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page James Kendall named acting director, 8 BOEMRE Alaska OCS region

Week of December 26, 2010 • \$2

Happy Holidays



Nabors Rig 7ES drilling on the North Slope.

Chevron hopes to close sale of Cook Inlet holdings by mid-2011

Chevron's plans for disposing of its oil and gas holdings in Alaska's Cook Inlet basin are beginning to come into sharper focus.

The company announced in mid-October that it planned to market its Cook Inlet assets owned by subsidiaries Union Oil Company of California and Chevron U.S.A. Inc. Chevron said the producing properties would be "offered as a single package," and that it expected marketing efforts would begin "in the near future."

Now new details of the potential sale are emerging.

In a routine eighth plan of development, or POD, for the Deep Creek unit submitted Dec. 14 to the Alaska Division of Oil and Gas, Chevron discussed plans not only for that property but also its broader Cook Inlet goals.

"Due to the changing market conditions over the past couple of years, Union has re-evaluated its exploration and development

see CHEVRON HOLDINGS page 10

NATURAL GAS

CINGSA approval

RCA grants gas storage certificate but CINGSA says conditions can't be met

By ALAN BAILEY

Petroleum News

n Dec. 17 the Regulatory Commission of Alaska approved a certificate of public convenience and necessity for the natural gas storage facility that Cook Inlet Natural Gas Storage Alaska wants to build on the Kenai Peninsula, to support the winter deliverability of gas to Southcentral Alaska utilities. In early November the commission held a public hearing to listen to testimony over whether the certificate should be granted.

"After considering the legislative record, the unanimous agreement of the parties in our hearing that gas storage services are needed, and the record presented in this docket, we find that natural gas storage service is required for the convenience and necessity of the

public," the commissioners wrote in their order granting the certificate. "We further find that CINGSA is fit, willing and able to provide natural gas storage services subject to certain conditions."

Property rights

But CINGSA has not yet acquired the property rights that its needs to gain the use of the Sterling C sands of the Cannery Loop gas field, on the south side of the City of Kenai, for the storage facility, and the company is still negotiating a deal with Marathon Oil Co., operator of the Cannery Loop field. As part of its conditions for the certificate, the commission requires CINGSA to file an application to amend the certificate once the company has acquired the necessary

see **CINGSA** page 2

NATURAL GAS

EIA drops Alaska line

In newest forecast agency says shale gas will lower prices below breakeven

By ERIC LIDJI

For Petroleum News

he U.S. Energy Information Administration has removed the Alaska natural gas pipeline from its newest 25-year projection of the domestic energy market to account for the rise of North American shale gas resources, but the agency also notes that the change more likely reflects a possible delay, rather than a death knell, for the long sought-after project.

The statistical arm of the U.S. Department of Energy removed the Alaska gas pipeline from its forecast because it expects shale gas production across the U.S. and Canada to drastically increase, dropping prices to a point that makes the major project uneconomic.

The EIA report warns against placing too much stock in the reference case: "Because of the uncertainties inherent in any energy market projection, the Reference case results should not be viewed in isolation."

Those projections come from an early overview of the 2011 Annual Energy Outlook released by the EIA on Dec. 16. The AEO is a yearly forecast of domestic energy markets through 2035. This early overview includes only the "reference case," the baseline presumptions used as a starting point for "side cases"

BP looks to replenish workforce with Alaska-trained young people

A common worry heard around Alaska's oil patch in recent years is the advancing age of the workforce, with many experienced hands at or near retirement.

BP, which operates the giant Prudhoe Bay oil field and lots of other North Slope properties, appears to be working hard to inject some youth into its operations.

The company's "Alaska Hire 2010 Report," just released, is chock full of fresh young faces who have landed spots with BP as either new employees or interns.

The report says the company is keen to recruit Alaskans, especially those coming out of the University of Alaska.

"In 2009, the University of Alaska system was BP's number one school for college recruitment of engineering graduates," John Minge, president of BP Exploration (Alaska) Inc., writes in the new report.

The report lays out lots of data on its recruiting efforts.

see **BP WORKFORCE** page 15

NATURAL GAS

Mac approved — sort of

Mackenzie pipeline regulatory phase winds down; still a long road for project

By GARY PARK

For Petroleum News

anada's federal energy regulator has approved the Mackenzie Valley natural gas project in a decision that is viewed as more of a signpost to the long road ahead than a truly significant milestone.

No one among the proponents or critics seriously expected the National Energy Board would reject the application outright and it didn't.

Nor was it a surprise that the approval came with a pile of conditions - 264 of them - covering engineering, safety and environmental protection.

The response from all sides was muted. There was no sense of joy or celebration that the Imperial spokesman Pius Rolheiser said the NEB approval is a "positive step for the project." Beyond that, however, "a number of steps remain and much more work remains to be done before the project can become a reality," he said.

Mackenzie Gas Project has completed a regulatory process that lasted six years, or almost a decade since the dream of reviving commercialization of Arctic gas was revived, or 37 years since a proposal was first immodestly touted as "the biggest project in the history of free enterprise."

see MAC APPROVAL page 14

EXPLORATION & PRODUCTION

Buccaneer planning Kenai well in 2011

Buccaneer Alaska is permitting three drilling locations at its Kenai Loop project and could begin drilling as early as February, the company announced on Dec. 17.

Kenai Loop sits on a non-contiguous patch of onshore leases north and northeast of the Cannery Loop unit owned and operated by Marathon Oil, and the city of Kenai.

Buccaneer, the local subsidiary of an Australian independent, believes the field holds "multiple stacked pay zone possibilities between 5,000 and 10,000 feet" based on control wells, 200 miles of 2-D seismic and the geology of surrounding fields. The company placed in-house reserve estimates for the field between 35 billion and 78 billion cubic feet with initial production rates between 5 million and 10 million cubic feet per day per well.

Acreage held by Buccaneer

Buccaneer began chasing the leases in the prospect this past summer, and now holds 100 percent working interest and 80 to 86.5 percent net revenue interest in some 7,734 acres of State of Alaska, Cook Inlet Region Inc. and Alaska Mental Health Land Trust leases.

The company described the first well proposed for the program as a step-out from Cannery Loop expected to spud in late February, depending on rig availability. The first well will most likely be on Mental Health Trust acreage, because earlier this year Buccaneer committed to drill on Trust acreage in 2011 in return for a 3,427-acre lease.

The field is tucked into a crowded section of the Kenai Peninsula, surrounded by four legacy fields operated by Marathon: Cannery Loop and Kenai to the south, Sterling to the east and Beaver Creek to the northeast. The nearest sales pipeline is about three miles away. Nikiski, home of a liquefied natural gas export terminal, is just up the coast. And the proposed natural gas storage operation planned at Cannery Loop is to the south.

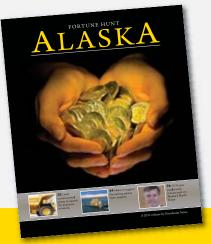
Buccaneer estimated the well would cost about \$7 million to drill and complete, and said it expects to be able to recover about \$4.5 million of that in ACES tax credits.

Buccaneer has been exceptionally busy since arriving in Alaska in March. The company is pursuing five prospects, including Kenai Loop, and continues to amass acreage in the Cook Inlet with each passing lease sale. Buccaneer has not yet drilled a well in Alaska.

—ERIC LIDJI

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continued from page 1

CINGSA

reservoir property rights. And the commission said in its order that the CINGSA certificate does not approve any specific facility, but that the facility must be located in reasonable proximity to the Cook Inlet natural gas pipeline system.

RCA has scheduled a hearing, starting on Jan.7, to hear testimony on CINGSA's proposed tariff for its facility. However, the commission says that it will cancel that hearing if CINGSA has not acquired the facility property rights by Dec. 30. And the certificate is also conditional on CINGSA acquiring all of the necessary permits and approvals for its facility, the commission says.

Impossible conditions

But CINGSA says that it is impossible to meet property-rights conditions that the commission has attached to the certificate, thus making the certificate worthless in its current form and potentially delaying completion of the gas storage project by at least a year. Continued financing of the project requires resolution of any tariff and rate issues by Jan. 31, thus making a January tariff hearing essential, CINGSA says.

In a petition to RCA filed Dec. 21 CINGSA asked the commission to remove all conditions attached to the certificate, other than requirements that CINGSA abide by all applicable laws, regulations and agency orders, and to approve a service territory for the specific storage facility in the Sterling C sands.

"Even with an unconditional certificate and defined service territory, CINGSA could not possibly complete by Dec. 30, 2010, the process of acquiring all of the necessary surface, mineral and storage rights of the 45 private individuals and corporations who claim ownership of mineral, storage or other interests in the Sterling C reservoir," CINGSA said in its petition.

Without the power of eminent domain that would come with a certificate for the specific facility that CINGSA plans to build, CINGSA will not be able to negotiate workable deals with all of the relevant property owners, CINGSA said.

"By conditioning the certificate, the commission has ceded its power to determine whether the proposed storage facility should be built to the over 45 holders of fractional property interests in the reservoir who, by refusing to sell, can effectively veto the project," CINGSA said. "In other words, the conditions in the (commission's) order make it impossible to satisfy those very conditions, not just by Dec. 30, but forever."

Deliverability crunch

With production from the aging gas

fields of the Cook Inlet basin continuing to decline, Enstar, the main Southcentral gas utility, says that without gas storage to warehouse summer-produced gas it is unlikely that the utility will be able to supply gas at a fast enough rate to meet all of its customers' needs during peak cold conditions in the winter of 2012-13. So CINGSA is trying to fast track the development of its storage facility, to enable the facility to start filling its storage reservoir during the summer of 2012. And, to meet that deadline, the company asked RCA to approve the facility certificate in December, so that construction can proceed.

Both Enstar and CINGSA are subsidiaries of gas company Semco Energy, but Semco has established CINGSA as a joint venture with MidAmerican Energy Holdings Co. The \$180 million CINGSA facility will provide third-party gas storage services, with customers hiring storage space in the facility reservoir and paying for the injection and withdrawal of gas. Southcentral gas and power utilities Enstar, Chugach Electric Association and Municipal Light & Power will be CINGSA's initial customers. The facility will have an initial capacity of 11 billion cubic feet per day, with the possibility of future expansion.

The maximum total gas delivery rate from the facility will be 150 million cubic feet per day. Enstar projects peak winter utility gas demand rising from 276 million to 298 million cubic feet per day between 2011 and 2015, with some of that gas coming directly from operational gas wells and some coming from gas storage. Enstar will probably have to add compression to its dual gas line from the Kenai Peninsula to Anchorage, to support the delivery of gas into Anchorage from the CINGSA facility.

First regulated facility

Although there are already three underground gas storage facilities in the Cook Inlet basin, these facilities are owned and operated by gas producers who use the facilities to ensure that gas deliverability commitments in gas supply contracts can be met. As the first third-party storage facility in the region, the CINGSA facility is the first gas storage to be regulated by RCA. And, by providing third-party access to storage, the facility may provide new opportunities for gas producers to sell gas year-round to local utilities.

On Nov. 19 the Alaska Oil and Gas Conservation Commission approved the future injection of gas into CINGSA's planned Sterling C sands storage reservoir. \bullet

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• FINANCE & ECONOMY

BPXA resists fine from pipeline spills

Company says state can't collect \$1.7 million plus \$6.8 million for negligence; wants credit for cleanup done in first 36 hours

By WESLEY LOY

For Petroleum News

awyers for BP Exploration (Alaska) Inc. already have notched considerable success in fending off some of the state's claims for damages stemming from the 2006 pipeline spills in the Prudhoe Bay oil field.

Now the lawyers are aiming to whittle down the state's case even further.

On Dec. 3, BPXA filed court papers opposing the state's request for a "base oil spill penalty" of \$1,698,016.

The fine is among an array of damages the state is seeking in its civil suit against the company. The amount is derived by multiplying the statutory penalty of \$8 per gallon against the 212,252 gallons of crude oil that leaked from a corroded Prudhoe Bay pipeline in the spring of 2006.

Lawyers for the state on Nov. 8 asked the court to declare it the winner with respect to the \$1,698,016 penalty. The state noted that BPXA itself had acknowledged it was liable for the amount, had admitted negligence in maintaining its pipelines, and had agreed that the size of the spill was 212,252 gallons.

But BPXA, in its Dec. 3 filing, essentially told the court: Whoa, not so fast!

One or the other

The concern for BPXA's lawyers is whether the state can collect not only the \$1,698,016 base penalty but also a much larger fine of \$6,792,064.

The larger sum is based on the state's argument that BPXA was grossly negligent and violated its oil spill prevention and contingency plan. In such cases, a state statute says a penalty of four times the base penalty may be collected for an oil spill.

In its Nov. 8 motion, the state said it was seeking only the base penalty for the time being, and not the larger penalty.

BPXA, however, is unwilling to simply concede victory to the state on the base penalty.

Company lawyers argue that the state may recover either the base penalty of \$8 per gallon of oil or the more severe penalThe Unified Command agreed that BPXA recovered 501 barrels of oil — or 21,042 gallons — in the first 36 hours of the cleanup, company lawyers said.

"BPXA is entitled to a credit for that amount," they argued, noting the state didn't explain in its motion why the credit wasn't applied.

It could be due to differing interpretations of when the 36-hour clock starts. The Prudhoe leak occurred slowly over days, with a field worker driving along the pipeline discovering oil on the tundra on March 2, 2006.

If the clock starts at the onset of a leak, then the state might believe no credit is due as no cleanup occurred within 36 hours.

But BPXA notes the statute requires the recovery to occur within 36 hours "after" the discharge.

Bigger dollars at stake

The per-gallon fine is a relatively small item in the overall suite of compensatory and punitive damages the state is seeking from BPXA.

The state also wants taxes and royalties it contends were "lost" from 2006 through 2008 due to production shortfalls resulting from emergency shut-ins and replacements of corroded pipelines. The state also is seeking to recoup its costs related to spill response and restoration.

Altogether, the state has said its damages could tally more than \$1 billion.

But on Dec. 10, state Superior Court Judge Peter Michalski slashed the state's claims by perhaps several hundred million dollars when he ruled BPXA doesn't owe taxes on the production shortfalls.

State lawyers aren't writing off the tax claims. They've indicated they'll file a motion by Jan. 20 asking the judge to reconsider his ruling. \bullet

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PIPELINES & DOWNSTREAM

Jet fuel shipper eyes Alaska market

Another company is looking to bring jet fuel into Alaska.

A unit of TransMontaigne, a Denver-based company involved in transportation and storage of refined products, has applied to the state Department of Environmental Conservation for an oil discharge prevention and contingency plan, or C-plan.

TransMontaigne plans to transport Jet A aviation fuel through Cook Inlet to the Port of Anchorage, a DEC public notice says. Double-hull vessels will carry a maximum of 325,000 barrels of product.

Morgan Stanley Capital Group, the principal commodities trading arm of investment banking giant Morgan Stanley, owns TransMontaigne, which says it specializes in "the fuel supply chain."

The opportunity for fuel suppliers in Anchorage is the city's international airport, a major stopover for wide-body cargo jets moving freight between Asia and North America.

Refineries in Alaska, including Flint Hills Resources facility at North Pole near Fairbanks, have had trouble in recent years meeting jet fuel demand.

In July, a top Japanese refiner, Cosmo Oil, also sought a C-plan to ship jet fuel into the Port of Anchorage. According to its application, Cosmo planned to transport up to 300,000 barrels of fuel on a monthly or quarterly basis, depending on market demand at the Anchorage airport.

Airport manager John Parrott told Petroleum News in a Dec. 21 interview that Cosmo did make a single shipment of jet fuel to Anchorage in early November as a trial run. Cosmo plans to resume deliveries in the spring, when air cargo traffic will increase following the post-Christmas slowdown, Parrott said.

Further details on TransMontaigne's plans were unavailable at press time.

But Parrott guessed TransMontaigne also will deliver jet fuel from Asia.

The Anchorage airport uses about 15 million gallons of jet fuel a week, or 2 million gallons a day, he said.

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ty of four times that amount, but not both.

If the judge grants the state's request for the \$1,698,016 base penalty, it must dismiss any claim for the larger amount, BPXA argues.

Credit for cleanup

BPXA makes a further argument for reducing its penalty for the spill.

State statutes say credit must be given for oil cleaned up in the first 36 hours following a spill, the company said.

"BPXA commenced a comprehensive cleanup as soon as it discovered the leak," the company's Dec. 3 court filing said. "The cleanup was conducted under the direction of a group called the Unified Command, which included members from the North Slope Borough, Alaska Department of Environmental Conservation, United States Environmental Protection Agency, and BPXA."



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NATURAL GAS

AGDC: Not ready to identify legislation

Alaska Gasline Development Corp. to have economic viability report to Legislature by March; studies under way on GTL, LNG, NGL

By KRISTEN NELSON

Petroleum News

he Alaska Gasline Development Corp. reported on progress on a plan for an in-state natural gas pipeline Dec. 15.

Dan Fauske, CEO of the Alaska Housing Finance Corp. and chair of the Joint In-State Gasline Development Team created earlier this year by House Bill 369, reviewed work under three categories itemized in the bill.

On the obligation

to "seek letters of intent from buyers and sellers of natural gas to ship gas using the facilities of the project and, from information obtained, define the project parameters that would allow the proj- DAN FAUSKE ect to be commercial-



ly viable," Fauske said there are "three critical elements" required to engage buyers and sellers in a commercially viable in-state gas line.

• Proving the economic viability of the project investment, and commercial requirements including an industrial anchor to keep the line operating at 100 percent of capacity through the first 20 years;

• A project schedule ensuring delivery of gas needed to meet Cook Inlet supply forecasts; and

· Finding a builder, owner and operator to participate in project development and fund the project following a successful open season.

Industrial anchor needed

Fauske said the project needs an industrial anchor so that the volume on the line would be great enough to reduce the cost of service to existing consumers and power utilities. The search for an industrial anchor requires analyses to identify the economic feasibility of gas to liquids, liquefied natural gas and natural gas liquids projects.

Three firms are doing the economic feasibility and market studies: Hatch Inc. on GTL, with results expected in February; Science Applications International Corp. on LNG export potential, with results expected in March; and R.W. Beck on NGL, with results expected in March.

Fauske said the economic feasibility of the potential GTL, LNG and NGL projects will determine the commercial viability of an in-state line and will be included in a report to the Legislature by March.

"AGDC anticipates using the results from this work to help formulate recommendations for 2011 legislation," he said.

AGDC has a request for proposal out for a financing plan, with responses due in January, and is participating with the Alaska Department of Natural Resources in a study "expanding understanding of the depletion of Cook Inlet gas supply," which will help determine optimal project construction.

Independent Project Associates was contracted to review the current phase of the project, access current activities and help develop a schedule to meet Southcentral gas needs and maximize likelihood of successful project execution.

Letters of interest

Fauske said on the obligation to "seek letters of interest from private pipeline construction and operating companies to develop the project," that AGDC has met with more than 10 potential candidates for the project, including: Anadarko Petroleum Corp., OneOK Partners, The Williams Cos., ConocoPhillips, BP Exploration Alaska, ExxonMobil Production Co., ATCO Pipelines, Enbridge Inc., El Paso Pipeline Group, MidAmerican Pipeline Group and Kinder Morgan Energy Partners Ltd.

He said Anadarko and OneOK are not participating in the project update phase, but that AGDC expects each company participating at this stage to provide a letter of interest or disinterest before July 1.

On the third obligation, to prepare any initial legislation necessary for the project by Dec. 15, Fauske said work in progress is expected to provide information on the direction of the project, so draft legislation was premature at this time, but said AGDC will report to the Legislature during the 2011 and recommend any legislation it believes necessary for the project.

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• **GOVERNMENT**

Auditors recommend sunset for ANGDA

Agency argues its record of working for the consumer, tells LB&A it brings a unique perspective to the state's gas line issues

By KRISTEN NELSON

Petroleum News

The Alaska Legislature's Division of Legislative Audit has completed a performance audit of the Alaska Natural Gas Development Authority for the Legislative Budget and Audit Committee, and recommends that the Legislature consider ANGDA for sunset once uncertainties about development of Alaska North Slope natural gas are addressed.

Legislative Audit said ANGDA does not play a lead role in acquiring and conditioning North Slope natural gas, or in constructing a pipeline to transport the gas. Those plans are being developed by other private or public entitles, the audit report said, with the Alaska Pipeline Project and Denali working on large-diameter lines and the Joint In-state Gasline Development Team guiding development of a small-diameter pipeline.

House Bill 369, which created the instate team, designated ANGDA's CEO as part of the five-member team, but essentially "made ANGDA a support agency rather than a lead agency in the development of an in-state pipeline."

ANGDA board disagrees

In a response to Legislative Audit's preliminary report, the ANGDA board summarized its major concerns with the audit.

The board said ANGDA plays "a unique and key role in the acquisition and delivery of North Slope natural gas to in-state markets, communities and citizen-consumers," and said ANGDA has remained true to the original goals set by Ballot Measure 3 which passed in the November 2002 general election, establishing ANGDA, while avoiding duplicate efforts with agencies and private groups involved in in-state energy issues.

The board said "ANGDA's pursuit of projects separate from the mainstream gas supply projects is meaningful to a significant minority of Alaskans and is essential to ensuring statewide energy solutions," while providing "for an evenhanded distribution" of the state's resources.

The board said ANGDA plays multiple roles in working to get North Slope gas to market, and noted that improving the state's efforts on gas lines "requires more than a simplistic elimination of an organization, particularly one that has consistently and steadily represented the interests of Alaska's citizens as consumers," especially since "many other gas supply initiatives funded with substantially more dollars have come and gone over the last 5 years." The board said "ANGDA remains the only organization that consistently measures alternative opportunities in terms of the consumer's monthly energy bill," and said "the loss of ANGDA's objective voice would be a costly and potentially irrevocable mistake."

for negotiated shipping rates that provide "an estimated one-third discount on future natural gas purchases," a discount estimated at a minimum of \$75 million in savings to Alaska consumers.

The board noted that it has advised LB&A that "these sensitive negotiations are clearly jeopardized by any threat to ANGDA's continuity and creditworthiness."

The board said the audit made no attempt to gauge success and therefore is "incomplete as a basis for judging the public's best interest."

While ANGDA's records were analyzed, the audit did not provide the same level of scrutiny to counter views.

"We sense that the conclusion on ANGDA's future may have been written before the audit started," the board said.

The board also objected to an interpretation that ANGDA operated outside its statutory framework, noting that the Department of Law has been involved in all ANGDA project decisions and "has consistently held that the actions are proper."

On the issue of how its assets are presented in financial statements and note disclosures, the board said it is working with the Department of Revenue to restate its asset accounts to reflect new accounting standards.

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EXPLORATION & PRODUCTION

GMC puts formation tops data online

The Alaska Geologic Materials Center has added subsurface depth data for the tops of Alaska rock formations to its Google Earth rock inventory, accessible from the GMC website. GMC staff compiled the information from data provided by the Alaska Oil and Gas Conservation Commission and the U.S. Geological Survey.

By double clicking on a well location displayed in Google Earth, it is possible to pull up the formation top picks for the well and also see what rock cuttings, core and other materials from the well are available in the GMC inventory. The GMC, located in Eagle River, holds a major archive of Alaska rock samples and stores an almost complete collection of core and drill-cutting samples from oil and gas wells drilled in Alaska and on the Alaska outer continental shelf. The collection at the center also includes numerous microscope slides from well samples and many thousands of rock samples from the mining industry.

The formation information is also available as lists in PDF and Microsoft Excel format on the GMC website, accessible via the Alaska Division of Geological and Geophysical Services website at www.dggs.alaska.gov.

-ALAN BAILEY



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GOVERNMENT

Murkowski questions ARNI use by EPA

Designation as aquatic resources of national importance has blocked NPR-A production, railroad from Fairbanks to Delta Junction

By KRISTEN NELSON Petroleum News

he Environmental Protection Agency blocked permits for ConocoPhillips Alaska's CD-5 development in the National Petroleum Reserve-Alaska early this year by declaring the Colville River Delta an aquatic resource of national importance.

Alaska's senior senator. Lisa Murkowski, said Dec. 21 that's not the only Alaska development EPA has blocked with an ARNI designation: A rail line connecting Delta Junction to Fairbanks has recently fallen victim to the same designation, leading Murkowski to ask EPA Administrator Lisa Jackson in a Dec. 20 letter how such designations are made, apparently with "no public input, consultation, or even notice."

Murkowski told Jackson that recent events in Alaska "have raised significant

questions" regarding EPA's "application of its authority under the Clean Water Act," specifically CWA authorization for EPA to prohibit areas as disposal sites, thus preventing

the U.S. Army Corps SEN. LISA MURKOWSKI of Engineers from issuing permits.

EPA's authority under section 404(c) of the CWA has not always been without controversy, the senator said, noting that under threat of congressional intervention, in 1992 EPA and the Corps signed a memorandum of agreement, "designed to aid in the resolution of conflicts over a proposed permit."

That MOA uses the term "aquatic resource of national importance," limiting elevation of specific permit cases to those

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involving an ARNI, and requiring EPA to notify the Corps in writing that a project "may result in substantial and unacceptable impacts to aquatic resources of national importance."

Only 16 cases listed

Murkowski told Jackson that while the EPA's website lists only 16 cases in which EPA has requested Corps review of a permit in the 18 years since the MOA was finalized, in addition to those 16, there have been at least two instances over the last six months where EPA has intervened with the Corps over Alaska projects.

EPA opposed bridge access to CD-5, even though the "actual users" of the Colville River Delta, primarily residents of Nuiqsut, "had been closely involved in the development of the very plan which the designation undermined. Their historical experience and day-to-day reliance on the CRD for various subsistence and cultural uses cannot be questioned - yet EPA second-guessed the bridge option as their preferred alternative," Murkowski said.

Less than a month ago EPA designed the Tanana River as an ARNI.

EPA had been aware of the proposed project prior to February of 2009, when it provided comments, "but no ARNI designation," on the draft environmental impact statement. Then, in mid-November, after asking in early October for more time to consider the project, "EPA stated that it considers the Tanana River an ARNI and cited the presence of subsistence fish and recreational users as the reason."

"With less than two months of consideration possible, less than one page of administrative reasoning, and with only one signature from a state-level EPA operations director, a critical rail extension project across the Tanana River has been blocked by EPA's unilateral declaration of the area as an ARNI."

While CWA guidelines require a showing that an alternative is the least environmentally damaging, "EPA has instead insisted that a 'no-build alternative must be presumed to be a practicable alternative to meeting the transportation needs of the area,"" the senator said.

Substantial questions

Murkowski told Jackson that EPA's actions raise "substantial questions" about the process the agency used and requested detailed answers to a number of questions, including "the genesis and statutory authority" for the term ARNI, which the senator said appears to have been created by the Corps-EPA memorandum of agreement.

On Alaska designations, the Murkowski asked for any information relied on by EPA providing the basis for the ARNI designations for the Colville and Tanana, including any communications with outside parties, including other governmental entities, on the status of the Colville and Tanana.

Murkowski said it appears that exercise of EPA's authority under the Clean Water Act, "as interpreted by the agency," requires "no public input, consultation, or even notice.'

She also questioned whether steps to permit projects give "the applicant and the public a clear path forward and transparent public record, and a fair opportunity to make their case." •

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GOVERNMENT Looking at the new landscape for OCS

New regulations for offshore drilling have come into effect as BOEMRE continues to re-organize itself after Gulf of Mexico disaster

By ALAN BAILEY

Petroleum News

s 2010, the year that saw the worst ever oil spill in the United States, draws to a close, the oil industry is still assessing the impact of the changing regulatory environment in the wake of the explosion of the Deepwater Horizon rig in the Gulf of Mexico. The U.S. Minerals Management Service has morphed into the Bureau of Ocean Energy Management, Regulation and Enforcement; a bevy of new offshore drilling regulations has emerged; and in Alaska Shell is still waiting for permission to drill in the Arctic outer continental shelf.

In a keynote address at the First International Oil & Gas Law Conference in New Orleans on Dec. 8, Michael Bromwich, director of BOEMRE, reviewed the various changes that the U.S. Department of the Interior has implemented in response to the Deepwater Horizon accident.

Immediately after the accident "it became abundantly clear that there were significant shortcomings in drilling safety practices and equipment and that industry and the government collectively lacked the ability to quickly gain control over a wild well in deep water," Bromwich said. "Once oil started flowing into the Gulf, spill response capabilities were taxed to the limit."

Two new rules

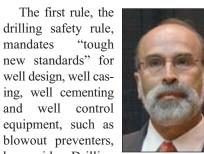
Bromwich summarized two new offshore drilling rules that BOEMRE issued during the year in response to the accident.



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mandates

he said. Drilling MICHAEL BROMWICH operators also must

now arrange an independent inspection and certification of each stage of the drilling process, and an engineer must certify that each blowout preventer used in an OCS drilling operation meets new testing and maintenance standards, and that the shear rams in the blowout preventer can sever the drill pipe at anticipate levels of well pressure, Bromwich said.

The second rule mandates the implementation of a safety and environmental management system, or SEMS, for any oil and gas operation in federal offshore waters, Bromwich said. A SEMS protocol, already voluntarily used by many companies, requires the identification of potential hazards and the development of risk-reduction strategies for all activities, he said.

To supplement its regulations, BOEM-RE has also issued several notices to lessees, Bromwich said. One of these rules, designated NTL-06, requires oil spill response plans to include a well-specific blowout and worst-case discharge scenario, including information about the assumptions and calculations used for the scenario. Another rule, NTL-10, requires an operator seeking to drill in deep water to provide a corporate statement, signed by an authorized company official, certifying that the operator will comply with all BOEMRE regulations; this rule also confirms that BOEMRE will evaluate whether the operator has submitted sufficient information to demonstrate access to the necessary equipment and resources, to be able to promptly respond to a deepwater well blowout.

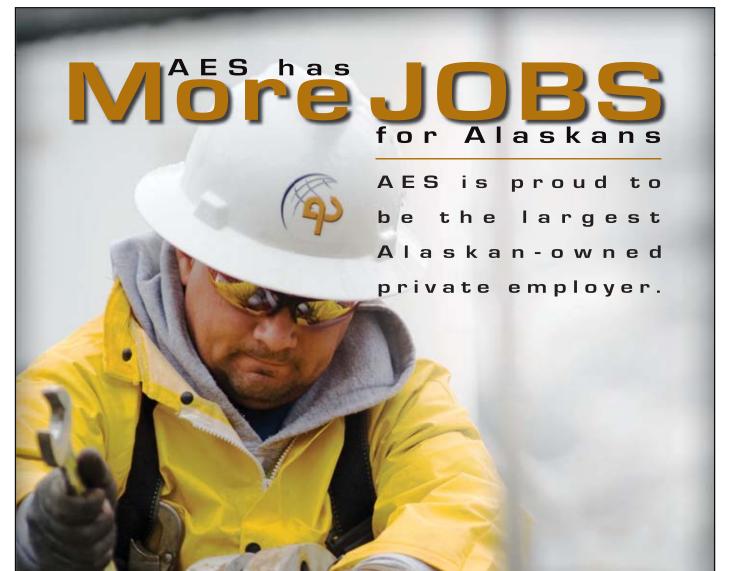
BOEMRE is preparing a guidance document, to help clarify permitting procedures under the new rules and regulations, Bromwich said.

The agency is also engaged in a review of the use of "categorical exclusions," the procedure whereby certain oil gas activities could be permitted with minimal environmental scrutiny - in August BOEMRE banned the use of categorical exclusions for new deepwater oil drilling.

Major reorganization

In parallel with issuing new rules and regulations, BOEMRE is undergoing a major reorganization, separating the old MMS structure into separate entities for promoting offshore energy development, regulating offshore drilling and collecting

see OCS LANDSCAPE page 9



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GOVERNMENT

Goll retires; Alaska gets acting director

Bureau of Ocean Energy Management, Regulation and Enforcement Director Michael Bromwich said Dec. 20 that Dr. James Kendall will serve as acting director of the Alaska Outer Continental Shelf Region beginning Jan. 1.

John Goll, the current director, is retiring effective Dec. 31.

Kendall is currently chief of BOEMRE's Environmental Division, responsible for overseeing the bureau's \$30 million applied environmental and socioeconomic research program, its responsibilities under the National Environmental Policy Act, its environmental compliance responsibilities and the Coastal Impact Assistance Program. Prior to joining the BOEMRE headquarters office in 2000, Kendall was chief of the Environmental Sciences Section of BOEMRE's Gulf of Mexico Region.



JAMES KENDALL

"At a time when offshore activities in Alaska are under care-

ful review and consideration by the Department of the Interior and BOEMRE, Jim will serve at a critical time while we search or a permanent head of the Region," said Director Bromwich. "We're focused on a number of important issues in attempting to ensure that offshore energy operations be assessed carefully and responsibly, and with appropriate weight given to the special circumstances in the Arctic. Given his strong scientific background, Jim has the right background and credentials to lead the Alaska Region during this period."

Goll retires after 41 years in public service, having led the Alaska Region as director since 1997. Goll joined the bureau as an environmental scientist in 1982 after service in the U.S. Army, the U.S. Nuclear Regulatory Commission, and the U.S. Geological Survey.

-PETROLEUM NEWS

EXPLORATION & PRODUCTION

Coil tubing Cook Inlet workover completed

A small Alaska oil and gas producer, Cook Inlet Energy, recently revived a long-idled well in its West McArthur River unit for use as an enhanced oil recovery well.

The West McArthur River Unit-2A well had been shut-in since late 2001, said a Dec. 16 press release from Cook Inlet Energy's parent company, Miller Energy Resources of Tennessee.

"The restoration of WMRU-2A will allow for a pilot water flood program which is expected to increase oil recovery rates at wells Miller presently operates in the area as well as providing backup to the current injection well," the release said.

Coil tubing unit

The well workover involved "a cost saving non-rig method that entailed the use of a coil tubing unit," the release said. "The final coil tubing completion string was configured so that the well could be returned to production as an oil well, but converted to a water flood well without additional work on the well.

"This approach is allowing Miller to recover remaining oil before implementing the water flood program. Post workover, WMRU-2A tested at 37 BOPD and has already produced nearly 1,000 barrels of oil, which helps to offset the workover cost of approximately \$500,000."

Anchorage-based Cook Inlet Energy became an operator on the west side of Cook Inlet in late 2009, acquiring with Miller's help a collection of assets that previously belonged to California-based Pacific Energy Resources Ltd., which liquidated through bankruptcy proceedings.

Cook Inlet Energy gradually has been restoring and enhancing production from the mostly shut-in assets.

-WESLEY LOY

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Federal prosecutors say company violated probation on 2006 spill, set to expire Nov. 28, when Lisburne spill occurred in 2009

in federal court

BP pleads not guilty

By ELIZABETH BLUEMINK

Anchorage Daily News

P pleaded not guilty Dec. 20 to proba-Dion violations relating to its criminal conviction for a major North Slope oil spill in 2006.

If found guilty of the violations, BP could face maximum penalties of five years of additional probation and a \$12 million fine, assistant U.S. attorney Aunnie Steward told a federal magistrate judge Dec. 20 in Anchorage.

Federal prosecutors say BP violated its probation when it spilled about 13,000 gallons of oil onto the tundra at the Lisburne oil field in 2009. The company's probation officer, Mary Frances Barnes, filed a petition to revoke probation in November.

The company has been on probation since it pleaded guilty to misdemeanor criminal violations of the federal Clean Water Act for its 2006 spill from a corroded and neglected pipeline at Prudhoe Bay, the nation's largest oil field.

More than 200,000 gallons of oil leaked onto the tundra during the 2006 spill — the largest-ever oil spill on the Slope. While smaller, the 2009 Lisburne spill was also one of the Slope's largest.

BP Alaska spokesman Steve Rinehart said Dec. 20 that the company has met all the terms of its 2007 plea agreement and does not need to remain on probation. The 2009 spill should be viewed in the overall context of the significant improvements the company has undertaken to make its Prudhoe Bay operation safer, he said. The probation had been set to expire on Nov. 28. BP made its initial appearance on the petition to revoke probation in federal magistrate judge John Roberts' courtroom Dec. 20. The company entered its not-guilty plea and agreed to abide by the terms of its probation while the case proceeds. Those terms include not committing additional crimes and not selling or transferring any of the company's Alaska assets worth more than \$10 million without approval from the probation officer. An ultimate decision on BP's probation is up to U.S. District Judge Ralph Beistline, who sentenced the company in 2007. Beistline has not scheduled a hearing yet but BP and federal attorneys suggested that it be in April or May.



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see BP PLEA page 10

Pearce assesses Alaska impacts of OCS regs

At the Law Seminars International Energy in Alaska conference on Dec. 6 Drue Pearce, senior policy advisor with law firm Crowell and Moring, reviewed the possible impacts in Alaska of changes in outer continental shelf regulation by the Bureau of Ocean Energy Management, Regulation and Enforcement. As a consequence of new Alaska regulations and a heightened safety awareness following the Exxon Valdez disaster in 1989, Alaska is in many ways already up to speed in the rigor with which safety and environmental protection is approached, Pearce said. She cited as examples the comprehensive oil discharge prevention and contingency plans used for Alaska offshore drilling, both for wells that have been drilled on the outer continental shelf in the past and for OCS wells that Shell currently plans to drill.

"Alaska law already requires extremely detailed oil discharge and contingency plans, and we in Alaska are frankly already ahead of the game in terms of all these response requirements," Pearce said.

Whereas a typical Gulf of Mexico contingency plan used to amount to just 50 pages, Shell's plan for its Beaufort Sea drilling consists of a 384-page document, plus some ancillary plans, she said.

On the other hand, although procedures under the National Environmental Policy Act have not really changed following the Deepwater Horizon disaster, companies can expect a need for much more detailed NEPA-related paperwork, Pearce said. And the listing under the Endangered Species Act of animals such as the polar bear, impacted by receding Arctic sea ice, will trigger new requirements for ESA consultations in association with OCS permitting — the impact of those consultations on offshore activities remains something of an unknown.

—ALAN BAILEY

continued from page 7 **OCS LANDSCAPE**

offshore oil and gas revenues.

"In the past these three conflicting functions resided in the same bureau, creating the potential for internal conflict and an increased risk of a pro-development bias," Bromwich said. "This will no longer be the case."

The simpler part of this reorganization, the splitting off of the revenue arm of the old MMS, has already been accomplished through the formation of the Office of Natural Resources Revenue. However, disentangling the previously intertwined functions of OCS leasing and OCS regulation is a complex operation that remains a work in progress.

"As part of our reform effort we have created 11 implementation teams that are responsible for analyzing various aspects of BOEMRE's regulatory structure and helping to implement the reform agenda that I have for BOEMRE," Bromwich said. "These teams are already hard at work analyzing various aspects of our organization and laying the foundations for lasting change to the way BOEMRE does business."

BOEMRE has also introduced a new recusal policy, requiring employees to notify supervisors of any potential conflicts of interest, prohibiting inspectors from inspecting the facilities of former employers and requiring inspectors to report any attempt by industry to exert undue influence over inspection activities. And in June, immediately after his appointment as BOEMRE director, Bromwich announced the formation of a BOEMRE investigation and review unit, to investigate any allegations of misconduct by agency staff or by companies involved in oil and gas leasing.

Culture of safety

In reviewing the various reforms that BOEMRE is enacting, Bromwich said that everyone must be open to developing a necessary culture of safety.

"In the past industry has in many instances reflexively opposed new regulations," Bromwich said. "That is no more responsible than the mindless multiplication of new requirements for their own sake. We must strike a new balance that fully involves industry in the regulatory process but that recognizes the need for us to exercise independent judgment."

And, while BOEMRE will be introducing some further new safety measures, including additional requirements for blowout preventers and remotely operated vehicles, the agency will introduce these measures through the standard rulemaking process, involving public notices and public comments, Bromwich said. In the absence of any significant new revelations from ongoing investigations of the Deepwater Horizon incident, BOEMRE does not anticipate any further emergency rulemaking for oil and gas permitting, he said. ●

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• ALTERNATIVE ENERGY

The ins and out of adding new power

Strandberg explains the complexities of adding new hydropower to the Alaska Railbelt's stranded and fragile electricity grid

By ALAN BAILEY

Petroleum News

A first blush it might appear that connecting a new hydropower plant into the Alaska Railbelt electricity grid would just be a question of wiring up a transmission line or two from the plant to the nearest point on the grid infrastructure.

Well, not quite.

As the Alaska Energy Authority moves forward with a potential plan to build a 600-megawatt hydropower dam on the Susitna River, south of the Alaska Range, the authority has been communicating with the six Railbelt power utilities, starting discussions on how to ensure reliable, stable power supplies while also maximizing economic efficiency, if the proposed power plant comes to fruition, AEA project manager James Strandberg told the Law Seminars International Energy in Alaska conference Dec. 7.

A Susitna hydropower plant would represent by far the largest single piece of power generation kit in the entire Railbelt. And, so, how can the stability of the Railbelt power supplies be assured, especially given the extreme isolation of the Railbelt grid from any other North American power system?

Three centers

The Railbelt utilities synchronize their power delivery arrangements across the grid using three power dispatch centers, two in Anchorage and one in Fairbanks, Strandberg said. Dispatchers at each center have access to information about all power generation systems on the grid, with the ability to make decisions about which generators to use in support of the constantly fluctuating power demand.

A new hydropower plant would not just have transmission lines connected into the grid: It would also have control circuitry connected to those dispatch centers, moving information about the plant operations into the synchronized computer-based systems that control the entire grid, thus enabling dispatchers to control the output from the plant's huge water turbines.

And dispatch decisions about how much power to generate from each power plant on the grid become a question of balancing economic and practical issues relating to the engineering and financial characteristics of each power source.

To explain this, Strandberg considered three potential power sources on the grid: a modern, simple-cycle gas turbine, a more complex combined-cycle gas-fired turbine system, and a large hydropower system, such as is envisaged for the River Susitna.

Control responses

A simple-cycle gas turbine is relatively cheap to install and its lightweight construction allows its power output to be very rapidly altered, to match continuously varying levels of power demand, Strandberg said. And the operational cost of a turbine fluctuates along with the power output, as the rate of the gas burn varies.

On the other hand, a vertical-shaft, hydro turbine generator is at the other end of the power generation spectrum, with heavy machinery that is sluggish to respond to any change in its control inputs. Huge volumes of water typically flow through the turbine, and the relatively high mass of the water has an inertia effect that further slows the responsiveness of the generator to any request to change the power output level.

"The power and inertia of a moving water column is very different from the power and inertia of a moving air column," Strandberg said.

In addition, although a typical hydropower plant has a very much higher up-front capital cost than a gas turbine system, once the hydropower system is working the operational cost is almost constant, regardless of how much power the system is generating.

And a combined-cycle gas-fired system has operational characteristics somewhere between a simple-cycle turbine and a hydropower system, Strandberg said.

Base-load power

Taken together, the differences in generator control responsiveness and cost characteristics across a power grid that has a choice of power sources tend to lead dispatchers to favor the use of hydropower at maximum output as the prime source of base electrical power, using

see **NEW POWER** page 11



continued from page 1 CHEVRON HOLDINGS

portfolio for the Cook Inlet (for both oil and gas)," the Deep Creek POD said.

The company said it has no plans through March 2012 for any exploration drilling in the southern Deep Creek unit acreage, outside of the Happy Valley participating area.

"Union plans to continue its efforts to farmout the southern Deep Creek exploration acreage during the 8th POD Plan period and will keep the Division apprised of same," the POD said. "Union will be opening a data room in January to market our Alaska assets. If we are successful in finding a qualified buyer, we are optimistic to close the sale around the middle of 2011. The southern Deep Creek exploration acreage is an integral part of the Deep Creek asset and we are marketing it as such."

The POD, which covers the period from April 1, 2011, to March 31, 2012, said Union plans to continue operating its Happy Valley wells to optimize production from the Deep Creek unit. But the company has no plans to drill any new development wells within the unit during the period.

Chevron was one of the original explorers and developers in the Cook Inlet basin. Many of the basin's oil and gas assets, however, are now well beyond their prime.

Other assets the company intends to divest include interests in 10 offshore platforms; the Granite Point, Middle Ground Shoals, Trading Bay and McArthur River fields; onshore gas fields including the Ninilchik and Beluga River units; two gas storage facilities; and the Cook Inlet Pipe Line Co. and Kenai Kachemak Pipeline LLC.

Chevron put net production from its Cook Inlet assets at about 4,000 barrels of oil per day and 90 million cubic feet of natural gas per day.

-WESLEY LOY









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continued from page 8 BP PLEA

Federal attorneys have said that the judge has several options: He could revoke probation and impose a new sentence that involves a new period of probation and new penalties; extend the probation period; or reject the petition and take BP off probation.

BP's 2007 plea agreement included three years of probation and \$20 million in fines and restitution.

In the petition filed in November, Barnes, the probation officer, said BP violated its probation when it failed to take action on warning signs that the Lisburne pipeline was compromised months before it leaked. The company's conduct was negligent under state law and the federal Clean Water Act, according to Barnes. ●

Contact Wesley Loy at wloy@petroleumnews.com

OFC identifies speakers for public forum

PETROLEUM NEWS

The federal coordinator's office for the Alaska natural gas pipeline has identified panelists who will speak at its Jan. 22 public forum on natural gas markets, set for 1 to 3:30 p.m. at the University of Alaska Anchorage Fine Arts Building Recital Hall. The forum will be streamed live on the federal coordinator's website at www.arcticgas.gov and broadcast at a later date on the statewide TV channels that carry Gavel to Gavel.

"The purpose of the forum is to help Alaskans understand the potential for a North Slope gas pipeline and the economic issues affecting that potential," Federal Coordinator Larry Persily said. "The Alaska gas pipeline will have to be economically viable in very competitive natural gas markets. The speakers will provide insights that should help Alaskans better understand the possible natural gas markets of 2020 and beyond."

The panelists are:

The forum will be streamed live on the federal coordinator's website at www.arcticgas.gov and broadcast at a later date on the statewide TV channels that carry Gavel to Gavel.

• Jeff Wright, director of the Office of Energy Projects for the Federal Energy Regulatory Commission, Washington, D.C. Wright oversees applications for the construction and operation of natural gas pipelines and storage facilities nationwide and the siting and safety of liquefied natural gas terminals. In addition, his office administers supplemental siting authority for interstate electric transmission facilities.

• Edward Kelly, vice president of North American Gas and Power for Wood Mackenzie, Houston. Kelly is a recognized expert on the North American natural gas and power industries, with focused expertise in the natural gas midstream, energy markets and energy business strategies. He is familiar with the Alaska gas line project, having provided consulting services to state officials on several occasions over the past 12 years.

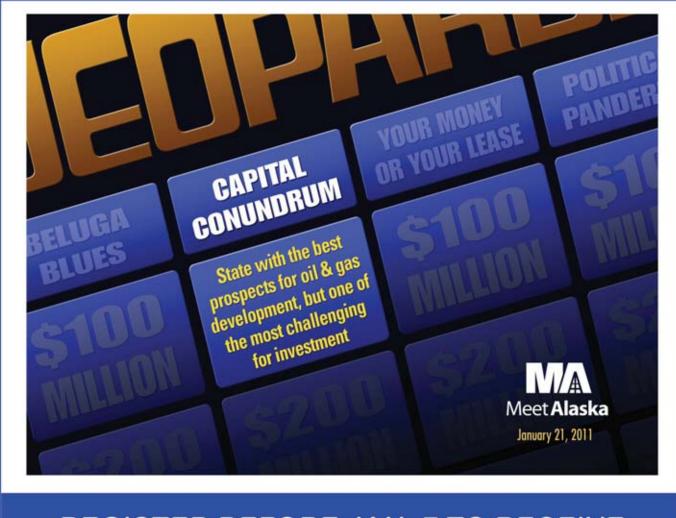
• Teri Viswanath, director of natural gas commodities research, Credit Suisse, Houston. She has served as director of research and strategy for the energy trading group at Deutsche Bank; a consultant at Citadel Investments; and a director at Dynegy, a wholesale power generating company.

• Ron Denhardt, chief executive officer for Strategic Energy and Economic

Research Inc., Winchester, Mass. Denhardt manages SEER's energy consulting services and is the primary author of SEER's short- and long-term natural gas services. He has 30 years of experience in the energy industry, focusing primarily on natural gas and electricity.

The Office of Federal Coordinator for Alaska Natural Gas Transportation Projects was established by Congress in 2004 to expedite and coordinate federal permitting for a pipeline to deliver natural gas from Alaska's North Slope to U.S. markets. ●





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continued from page 10 **NEW POWER**

gas-turbine powered generators to adjust the power supply to match the fluctuating power demand.

However, the need for a dependable power supply across the grid brings another set of complications into the power dispatch equation. Essentially, the grid requires spare generation capacity that can be brought into play rapidly, to ensure continuity of supplies should a generator or transmission line fail. And dispatchers need to keep in their back pockets enough reserve generation capacity to cover those potential hiccups in the generation system.

"The reserve capacity is maintained so that the largest unit that's operating, if that's clicked off, the other units could pick it up," Strandberg said.

And that's a particular concern in the isolated Railbelt grid with its lengthy and flimsy transmission lines connecting the main population centers — in the Lower 48, by comparison, there is vast network of robust transmission lines connecting huge numbers of power plants, so that if one power generation system fails there may be no noticeable impact on the grid as a whole.

In Alaska, what would replace the perhaps 150 megawatts of power emanating from a Susitna hydropower system were, say, a safety system at the plant to trigger a shutdown?

Varied sources needed

An integrated resource plan study commissioned by AEA recommended that a broad, diversified set of power generation systems, including hydro, gas turbine generation, coal-fired power, wind power, geothermal energy and energy from municipal waste, would be especially appropriate for the Alaska Railbelt, Strandberg said.

But a large hydropower system, coupled with an upgraded power transmission system, could provide a stable backbone for base-load power in the grid.

"A large-scale project like this, with very heavy inertia, is very beneficial to the long-term stability of the network," Strandberg said. \bullet

Contact Alan Bailey at abailey@petroleumnews.com

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Petroleum

Arctic Catering promotes McIntosh to general manager

In his new role as general manager, McIntosh will progressively take responsibility for both

Lower 48 and Alaska operations. He will have a more active role in the contracting process for

strategies, in addition to providing leadership and development of new business opportunities.

Additionally, Ean Aucoin has been promoted to field operations manager, Alaska region. Aucoin will be responsible for all aspects of Arctic Catering's Alaska operations including plan-

the Lower 48, streamlining processes and providing overall communication of operational

Arctic Catering Inc. said Dec. 21 that it has promoted Terry McIntosh to general manager. "Terry's sixteen years of experience with Arctic Catering Inc., the past fourteen years as the operations manager, has prepared Terry well for his new role as General Manager. Terry's wide knowledge of remote camp catering and the culinary field has allowed him to approach challenges and present solutions on emergent issues flawlessly," said Randy MacMillan, vice president of Arctic Catering.



EAN AUCOIN **TERRY MCINTOSH**

ning and coordination of camp mobilizations, startup and closeout, ensuring efficiencies and adherence to company policies and procedures. His new role coordinates logistics and provides support to camp managers and field personnel.

Oil Patch Bits

Crowley expands terminal complex at Port Everglades

Crowley Maritime said Dec. 15 that it is expanding its Port Everglades with a new 10-year terminal lease that calls for additional acreage and increased container guarantees. The Broward County Commission, the governing board for Port Everglades, has approved the new lease. The terms of the new lease call for increasing Crowley's terminal from 68.2 to 80 acres. Guaranteed container moves will begin at 110,000 in 2011, increase to 112,000 in 2012, and increase by 1,000 annually thereafter on each Jan. 1 through 2020. Under the new agreement Crowley's first-year guarantee represents nearly 96 percent of their FY10 container volumes.

Crowley operates the largest container terminal in Port Everglades and the company's economic impact through the Port could increase by 9 percent over the remaining term of this agreement, based on the increase in guaranteed volumes alone. The economic impact resulting from Crowley's activity at Port Everglades is estimated to support 31,983 jobs and generate personal income of \$1.1 billion, plus state and local taxes of approximately \$80.1 million.

see OIL PATCH BITS page 13

Companies involved in Alaska and northern Canada's oil and gas industry

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Alaska Dreams
Alaska Frontier Constructors
Alaska Interstate Construction (AIC)13
Alaska Marine Lines16
Alaska Railroad Corp.
Alaska Rubber & Supply
Alaska Steel Co.
Alaska Telecom
Alaska Tent & Tarp
Alaska West Express16
Alaskan Energy Resources Inc
Alutiiq Oilfield Solutions
American Marine9
Arctic Controls
Arctic Foundations
Arctic Slope Telephone Assoc. Co-op.
Arctic Wire Rope & Supply
ASRC Energy Services7
Avalon Development

B-F

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Peak Civil Technologies	
Peak Oilfield Service Co.	
PENCO	
Petroleum Equipment & Services	6
PND Engineers Inc.	
PRA (Petrotechnical Resources of Alaska	a)2
Price Gregory International	

O-Z

Bald Mountain Air Service
Bristol Bay Native Corp.
Brooks Range Supply8
Builders Choice Inc.
Calista Corp.
Canadian Mat Systems (Alaska)15
Canrig Drilling Technologies
Carlile Transportation Services
CGGVeritas U.S. Land
CH2M HILL
Chiulista Services
Colville Inc.
ConocoPhillips Alaska
Construction Machinery Industrial
Crowley Alaska
Cruz Construction
Delta Leasing10
Delta P Pump and Equipment
Denali Industrial
Dowland-Bach Corp.

	T' D
Lister Industries	Tire D
Lounsbury & Associates	10 TOMC
Lynden Air Cargo	16 Total S
Lynden Air Freight	16 TOTE-1
Lynden Inc.	16 Totem
Lynden International	16 TTT En
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Maritime Helicopters	Univa
M-I Swaco	9 Unive
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	Usibel
N-P	West-I
	Weste
Nabors Alaska Drilling	14 Westo
Nalco	XTO E
NANA WorleyParsons	Yenne
NASCO Industries Inc.	

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The Distribution Systems (TDS)
TOMCO Group of Companies
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\continued from page 1 EIA FORECAST

that take into account various factors such as changing laws and regulations, and fluctuating commodity prices.

The complete AEO, slated for release next spring, will include those alternative forecasts, of which some should shine more favorably on Alaska and some even less favorably.

Last forecast had line in 2023

The 2010 AEO reference case projected that an Alaska gas pipeline would be completed in 2023, but the 2011 reference case doesn't include the project at all, saying, "This change is a result of increased capital cost assumptions and lower natural gas wellhead prices, which make it uneconomical to proceed with the project over the projection period."

In one sense, the Alaska natural gas pipeline is farther along than ever before, with two competing proposals each holding open seasons this year, but the EIA report reflects the growing concern that shale gas may have closed the window on Alaska gas. The State of Alaska rejects that assumption, arguing that the cost of shale gas is not fully understood.

The EIA report also warns against placing too much stock in the reference case: "Because of the uncertainties inherent in any energy market projection, the Reference case results should not be viewed in isolation. Readers are encouraged to review the alternative cases when the complete AEO2011 publication is released in order to gain perspective on how variations in key assumptions can lead to different outlooks for energy markets."

How does the EIA decide if the Alaska

The State of Alaska is more optimistic about the pipeline. A recent state-backed forecast expects gas prices in Alberta, where Alaska gas would most likely be sold, to hover between \$5 and \$7 per mcf through 2020, and then start to rise after that. The

state believes the pipeline is economic within that price range.

pipeline makes its reference case?

Simply put: If natural gas prices are expected to be above a certain level by the date the pipeline gets sanctioned, then the project get included. That "level" is an average Lower 48 wellhead price of about \$6.18 per thousand cubic feet in 2009 dollars, according to Joe Benneche, an EIA analyst who helped construct the reference case.

The actual model is much more complicated. To forecast the price in any given year, it takes into account forecasts for the surrounding years, both earlier and later.

With the increase of shale gas resources, the EIA reference case no longer forecasts natural gas prices to be high enough to justify the expensive pipeline by 2035.

The 2011 reference case more than doubles the amount of shale gas believed to exist beneath U.S. soil. The EIA now estimates that the U.S. holds 827 trillion cubic feet of technically recoverable unproved shale gas resources, an increase of 480 tcf from the 2010 estimate. Because of that, the EIA doubled its estimates for shale gas production and upped its estimates for total Lower 48 gas production by 20 percent through 2035.

Because of those production increases, the reference case expects wellhead

prices will stay below \$5 per thousand cubic feet through 2022 and increase to \$6.53 by 2035. In its 2010 estimate, the EIA projected natural gas wellhead prices would reach \$8.19 by 2035.

Natural gas prices are currently closer to \$4 per mcf.

Issue of economics

The EIA doesn't believe the pipeline is economic at its newly forecasted prices, but the full report available next year should add nuance to that view. The 2010 AEO alternative cases looked at the impact of high and low oil prices, of a good and bad economy, of laws that might sunset or be extended and of various possible outcomes for unconventional gas, including no shale drilling, no lowpermeability drilling and high shale drilling.

The new EIA report also notes the uncertainty of shale gas production, where wells within the same formation produce at very different rates and environmental concerns are increasingly adding uncertainty to the long-term future of many development ventures.

On top of that, the reference case only looks out to 2035, meaning that even in this new forecast the Alaska gas pipeline could be economic by 2036 and not make the cut.

"The reference case isn't the future," said Philip Budzik, an EIA analyst. "It's just our best representation of the future based on what we know today. What tomorrow will bring, I do not know."

The state remains bullish

The State of Alaska is more optimistic about the pipeline.

A recent state-backed forecast expects gas prices in Alberta, where Alaska gas would most likely be sold, to hover between \$5 and \$7 per mcf through 2020, and then start to rise after that. The state believes the pipeline is economic within that price range.

The reason for that bullish outlook is that the state expects shale production to get more expensive, not less, in the coming decades. The costs to produce shale are not fully understood because of the relatively short life of shale development in North America, according to Antony Scott, a commercial analyst with the Division of Oil and Gas.

"My belief is that the biggest driver of the differences (between how the state and the EIA view future gas prices) has to do with expectations around how shale gas finding and development costs evolve," Scott said. He believes the state is taking more factors into account, such as the rising cost to acquire land, the rising cost of water used in the hydraulic fracturing process, and the need for new infrastructure in many shale plays.

While prices are crucial, Scott believes other factors will also come into play as the project moves toward sanctioning: "The Alaska project is of sufficient size that the companies are going to be looking at it on an individual basis. It's a strategic project."

Speaking in November, representatives from the two pipeline projects offered a lukewarm view of the market. TransCanada's Tony Palmer said Alaska gas can compete, but is at a disadvantage to shale gas, while Denali's Bud Fackrell said the pipeline is probably not economic today, but the "verdict is probably still out on shale gas."

The most recent cost estimates for the pipeline have pegged the price of the project between \$20 billion and \$41 billion depending on the route and the company in charge. \bullet

Contact Eric Lidji at ericlidji@mac.com

A firm price threshold

continued from page 12 **OIL PATCH BITS**

These impact estimates are based on the Port Everglades Economic Impacts Model developed by Martin Associates as part of the 2006 Port Everglades Master and Vision Plan.

EOR projects boost recovery of oil and gas fields

Schlumberger said Dec. 10 that it has made a multiyear research technology cooperation agreement focusing on improving the recovery factor of oil and gas reservoirs and extending the life of existing oil and natural gas fields.

The combination of Schlumberger formation evaluation and reservoir characterization knowledge with the subsurface laboratory and reservoir expertise of Shell will result in the development of better tools and methods to obtain improved field data, better and more efficient numerical models, and enhanced field development methods. The research collaboration is an expansion of the joint work on several fronts that Shell and Schlumberger already conduct together, and it will initially focus on two specific projects: reservoir surveillance for enhanced oil recovery projects, and digital rock for detailed numerical modeling of reservoir rocks. The key target of the cooperation is to shorten development cycles, increase production and enhance ultimate oil and gas recovery. As part of this joint cooperation agreement, Schlumberger and Shell research scientists will work closely together in several research facilities in the U.S., UK, Russia, Oman and the Netherlands. some in expanded form — will appear in the next Arctic Oil & Gas Directory, a full color magazine that serves as a marketing tool for Petroleum News' contracted advertisers. The next edition will be released in March.

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South Korea backs Arctic

State-run Korea Gas Corp. has made a C\$30 million bet on the future of Arctic energy by acquiring a minority share of a Significant Discovery License on the Mackenzie Delta from MGM Energy, the smallest, liveliest — and, in recent years, the only — explorer in the region.

The deal made through wholly owned subsidiary KOGAS Canada involves the 21,000 acres Umiak SDL, which includes both a natural gas and oil discovery.

MGM, as operator, is selling 20 percent of its 60 percent working interest in the SDL, which gives it indefinite tenure over the lease. ConocoPhillips owned the remaining 4 percent interest.

KOGAS will pay C\$20 million when the transaction closes, likely by February, and C\$10 million if and when a decision is made to construct the Mackenzie Valley pipeline, or some other project is approved to commercialize production from the SDL.

MGM has an estimated net mean contingent plus prospective resources of 328 billion cubic feet for its 60 percent stake in Umiak. The KOGAS acquisition represents a sale of 109 billion cubic feet, or about 12 percent of MGM's current net mean contingent plus prospective resource base of 887 bcf.

Based on expected activity levels, proceeds from the sale will be sufficient to fund MGM's capital and operating expenditures into 2012.

Korea Gas to invest US\$1.1B

Korea Gas agreed earlier this year to invest US\$1.1 billion to joint develop gas fields in Canada with Encana, taking a 50 percent stake in properties in the Montney and Horn River unconventional plays in sparsely drilled areas of northeastern British Columbia.

see KOREA GAS page 15

continued from page 1 MAC APPROVAL

Project in public interest

The NEB said Dec. 16 that the plan by Imperial Oil, with a 34.4 percent stake, and its co-venturers — the Aboriginal Pipeline Group (33.3 percent), ConocoPhillips (15.7 percent), Royal Dutch Shell (11.4 percent) and ExxonMobil Canada (5.2 percent) — to build a 720-mile pipeline through the Northwest Territories to carry 1.2 billion cubic feet per day (1.8 bcf per day by adding compression) was "in the public interest," based on current and future gas needs.

Acknowledging that the MGP would have "much larger and far reaching effects than previous developments in the North," the NEB said the project came under a broad examination, based on how it would "affect the people, the land where they live, and the economy, now and in the future."

But it concluded the MGP would usher in a new era of economic development in the Arctic and "contribute to strong, selfreliant communities that continue to take care of the land and the people in the North."

The federal cabinet is now expected to



decide in early 2011 whether to sign off on the NEB's approval, said Environment Minister John Baird, who carries the MGP file, although Natural Resources Minister Christian Paradis will recommend whether the final go-ahead should be issued.

Describing the MGP as exciting for Canada's North and the Canadian economy, Baird said the government is eager to "jump the next hurdle in getting the regulatory approvals completed."

Unresolved issues

Even if that occurs, the MGP is left with a stack of unresolved matters and unanswered questions, which could mean the project is barely as its halfway point.

It's taken a decade of deliberation and regulatory processes; it could now take another decade of negotiations with the Canadian government over a fiscal agreement, processing of about 6,300 permits and authorizations, investment decisions by the corporate partners and construction before gas could flow from the Mackenzie Delta, as late as 2020.

The major elements covered by the permits include the main pipeline, a separate 280-mile natural gas liquids pipeline to an existing crude oil pipeline at Norman Wells in the central NWT, and the drilling of 28 wells from six pads at the three anchor onshore gas fields which hold an estimated 6 trillion cubic feet of natural gas.

Imperial spokesman Pius Rolheiser said the NEB approval is a "positive step for the project." Beyond that, however, "a number of steps remain and much more work remains to be done before the project can become a reality," he said.

That includes finishing engineering work, updating the cost estimate which was last set at C\$16.2 billion four years ago and acquiring the necessary permits all before an investment decision can be made by the partners, likely in 2013.

Construction start date an issue

However, the consortium is troubled by the NEB's insistence that construction must start by the end of 2015, one year earlier than Imperial had requested.

Rolheiser said the 2015 deadline "will prove very challenging," putting pressure on both the MGP partnership and the government to reach an agreement on the fiscal terms, opening the way to re-staffing the project team and carrying out additional work.

But the drawn-out regulatory phase, which took twice as long as originally hoped, has allowed both known and unexpected competition to intervene, turning what was once seen as a certain project into a questionable proposition.

Government and industry leaders have been largely agreed on one thing — if a 4 bcf per day overland gas pipeline from Alaska, through Canada, to the Lower 48 proceeds first, the MGP would probably be unable to compete for construction labor, materials or market share and would likely be shelved indefinitely. Compounding the economic doubts surrounding the MGP, fast-rising output from North America's shale plays has dragged gas prices to around \$4 per thousand cubic feet, where many producers expected it will remain for at least five years. Some analysts have set \$6 per thousand cubic feet as an economic threshold for the MGP.



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No shortage of upbeat views

There's no shortage of industry and government leaders who take an upbeat view of the MGP's chances proceeding.

NWT Industry Minister Bob McLeod — one of the strongest advocates of natural gas becoming a vital transportation fuel in North America — said the NEB decision

see MAC APPROVAL page 15

continued from page 14 **MAC APPROVAL**

was "an early Christmas present" for a project that "could provide significant economic and environmental benefits" for the NWT and Canada.

Bob Reid, president of the Aboriginal Pipeline Group (which must arrange about 400 million cubic feet of gas supplies from independent producers to secure its onethird equity stake in the MGP), said the MGP is "truly a nation-building project. It's going to be able to deliver the clean energy we need in an environmentally responsible way."

Brenda Kenny, president of the Canadian Energy Pipeline Association, said the MGP could "open a brand new supply basin" in the Mackenzie Delta and Beaufort Sea and "provide thousands of jobs that would not occur otherwise."

Dave Collyer, president of the Canadian Association of Petroleum Producers, said the MGP is a "long-term project with a long project life and I think the proponents will ultimately make their decision based

continued from page 14 KOREA GAS

MGM President Henry Sykes said the deal "is an expression of confidence in the value of natural gas resources in Northern Canada, the quality of the Umiak SDL and the prospect of a Mackenzie Valley pipeline."

MGM also said that, subject to regulatory approvals, it will drill an oil prospect in the Great Bear River area of

on their long term view of gas prices."

But he touched on the issue that causes the greatest doubt among industry observers by noting how much the market has changed since the MGP was proposed, adding "we have to accept that it's a more difficult market."

Market challenges

Rolheiser agrees that the challenge for the MGP is to "compete on a supply/cost basis with other sources of supply in the the Central Mackenzie Valley, where it acquired seismic last winter.

It expects to spud the well in early February, with a total project cost of C\$8 million (C\$4 million net to MGM).

Sykes said that although the well is high risk, "the potential is great and any oil discovered can be transported on the existing Norman Wells pipeline," an underutilized system from the Northwest Territories only commercial oil field to northern Alberta.

-GARY PARK

North American market. That includes liquefied natural gas, shale gas, a potential Alaska project and other sources of supply."

Boyd Russell, of Energy Navigator, doubts the MGP will ever proceed because of the estimated 6,000 trillion cubic feet of recoverable shale gas in North America, most of it in the United States and closer to customers than pipelines from the Arctic.

Derek Evans, chief executive officer

of Pengrowth Energy Trust, doubts gas producers in Western Canada would be happy to see the Canadian government give financial support to the MGP at a time when surplus gas is already beating down North American prices.

Ralph Glass, an economist and vice president with AJM Petroleum Consultants, said the companies involved in the MGP have better opportunities to put their money to work in the shale plays southern Canada and the United States.

"There's so much gas available now, or potentially available, with the new technology that is taking hold that the Mackenzie project is not economically viable," he argued.

But there is a solid assortment of observers who insist Mackenzie gas could take its place in the North American supply equation by displacing coal in electricity generation, which could have a positive impact on both Mackenzie and Alaska gas. \bullet

Contact Gary Park through publisher@petroleumnews.com

continued from page 1 BP WORKFORCE

"Over the last five years, BP has provided internships for 107 University of Alaska students and has extended fulltime job offers to 101 students," the report says. "In 2010, BP hosted 15 university graduate summer interns and 14 operator interns from the geosciences, business and engineering fields, and hired 25 new entry level operators."

The Alaska Process Industry Careers Consortium, or APICC, also has been a significant contributor to BP's workforce, the report says.

"In 2010, BP hired 10 summer interns and nine full-time technicians from the APICC program," the report says. "Internships provide students valuable hands-on experience in oil and gas production plants."

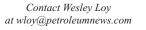
In terms of workforce residency, the report says more than 82 percent of BP Alaska's 2,000 employees "call Alaska home."

The report also lays out figures on BP's Alaska purchasing.

"BP spent more than \$1.9 billion with Alaska companies in 2009," the report says. "In fact, more than 77 percent of all BP's purchases were made with Alaskabased firms. These expenditures ranged from large-scale projects such as the Liberty development to the purchase of goods and services for daily operations. Alaska's contractors have demonstrated their capabilities on many large-scale oil and gas industry projects."

The 12-page report is available at (907) 564-5143 or alaska.bp.com.

—WESLEY LOY



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