanked the committee members for their attention.

Recess from 10:27 to 10:34 a.m.

10:34:00 AM

KEITH MEYER, LNG Alaska, said he had been in the energy industry for about 31 years and about 15 of them were involved in LNG in one way or another. He was chairman of Flex LNG, which developed floating liquefaction facilities and president of Chenier LNG that developed North America's largest import terminal on the Gulf Coast; and he was vice president at CMS Energy that bought the Panhandle systems, which included the Trunk Line LNG facility at Lake Charles and international energy infrastructure businesses.

He said LNG Alaska is an alliance between LNG central (him and his team) and Buccaneer. Buccaneer is very focused on developments within Alaska and recognizing the potentially limiting small market (if they produce what they think they are going to produce) and that the existing export facility might be

closed, they contacted him to see what could be done to grow the LNG market in Alaska.

MR. MEYER said after months of assessment he concluded that something can be done with LNG both within the in-state market as well as in the export market, and as a result LNG Alaska set an objective to increase the market reach of Alaska natural gas and to improve LNG production and delivery infrastructure.

In that regard, one of the things he recognized is that Cook Inlet gas has a negative perception and has become the scape goat for justifying many alternative projects. It is used in resolutions supporting the pipelines from the north and it's used in studies supporting hydro projects and in statements regarding imports of LNG. He said it takes producers to develop the gas and those producers need to see that there is a market opportunity once they develop it. That increased demand will translate into increased supply.

[10:38:33 AM](#)

Virtually every producer in the Cook Inlet he has talked to, Buccaneer included, is willing to be supportive of a market growth initiative and he views LNG Alaska as an enabling solution that looks at: putting in new modular liquefaction, using infrastructure investments to expand LNG use within the state - trucks, rail and barge deliveries, remote storage and revaporization at select locations and fuel terminals for truck and marine use - and continuing to expand the potential for LNG export/import options. The reason for imports would be to convince the demand side of this equation that the LNG infrastructure they are investing in would be used and useful under any scenario. He emphasized that LNG Alaska is an infrastructure play capable of liquefying natural gas and transporting it to the in-state markets as well as exporting it to international markets.

[10:40:23 AM](#)

MR. MEYER said the LNG industry has changed since the Kenai facility was built. It is not mature but it has "grown up" and has a vibrant future. Twenty-two nations now import LNG as opposed to one when Kenai was built and double the number 10 years ago. Thirty import re-gas facilities are being planned and LNG is now being used across the world by many nations that are now importers of LNG.

[10:41:29 AM](#)

He explained that Kenai is now considered a mid-scale facility at 1.6 million tons per year. The industry has matured to a point where these mid-scale facilities can be scaled modularly and expanded as the market dictates. For example, a floating facility the size of Kenai can be built in a Korean shipyard.

MR. MEYER said another big change is coming and that is LNG for use as a transportation fuel in the U.S. where it would be used in heavy trucking (the Port of Long Beach has over 1,000 trucks dedicated to burning LNG). Norway is probably the best example of a country that sort of looks like Alaska; it has natural gas and makes a very concerted effort to introduce it into the transportation sector becoming much more oil free. Cruise ships and freighters are installing LNG fuel capability, too, because it's cleaner and cheaper.

[10:43:44 AM](#)

MR. MEYER said the LNG Alaska program is built on three strategic pillars: the Fairbanks initiative, a coastal and transportation initiative that looks at moving LNG to the coastal cities for use as fuel to displace the diesel power in the transportation sector and the export/import initiative.

[10:44:36 AM](#)

SENATOR WIELECHOWSKI asked what a revaporization plant would cost if it were to go into rural Alaska - say to Bethel.

MR. MEYER replied the revaporization piece of this plan is actually the cheapest piece. The LNG would be offloaded into a small storage facility and then it just get rewarmed into natural gas. The overall delivery infrastructure from Cook Inlet gas to LNG to transport to Bethel must be cheaper than getting oil there including getting the communities to switch. However, doing just Bethel would be tough, he admitted, and several groups would have to come together and work on a united plan. If the AMHS, Fairbanks and exports got together, for instance, that would be competitive.

[10:47:06 AM](#)

The core reliable infrastructure was conceived to be fueled with Cook Inlet production and to also be used as storage for not only the pipeline supply but LNG imports. He emphasized again if there is no Cook Inlet production and LNG is imported and put into the storage tanks the same infrastructure logistics could be used to deliver gas to Fairbanks, so the people there could be comfortable knowing their investment is useful under any scenario.

SENATOR WIELECHOWSKI asked if he is talking to ConocoPhillips about using their plant or will LNG Alaska build its own LNG facility.

MR. MEYER replied that the most ideal spot for a facility is the one owned by ConocoPhillips and they just had a positive informal discussion with them about it. But if ConocoPhillips eventually doesn't want to negotiate he is also looking at alternative sites.

10:49:48 AM

MR. MEYER stressed that Fairbanks and the Railbelt region is an important market for the LNG Alaska plan. The Railbelt region is considering multiple alternatives, one of which is a mid-scale liquefaction facility in the north and trucking LNG down the Haul Road. But he thinks a mid-scale LNG Alaska facility in the south could be built and operated at a lower cost; the delivery cost would be less and more reliable, as well, because of two alternatives: roads and rail. The only thing that could change this scenario is "if they are giving away gas in the North."

He said that supporting legislation such as SB 42 establishing the Railbelt Energy Fund is very helpful; it has been enacted to help with studies and grants for power projects.

SENATOR WIELECHOWSKI asked if he had done a competitive analysis of his project compared to an in-state line from Cook Inlet to Fairbanks.

MR. MEYER answered yes; he has seen the studies, but he has not done an in-depth analysis of the cost variables of that pipeline, but his plan is competitive unless the gas is being given away in the North. If the pipeline is built and the state allows ratepayers to pay for it - and that capital is already invested on a variable cost basis - an installed pipeline wins. Further, if the demand is big enough, again, the pipeline wins. For instance, right now in China LNG is being trucked to remote areas until critical mass is reached and then a pipeline will be put in.

MR. MEYER said he believes that long-term there would be a pipeline solution here, but it won't happen in the next 10 years; the earliest forecast is 2022 and his facility will work for that decade-plus. It is synergistic in that it builds the gas demand so a pipeline is easier to justify. Further, some of this infrastructure, particularly the transportation

infrastructure, is used and useful regardless of the pipe, because of the LNG. What LNG then becomes is a peaking infrastructure and dynamic storage. He explained that it's a lot of volume in a small space and even with the pipeline there will still be demand peaks that it can satisfy. Eventually when a pipeline is built there will be other avenues for the LNG including export to international markets (especially if gas starts coming from the North) and he said he was comfortable that LNG investment is sound under any scenario including a long distance pipeline.

[10:55:39 AM](#)

As fuel for power generation Mr. Meyer said that 7 to 10 coastal cities have large enough demand to justify the effort of moving LNG by barge and he was recently told that the City of Bethel has already sought funds for studying the use of LNG for power. The Alaska Marine Highway System (AMHS) could also be a significant user of LNG as fuel for transportation.

[10:56:59 AM](#)

Back to coastal power generation, he said Norway is probably the best case study of what Alaska could do because it has a similar climate and coastline. It has LNG production but uses small LNG tankers (1,000 cubic meters) as opposed to the large 88,000 cubic meter ships going to Kenai (the average new build is around 160,000 cubic meters). Trucks could be loaded from a very small LNG ship and the fuel could be taken to wherever it was needed.

[10:57:57 AM](#)

LNG is a growing transportation fuel for on-road, off-road and marine vehicles. On-road users are typically large trucks; off-road markets have good demand and are typically for use in mining vehicles. He explained that one of the benefits of a mine operation is that it stays in a small geographic footprint and so refueling structures are not needed. Marine applications are similar and include tugboats, workboats and ferries.

MR. MEYER said workboats are being converted to dual fuel and ferries in Washington, New York, Argentina, Norway and a number of other countries are converting to LNG. The AMHS would be an ideal demand because its large load and scheduled route make fueling logistics much easier.

[10:59:38 AM](#)

Focusing on the AMHS, Mr. Meyer said the fleet is relatively old and the state has commissioned a study to design fuel efficient

vessels to replace it. Dual fueled diesel/LNG engines have been in operation for many years and meet the Tier 3 emission requirements. Therefore, this is a perfect opportunity for the state to really look at using the dual fuel diesel/LNG vehicle as the new class of Alaska class ferries.

SENATOR WIELECHOWSKI asked what it would cost to upgrade some of the ferries and how soon the cost would be recouped.

MR. MEYER replied that he understands the larger Alaska ferries are being replaced as opposed to being retrofitted and it is easier to have a dual-fueled "new build" than to convert an old one. He didn't know how much it would cost to convert a large freighter, but it would be over \$1 million for a tugboat class vessel and about \$40,000 for a truck. He threw out a wild guess of \$3 million to \$5 million for the ferry system and said it's important to do it on new builds because they can be designed correctly.

[11:03:22 AM](#)

He said that LNG Alaska will help create jobs in the energy sector including Cook Inlet production activities, LNG delivery operations, LNG vehicle conversions and maintenance facilities and expanded natural gas distribution facilities. He said it will also be beneficial in terms of reduced imports of refined products and a continued or increased opportunity for international exports.

[11:04:04 AM](#)

Unit costs would come down with more uses and estimates indicated that the transportation fuel for the AMHS and power generation would cause a significant reduction to \$12.50 mmbtu and with exports it would come down to \$10 mmbtu, which equates to about \$.80/gal.

MR. MEYER summarized that LNG Alaska has significant gas production potential in the Cook Inlet and that creating natural gas demand and market access will encourage those activities. Alaska's domestic gas reserves can be used to displace imported refined products, reduce pollution and reduce the cost of energy to consumers. Alaska has the necessary legislation and incentives in place to help accelerate the LNG Alaska program and LNG Alaska is ready to work with the state to implement a clean and reliable natural gas expansion program.

[11:06:12 AM](#)

SENATOR GIESSEL asked if he is referring to the market for electric generation or if he is including converting private homes to natural gas when he talks about Fairbanks usage.

MR. MEYER replied that he is initially referring to the large chunks of electrical generation with GVEA and Flint Hills, although he had not had discussions with them yet.

CO-CHAIR WAGONER went back to Senator Wielechowski's question about the potential for building a pipeline from Southcentral Alaska to service the Fairbanks market versus his project, not a bullet line.

MR. MEYER responded that growth of the Fairbanks market could be the supporting load for a pipeline south, but it would face the same challenges LNG Alaska faces, which is what if Cook Inlet production isn't there. He looks at this LNG program as being the front end of a broader infrastructure solution, which would involve a pipeline to eventually serve that critical mass.

[11:10:15 AM](#)

At ease from 11:10 to 11:19 a.m.

[11:19:44 AM](#)

DAVID HALL, CEO, Cook Inlet Energy, LLC, said they are an Alaskan company that was formed in 2009 when things looked "pretty grim" in Cook Inlet, but now they see an opportunity. He said they have spent \$13 million in Cook Inlet so far and employ 25 Alaskan residents and use many contractors for their operations. They own property in the West MacArthur River Unit, the Osprey Platform, a production facility and nearly 42 miles of pipeline as well as 20 mg of combined power generation - all located on the west side of the Cook Inlet. Current production is around 1,200 boe/day and continues to rise.

He explained that \$13 million was spent in 2010 on capital projects and \$10 million has been spent so far in 2011 mainly on well workovers. In addition, they have spent \$20 million on two rigs for Cook Inlet - not to be confused with the jack-up rig - Rig 34 and Rig 35. Rig 35 is going to be used on the Osprey Platform, but it is designed to be used onshore as well. It has the capability of drilling to 20,000 ft. and is on its way to Nikiski now.

[11:23:28 AM](#)

MR. HALL said Cook Inlet Energy has designed and engineered six work-overs for the Osprey with an estimated combined gross

capital cost of over \$30 million. In addition to that, 13 new grassroots well candidates have been identified for an estimated cost of \$15 million each. Rig 34 is designed for shallow wells of 7,000 ft. or less and a great number of shallow gas well prospects have been identified along the west side of Cook Inlet.

[11:25:08 AM](#)

He said Cook Inlet Energy is an oil and gas producer and is moving aggressively to grow production of both. Their focus is Southcentral and the Susitna Basin where they have been doing a lot of field work.

MR. HALL said they are a small company and are grateful for the tax credits adding "I mean that from the heart." Without them the economics would be difficult in many ways. Cook Inlet is an expensive place to do business and they have fixed costs no matter how much they produce.

[11:26:19 AM](#)

He related that AS 38.05.180 is the royalty relief statute that was enacted 10 years ago to keep existing oil production on line. It is an excellent measure, but it needs to be updated to fit existing realities in Cook Inlet. HB 32 does just that. For instance, the 180(f)(6) royalty relief applied only to fields that existed 10 years ago when it was enacted and to maintain existing gas production in Cook Inlet marginal gas wells should be granted the same treatment. The 10-year royalty term established in .180(f)(5) is of particular concern because the Osprey Platform, for instance, has had a 5 percent royalty since it began production in December 2002, but it had some major problems in being economical even at that rate. Current statute calls for royalty to increase to 12.5 percent in December 2012, which will really challenge their efforts, especially when they are talking about tens of millions of dollars to fully develop the field.

MR. HALL said changes like this could potentially extend the life of a field or even a shut-in platform, some of which are in Cook Inlet and are currently queued up for abandonment. HB 32 would remove the 10-year clause and keep volumetric limits in place at 25 million barrels of oil and 35 tcf of gas so that large fields would end up paying the 12.5 percent royalty, but marginal fields would not.

[11:29:27 AM](#)

Next Mr. Hall said Cook Inlet Energy recently went through the permitting process for gas exploration in the Beluga area and anything that can streamline the permitting process that goes through the Alaska Department of Fish and Game (ADF&G) because of the game refuges and critical game habitat areas on the west side as well as the Department of Natural Resources (DNR). He suggested allowing summer activities or approval of small roads and pads with certain mediation standards.

[11:31:33 AM](#)

MR. HALL said they understand the gas and energy issues before the legislature and part of the problem in Southcentral is the small market where consumers risk shortages if supply does not keep up and the producers risk not having a market or having the price crash. Cook Inlet Energy's big challenge is if they deploy huge capital dollars to bring gas to market today, they still couldn't they get a contract. So, they are positioning themselves by participating in the spot market and looking for contracts going forward.

He asked them to remember that a bullet line would be helpful for gas markets if it results in more gas moving in and out and local producers can sell into it. It has to be an open access configuration.

[11:34:15 AM](#)

SENATOR STEDMAN said he has been going over Cook Inlet issues with Senator Wagoner for six years and it appears that things are moving forward, but at some point the legislature will review the incentives and stimulus to see if they are still applicable. Clearly, it's not beneficial to the state to take big upfront positions that have nothing on the other side. Legislators want a balance.

MR. HALL thanked him for the comment and said they understand that as well. For now the incentives are certainly needed in Cook Inlet.

CO-CHAIR WAGONER clarified that Cook Inlet Energy as a company has not had the same opportunity that most operators in Cook Inlet have had for royalty reduction, but it wasn't put in place to save companies money as much as it was to save the current infrastructure there, because if that ever went away the state wouldn't have the opportunity to do what it is today in a whole lot of cases. That is part of the balance.

SENATOR STEDMAN wanted to clarify that there is no movement to change what is in place today and he was talking about review sometime down the line.

[11:37:49 AM](#)

CO-CHAIR WAGONER, finding no further questions, thanked everyone who participated and adjourned the meeting at 11:37 p.m.