



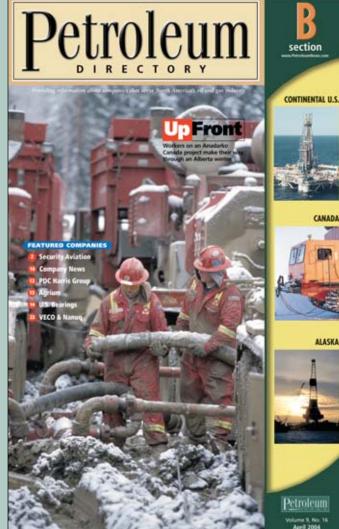
North America's source for oil and gas news



page Alaska still costly place to do 13 business, says Wood Mac

Week of April 18, 2004 • \$1

Inside: Directory & Mining News



Both of Petroleum News' monthly supplements are part of this issue the Petroleum Directory and North of 60 Mining News. Highlighting this month's directory is a story about Security Aviation, which celebrates its 20th anniversary this year. Mining News features an interview with AngloGold's North America exploration manager Jeff Pontius.

BP has conceptual breakthrough on North Slope viscous crude oil

When a single horizontal well was drilled to viscous oil on Alaska's North Slope in 1999, producers had taken what proved to be a significant step toward economic development of the 15 billion barrel resource.

NORTH AMERICA

King of the Hills

EnCana pounces on Tom Brown, tightening grip on U.S. Rockies gas plays

By GARY PARK

Petroleum News Calgary Correspondent

lready the dominant force in the U.S. Rockies, EnCana is taking a bold step to shut any would-be rivals out of the region by offering \$2.7

billion for Denver-based independent Tom Brown

In announcing the bid April 15, the EnCana CEO Gwyn Canadian independent also said it plans to Morgan sell "non-core" conventional assets pro-

ducing 40,000-60,000 barrels of oil equivalent per day in Western Canada for \$1 billion-\$1.5 billion this year on top of divestitures to date of \$380 million.

Chief Executive Officer Gwyn Morgan said the



net effect of the deal-making will balance out EnCana's production, but "significantly enhance" the company's portfolio by lowering its Canadian decline rate and moving in assets that are "growing rather than falling."

The Tom Brown takeover is scheduled to close on June 1, provided 90 percent of shareholders go along with the recommendation of their board of directors and tender to the cash offer of \$48 per share, a

premium of 24 percent to the April 14 closing price. Tom Brown's assets are concentrated in the Rockies, Permian Basin, East Texas and Western

Canada and total 1.2 trillion cubic feet equivalent of reserves, producing 325 million cubic feet per day.

"Under very bad conditions ... this

project is a disaster," van Meurs told

about 15 lawmakers gathered at an

April 7 meeting of House and Senate

members. "How do gigantic projects

ahead decision for the proposed

pipeline by taking a share of the risk, he

The state could help encourage a go-

see KING page A6

🔵 JUNEAU, ALASKA Alaska gas line needs help, says consultant van Meurs

Contends Alaska could benefit from agreeing to share line's financial risks

By LARRY PERSILY

Petroleum News Government Affairs Editor

ure, an Alaska natural gas pipeline could be very profitable if construction costs and market prices for the

gas go in favor of whichever companies hold the risk. But low prices and high tariffs could cause a financial wreck, likely hitting hard at the North PEDRO VAN MEURS Slope producers, international oil and gas

consultant Pedro van Meurs told Alaska legislators.

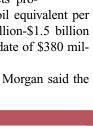


said. And with that exposure, the state

should share in the benefits if the eco-

nomics go well, van Meurs added. "If the project is

come about? Very carefully."



In the last year, new drilling and completion technology tripled productivity from the shallow viscous accumulations, which are both thicker and colder than the slope's conventional oil, and harder to get out of the ground (see sidebar on viscous and heavy oil).



Ed LaFehr, BP **Exploration** (Alaska)

see **BREAKTHROUGH** page A23

BREAKING S Ε W Ν

5 SEC out of date: Industry wants clarity on reserves, says Securities and Exchange Commission reserve rules outdated

7 Squeezing out more oil: BP managing production decline at existing profit centers, such as Alaska; capturing LNG market

9 Oil Sands pipeline plans waver: Enbridge, Terasen plans at risk, but China explores ways to process Alberta crude

Scrambling for bargains

Income trusts in flurry of deals, most recent total C\$1.7 billion

By GARY PARK

Petroleum News Calgary Correspondent

t's garage sale season on a grand scale in the Canadian oil patch, with energy income trusts forking over premium prices to beat off their rivals.

In just two weeks, four trusts negotiated five transactions — four of them in just three days valued at a combined C\$1.7 billion in the scramble to corner producing properties and extend their operating lives.

Industry executives and analysts believe more activity is in store as junior E&P companies cash in on high commodity prices and the high unit valuations of the trusts.

The tight asset market is also forcing more trusts to break with their historic pattern and start chasing assets through the drill bit, with trusts drilling about 1,000 wells in 2003 compared with 889 in 2002.

Pengrowth acquires Murphy assets

The deal-making saw:

Pengrowth Energy Trust, the most diversified of all the trusts, bought most of the Western Canadian conventional oil and gas assets of Murphy Oil on April 8, moving into the heavy oil sector in a sub-

see **BARGAINS** page A20

RIG REPORT

15, 2004.

Courtesy Encana Corp.

Year Ago 979 175

97

194

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Alaska - Mackenzie Rig Report

					-		
Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status		Nackenzie Rig Repo		
	Alask	a Rig Status		Acti	ve drilling companie	es only listed.	
		h Slope - Onshore			ed with top drive units oiled tubing operation		
oyon Drilling							-
reco 1250 UE Ny Top Brewster NE-12	14 (SCR/TD) 15 (SCR/TD)	Milne Point, drilling on E pad, well N Deadhorse yard	/IPE-25A BP Available	This rig rep	ort was prepared b	y Wadeen He	epworth
eco 1000 UE eco D2000 UEBD	16 (SCR) 19 (SCR/TD)	Startup expected April 30, 2004 Drilling in NPR-A, Spark #4	BP				
		moving back to Alpine this week	ConocoPhillips				
VIE 2000	141 (SCR/TD)	Drilling 1E-119, moving to 2L-pad later this week	ConocoPhillips				
abors Alaska Drilling							
ans-ocean rig	CDR-1 (CT)	Stacked, Prudhoe Bay	Available				
eco 1000 UE id-Continent U36A	2-ES (SCR) 3-S	Prudhoe Bay, P1-07A Stacked at Prudhoe Bay	BP Available				
Iwell 700 E	4-ES (SCR)	Milne Point, MPF-45	BP				
eco 1000 UE eco 1000 UE	7-ES (SCR/TD) 9-ES (SCR/TD)	Prudhoe Bay, V-119 Prudhoe Bay, L-201	BP BP	CORE STREET			
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ilwell 2000 Hercules ilwell 2000	16-E (SCR/TD) 17-E (SCR/TD)	Stacked, Prudhoe Bay Stacked, Point McIntyre	Available Available				
nsco Electro-hoist -2	18-E (SCR)	Stacked, Deadhorse	Available				
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co 900	3 (SCR/TD)	Meltwater 2P-443	ConocoPhillips		R		
	North	n Slope - Offshore					
bors Alaska Drilling			2.2				
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udd Pressure Control	340K	Workover, Osprey Platform	Forest Oil	April			Year Ago
Unocal (Nabors Alaska Drilling	g labor contractor)		US 1,13			979 175

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XTO Energy (Inlet Drilling Alaska labor contract)

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	Centra	al Mackenzie Valley		Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator
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Nabors Canada	62	Racked	Available	Aurora Gas Franks 300 Explorer III	AWS1	May 1, 2004 mobilization	Aurora

The Alaska - Mackenzie Rig Report is sponsored by:



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Canada Gulf

ON DEADLINE

NORWAY

Marathon Oil scores discovery on Hamsun prospect offshore Norway

Marathon Oil says it has made an oil and gas find on the company-operated Hamsun prospect offshore Norway.

The Hamsun 24/9-7 vertical well encountered 121 feet of net gas pay and 38 feet of net oil pay, mainly in two reservoirs, Marathon said.

The discovery well, in production license area 150 about six miles south of the Alvheim area, was drilled to a total depth of 7,382 feet below sea level utilizing the Deep Sea Delta semi-submersible rig, Marathon said. The prospect is situated in 403 feet of water on the Norwegian continental shelf.

"The Hamsun well builds upon our successful 2003 Norwegian drilling program, which resulted in three discoveries," said Philip Behrman, Marathon's senior vice president of worldwide exploration.

He said results from the Hamsun well will be used to develop a reservoir management plan for the Hamsun accumulation, including a possible tieback to the Alvheim development.

Marathon is the operator of production license 150 and holds a 65 percent working interest, with Det Norske Oljeselskap holding the remaining 35 percent. Lundin Petroleum has acquired DNO's 35 percent interest in production license 150, which is pending government approval.

-RAY TYSON, Petroleum News Houston correspondent

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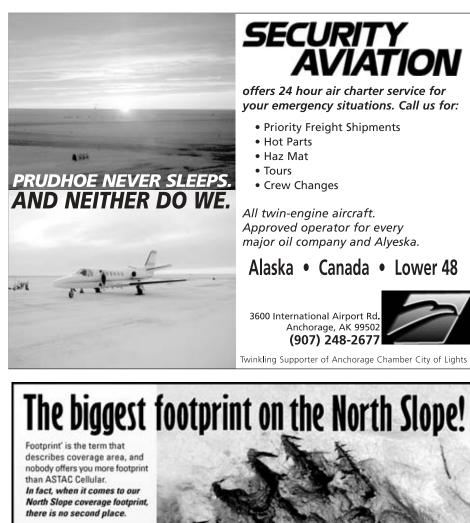
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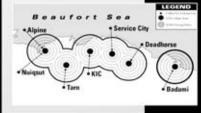
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ON DEADLINE

ALBERTA

No let-up in Alberta land grab

The pursuit of exploration rights continues unabated in Alberta, with the latest auction of provincial government leases reaching almost a four-year high.

The sale of petroleum, natural gas and oil sands rights fetched C\$95.11 million, just C\$2.08 million short of the previous best result in May 2001.

Successful bidders obtained access to 571,371 acres, the largest amount of acreage since November 2003 when 642,630 acres were auctioned.

The 749 parcels on the block set a new all-time record, surpassing the 722 parcels in a March 1997 sale.

For the year to date, the Alberta government has collected C\$329.1 million from 2.24 million acres, compared with C\$214.9 million from 2.06 million acres for the same period of last year.

Interest was especially strong in the Pembina region of west-central Alberta, where Four West Land Consultants paid C\$5.26 million for 1,898 acres and Britt Resources acquired 2,530 acres for C\$2.46 million.

Overall, parcels in the Pembina area, which offers both oil and gas prospects with an emphasis on deeper zones, attracted combined bids of C\$11.78 million.

---GARY PARK, Petroleum News Calgary correspondent

REPUBLIC OF CONGO

Nuevo Energy sells offshore Congo permit to Perenco for \$62 million

U.S.-based independent Nuevo Energy, which recently acquired Plains Exploration and Production, has signed an agreement to sell its interest in the Marine 1 Permit offshore the Republic of Congo to state-owned Perenco for \$62 million, Nuevo said April 8. The sale would be effective Jan. 1, 2004, and the final sales price would be offset by working capital adjustments and net cash flow from the effective date to the closing date, Nuevo said.

Nuevo has a non-operating 50 percent working interest and a 37.5 percent average net revenue interest in the permit, which includes the Yombo and Masseko fields, and a 50 percent interest in a floating production, storage and off-loading vessel. In 2003, production from the area averaged 4,800 barrels of oil equivalent per day net to Nuevo.

Nuevo's U.S. domestic producing properties are located onshore and offshore California and in West Texas. The company is the largest independent producer of crude oil and natural gas in California.

-RAY TYSON, Petroleum News Houston correspondent

Commercial Analyst State of Alaska

The Department of Natural Resources, Division of Oil and Gas is seeking qualified, experienced applicants for a Commercial Analyst to work in the Commercial Section. The Division represents the State of Alaska in its commercial dealings with oil and gas companies who explore for, develop, and produce hydrocarbons from State lands. Organized on a model that resembles the exploration and production arm of an integrated oil company, the Division last year collected over \$1.0 billion in royalty revenues. The Commercial Analyst position is a permanent, full-time, Range 26, exempt position. Minimum salary \$6146/month, depending on experience and qualifications.

This Commercial Analyst will evaluate the commercial incentives of the state's oil and gas lessees in establishing the value for oil and gas produced from State lands on the Alaska North Slope and in the Cook Inlet region. The Commercial Analyst will provide the Division with oil and gas market analyses and forecasts, descriptions of potential market forces that affect market demand and price, and analyze potential commercial arrangements related to the transportation and disposition of Alaska oil and gas in destination markets in the Lower 48 and within Alaska. It is expected that this Commercial Analyst will primarily participate with the Department of Natural Resources' negotiating team to implement AS 43.82 ("Stranded Gas Act") and other North Slope gas commercialization efforts.

ST. MICHAEL, BARBADOS

Noble: U.S. Gulf, West Africa drilling markets slow to recover

By RAY TYSON

Petroleum News Houston Correspondent

ffshore contract driller Noble Corp., whose 2004 first-quarter profit dropped 28 percent compared to the same period last year,

said April 15 that markets in West Africa and on the Gulf of Mexico's continental shelf have been slow to recover, despite strong product pricing.

"While we believe the drilling markets overall will be highly volatile over the near term, the trend in activity should be positive," said James Day, Noble's chief executive officer.

The company reported 2004 firstquarter net income of \$28.3 million or 21 cents per share on operating revenues of \$245.4 million, beating analysts' consensus by a cent. That compared to net income of \$39.4 million or 30 cents per share on operating revenues of \$245.0 million for the first quarter of 2003.

"Results for the first quarter ... were adversely impacted by continued weak market conditions in West Africa and maintenance projects on the company's drill ships in Brazil," Noble said. "These items were partially offset by solid performance in Mexico and the Middle East."

Day rates down, as are rig utilization rates

Offshore revenues from deepwater drilling rigs capable of drilling in 4,000

feet of water or greater accounted for about 34 percent and 36 percent of the company's total offshore contract drilling services revenues for the first quarter of 2004 and 2003, respectively, Noble said. The company currently operates seven deepwater semi-submersibles in the U.S. Gulf and one deepwater semi-submersible and three deepwater drill ships offshore Brazil.

Offshore drilling revenues from international sources alone accounted for about 70 percent and 74 percent of the Noble's total offshore contract drilling services revenues for the first quarter of 2004 and 2003, respectively.

The average day rate for the company's international rigs was \$52,713 in the first quarter of 2004 compared to \$56,444 in the first quarter of 2003. Rig utilization decreased from 90 percent in the first quarter of 2003 to 80 percent in the first quarter of 2004.

Day rate on domestic jack-up up 45%

The average day rate on Noble's deepwater rigs in the U.S. Gulf capable of drilling in 6,000 feet or greater decreased 3 percent to \$110,322 in the first quarter of 2004, while utilization increased to 100 percent in this year's first quarter from 86 percent in the first quarter of 2003.

The average day rate on the company's domestic jackup rigs was \$41,292 in the first quarter of 2004, or 45 percent higher than the same quarter of 2003. \bullet

GULF OF MEXICO

Goldfinger gives Dominion second tieback opportunity at Devils Tower

New Orleans-based Dominion Exploration & Production, which announced an oil discovery at its Goldfinger prospect in the deepwater Gulf of Mexico, also said April 14 the find likely would be completed as a subsea tieback to the nearby Devils Tower production spar in Mississippi Canyon.

The Goldfinger discovery well, on Mississippi Canyon Block 771, was drilled in 5,423 feet of water and encountered 57 net feet of oil bearing sand about 15,000 feet below sea level, Dominion said. The well was temporarily abandoned.

Goldfinger represents the second subsea tieback prospect drilled by Dominion near the Devils Tower spar. The Triton discovery on Mississippi Canyon Block 772 was drilled in 2002 and successfully appraised on Block 728 in 2003.

A three-well subsea development system is being evaluated to connect the discov-

A4

A minimum five years experience working in the oil and gas industry "downstream" and "midstream" sectors including oil and gas marketing (particularly gas trading) and gas pipeline transportation is preferred. Applicants should have excellent analytical and communication skills; proven team leadership abilities; demonstrated ability to achieve results; and proven ability to balance multiple tasks and responsibilities. This position requires an appropriate college degree(s) and experience in a field related to the commercial behavior of firms in the oil and gas industry including Economics, Business Administration, Accounting, Law, Engineering or Natural Resource Management.

> Alaska Department of NATURAL RESOURCES DIVISION OF OIL & CAS

eries to the Devils Tower host platform, Dominion said. The Devils Tower spar is scheduled to begin production in the second quarter of this year, following commissioning of the export pipelines and well completions.

Dominion said the Triton-Goldfinger project could be completed and producing through the spar by late 2005 or early 2006, depending on available processing capacity.

Dominion owns a 75 percent working interest and is operator of Devils Tower, Triton and Goldfinger. Pioneer Natural Resources owns the remaining 25 percent interest in the project.

-RAY TYSON, Petroleum News Houston correspondent



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BUY

UNITED STATES

Industry wants clarity on reserves, says SEC reserve rules out of date

Agency asked Gulf of Mexico operators in 2002 if they were using 1978-prescribed formation testing, historically interpreted as flow testing, to gauge deepwater reserves, a process that could take two years, cost upward of \$35M

By RAY TYSON

Petroleum News Houston Correspondent

n the year and half since the U.S. Securities and Exchange Commission put companies on notice concerning their methods of accounting for oil and gas

reserves, industry's world has been turned upside down with a flurry of high-profile reserve write-downs that has both shaken investor confidence in reserve reporting and left industry second guessing the SEC's next move.

"We want clarity. That's all we really want," said Ronald Harrell, chief executive officer of petroleum consulting firm Ryder Scott.

"We want a level playing field, too," added Dan Olds, a petroleum engineer for Ryder Scott. "We don't care what the rules are. We just want to know what the rules are so we can tell our clients."

Industry is essentially at the mercy of two SEC engineers charged with reviewing the oil and gas reserves of all energy companies publicly traded in the United States. Critics believe the SEC is operating under archaic rules that do not address industry changes over past quarter century, particularly in the arena of technology.

More than 80 percent of those polled at last October's Society of Petroleum Engineers Evaluation Forum in Houston, Texas, said they did not feel the SEC adequate-ly incorporated today's technology.

That concern turned into a mild panic a year earlier when the SEC sent a letter to companies operating in the Gulf of Mexico with questions centered on whether they were using "formation" testing, historically interpreted to be an actual flow test of wells, to gauge deepwater reserves, a technical requirement under SEC rules adopted back in 1978.

In fact, explorers rarely, if ever, resort to flow testing to determine whether a deepwater discovery is productive, largely because of expense and time constraints. Such a test can take two years to prepare and cost upward of \$35 million. Moreover, industry argues that flow testing is unnecessary with today's sophisticated seismic technology and downhole tools that can provide accurate readings on fluids, pressures and other reservoir characteristics.

SEC still evaluating responses

A year and a half after dropping the deepwater bomb on industry, the SEC continues to operate under the old rules with no apparent intent of altering them anytime soon. Interestingly, the agency apparently has yet to penalize industry for not testing deepwater reserves the SEC way.

"We are still processing the results of those letters," SEC Assistant Director Roger Schwall said. "We have done nothing specifically with the idea of changing rules or making specific revisions."

It wasn't only deepwater companies that received a letter from the SEC. Virtually all publicly traded companies that have offshore and onshore oil and gas reserves in North America and abroad received one, sources said.

As far as the SEC is concerned, only proved reserves that can be economically produced count. That has been the case for some time, but the definition has taken on a whole new dimension since the Enron scandal.

"In light of Enron and other disasters in the stock market, the SEC is taking a more conservative approach in what they want industry to do," Ryder Scott's Olds said. "Enron didn't have anything to do with oil and gas reserves in the ground. Nevertheless, we're being painted with the same brush."

Even the SEC concedes its conservative bent when it comes to assessing oil and gas reserves. "We feel the conservative approach is most appropriate," Schwall said.

SEC feels some companies 'overly optimistic'

"We certainly do see companies we feel are being overly optimistic in their (reserve) reporting," added Ron Winfrey, one of the SEC's two petroleum engineers.

Analysts speculate that SEC scrutiny may have influenced Shell's stunning decision in January to reclassify 20 percent of its proved reserves, or a hefty 3.9 billion barrels of oil equivalent. The revision also led to the resignation of its chairman and the chief of its exploration and production business.

Houston's El Paso reduced its estimated proven oil and gas reserves by 41 percent in February, followed in March by BP's 2.5 percent downward revision of proven reserves. Among U.S.-based independents, Denver's Forest Oil cut its proven reserves because of the company's ill-performing Redoubt Shoal oil field in Alaska.

Exploration and production companies have devoted considerable time in quarterly conference calls attempting to justify their reserves to analysts. That's because reserves reflect on a company's future profit potential and therefore a company's value and stock price. Also, in an effort to bolster credibility, an increasing number of companies are said to be turning to independent consultants to verify their reserve estimates.

SEC taking a conservative approach

The SEC's conservative approach to reserve reporting appears to be at odds with that of the E&P sector, which generally claims every barrel it believes it's entitled to. The SEC says while it "recognizes" probable and possible reserves, it still wants "reasonable certainty" based on proved reserves only.

"We recognize those volumes are part of the business," Winfrey said. "But our current rules don't allow for disclosure in general of unproved reserves. We believe that proved reserves by their nature are conservative ... and that proved reserves should have a much greater chance to increase in performance than decrease."

If industry wants to change the rules, Winfrey added, "they need to mount an effort. We interpret what we think those rules are. But I think it is important for them to understand what the rules are and what is expected of them in their disclosure to the public."

There is little doubt the agency is suspicious of industry. SEC engineer Jim Murphy, in last October's address to the Society of Petroleum Engineers Evaluation Forum, which was closed to the press, said that undue reliance on so-called "can't-miss" technology had been the cause of several reserve write-downs and impairments over the preceding two years.

"We feel in these cases and others there was an attempt to maximize the initial reserve estimates over and above which was realistically supported by the data at hand," he said at the forum. "The underlying theme of this conference ... appears to be 'what are the shortcuts that we can take to allow us to book more reserves sooner.' We would hope in the future your focus will be on getting the estimates correct ..."

see **CLARITY** page A6



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SYSTEMS

ALASKA • EDMONTON • TEXAS • WASHINGTON

continued from page A1

KING

EnCana exited 2003 with reserves of 8.4 tcf of gas and 957 million barrels of oil and liquids, which generated average daily sales volumes for the year of 2.57 billion cubic feet of gas and 222,500 barrels of oil and gas liquids.

Rockies output would rise to 1 bcf per day

Incorporating the Tom Brown assets, would see EnCana's Rockies output alone increase to 1 billion cubic feet per day from 588 million cubic feet for all of 2003 and 654 million cubic feet over the final quarter.

The two-step plan of buying Tom Brown and selling Western Canadian properties, which is expected to involve two packages in the second half of 2004, would see U.S. gas production increase to 24 percent of EnCana's total output from 18 percent and boost U.S. and Canadian production to 88 percent of the company's total, said Randy Eresman, chief operating officer.

Morgan said in a statement that acquir-

ing Tom Brown's "long-life natural gas reserves and production, together with the high-growth potential of its undeveloped resources located in the key unconventional onshore U.S. gas basins, will further advance our North American resource play strategy."

That strategy has seen EnCana (through co-founder Alberta Energy Co.) embark on a takeover spree in recent years, notably its 2001 acquisition of Ballard Petroleum to gain entry into Mamm Creek.

Roger Biemans, president of EnCana Oil & Gas (USA), said EnCana has multiplied the Ballard reserves by seven-fold to 1 tef and the production by ten-fold to 210 million cubic feet per day, contributing to a compound growth rate in the United States of 75 percent, three-quarters of which has come through the drill bit.

In addition to the reserves, Tom Brown contributes 2 million net acres of undeveloped land.

EnCana said that since 1998 Tom Brown has grown its production by 18 percent annually from the Piceance, Green River, Wind River, Paradox, East Texas, Permian and Western Canada basins and has identified about 3,200 drilling locations.

Gas future in unconventional assets

Morgan told a conference call that the kind of "resource" plays in the Tom Brown portfolio are at the heart of EnCana's strategy, because of the company's unwavering belief that the future of North American gas lies in "unconventional assets … what we call resource plays."

He said EnCana is confident it can achieve its target of 10 percent annual growth in share value by applying its "core competencies" to exploiting deep, multizone gas plays.

Morgan has previously indicated he is counting on gas prices to remain strong in North America until at least 2008 because supplies are flat, demand is building and imports of liquefied natural gas will not reach North America in significant volumes until late this decade.

Some analysts, such as Thomas Driscoll and Philip Skolnick from Lehman Brothers, have questioned whether EnCana is "spending too aggressively," noting that in 2003 it spent \$4.2 billion on its upstream core capital program, or about \$570 million more than budgeted, while adding \$525 million to debt in the final quarter.

To give itself some protection, Morgan

said Tom Brown's price hedges of half its expected gas production in 2004 and a lesser portion for the first quarter of 2005 will be expanded to 100 percent of forecast production through 2006.

But he was emphatic that the acquisitions and divestitures planned for 2004 will enable EnCana to remain "well within" its debt to capitalization ratio of 35 percent-45 percent. The company has also scheduled early meetings with rating agencies to make what Morgan described as the company's case that it has a "lot of resiliency around ratings."

Morgan was not willing to say who initiated the Tom Brown negotiations beyond saying that EnCana's subsidiary and Tom Brown are both based in Denver, "where we see each other once in a while and find ourselves competing with each other once in a while."

He said that because the two companies are in the middle of a tender offer he was precluded from any detailed discussion of future development plans, but did agree that bringing Tom Brown's Rockies assets into the fold will "strengthen our resolve" to get a 1.3 billion cubic feet per day pipeline from northwest Colorado to the Cheyenne hub on stream in 2005. \bullet

continued from page A5

Engineers joined SEC in 1999

One participant in the SPE evaluation forum said there were no SEC engineers on staff for most of the 1990s and that Murphy and Winfrey joined the agency in 1999, before the Enron scandal broke.

"As far as I know there were no major events that triggered their coming," he added. "They've been learning their jobs, digging deeper and deeper each year into companies' reserves."

In addition to technology, SEC critics believe agency rules fail to recognize critical market changes over the 25 years. For example, natural gas reserves are still valued on the spot price of gas at year-end rather than on the average spot price throughout the year. In the past, year-end pricing worked because most gas was sold on long-term contracts with fixed prices. That is no longer the case because most gas today is sold on the spot market and because prices tend to be volatile.

"So the company that is fortunate to have high prices at year-end makes their reserves look very good," according to one market observer. "But if they are unfortunate enough to have a year-end when prices are lower than the average then that is the price they are stuck with. So you have accounting implications. If the reserves are less than book value, companies are forced to take writedowns." He also noted that involvement of U.S. companies in overseas projects and their complicated production sharing arrangements and contracts was far less pre-1978 than today. "So the two engineers are somewhat forced into having to adapt to this changing environment with these old definitions," he added. Industry experts do concede that reserve estimating, even with the benefit of new technologies, is not an exact science and mistakes are made. "We really don't know how much a reservoir is going to produce until after it's done producing," Ryder Scott's Olds said. "Some of the new technologies allow us to get data in a real-time fashion in some instances, and we can do some pretty good things with that data. But we do predict the future and occasionally we do predict wrong." •

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WEEK OF APRIL 18, 2004

INTERNATIONAL

Murphy lowers production sights

Murphy Oil produced about 136,500 barrels of oil equivalent on average during the 2004 first quarter, lower than the company previously estimated due primarily to lower sales volumes in Malaysia, the company said April 12.

Net income for this year's first quarter should be between 90 cents and \$1.10 per diluted share, the El Dorado, Ark.-based Murphy said.

Dry hole charges for the quarter should be in the range of \$48 to \$63 million, with total worldwide exploration expense averaging between \$57 and \$72 million, the company said, adding that a \$15 million after tax gain on sale of onshore U.S. properties will be included in revenue in the first quarter.

-RAY TYSON, Petroleum News Houston correspondent

HOUSTON, TEXAS

El Paso sells interest in Australian pipeline

Financially troubled El Paso said it agreed to sell its one-third interest in a portion of the company's Australian pipeline holdings to Hastings Funds Management for about \$48 million.

The assets sold include 1,180 miles of pipelines in South Australia, Queensland and Western Australia, the company said April 12, adding that the deal is expected to close in the second quarter of 2004.

El Paso said the sale supports the company's long-range plan to reduce its debt, net of cash, to about \$15 billion by year-end 2005. To date, the company has announced or closed about \$3.0 billion of the \$3.3 to \$3.9 billion of asset sales targeted under the plan.

-RAY TYSON, Petroleum News Houston correspondent

NORTH AMERICA

Canadian junior faces blizzard of class-action suits in U.S.

Canadian Superior Energy is besieged with legal actions in the United States, with investors launching three new class-action suits, on top of the three already filed.

The Calgary-based junior E&P company and its Chief Executive Officer Greg Noval face accusations that stem mostly from the decision in March to abandon the highly touted Mariner I-85 well offshore Nova Scotia, sending Canadian Superior shares into a tailspin.

The shares are now trading at close to C\$1.60, down from C\$4.28 when Canadian Superior and El Paso plugged the well without doing further testing. A suit filed by Bull & Lifshitz said the defendants "issued materially false statements (about Mariner I-85)" and failed to disclose that the well did not contain a big enough reservoir to support a commercial project.

It also said the "costs of testing and drilling at the well were significantly exceeding the budget" of C\$30 million. Abbey Gardy

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HOUSTON, TEXAS

Rowan blames financial slide on idle Gulf rigs

Altered drilling contract in the North Sea also cited; company incurred loss of \$11.3 million on revenues of \$170.5 million in first quarter

By RAY TYSON

Petroleum News Houston Correspondent

ontract driller Rowan admits it performed poorly on the financial front during the 2004 first quarter, blaming idle rigs in the Gulf of Mexico and an altered drilling contract in the North Sea. Rowan, first of the major drillers to report firstquarter results, said April 14 that it incurred a loss of \$11.3 million or 11 cents per share on revenues of \$170.5 million. That compares to a loss of \$17.2 mil-

lion or 18 cents per share on revenues of \$131.4 million in the year-ago quarter.

While a definite improvement compared to the same period last year, the company's loss for this year's first quarter was more than twice the nickel-per-share see **ROWAN** page A8

PETROLEUM NEWS

The Gorilla V completed its most recent assignment offshore eastern Canada in late March and was expected to go back to work in the area by the end of April.

INTERNATIONAL

BP managing decline at existing profit centers

By KRISTEN NELSON

Petroleum News Editor-in-Chief

roduction is not just downhill at BP's existing exploration and production profit centers (those with declining reserves as opposed to the company's new profit centers, which are under

development and have growing reserves). There are offsets to declining production, Tony

Hayward, the company's chief executive upstream, said at a BP strategy presentation March 29.

In Alaska, decline in existing North Slope fields is "offset by further viscous oil development," and in the company's North American gas business, "production decline is mitigated as we develop incremental gas reserves including tight gas in and around existing fields," Hayward said.

New projects are coming on stream in the existing North Sea profit center, and production is expected to

grow in South America as BP continues to develop the Cerro Dragon oil field in Argentina.

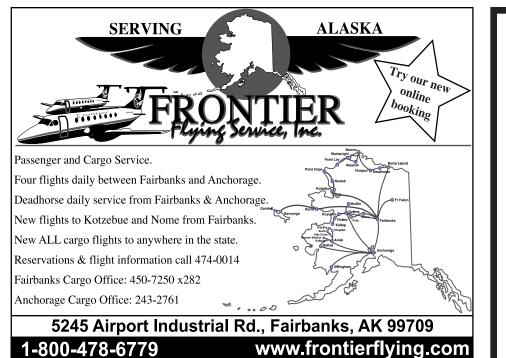
Without new projects at existing profit centers, production from those centers would be declining at a 5 percent rate, he said, but with new projects that decline has been cut to 3 percent.

BP also plans to increase operating efficiency from 87 percent to 89 percent over the next four years - it was improved from 86 percent to 87 percent over the last three years. And drilling performance has been improved, with a 25 percent reduction in days per 10,000 feet since 2001. That alone reduced costs by an estimated \$350 million, Hayward said.

Improved reservoir management

In the existing profit centers, improved recovery through leading-edge technology has grown reserves, including use of 4-D seismic at the Andrew field

Α7



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OKLAHOMA CITY, OKLA.

Devon Energy retires \$635M in debt

Devon Energy, the largest independent producer in the United States, said April 12 it used cash on hand to retire the remaining \$635 million balance of a \$3 billion acquisition credit facility established in 2001.

The acquisition account had a maturity date of October 2006 and incurred no penalties for early repayment of this debt, the company said. Including the \$635 million repayment, Devon has retired \$846 million of debt in 2004. The company said it retained about \$800 million of cash associated with the early retirement and that it entered into a new \$1.5 billion revolving credit facility, maturing in April 2009. The new facility replaces the company's existing \$1 billion revolving credit facility maturing in 2004. Devon said it has no balance outstanding under the new revolving credit facility. "By retiring the acquisition facility and putting the new five-year revolving credit facility in place, we have accelerated debt repayment and lowered our interest expense without compromising the company's liquidity," said Brian Jennings, Devon's chief financial officer.

-RAY TYSON, Petroleum News Houston correspondent

continued from page A7

SUITS

A8

alleged that Noval sold 25 percent of his Canadian Superior shares at artificially inflated prices.

Insider trading reports filed with securities regulators indicated Noval sold 1.14million shares in late January at an average C\$3.75 a share, around the time that Canadian Superior issued statements that it was "very pleased" with progress on Mariner I-85 and claimed "significant gas shows." Canadian Superior has dismissed the legal actions as "groundless, frivolous and a misuse of the United States legal system," declaring that they will be "aggressively dealt with in court."

> —GARY PARK, Petroleum News Calgary correspondent

continued from page A7

BP

which helped BP add some 15 million barrels of incremental reserves and at the Valhall field in Norway where 600 million barrels of oil equivalent have been produced from a field that in 1982 had estimated reserves of about 250 million boe. In 2003, Hayward said, "we installed the world's first full-scale life-of-field seismic system to allow us to monitor the movement of fluid through the reservoir on a continuous basis." Recoverable reserves at Valhall are now estimated at more than 1 billion boe.

At the Milne Point field in Alaska, a comprehensive injection management model for the Kuparuk reservoir optimized waterflood response and reduced natural decline from 17 percent a year to less than 10 percent, increasing recovery by some 4 percent and adding some 40 million barrels of reserves.

The company has also reduced cash costs for existing profit centers from \$4.1 billion in 2002 to \$3.8 billion in 2004 with the divestiture of high-cost assets and restructuring of major operating centers.

Deepwater Gulf on schedule

Major projects are on track at BP's new profit centers, Hayward said. Startups in 2003 included the Atlantic LNG Train 3 in Trinidad, the Xikomba and Jasmin projects in Angola and NaKika in the Gulf of Mexico.

2004 startups include: Atlas Methanol in

continued from page A7

ROWAN

loss analysts had expected.

In fact, the company's income loss in the recent quarter was "well below what we had originally anticipated," said Danny McNease, Rowan's president and chief executive officer.

He said the "the primary cause of our poor financial performance" was the inadequate utilization of several Gulf of Mexico rigs, including two Gorillas and one Super Gorilla class jack-up that have been largely idle since January.

In addition, he said, the amendment of Rowan's North Sea drilling contract for the Gorilla VII had the effect of reducing the drilling revenues by more than \$2 million during the quarter. Rowan previously announced that it agreed to temporarily reduce the day rate on Gorilla VII's drillingproduction contract in the North Sea to help extend the productive life of the aged Ardmore field. On a positive note, the project could yield work beyond the contract's

ROCKY MOUNTAINS

Grey Wolf closes New Patriot acquisition

U.S. contract land driller Grey Wolf said it has closed its previously announced purchase of New Patriot Drilling and its 10 rigs for \$15.8 million in cash and 4,610,480 shares of Grey Wolf common stock.

In addition, Grey Wolf said April 6 that it made payments of \$14.7 million to retire the outstanding debt of Patriot. Patriot's estimated working capital at clos-

ing was \$1.7 million, excluding the current portion of the debt repaid at closing by Grey Wolf.

The cash consideration is subject to final adjustment for changes in Patriot's working capital, the company said. With the addition of New Patriot's assets, Grey Wolf now has 14 rigs in the Rocky Mountain region ranging from 450 to 4000 horsepower.

"We believe the Rockies hold great potential for increased natural gas drilling," said Tom Richards, Grey Wolf's chief executive officer.

Of the 10 drilling rigs acquired, eight are currently working and the remaining two are under contract and are expected to begin work in Wyoming in the next month, Grey Wolf said, adding that three of the rigs are currently working in Wyoming and five in Colorado.

-RAY TYSON, Petroleum News Houston correspondent

Trinidad, second quarter; commissioning of In Salah in Algeria under way, with mid-2004 first gas sales expected; Northwest Shelf Train 4 in Australia on track for first gas into the plant and first gas sales as spot cargoes in the third quarter; the Kizomba A floating production, storage and offshore loading facility has sailed from Korea with first oil planned for late 2004; and in the deepwater Gulf of Mexico, the Holstein spar is on the Gulf Coast and is planned for installation in mid-year with startup before the end of the year.

Major projects are scheduled to start up in 2005 and 2006: Mad Dog, Thunder Horse and Atlantis in the deepwater Gulf; Kizomba B and Dalia in Angola; Central Azeri and West Azeri in Azerbaijan, along with Baku-Tbilisi-Ceyhan pipeline; and

minimum 18-month term, the company said.

Rowan expects upward pressure on day rates to intensify

Despite its performance in the first quarter, "we continue to see signs of more favorable business conditions on the horizon," McNease said. "We believe that as the Gulf of Mexico jack-up market continues to tighten, the upward pressure on day rates will intensify."

He said the addition later this month of Rowan's first Tarzan Class jack-up, the Scooter Yeargain, will enhance the company's position in the emerging deep gas market on the Gulf of Mexico's continental shelf. "We are continuing to pursue overseas opportunities for our Gorilla and Super Gorilla class jack-ups and fully expect that one or more of such rigs currently positioned in the Gulf of Mexico will be relocated abroad before the end of this year," McNease said. Train 4 LNG in Trinidad.

Capturing the market

In gas, BP's goal is "to move our gas resources into markets with the same ease as oil does today," said Ralph Alexander, the BP executive in charge of gas, power and renewables.

BP's goal is to capture liquefied natural gas markets "ahead of supply." Alexander said BP has some 500 million cubic feet a day more in market than BP gas to supply that market. "In the short run, these markets will be supplied by BP's arrangements with all three Middle East producers," Alexander said. In the longer term, this gas could come from Tangguh, or from Trinidad, Angola and Egypt as gas is available from those sources. ●

in late March and was expected to go back to work in the area by the end of April.

He also said the company's prospects for its mining equipment group "have never been better," noting that Rowan's manufacturing backlog of \$58 million is at a six-year high.

Rowan's Gulf of Mexico rig utilization was 82 percent during the first quarter of 2004, compared to 92 percent in the fourth quarter of 2003 and 90 percent in the yearago period. The average day rate in the Gulf of \$39,700 decreased by \$2,700, or 6 percent from the fourth quarter of 2003, but was up

subject to final adjustment for changes in Patriot's working capital, the company said. With the addition of New Patriot's assets, Grey Wolf now has 14 rigs in the Rocky Mountain region ranging from 450 to 4000 horsepower.

The cash consideration is



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He said the Gorilla V completed its most recent assignment offshore eastern Canada

by \$5,000 or 14 percent from the year-earlier period.

Land rig utilization was 73 percent during the first quarter of 2004, versus 80 percent in the fourth quarter of 2003 and 66 percent in the year-ago period. The average land rig day rate of \$11,000 decreased by less than \$200 or 1 percent from the fourth quarter of 2003, but was up by \$1,200 or 12 percent compared to the same period last year, the company said. \bullet



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WEEK OF APRIL 18, 2004

GALLUP, N.M.

Feds look for cause of New Mexico refinery explosion

Federal investigators have started the process of collecting evidence they hope will provide clues about the cause of a fiery explosion at a gasoline refinery east of Gallup, N.M.

Members of an investigative team with the U.S. Chemical Safety and Hazard Investigations Board were contacting area hospitals April 10 as well as emergency workers who may have responded to the explosion. They also planned to interview refinery workers April 12.

"A lot of people have been working very hard the past two days," said Rixio Medina, an investigator and member of the U.S. Chemical Safety Board. Medina said the team has asked Giant Industries, which owns the refinery, for information about chemicals used at the plant and diagrams of the refinery's pipes and valves.

Authorities said an initial explosion occurred around 9 a.m. April 8 in a unit of the refinery that produces high-octane fuel, causing a second blast in the same area.

Four employees suffered severe burns and were airlifted to the University of New Mexico Hospital in Albuquerque.

-THE ASSOCIATED PRESS

UNITED STATES

MMS looks at changes in OCS pipeline access rules

MMS said it will be holding a series of public meetings designed to gain input on the agency's potential new pipeline authority for oil and natural gas. A recent court order determined that the Federal Energy Regulatory Commission did not have authority to require data submittals for certain natural gas pipelines in the Outer Continental Shelf, indicating the Interior Department may be the most appropriate federal regulator.

Based on that court order, MMS published an advance notice of proposed rulemaking in the Federal Register April 12.

The agency said it is "exploring the authority to ensure open and non-discriminatory access to oil and gas pipelines," and is interested in hearing from the public on the "open and non-discriminatory access" provisions of the Outer Continental Shelf Lands Act.

Companies moving oil and gas on the OCS may still be subject to the FERC's jurisdiction. However, if the FERC declares that a company's facilities perform a "gathering" function rather than a "transportation" function, then the facilities are exempt from the FERC's jurisdiction under the Natural Gas Act. As such, the FERC will not impose its ratemaking authorities (tariff calculation guidelines) on that facility. Ensuring open and nondiscriminatory access to these gathering pipelines may then fall to the MMS.

The public meetings will be held April 27 through May 11 in Houston, Washington, D.C., and New Orleans.

More information is available in the Federal Register notice available online at :

http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edock et.access.gpo.gov/2004/04-8247.htm.

www.PetroleumNews.com

CALIFORNIA

Shell faces protests over decision to close refinery

Californians, already angry over high pump prices, question Bakersfield shutdown

By ALLEN BAKER

Petroleum News Contributing Writer

hell Oil Products US is facing growing protests over its decision to shut a small refinery in Bakersfield, Calif., next to the Kern River oil

field. Shell's credibility already was damaged by the wholesale reserve revisions the company made in January, and California's high, and rising, pump prices aren't helping matters either.

Shell says it's willing to sell the Bakersfield refinery, which processes about 70,000 barrels a day. But another owner would face the same supply problems, company officials say.

"This is a land-locked refinery, which because of a decline in its crude source — San Joaquin Valley heavy crude from the Kern River field — makes its continued operation no longer economically viable," said Lynn Elsenhans, president of the Shell entity. Shell announced last November it was closing the refinery this coming October, and taking an after-tax charge on earnings of about \$200 million. The company has promised to keep supplying branded stations in the area.

The Shell refinery produces just 2 percent of California's gasoline and perhaps 6 percent of its diesel, but supplies are tight in the region and gasoline prices have soared well beyond \$2 a gallon in many places.

Internal documents aired

California has problems not with supply, but with refinery capacity, the Los Angeles Times noted in an editorial, and in early April a consumer watchdog group raised the stakes when it released internal company documents showing the facility's refining mar-

see **PROTESTS** page A10

Oil sands pipeline plans waver

Enbridge, producers unable to negotiate tolling agreement for connection to Cushing; Terasen plans at risk; but China explores ways to process Alberta crude

By GARY PARK

Petroleum News Calgary Correspondent

 hina is moving into the spotlight as other plans for shipping oil sands production out of Alberta to new markets show signs of wavering.

Enbridge and Terasen, the two front-runners to build new pipeline connections, have raised doubts about pipeline projects that were destined to handle the burgeoning supplies of synthetic crude.

Unable to reach a deal with oil sands producers, Enbridge has stalled its plans for reversing an old BP line, to push 300,000 barrels per day of light, sweet Canadian synthetic crude from Chicago to the Nymex crude delivery point at Cushing, Okla.

The US\$142 million, 650-mile Spearhead project, launched last year, was targeted for start-up in 2005 and designed to interconnect with Enbridge's proposed US\$550-\$650 million Southern Access system, offering initial capacity of 250,000 bpd from Superior, Wis., to the Wood River hub in southern Illinois in 2007.

Those two links were seen by market sources as the launching platform for carrying Canadian crude to the Gulf Coast refinery region.

Producers unwilling to pay additional toll

But Rick Sandahl, Enbridge's market development vice president, told The Canadian Press that producers were unwilling to pay an additional toll for several years to make Spearhead work.

He said Enbridge, despite its belief that Spearhead offered high incentives, was unable to "get enough mutual support."

However, Sandahl and the Canadian Association of Petroleum Producers said producers have agreed to explore other alternatives.

Meanwhile, Terasen is growing nervous over the impact of oil sands cost overruns on its planned C\$2

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continued from page A9

WAVER

billion pipeline from northern Alberta to the Pacific Coast, where it could be shipped to fresh outlets in California or Asia.

Terasen Pipelines President Rich Ballantyne said the mushrooming costs announced in March by Syncrude Canada on top of other multi-billion dollar overruns, could erode the confidence of other companies with ambitions to join the oil sands fold.

Noting that Terasen is the tail, not the dog, he said customers are needed before any pipelines can be built. Ballantyne said the Syncrude setback could send a chill through the ranks of oil sands investors, who are vital to the sector's hopes of doubling output to 2 million bpd by 2010.

Still being evaluated is an Enbridge proposal to build a C\$2.5 billion Gateway pipeline from Alberta to deepwater ports in Prince Rupert or Kitimat on the British Columbia coast, matching Terasen's plans to access the U.S. West Coast or Asia.

That 400,000 bpd scheme, which could be completed by 2009, also needs producer backing. The prospects of opening up a market in China got a boost at a conference in late March that discussed new markets for

Alberta oil sands production.

Chunming Xu, an engineer from the University of Petroleum in Beijing, said synthetic crude appeals to China because of its high diesel yields, and although synthetic crude from Alberta has yet to be processed through a Chinese refinery that research is now being conducted by the Alberta Research Council and state-owned PetroChina.

He noted that China is consuming 5 million bpd of oil, almost half of it imported, while the demand for transportation fuels and diesel soared by 8.9 percent last year.

However, Xu also said Chinese refineries are currently able to produce only 1.8 million bpd of diesel.

Regardless of the failure by producers and Enbridge to arrive at a deal, there is some hope that refiners and producers can form joint ventures in the United States to handle greater volumes of synthetic crude.

Brent Lee, director of crude oil supply and marketing for Suncor Energy, said Flint Hill, ConocoPhillips and Marathon Oil are all working on refinery projects, while ExxonMobil has plans for reversing an idle pipeline within the next year to ship Canadian heavy crude from Illinois to the Gulf Coast.

Want to know more?

If you'd like to read more about oil sands pipeline plans, go to Petroleum News' web site and search for these articles, which were published in the last few months.

Web site: www.PetroleumNews.com

2004

• April 4 Petro-Canada exec repeats request for oil sands database

- March 21 Uncertainty hits oil sands • Feb. 29 U.S. pipeline backs oil sands
- outlook • Feb. 29 Trying Imperial's patience
- Feb. 29 Terasen puts damper on trust conversion talk
- Feb 22 Oil sands in full swing, JV approved
- Jan. 25 Canadian pipeline group wants red tape untangled
- Jan. 25 Terasen toys with trust

• Jan. 4 Canadian pipelines chase U.S. markets

Jan. 4 Oil sands poised for gusher

2003

• Dec. 14 Carriers go from pipedreams to pipelines to ship oil sands



Forty years is a lot of years.

For many, it marks an important turn- who've contributed to our success over ing point. A time to review the past and the past four decades. evaluate achievements. And a chance to consider the challenges of the future.

continued from page A9 PROTESTS

gin in March hit a very impressive \$23.01 a barrel, making it the most profitable of Shell's three plants in the state.

Well, yes, March was profitable, the company replied, but those same documents show the facility lost money in 2001 and 2002 - as did many other refineries that now show booming profits.

Still, says Elsenhans, "the profit that we project for the refinery in 2004 does not justify maintaining our investment in the facility. Furthermore, the declining utilization rates illustrate that it will not be economically viable to operate the facility going forward." San Joaquin Valley heavy crude output averaged about 450,000 barrels a day in 2000, but that figure is expected to drop by a third by 2010.

Government inquiries

Politicians and others are suspicious, and it's an election year. So the state attornev general is investigating, along with the Federal Trade Commission.

The federal agency was prodded into the fray by Sen. Ron Wyden, D-Ore., who fears his state's gasoline prices will suffer if regional supplies are cut.

Wyden advances the interesting notion that the shutdown was perhaps propelled by an FTC condition when it approved the merger of Chevron and Texaco. At that time, the agency mandated the dissolution of Equilon, a joint refining venture between Texaco and Shell, due to antitrust concerns. That meant ChevronTexaco no longer had a vested interest in supplying Bakersfield.

ChevronTexaco is heavily exploiting its holdings in the area. Indeed, the company is planning to drill more than 800 new wells in the San Joaquin Valley in 2004, according to a report by the Bakersfield Californian newspaper that Wyden quoted in his letter to FTC Chairman Timothy J. Muris. The field is expected to continue producing for 20 to 25 years, and technological advances could add to that figure.

The Bakersfield facility, which went into operation nearly 70 years ago, produces about 20,000 barrels of gasoline daily, and about 15,000 barrels of diesel. Shell isn't planning to boost capacity at its other California refineries when Bakersfield is brought to a halt.



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exploration&production

WEEK OF APRIL 18, 2004

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NORTH AMERICA

PETROLEUM NEWS

A11

NPR-A

Total's NPR-A well hit 9,362 feet

Information released by the Alaska Oil and Gas Conservation Commission in early April shows Total's winter National Petroleum Reserve-Alaska exploration well, the Caribou 26-11 No. 1, was a vertical hole drilled to 9,362 feet. The well, on federal lease A084170, was in section 26, township 10 north, range 5 west, Umiat Meridian, in NPR-A on Alaska's North Slope.

The commission said the completion date on the well is Feb. 25.

Total and its partner Fortuna Energy Inc., a subsidiary of Calgarybased Talisman Energy, drilled the rig with Nabors Alaska 14E, near the vicinity of the old Inigok test well.

Jack Bergeron, Alaska manager for Total E&P U.S.A., told committees of the Alaska Legislature in mid-February that because the Caribou prospect was "80-plus miles from the nearest road," the company used rolligons to move the rig and equipment to the site to save the time it would have taken to build ice roads. The whole distance, he said, was 70 miles from Deadhorse to the end of the road, and then the 80 miles by rolligon.

Within NPR-A, the companies did build an ice road from the old Inigok test well, where there is a 5,000-foot gravel runway, so personnel and supplies could come in by air.

Bergeron told Petroleum News after drilling was completed that the well data would be analyzed in Houston. He said the well was "spud on Jan. 29 and drilled to its planned TD."

—PETROLEUM NEWS

NORTH AMERICA

Drilling rig count falls again

The number of rotary drilling rigs operating in North American fell by 68 to 1,286 during the week ending April 8, according to rig monitor Baker Hughes. That followed a steep 116-rig decline during the preceding week.

The Canadian rig count alone dropped by 46 to 148 in the recent week, down by 27 rigs compared to the same period last year.

The total number of rigs operating in the United States decreased by a net 22 to 1,138 rigs during the recent week, but was up by 159 versus the same period a year ago. During the recent week, land rigs alone declined by 24 to 1,031 rigs. The inland waters gained two rigs for a total of 16, while the offshore rig count was unchanged at 91.

Of the total number of rigs operating in the United States during the recent week, 988 were drilling for natural gas and 148 for oil, while two rigs were being used for miscellaneous purposes. Of the total, 750 were drilling vertical wells, 285 directional wells and 103 horizontal wells.

Among the leading producing states in the United States, Oklahoma gained four rigs in the recent week for a total of 162 rigs. California picked up one rig for a total of 24, New Mexico's rig count decreased by four to 61 and Wyoming's slipped by four to 57. Texas was down by three rigs to 499. Louisiana lost three

see RIG COUNT page A12

Onshore hot; offshore not

EnCana boss revels in northern B.C. gas finds; predicts 10 years of heavy investment and decades of production; but wary of pushing offshore exploration

By GARY PARK

Petroleum News Calgary Correspondent

olding close to 10 trillion cubic feet of natural gas discoveries in its portfolio, EnCana is brimming with confidence about northeastern British Columbia, but ______

cool to the potential of the province's offshore, Gwyn Morgan said in Vancouver April 7.

The chief executive officer of the Canadian independent, which lays claim to being the world's largest E&P independent, said the size and scope of the Greater Sierra and Cutbank

Ridge finds "means at least 10 more years of investment" by his company in the

region and decades more of production.

"We believe they have huge potential — more potential, in fact, than any other new regional gas play" in Canada, Morgan told the Vancouver Board of Trade.

But the geology of the unconventional deposits poses challenges in unlocking the potential of a region that had been drilled by many companies over several decades, with little success, he said.

"We didn't just pop a few wells down and get lucky," he said. "Our people sized up the situation differently — with ingenuity, applied technologies and a long-term view — and they got a better result," Morgan said.

Horizontal drilling, multiple-well pads

By employing horizontal drilling, with multiple wells from a single surface pad, EnCana has opened up Greater Sierra and Cutbank Ridge, which are eventually projected to produce a combined 800 million cubic feet per day over a long period.

Currently, British Columbia contributes about 400 million cubic feet per day, or about 15 percent of EnCana's total gas output of 2.7 billion cubic feet per day.

see **ONSHORE** page A12

NORTH SLOPE, ALASKA

Work could begin at Alpine satellites next winter

Corps has received ConocoPhillips Alaska application for development of five new satellites, two in Colville River Delta, three in NPR-A

By KRISTEN NELSON

Petroleum News Editor-in-Chief

he next five winters will be busy ones on the North Slope if work goes ahead according to a proposed schedule for development of five Alpine satellites.

Alpine satellite work would begin next winter at Fiord and Nanuq, north and south of existing Alpine facilities, with production possible from those satellites as early as 2006, ConocoPhillips Alaska Inc. told the Corps of Engineers in applications for its proposed satellites in the Colville River Delta and the National Petroleum Reserve-Alaska. The Corps published the application April 9; comments are due by May 10.

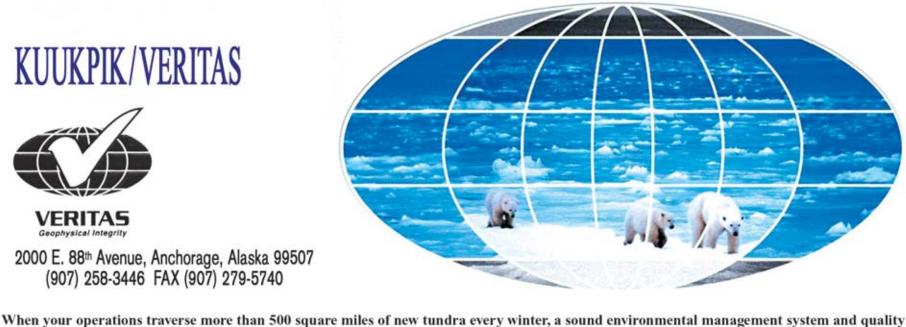
Bridge piers for the 1,200-foot Nigliq River bridge would be installed in the winter of 2007, as would gravel at Lookout in NPR-A; bridge installation and gravel laying at Alpine West and Spark in NPR-A would occur in the winter of 2009.

The Corps said the project will require placement of almost 2 million cubic yards of gravel fill material in some 294 acres of U.S. waters, including wetlands. The Alpine field is being developed from Colville

Delta pads 1 and 2, CD-1 and CD-2.

The proposed project, with a final environmental impact statement expected in July, includes five drill





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continued from page A11 **ONSHORE**

Applying similar technology has also enabled EnCana to tap the deep gas deposits of Wyoming's Jonah field, making the U.S. Rocky Mountain states, northeast British Columbia and Alberta the three major recipients of the company's capital spending, which totaled about C\$6 billion in 2003 spread over a dozen countries.

The U.S. Rockies — including Jonah and the rejuvenated Mamm Creek play in Wyoming — yielded average gas sales last year of 588 million cubic feet per day, up nearly 50 percent from 2002.

EnCana credits provincial government

Morgan was full of praise for the

continued from page A11 **ALPINE**

pads; a 3.6-mile access road from CD-2 to proposed CD-4; a 22-mile NPR-A access road from existing CD-2 on the east side of the Nigliq Channel to proposed CD-7; access roads from CD-5 and CD-6 to the NPR-A access road; an airstrip, floating boat dock and dock access road at CD-3; and a boat ramp and boat dock access road at CD-4. The NPR-A access road would include a 1,200-foot bridge over the Nigliq Channel of the Colville River, a 120-foot bridge over the Ublutuoch River, an 80-foot bridge, four 40foot bridges and four culvert batteries.

There would be a new 65-acre gravel mine at the Clover exploration site and ConocoPhillips would also use the previously permitted Arctic Slope Regional Corp. gravel mine, with an expected 27-acre impact.

Fiord would be reached by air

CD-3, formerly called CD-North and Fiord, is within the Colville Delta some five miles north of the existing Alpine Central Processing Facility, CD-1. Work at CD-3 would include a 13-acre drill pad, airstrip, access road from the airstrip to the pad, a floating boat launch and an access road to the boat launch. Facilities would include an

continued from page A11 **RIG COUNT**

rigs for a total of 167. And Alaska's rig count decreased by two to 10.

For the month of March 2004, the U.S. rig count averaged 1,136, up 17 from the 1,119 counted in February 2004 and up 195 from the 941 counted in March 2003.

advances made by the British Columbia government in turning the province into a "quickly rising star," with well completions increasing to 1,144 last year from 750 five years ago and a further 45 percent gain in wells drilled in January and February of this year. The result, he noted, is that royalties and land sale payments generated more than C\$2 billion in fiscal 2003 — more than direct revenues from any other sector, including the former mainstay forestry industry.

He said EnCana invested C\$1.4 billion in British Columbia last year, including a stunning C\$369 million in a single land sale, and drilled 270 net wells, or about 25 percent of the provincial total, and expects about the same total this year.

From EnCana's viewpoint, Morgan said the British Columbia government is doing

emergency generator, warm and cold storage buildings and an emergency living quarters module.

The 3,670-foot airstrip would accommodate fixed-wing aircraft (Casa and Otter) or helicopter.

A 5.8-mile pipeline would be built on new vertical support members to the Alpine Central Processing Facility, with three pipeline-only bridges. Up to 32 wells would be drilled from the CD-3 gravel pad with drilling occurring only in the winter "to avoid impacts to wildlife and subsistence activities during summer months," the Corps said. A drilling rig would be brought in by ice road each winter; the ice road would also provide access for emergency relief well purposes. Five to seven winter drilling seasons would be required to complete CD-3 development drilling.

Work at this satellite, and CD-4 (formerly called CD-South and Nanuq) would begin with gravel laying in the winter of 2005, drilling at CD-3, installation of vertical support modules and module piles. Pipeline bridge foundations to CD-3 would also be installed in the winter of 2005. In the winter of 2006, drilling would continue, and pipelines and power lines would be installed, along with construction of pipeline bridges, installation of surface facilities and modules. Production would begin in the summer of 2006.

The Canadian rig count for March was 462, down 106 from the 568 counted in February 2004 and up 13 from the 449 counted in March 2003.

The worldwide rig count for March 2004 was 2,397, down 80 from the 2,477 counted in February 2004 and up 260 from the 2,137 counted in March 2003.

 many of the right things to create a policy environment that encourages the industry to "take a leap of faith," with a strategy that includes:

• A new energy policy framework, including streamlined regulatory processes.

• Royalty programs that target underexploited resources, such as low-volume resource-play wells and deep, high-cost wells.

• Investment in infrastructure and corridor access roads.

• A strong and growing service sector.

Offshore a distant prospect

In return, he said EnCana is working hard to minimize its environmental impacts and taking steps to ensure tangible opportunities for First Nations people.

Nanuq a short drive from existing Alpine facilities

CD-4, or Nanuq, is some four miles south of the Alpine and facilities would include a nine-acre drill pad, an access road to CD-1 and a boat ramp with access road. The 3.6-mile gravel road to the Alpine Central Processing Facility, CD-1, follows a naturally occurring ridge for about 80 percent of the route, with the remaining 20 percent on discontinuous sections of the ridge. A 22-foot wide by 130-foot long concrete boat launch would provide water access.

CD-4 development would consist of up to 32 wells, drilled in the summer, and most likely using the rig drilling at CD-3 in the winter.

Work would begin in the winter of 2005 with laying of gravel for the drill site, installing vertical support members and module piles and installation of pipelines and power lines. Drilling would begin in the summer of 2006, followed by production startup.

Lookout first NPR-A development

CD-6, Lookout, is some 15 miles southwest of CD-1 at Alpine. Work would begin with gravel placement for the 0.4-mile spur road to the NPR-A access road and a nineacre drill site in the winter of 2007. CD-6 would include on-site power generation and a backup generator. Vertical support members and the pipelines would also be installed that winter, along with module piles; drilling would begin in the winter of 2008, with production startup that summer.

Alpine West, Spark development last

Development at CD-5, Alpine West, would include a nine-acre drill pad and a 0.1-mile spur road to the NPR-A access road. CD-5, some six miles southwest of CD-1, is outside of the Colville River Delta.

But the offshore remains a distant prospect for EnCana, despite a new round of hearings in British Columbia to explore arguments for lifting a 32-year moratorium on exploration.

Morgan told reporters that the "last thing the industry wants to do is push something that people don't want to have."

He said "most people are not overly anxious to drill a whole bunch of wells off the west coast of Canada."

Morgan himself owns a coastal cruiser that he often sails in a region he rates as one of the "most heavenly places on earth."

To open the door to drilling would need a carefully crafted environmental regime, before companies such as EnCana would consider taking on the capital cost of probing the region, he said. \bullet

Construction would begin in the winter of 2009 with gravel placement for road and pad, installation of vertical support members for pipelines and installation of module piles; pipelines and power lines would also be installed. Drilling at CD-5 would begin in the winter of 2010, with production startup that summer.

Development would occur in the same timeframe at CD-7, Spark, some 20 miles southwest of CD-1 at Alpine. Gravel placement for pad and a spur road to CD-6 would occur in the winter of 2009, with installation of pipelines and power lines, and the beginning of drilling, in winter 2010. Production startup would be that summer.

22-mile road into NPR-A

The 22-mile NPR-A access road would provide access to CD-5, CD-6 and CD-7, beginning on the east side of the Nigliq Channel at CD-2 and ending at CD-7, with spur roads to CD-5 and CD-6. The road includes a 1,200-foot bridge over the Nigliq Channel, an 80-foot bridge crossing a system of small lakes west of the Nigliq Channel bridge, a 120-foot Ublutuoch River bridge, four 40-foot bridges along the NPR-A access road, four culvert batteries and additional road culverts.

Bridge piers at the Nigliq Channel would be installed in the winter of 2007, as would bridge foundations at the Ublutuoch River. The bridges would be constructed in the winter of 2009, and gravel would be placed for roads.

Gravel from the Arctic Slope Regional Corp. gravel mine would be used for CD-3 and CD-4. The Clover gravel mine would be used for CD-5, CD-6, CD-7 and roads.

The Corps said that ConocoPhillips "is drilling additional borings this winter 2004" to complete delineation of the Clover gravel mine, and is also preparing a mining and reclamation plan. \bullet

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EXPLORATION & PRODUCTION

ALASKA

Alaska proves costly for oil industry

High costs, regressive tax structure put state far down the list for companies at \$20 oil, says Wood Mackenzie study

By LARRY PERSILY

Petroleum News Government Affairs Editor

laska is an expensive place to do business but the high costs of working in the arctic and moving the oil to market by pipeline and tanker are no surprise, says an international oil and gas consultant who helped prepare a report ranking 61 producing areas worldwide.

"Most people involved in the business recognize it must be one of the most expensive places to do business," said Londonbased Graham Kellas, principal consultant on petroleum economics for Wood Mackenzie Ltd.

The consulting firm, with offices in seven countries, released its "Global Oil & Gas Risks & Rewards" report in September 2002. The Alaska Oil and Gas Association negotiated partial use of the "This study is anothprivate report and last er indicator that month distributed a challenged to be summary to all 60 competitive for oil Alaska legislators.



Alaska is seriously and gas investment dollars." —Judy

"We're not asking Brady, executive them to do anything director of the about it. It's just a Alaska Oil and Gas Association reminder," said

Marilyn Crockett, the association's deputy director. Industry officials referred to the report, and Alaska's ranking, at an April 14 House committee hearing on oil production taxes.

"This study is another indicator that Alaska is seriously challenged to be competitive for oil and gas investment dollars," said Judy Brady, the industry association's executive director, in a March 12 letter to legislators.

The report, however, is not a comprehensive ranking of all oil-producing regions in the world. Alaska was the only state included in the study, and none of Canada's oil-producing provinces are included either.

Nor were the major producing nations of Saudi Arabia, Kuwait, Iraq and Mexico included in the report - there was no foreign oil company activity during the study period in those countries. The report also did not include Russia.

The cost ranking covers only those North Slope fields that started production after 1995, Wood Mackenzie said. Those would include smaller developments, possibly producing oil at higher per-barrel costs than giants Prudhoe Bay and Kuparuk that are supplying almost 60 percent of North Slope production this year.

Wood Mackenzie put total capital, operating and transportation costs for a barrel of post-1995 developed North Slope crude at \$12.52, averaging the expenses out to the end of production from existing fields. That is close to Alaska Department of Revenue numbers that put the cost of Fiscal Year 2005 production and transportation at \$11.71 per barrel.

Qatar, Iran with lowest costs

Qatar had the lowest costs in the Wood Mackenzie study, at \$1.38 per barrel, followed by Iran at \$1.61. Canada's East Coast was next to Alaska at the other end at \$10.56 per barrel, followed by North Sea production - the United Kingdom shelf at \$8.79 and Norway at \$8.76.

Separate from the cost of finding, producing and moving the oil, the federal, state and municipal take consumes a large chunk of revenues in Alaska, the report said, putting the state's 36th place ranking in the lower half worldwide. The total government take in Alaska is about 64 percent, the study said.

That compares to the lowest government take of 10.86 percent in the African nation of Cameroon and the highest at 93.26 percent in Iran, according to Wood Mackenzie. But Cameroon, at 72,000 barrels per day in 2002, is far from the world leaders in production. The more noticeable regions with low government takes are Canada's East Coast at 35.17 percent (third), the United Kingdom shelf at 40.77 percent (fifth), and deepwater U.S. Gulf of Mexico at 42.1 per-

see **COSTLY** page A14

REFUGIO COUNTY, TEXAS

Whittier targets Frio sands in Texas

Exploration and production independent Whittier Energy said it plans to drill the Schirmer 1-19, a new development gas well in the Bonnie View field in Refugio County, Texas, targeting Frio sands at 5,400 and 5,600 feet.

Whittier said April 14 it already has staked the surface location and expects to spud the well next month, adding that an independent reserve report attributed about 342 million cubic feet of proved undeveloped reserves to Whittier's net interest in the well.

field for approximately \$95,000, increasing its working interest to 71.38 percent.



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Last month Whittier acquired an additional 5 percent interest in the Bonnie View

-RAY TYSON, Petroleum News Houston correspondent

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Other states not comparable to Alaska

Wood Mackenzie doesn't have comparable databases for other states such as Texas and Louisiana, and it's a different business in the Lower 48, Kellas said. The other states and Canadian provinces each have thousands of wells and leaseholders, he said. They just aren't "regarded as a comparable business (to Alaska)."

The report looked at actual costs and government takes from the value of remaining production at existing developments, based on oil selling at \$19.50 per barrel (Brent) in 2002 and increasing 2.5 percent per year.

Alaska ranked 36th of 61 for total government take and last in cost of capital, operating and transportation expenses (including pipeline and tankers).

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MEXICO

Pemex to drill first deepwater well

Under pressure to increase output, Pemex turns to major players

By DEBRA BEACHY

Petroleum News Contributing Writer

Pemex will turn to foreign oil companies to drill its first deepwater well this year, Pemex Director

General Raul Munoz said in early April. Munoz made the announcement first in a

speech to the Association of Mexican

Petroleum Engineers April 4, and then repeated it in a speech April 5, marking the 100th anniversary of the first commercial oil field discovered in Mexico.

Munoz said Pemex planned to drill the deepwater well "in collaboration with foreign oil consortiums to benefit from their experience with deepwater drilling which Mexico doesn't possess." Munoz did not name the

consortiums, but said Pemex is talking to the major players about deepwater drilling.

Pemex is under increasing pressure to come up with a replacement for the Cantarell field, discovered in the 1970s, which now provides Mexico with two-thirds of its crude production. Analysts say Cantarell could dry up in the next 10 to 20 years.

Cantarell, off the Yucatan Peninsula in the Gulf of Mexico, is in relatively shallow water. The Constitution currently bans foreign ownership of Mexico's oil wealth, and oil companies, analysts say, would not want to share deepwater technology without get-

continued from page A13 **COSTLY**

cent (seventh).

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The government-take percentages do not include any equity shares held by national oil companies, Kellas said. The numbers include everything else, including municipal, state, provincial and federal taxes and royalties, or profit-sharing or production-sharing payments in lieu of taxes. "It's basically everything." ting to share in production.

Prospects include 172 deepwater drilling sites

Out of 817 exploration sites identified by Pemex in the Gulf of Mexico, 172 are deepwater drilling sites, Munoz said.

Munoz told the engineers that Pemex wants to increase crude production to an

Munoz said Pemex planned to drill the deepwater well "in collaboration with foreign oil consortiums to benefit from their experience with deepwater drilling which

Mexico doesn't possess." Munoz did not name the consortiums, but said Pemex is talking to the major players about deepwater drilling. average of 4 million barrels a day by 2006 from the average 3.4 million barrels a day produced in 2003. Pemex wants to increase natural gas production to 7 billion cubic feet per day, up from 4.5 billion cubic feet produced in 2003, he said.

Munoz said Pemex will spend a record \$12 million on new exploration, which includes

Ku-Maloob-Zaap, offshore light crude, the Bermúdez Complex, Lankahuasa and some multiple service contracts for gas exploration in the Burgos basin.

Munoz said Pemex also plans to pump investment into its aging petrochemical plants and focus on ethanol derivatives. Pemex has launched the first phase of its \$2 billion Project Phoenix, which will include joint ventures in which energy companies will own a majority interest, he said.

"It will be a complete structural change in the petrochemical industry," Munoz said. As a result, Pemex hopes to see an increase of 10 percent a year in the production of ethanol derivatives, he said. \bullet

said. Some jurisdictions favor such an approach, he said, with the individual circumstances of their economy — "how dependent they are on oil revenues" — often the deciding the factor in whether to share in the risks of low prices and the rewards of high prices.

"As you look around the world there are a lot of governments that will retain regressive fiscal instruments," he said, reflecting their heavy dependence on oil and gas revenues.

"However, the number of regimes linking the government's profit share/tax rate to project profitability is growing in popularity, although these get a mixed reception within the industry," Kellas said. "There are some pretty strong economic theories that justify such a move."

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In Alaska's case, federal taxes are about one-third of the total, with the federal share increasing at higher prices while the state's share decreases, according to the Alaska Department of Revenue.

Alaska's share decreases at higher prices

At \$20 a barrel, the department calculates the federal take at almost 21 percent of the income after production and transportation costs are deducted, with the state and municipal combined share at about the same 40 percent as the producers.

But the producers' share and the federal take increase at higher prices, while the state's share falls. At \$30 oil, for example, the state's slice drops to about 29 percent, with 46 percent for the producers and 25 percent for the federal treasury.

Alaska's regressive tax structure protects state revenues at low prices, Kellas

More governments link their take to profits

Property and production taxes and royalties usually are revenue-based, not profitbased, Kellas said, and more governments are linking their take to profitability.

Countries that have adopted more progressive tax regimes include Ecuador, Australia, Malaysia, Angola, Peru and Caspian Sea nations, he said. "There is a growing tendency to say ... we can reconstruct it so that if things go well we can really be in quids in," using the British expression for getting more money than expected. \bullet

government

WEEK OF APRIL 18, 2004

BRITISH COLUMBIA

British Columbia under fire for short-sighted policies

The British Columbia government has been accused of squandering its opportunities while pursuing short-term gains from the oil and gas industry.

A coalition drawn from environmental groups, labor, landowners and First Nations delivered 10 recommendations to Premier Gordon Campbell's government calling for review and reform of the burgeoning industry.

Karen Campbell, from West Coast Environmental Law, said the focus is on doubling production by 2011 without any acknowledgement that the resource will eventually be depleted.

She said jurisdictions such as Alberta, Alaska and Norway channel a portion of their resource revenues into funds for future generations, with Alberta's fund currently at about C\$12 billion.

Campbell also contended that Alberta has

A coalition drawn from environmental groups, labor, landowners and First Nations delivered 10 recommendations to Premier Gordon Campbell's government calling for review and reform of the burgeoning industry.

superior regulations and affords more protection for landowners. One landowner noted that British Columbia allows

Campbell

sour gas wells to be drilled barely 300 feet from homes, posing a serious safety and health risk to occupants.

Labor unions expressed concern that four out of five oil and gas jobs are being

filled by Albertans, while the forestry industry is worried that it will pay a heavy price as oil and gas development cuts deeper into the forests.

For the aboriginal community, Garry Oker, chief of the Doig River First Nation, called for a revenue-sharing agreement because of the disruption to Native hunting and fishing grounds by oil and gas activities

A spokesman for the British Columbia Oil and Gas Commission said many of the coalition's recommendations are already being tackled by the government as part of its evolving energy plan.

---GARY PARK, Petroleum News Calgary correspondent

NEW MEXICO

Interior official criticizes governor's Otero proposal

New Mexico Gov. Bill Richardson's suggestions for managing oil and gas development on Otero Mesa are unfeasible and would block drilling on the land, an Interior Department official said.

lands and minerals management, said April 1. Richardson and several environmental groups criticized a plan released by the Bureau of Land Management for the land in southern New Mexico. Richardson's submitted a consistency review to the BLM saying the federal agency's plan goes against several state policies, proposing a more restrictive plan that allows some access to gas reserves. Watson said Richardson's proposal would require directional drilling to access it into a horse race or about 333,000 acres, which wouldn't work. election. You're ask-"It's not feasible," she said.

"It's a no drill plan," Rebecca Watson, assistant secretary for

ALASKA Prices up, production down

Alaska Department of Revenue forecast predicts \$28.30 oil next year at 980,000 barrels per day; \$31.13 a barrel for year ending June 30

By LARRY PERSILY

www.PetroleumNews.com

Petroleum News Government Affairs Editor

he state expects Alaska North Slope oil will average \$28.30 per barrel in fiscal year 2005, with high prices helping to reduce the budget

gap and the need to draw on reserve funds to cover public spending. But production continues its decline, with the annual flow from 2004 to 2010 projected to average 5 percent less than was forecast two years ago.

And much of that oil in 2009 and beyond would come from projects under evaluation but not under development.

The Alaska Department of Revenue released its spring forecast April 15, an annual rite of spring as the Legislature nears the end of its session and is looking to put together a spending plan for the fiscal year that starts July 1.

The department expects North Slope oil will average \$31.13 a barrel for the fiscal year ending June 30, its highest price in more than 20 years. The price is in the middle of this fiscal year's range for the crude, which hit its low of \$25.94 on Sept. 22 and its year-to-date high of \$36.98 on March 17.

Growing oil consumption worldwide, particularly in China, is keeping prices high, the department said. "With demand up and supply lagging, oil and oil-product inventories remain at historical-

"We continue to forecast production of those reserves that have already been discovered and at a minimum are being evaluated for development." -Alaska Department of Revenue

PETROLEUM NEWS

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ly low levels and prices remain high."

Alaska's forecast team expects prices will start heading down toward more historic levels, averaging \$28.30 for fiscal 2005 and \$25.85 in fiscal 2006 — \$3.65 and \$3.85 higher per barrel, respectively, than the state's fall 2003 forecast. By 2006, the state's budget gap could be about \$500 million, doubling to almost \$1 billion by 2012 if prices retreat further to the bottom of OPEC's \$22-\$28 price range.

Production estimates key part of forecast

Regardless of what happens with world oil prices, North Slope production also is a key component of the Revenue Department's biannual forecast book. The spring 2004 forecast shows average daily production at 985,000 barrels for fiscal 2004, a drop from 996,000 predicted last fall and the lowest level since Prudhoe Bay reached full production 25 years ago.

Production will continue to decline, the forecast

see FORECAST page A16

JUNEAU, ALASKA

Oil tax legislation gets hearing

Proponents, opponents argue change in Alaska production tax structure

By LARRY PERSILY

Petroleum News Government Affairs Editor

s expected, proponents of adding a price factor to Alaska's oil production tax structure told legislators it's only fair that the state receive

more money at high prices, while the industry testified that any increase in taxation would be a disincentive to investment. (See relates article on page A13 of this issue.)

After 90 minutes of testimony, questions and answers, legislators took no action on the bill, which is not expected



mula, 18 of 21 North Slope fields pay less than a 3.5 percent tax rate - yet will produce about 40 percent of the slope's oil this year.

And 14 of the 21 fields pay less than a 1 percent tax rate.

Production taxes comprise about 30 percent of oil company payments to the state. The rest comes from royalties, corporate income tax and property tax.

Legislation adds oil price to tax formula

Gara's bill would raise rates for all fields when oil climbs above \$20 per barrel, while reducing each field's new rate when prices drop below \$16. The measure also would set a minimum rate at 5 percentered by the set of the set The current formula includes no price factor. Under House Bill 441, the state could see an additional \$400 million a year when oil is at \$30 per barrel or an average of \$110 million a year at \$22 oil. Below that price, the measure would have little effect on taxes.





groups have turned

ing for information.

a vote up or down.

-Rebecca Watson

You're not asking for

Watson said Otero Mesa is part of a larger issue: "This is a nationwide battle."

"Environmental groups have turned it

into a horse race or election. You're asking for information. You're not asking for a vote up or down," Watson said of the review and public comment process.

Watson said many who have spoken out against drilling on Otero Mesa are part of organized campaigns.

"These are voices that are being simplified through fund-raising," she said.

-THE ASSOCIATED PRESS

to move beyond its first committee of referral before the Alaska Legislature adjourns the second week of May.

Almost one-quarter of the

60-member attended the April 14 hearing, joined by about 10 oil industry will not decrease lobbyists and company representatives in the audience.

"The system ... needs a lit- any change in taxes tle bit of a fix," said Rep. Les will only make it Gara, sponsor of House Bill of Anadarko 441 to amend Alaska's oil pro- Petroleum said. duction tax formula, known as

the Economic Limit Factor or ELF. The state just isn't receiving its fair share of oil profits at high prices, the Anchorage Democrat told the House Ways and Means Committee.

The ELF is an incentive formula, based on perwell productivity and field size, multiplied against the state's statutory production tax rate of 15 percent to set the actual rate for every field. Under the for-



Legislature "There's an assumption in here that an increase in taxes production. Alaska is competitively challenged," and

"It's my view that we should not be producing oil that completely escapes (production) taxation," testified Deborah Vogt, former deputy commissioner at the Department of Revenue 1995-1999 and former state tax attorney on oil and gas issues. "I believe the tax is seriously out of whack."

On the contrary, said Dan Seckers, chairman of the tax committee for the Alaska Oil and Gas Association. The ELF is working as intended, promoting new development, he said.

Legislators adopted the original ELF 25 years ago, and the amended version 15 years ago, to provide a tax break for smaller, marginal fields and to encourage continued investment in declining, older fields.

see **LEGISLATION** page A16

GOVERNMENT

continued from page A15 FORECAST

book said, down to an estimated 980,000 barrels the next two years and 843,000 barrels a day in 2015. And of that 2015 estimate, 288,000 barrels would come from projects under evaluation but not under active development.

The production forecast for 2004-2015 is estimated at an annual average of 945,000 barrels, down from last fall's forecast of 949,000. Comparing just the 2004-2010 timeframe, the April 15 forecast shows annual production at 966,000 barrels a day, down 5 percent from the 1.013 million average the department predicted in December 2002.

In past years, the forecast book split production into two categories: existing projects and new production from known reserves. This time, the Department of Revenue divided the total into three categories: existing, under development and under evaluation.

"We do this so that the reader will have an understanding about the uncertainty associated with the production levels assumed," the book said. "We continue to forecast production of those reserves that have already been discovered and at a minimum are being evaluated for development."

New fields a big part of forecast

Among the fields either under development or under evaluation and included in the forecast are:

• Alpine satellite fields of Nanuq and Fiord, coming online in fiscal 2007 at a combined 17,000 barrels per day and growing to 34,000 barrels in fiscal 2009 before starting their decline.



Among the fields included in the forecast were the Alpine satellite fields of Nanuq and Fiord, coming online in fiscal 2007 at a combined 17,000 barrels per day and growing to 34,000 barrels in fiscal 2009 before starting their decline.

• National Petroleum Reserve-Alaska and Point Thomson, coming online in fiscal 2009 at a combined 33,000 barrels per day and building to 145,000 barrels by 2015. However, ExxonMobil, the majority owner at Point Thomson, has not committed to an online production date, and the Department of Revenue said not all of the production from NPR-A is under development.

• Liberty, Sourdough and Flaxman Island, coming online in fiscal 2010 at a combined 45,000 barrels per day. BP Exploration (Alaska), the 100 percent owner at Liberty, continues to evaluate development of the field. Sourdough and Flaxman are part of the Point Thomson unit.
Sandpiper, an offshore field, is estimated to come online in fiscal 2012 at 12,000 barrels per day.

Some estimates changed from last year

Changes in the spring forecast from the December 2003 book include revised outlooks in several of the state's high-profile developments:

• Point Thomson production was delayed one year.

• NPR-A production was moved ahead a year.

• Alpine production was increased by 5,000 barrels a day for fiscal 2005 and

7,000 barrels for fiscal 2006, but the estimate was reduced by an average 9,000 barrels a day for fiscal 2007-2015.

• Production estimates were increased for heavy oil at West Sak, up to 80,000 barrels a day in fiscal 2010 from last fall's projection of 50,000. The department said it based the increase on the successful use of horizontal drilling for multilateral wells and the approval of a new drill site.

And while the state looks to its newer fields for increased production, Prudhoe Bay and Kuparuk will continue their decline from a combined 577,000 barrels a day this year to an estimated 360,000 barrels in 2015, according to the forecast book. \bullet

MOVING

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Don Borega Manager, Alaska Operations

continued from page A15 **LEGISLATION**

This year's legislation is nothing more than a tax increase and would especially hurt projects planned under the existing tax structure, said Seckers, who works for ExxonMobil.

Industry says tax change would hurt Alaska

"There's an assumption in here that an increase in taxes will not decrease production," said Mark Hanley, of Anadarko Petroleum Corp. "Alaska is competitively challenged," and any change in taxes will only make it worse, he said.

The third industry official to testify, BP Exploration (Alaska) Inc. tax counsel and former state Revenue Commissioner Tom Williams, told legislators they need to ask how changes in the ELF would affect future investments in the state. The tax is assessed on the wellhead value of the oil, after deducting pipeline and tanker transportation costs, but with no allowance for getting the oil out of the ground, he said. Alaska's current Revenue commissioner, Bill Corbus, closed the hearing by stating the governor's opposition to the bill. field and new production from low- or notax fields is severely cutting into state revenues. The average production tax rate for all North Slope production was 13.5 percent in 1993, he said, vs. 7.5 percent this year and about 4 percent projected for 2013.

What that means in dollar terms, assuming oil prices were the same and no change in the ELF, is that the state would receive almost \$200 million less in production tax revenues in 2013 than this year.

Administration worries about lost investments

While not offering specific predictions of lost investment dollars, the Revenue Department analysis of the bill makes clear the administration is worried about the measure's possible effect on the industry: "It appears to us that any tax increase ... may well imperil that investment."



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The problem, Gara said, is that declining production from the high-tax Prudhoe Bay

Regardless of the pro-and-con debate, the formula itself and its consequences can be difficult to predict.

"(ELF) stretches the brains of most of us," said London-based Graham Kellas, principal consultant on petroleum economics for Wood Mackenzie Ltd. "It's just a particularly highly complex formula," said Kellas, who worked on the consulting firm's 2002 study of oil and gas fiscal structures worldwide. ●

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natural gas

WEEK OF APRIL 18, 2004

NORTH AMERICA

Canadian Natural eyes Murphy assets; chasing deal believed to include 50% of Ladyfern

Canadian Natural Resources has apparently challenged those with right of first refusal to arm wrestle over Murphy Oil natural gas assets by bidding C\$260 million for the Murphy properties that were unaccounted for April 7 when Pengrowth Energy Trust made a C\$550 million acquisition.

Commonly known as CNQ, Canadian Natural will know within about a month whether it has landed the deal, Investor Relations Director Corey Bieber told the Financial Post, saying the Murphy assets "fit like a glove" with CNQ's current holdings.

Not clear what reserves involved

It is not clear what reserves and production are involved, nor the location of the properties. Petroleum News was unable to contact Bieber before deadline.

However, when Murphy put its conventional Western Canada assets on the block four

months ago, it said the package included reserves of 46 million barrels of oil equivalent, including light oil, heavy oil and natural gas, and production of 20,000 boe/d.

Mindy West, a spokeswoman for Murphy, told Petroleum News April 15 that her company is only able to disclose that proceeds from the sale of most of its Western Canadian Commonly known as CNQ, Canadian Natural will know within about a month whether it has landed the deal, Investor Relations Director Corey Bieber told the Financial Post, saying the Murphy assets "fit like a

glove" with CNQ's current holdings.

assets amounted to C\$829.5 million.

She said the buyers did not want to release their identities. However, Pengrowth said it had purchased 43.6 million boe of Murphy reserves with output of 15,500 boe/d.

Muyrphy's piece of once-prolific Ladyferm might be part of deal

The deal CNQ is reported to be pursuing is believed to include Murphy's 50 percent interest in the once-prolific Ladyfern field in northeastern British Columbia — a discovery that held estimated reserves of 750 billion to 1 trillion cubic feet, hit peak output of 665 million cubic feet per day two years ago and has since tumbled to well under 200 million cubic feet per day.

Murphy President Harvey Doer expressed frustration in late 2002 that his firm had been unable to work out an agreement with CNQ and EnCana to slow production in an effort to prolong Ladyfern's operating life and improved profit margins.

CNQ Chief Operating Officer Steve Laut responded at the time that Ladyfern's wells watered out faster than expected, but the play remained a "very, very good prospect."

-GARY PARK, Petroleum News Calgary correspondent

www.PetroleumNews.com

ALASKA

Alaska senators ask who should build gas pipeline

Legislators hear pros and cons of producer- vs. non-producer-owned natural gas pipeline; Alaska's best interests at issue

By LARRY PERSILY

Petroleum News Government Affairs Editor

t's more important to think about building the lowest-tariff pipeline to

■ carry North Slope natural gas to market than worrying about who owns the line, Alaska legislators were told

recently. "The real issue is it doesn't matter to us so much who owns the pipeline as long as it has the lowest rate," said Mark Hanley, spokesman for Joe Marushack,

Anadarko Petroleum in ConocoPhillips Anchorage.

The lower the tariff, the higher the state's royalty and production tax revenues, which are based on the wellhead value of the gas. And the same is true



for gas producers, whether they are majors or independents — they would make more money with a lower gas line tariff.

PETROLEUM NEWS

"The only successful project will be the one that has the lowest cost of service to market," said Joe

> Marushack, vice president for gas development at ConocoPhillips Alaska.

> Marushack, Hanley and Kirk Morgan of MidAmerican Energy Holdings Co. testified March 31 before the Alaska Senate Resources Committee at a session called to discuss whether it's in the state's best interests to have a producerowned gas line or a project

Anadarko Petroleum owned gas line or a province owned by pipeline companies.

After 30 years of waiting, the Legislature hopes

see WHO page A18

WEST COAST

Calpine interested in Alaska gas

Mark Hanley,

Financially troubled company talking with municipal gas line authority

By LARRY PERSILY

Petroleum News Government Affairs Editor

alpine Corp. is talking with the Alaska Gasline Port Authority about possibly buying billions of dollars of natural gas from the municipally owned project proposed to move North Slope reserves to market. But the San Jose, Calif.-based power company likely will need to overcome its junk-bond credit rating and heavy debt load before it could be in a position to provide the payment guarantees needed to help finance the pipeline.

The port authority wants to line up gas purchasers to guarantee a revenue stream sufficient to obtain 100 percent debt financing of the \$26 billion project to move almost 6 billion cubic feet per day of North Slope gas by pipe to mid-America and by liquefied natural gas tankers to U.S. West Coast and overseas markets.

Calpine and the port authority have agreed to put forth their best efforts to strike a deal, but it's far too early for a sales agreement, said Fairbanks North Star Borough Mayor Jim Whitaker. In addition to the borough the port city of Valdez belongs to the authority, created by voters in the two municipalities in 1999 to build and own a natural gas pipeline.

The company has asked about possibly contracting for as much as the authority's total output, Whitaker said.

Talks are at a "very preliminary stage," said Brad Barnds, a vice president at Calpine's Houston

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office. "By no means have there been any binding agreements."

Company finances 'legitimate concern'

The company's financial problems and its ability to guarantee ship-or-pay contracts are "a legitimate concern," he said. "Calpine would hope to be in a different financial situation then," Barnds said of the end of the decade, when an Alaska gas project might be under way.

But that's a long way off from the company's current financial difficulties, which are forcing it to pay substantial rates for its borrowing.

After dropping plans in late February to issue \$2.35 billion in debt, saying investors wanted too high of interest rates, Calpine returned to the market late last month and successfully closed a \$2.4 billion deal with an additional \$200 million revolving line of credit for its wholly owned subsidiary, Calpine Generating Co. But the interest rates were high, and floating. Notes due in 2009 were priced at a minimum 5 percent; 2010 notes at a minimum 7 percent; and 2011 notes at a 10.25 percent minimum and some at a fixed 11.5 percent.

Calpine's stock closed April 13 at

\$4.66 a share, down more than 10 percent from late February when it first backed away from the debt issue. The stock reached its height of almost \$60 a share in spring 2001 and its recent low mark at around \$2 in October 2002.

Liabilities total almost \$23 billion

The company carried almost \$23 billion in liability as of Dec. 31, 2003, against \$4.6 billion in shareholder equity. The debt load is about 10 times what it carried at the end of 1999.

"We have substantial indebtedness that we may be unable to service and that restricts our activities," the company said in its 2003 annual report to the U.S. Securities and Exchange Commission.

Regardless of its debt problems, the company still needs to secure long-term gas supplies. "We became interested in the (Alaska) project a few months ago," Barnds said, after the gasline authority contacted Calpine, one of the nation's leading electrical power producers.

The authority has stepped up its sales efforts in recent months, at the same time it was expanding its proposed project to incorporate a line moving more than 3 bcf a day through Canada to U.S. markets in addition to its original proposal for a pipe leading to an LNG shipping terminal at Valdez.

Calpine is interested in perhaps taking gas through both delivery systems, pos-

sibly on a 20-year deal, Barnds said. "Calpine has gas demands throughout North America." The company also is talking with other possible long-term gas suppliers, though he declined to name them.

Calpine burns almost 2 bcf per day of gas, with more than three-quarters of the supply coming from short- and longterm contracts, Barnds said. The company runs 85 power plants in the United States and Canada, producing almost 23,000 megawatts, with about 700 megawatts of that total coming from geothermal power generation in Northern California, he said. The rest of the plants are gas-fired.

Calpine looks to pipe and LNG supplies

It gets a little less than one-quarter of its gas from its own reserves, which total about 800 bcf in Alberta, Northern California, south Texas and the Rocky Mountains, Barnds said. The company's long-term goal is to get 25 percent of its gas from its own reserves, 50 percent by pipe and 25 percent by LNG tankers.

Calpine does not own or operate any LNG receiving terminals, or hold capacity rights at any of the nation's four existing terminals, but is talking with several potential regasification plant developers. The company recently abandoned plans for its own LNG receiving terminal at Eureka, Calif., after heavy community opposition to the plant.

It's the heavy debt load, however, and commitments and cash needs to build an additional 14 power plants generating 7,700 megawatts that worry rating agencies and financial analysts. The company also faces more than a dozen class-action lawsuits from shareholders and bondholders, and is involved in other litigation in the fallout from California's energy crisis and controversial trading schemes of three winters ago.

Access to financial markets 'critical'

"High leverage and the associated interest expense could prove unwieldy, making it difficult to grow cash flows and earnings per share," said Credit Lyonnais Securities (USA) Inc., in a March 16 report. "The ability to maintain access to financial markets is critical to Calpine's 2004 liquidity and capex plans."

But the company could be in a good position if power prices recover in 2005-2006, the analysts' report said.

Merrill Lynch said in a Feb. 27 report it is skeptical of a 2005 recovery: "Power markets recovery is a long ways off." A shortage of liquidity over the next year could force the company to defer or cancel some of its discretionary capital spending, Merrill Lynch said. ●

continued from page A17 **WHO**

that growing market demand and declining North American supplies from mature fields will finally conspire to entice companies to build an Alaska natural gas line this decade.

Resources Chair Scott Ogan said he called the meeting not to debate or "Monday morning quarterback" the governor's decision to reject MidAmerican's demand for sole development rights to the North Slope project or the pipeline company's subsequent decision to walk away from negotiations and abandon its Alaska gas pipeline proposal.

Rather, the Palmer Republican said, he called the meeting because it's important for the Legislature to understand the policy issues of a producer- vs. non-producer-owned pipeline.

FERC rules will govern gas line

"The pipeline will be regulated by the Federal Energy Regulatory Commission, regardless who owns it," Marushack said. Under federal laws, pipeline owners cannot discriminate against non-owners that want to move gas through the line, he said. "Open access means any party can purchase access." the shipping charges in the early years would be too high.

Anadarko worries about access

Regardless of FERC oversight, Anadarko worries that it could find it hard to get access to the pipeline, or at least at terms and rates that it likes, Hanley said. The independent, with about 20,000 barrels a day of North Slope oil production, will not drill for gas until it sees pipeline tariff and access terms, he said.

Reluctance to spend money on exploring gas prospects could be a problem for the company and others in the same situation of holding North Slope leases but no proven gas reserves.

If the three majors build the line — BP Exploration (Alaska), ExxonMobil and ConocoPhillips — they could schedule an open season for bidding on gas line capacity too soon or too short for independents to make informed commitments on supplying gas for the line, Hanley said.

Or the producers could decide to base the tariff on British thermal units instead of cubic feet of gas, favoring their own liquid- and Btu-rich Prudhoe Bay gas over dry gas that Anadarko and others

may find in their lease areas, he said. All things considered, Hanley is less gas line. A producer-owned line would give the companies more market concentration, he said.

But it's questionable how pipeline ownership would give the producers more of the natural gas market. Ownership of the line wouldn't have anything to do with ownership of the gas, which would remain under producer control unless a pipeline company stepped forward and offered to buy the gas at the wellhead and take all of the market price risk in the years ahead — something no pipeline company has offered to take on for the Alaska project.

BP was the largest U.S. producer of natural gas in 2002, according to federal Energy Information Administration statistics. The company produced an average of 5.5 billion cubic feet of gas per day in 2002, with ExxonMobil in second place at 3.1 bcf per day. ConocoPhillips placed fourth, at 2.45 bcf per day.

Though it's a lot of gas, the three companies' total production was just about 20 percent of domestic gas flow in 2002, equal to the market share of the next five top producers: ChevronTexaco (No. 3) and Nos. 5-8 Shell Oil, Devon Energy, El Paso and Burlington Northern. Anadarko Petroleum was listed at No. 9 on the 2002 Marushack said. "We need Alaska gas to happen too."

But couldn't a producer-owned line hinder and delay independents from finding and supplying their own Alaska gas to North American markets, asked Anchorage Rep. Eric Croft.

The producers, if they owned the line, Marushack said, would want independents to explore and find more gas on the slope. At 4.5 bcf per day, the project would need at least 50 trillion cubic feet of reserves to run for 30 years, yet proven reserves on the North Slope total only 35 tcf, he said.

Several options to gain access

Although independents may not want to bid for pipeline capacity during the open season that would be held in advance of construction, he said, they would have several options to get gas into the line:

• "Companies can explore for gas so they are ready for the open season." At the earliest, an open season is at least two years away, according to the producers' application to the state for a fiscal contract governing the project.

· "Companies could take capacity on the come," betting they'll find gas or, if not, selling their capacity rights to others. • The producers expect the flow from their own proven North Slope reserves would start declining about 12 years after the line goes into operation, creating space for new shippers. • Or, if there is enough demand, the producers could hold an open season to expand the line. Regardless of the options, "there is an advantage to a pipeline company building the line because of that expertise," Hanley said. But pipeline-building expertise maybe isn't as important as experience in Alaska, Marushack said. "Alaska isn't like Wyoming," he said, an apparent reference to MidAmerican's recent pipeline expansion in Wyoming. "BP and Phillips are operators on the North Slope," with experience in working through the winter and building over permafrost.

Ogan asked how that is different from the trans-Alaska oil pipeline and its longstanding tariff disputes.

Marushack answered in two parts. First, he explained, the oil pipeline is a common carrier, open to all shippers. Under common carrier rules, if the pipeline were at capacity when it opened and a company wanted to add more oil to the flow, all shippers would have been required to scale back on a prorated basis to make room.

The gas line would be an open-access contract carrier, meaning anyone could bid for capacity and would hold that capacity for as long as their contract terms allowed.

And, unlike a declining tariff structure designed to lower shipping costs over time, Marushack said the gas line would work better with a flat tariff. Otherwise, comfortable with a producer-owned line, although he said cost is a key issue, acknowledging the perception that pipeline companies might be less concerned about low tariffs since their profits are not dependent on the value of the gas after transportation costs.

It was a point that Marushack emphasized in his presentation to the committee. A pipeline company's profit is simply a return on its investment in the line. The more expensive the project, the larger the company's profit, Marushack said, eliminating any incentive for a pipeline company to push as hard as producers for the lowest-cost line possible.

MidAmerican favors non-producer-owned line

MidAmerican's Morgan, however, said his company believes the state would be better served if the majors do not own the federal report, at 1.776 bcf per day.

The talk of market share provoked pointed questions from two Democratic legislators, who questioned the North Slope producers' motives regarding an Alaska gas project.

Legislators question producers' motives

Why would the majors want to move Alaska gas to market, where it might compete with their existing North America production and new supplies the companies plan to import into the United States as liquefied natural gas, asked Sen. Kim Elton.

"We are motivated to sell the gas," Marushack told the Juneau lawmaker. Turning Alaska's stranded gas reserves into cash would boost ConocoPhillips' profits and its stock price, the vice president said.

"I'm not worried about LNG,"

ALTERNATIVE ENERGY

• URBANA, ILL.

Pig manure can become crude oil

By JIM PAUL

Associated Press Writer

University of Illinois research team is working on turning pig manure into a form of crude oil that could be refined to heat homes or generate electricity. Years of research and fine-tuning are ahead before the idea could be commercially viable, but results so far indicate there might be big benefits for farmers and consumers, lead researcher Yanhui Zhang said.

"This is making more sense in terms of alternative energy or renewable energy and strategically for reducing our dependency on foreign oil," said Zhang, an associate professor of agricultural and biological engineering. "Definitely, there is potential in the long term."

The thermochemical conversion process uses intense heat and pressure to break down the molecular structure of manure into oil. It's much like the natural process that turns organic matter into oil over centuries, but in the laboratory the process can take as little as a half-hour.

A similar process is being used at a plant in Carthage, Mo., where tons of turkey entrails, feathers, fats and grease from a nearby Butterball turkey plant are converted into a light crude oil, said Julie DeYoung, a spokeswoman for Conagra Foods, which operates the plant in a joint venture with Long Island-based Changing World Technologies.

But converting manure is sure to catch the attention of swine producers. Safe containment of livestock waste is costly for farmers, especially at large confinement operations where thousands of tons of manure are produced each year. Also, odors produced by swine farms have made them a nuisance to neighbors.

"If this ultimately becomes one of the silver bullets to help the industry, I'm absolutely in favor of it," said Jim Kaitschuk, executive director of the Illinois Pork Producers Association.

So far conversion only in batches

Zhang and his research team have found that converting manure into crude oil is possible in small batches, but much more research is needed to develop a continuously operating reaction chamber that could handle large amounts of manure. That is key to

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making the process practicable and economically viable.

Zhang predicted that one day a reactor the size of a home furnace could process the manure generated by 2,000 hogs at a cost of about \$10 per barrel.

In a best-case scenario, \$1.5 billion in crude oil imports could be saved each year if 50 percent of the nation's swine farms used the technology, Zhang said. And he estimated the value of hogs would increase \$10 to \$15 each if the oil that their waste produces could be sold for \$30 per barrel.

Big oil refineries are unlikely to purchase crude oil made from converted manure, Zhang said, because they aren't set up to refine it. But the oil could be used to fuel smaller electric or heating plants, or to make plastics, ink or asphalt, he said.

"Crude oil is our first raw material," he said. "If we can make it value-added, suddenly the whole economic picture becomes brighter." \bullet

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THE REST OF THE STORY

continued from page A1 BARGAINS

stantial way.

The C\$550 million deal gives Pengrowth 43.6 million barrels of proved heavy oil, light oil and natural gas reserves and production of 15,500 barrels of oil equivalent per day. The daily production breakdown consists of 46 million cubic feet of gas, 1,550 barrels of light/medium crude and natural gas liquids and 6,250 barrels of heavy oil.

Murphy said it actually entered into



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binding agreements to dispose of the bulk of its Western Canadian conventional holdings for total proceeds of C\$829.5 million, but offered no breakdown.

Murphy announced last December that it was seeking buyers for the properties to generate proceeds to focus on "highgrowth" frontier areas such as Malaysia.

For Pengrowth, the transaction will boost its output by 33 percent to 62,000 boe per day, increase its recoverable gas reserves to 40 percent from 37 percent and add 219,000 acres of undeveloped land to its portfolio.

Pengrowth President and Chief Executive Officer James Kinnear said the new asset package gives the trust "exposure to higher impact areas ... with significant development potential."

He said Pengrowth is more comfortable entering the heavy oil sector now that high oil prices have increased the value of that commodity, but also hinted that the heavy assets could eventually be spun off.

APF adds Great Northern

APF Energy Trust locked up a deal on April 7 to acquire Great Northern Exploration for C\$291 million, adding 5,600 boe per day to its Alberta production, which will rise 40 percent, increasing its proved reserves by 14.16 million boe to 44.26 million boe and gaining about 140,800 acres of undeveloped land.

In paying about C\$5.05 per share for Great Northern, APF offered a 7 percent premium over the previous day's trading price.

APF President Steve Clouthier said the trust did not mind paying C\$50,000 per flowing barrel of production to gain "upside" from the reserves and years of new production.

"We would not do that but for the fact that there's tremendous development potential," he said.

Clouthier said one of the prizes is Great



Want to know more?

If you'd like to read more about Canada's energy income trusts, go to Petroleum News' web site archives and search for these recently published stories.

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- April 4 Canada tightens grip on trusts
- March 14 Canada out to bust the trusts?
- Feb. 29 Income trust negotiates C\$175 million takeover of Birchill
- Feb. 29 Terasen puts damper on trust conversion talk • Feb. 22 Energy trusts show cooling signs
- Feb. 15 Art or science?
- Feb. 8 Income trusts fuel Canadian financings, up 14% from 2002
- Jan. 25 More warning signals for energy trusts • Jan. 11 Energy trusts may curb U.S. investors

2003

• Dec. 28 Canadian income trusts fatten portfolios • Dec. 14 U.S. players jettison Canadian assets

Northern's land holding in the Horseshoe Canyon area northeast of Calgary, rated as one of the most enticing coalbed methane prospects, making APF the first trust to take a major stake in coalbed methane.

Provident lands Olympia, Viracocha

Provident Energy Trust made a dual deal on April 6, landing two junior companies for C\$423.5 million — Olympia Energy for C\$217.6 million and Viracocha Energy for C\$205.9 million.

Provident Chief Executive Officer Tom Buchanan told analysts the transactions "add considerable strength and stability to Provident's cash flow and depth to its underlying assets."

In addition to 198,000 net acres of undeveloped land, engineering reports assign total proved reserves to the combined purchases of 20.3 million boe, giving Provident total proved reserves of 62.1 million boe and a reserve life index of five years.

The trust estimates the assets will raise its output by 10,300 boe per day to 34,000 boe per day - 45 percent gas, 33 percent light/medium oil and gas liquids and 22 percent heavy oil. Operating costs will be C\$7.50-\$8 per boe in 2004.

Petrofund starts buying with Ultima

The acquisition binge started March 29 when Petrofund Energy Trust negotiated a C\$450 million takeover of Ultima Energy Trust, to pool a combined 143.5 million boe of proved plus probable reserves and increase its production to 37,133 boe per day, moving it into fifth place on the list of trusts.

Ultima President Brian Gieni predicted at the time that the Petrofund deal could be a "trend of the future" for trusts, given the intense competition for assets in Western Canada.

He said it is becoming "very tough to compete and grow" in a way that trust investors have demanded, noting that the Petrofund-Ultima deal offers long-term solutions in the form of better access to capital, a longer reserve life index, more sustainable cash distributions and better prospects of exploiting properties.

That confirmed the growing views of analysts that the 28 Canadian trusts could be entering a period of upheaval at a time of shrinking netbacks, rising operating costs and the adjustment to new tax rules covering foreign ownership over the next three years.

The rate of asset depletion is reflected in the loss of production per trust unit, with ARC dropping 7 percent over the past three years, Petrofund by 17 percent in 2003 and Shiningbank Energy Trust and Viking Energy Trust shrinking by 12 percent each last year.

Returns predicted to slide

Peters & Co., a Calgary-based investment dealer, warned in January that based on unit prices and its forecast commodity prices for 2004 of \$27 per barrel for oil and C\$4.50 per million British thermal units for gas, cash returns from trusts could slide to 11-12 percent this year.

Over the last five years, total returns have averaged about 40 percent, but BMO Nesbitt Burns analysts Gordon Tait and Les Stelmach expect cash distributions will "trend lower over the next few quarters."

The tight asset market is also forcing more trusts to break with their historic pattern and start chasing assets through the drill bit, with trusts drilling about 1,000 wells in 2003 compared with 889 in 2002. ●

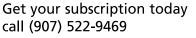
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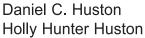
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Business Spotlight

By PAULA EASLEY



Rocky J. Doty, maintenance supervisor

Agrium Kenai Nitrogen Operations

Agrium fertilizers maximize plant growth and enhance the nutritional values of food. The company's production, distribution and retail facilities contribute to the economic growth of communities, and its products help agricultural businesses grow and prosper. So, it's all about growth. With adequate natural gas feedstocks, the company and employment opportunities will continue to grow.

Seven years as a welder and maintenance mechanic and being dad to five children convinced Rocky Doty of the advantages of an engineering degree. His first engineering job was with Unocal in Kennewick, Washington, followed by employment at Unocal's Kenai facility. Today he works at Agrium Kenai Nitrogen Operations. Summer salmon and halibut fishing, plus family visits (remarkably timed to when the fish are running), keep Rocky and wife Kara happily occupied.



Matthew Glynn, vice president and chief operating officer

Alaska Railroad

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Corp.

A state-owned operation since 1985, Anchorage-based Alaska Railroad Corp. has implemented sweeping changes in technology and processes to make it more efficient and reliable, including modernizing the physical plant and equipment. Current objectives are to build more capacity, improve performance, and support economic development. Matt Glynn joined ARR in January 2001 after spending 21 years with the Burlington Northern Santa Fe Railroad. His professional goal for the railroad is to move a million carloads of fuel with zero spills. He believes "It ain't bragging if you can do it." Matt and wife Nancy enjoy traveling with their boys, ages 17, 15 and 13. At home the couple enjoys water and snow-skiing, although the boys prefer skateboards, rollerblades and snowboards.

HELP

good, we should get something back, we should get something extra."

The combination of lower-than-expected prices and higher-than-projected construction costs and tariffs could knock down the project to a single-digit rate of return, falling far short of what companies need for such a multibillion-dollar risk, van Meurs said.

A low rate of return on such a massive investment could drive a company's stock price, and debt ratings, so low as to make it difficult to raise money for exploration and new production, possibly leading to a breakup of the company, he said.

Van Meurs is leading the state's team in its negotiations with the major North Slope producers and other applicants under Alaska's Stranded Gas Development Act. The state is trying to negotiate a long-term fiscal contract covering payments in lieu of state and municipal taxes, should the producers or any other company or group of companies decide to build the pipeline.

Adviser briefs legislators and governor

While not commenting on the confidential negotiations, van Meurs briefed legislators on his views of the project's economics, competitiveness and market conditions. The governor's office set up the meeting, which was open to the public. The audience included Gov. Frank Murkowski, Lt. Gov. Loren Leman and Murkowski's chief of staff, Jim Clark.

Van Meurs, 62, who has advised the state on oil and gas fiscal issues since 1996, has consulted for more than 70 countries, always working for governments and never for industry. His clients have included the United Nations, World Bank, Mexico, Kuwait and several of the world's leading oil and gas producing countries.

He was born in the Netherlands, moved to Canada and, a few years ago, moved to the Bahamas, although he spends most of the year living in hotels, working for his clients.

"Who is actually taking the risk on this pipeline?" van Meurs asked legislators. It will be the shippers that sign long-term contracts, guaranteeing to use the line and pay the tariff regardless of the market price for the gas, he answered. Only with such contracts could a pipeline developer obtain financing.

"Today, the reality is the producers are probably going to be the shippers," van Meurs said. Though others have expressed interest in taking some of Alaska's gas, there is no evidence any are willing or financially able to guarantee payment on several billion dollars a year in shipping charges, he said.

"For each of the three companies (ExxonMobil, ConocoPhillips and BP Exploration (Alaska)) ... if this project actually comes about it will be their largest project in the world," the state's adviser said.

Delayed return on investment a problem, too

Not only does the size of the investment present problems, but so does the cost of building in Alaska and the reality that developers would spend up to \$20 billion over as many as 10 years before seeing the first dollar of cash flow from gas sales, van Meurs said.

Want to know more?

If you'd like to read more about Pedro van Meurs, go to Petroleum News' web site archives and search for his name. The following stories will pop up.

Web site: www.PetroleumNews.com

2004

- March 7 Gas line on fast track
- Feb. 1 Natural gas pipeline plans not the same

2003

- Nov. 2 Part 3: Oil, gas adviser to the world
- Oct. 26 Part 2: Oil, gas adviser to the world
- Oct. 19 Part 1: Oil and gas adviser to the world • Sept. 14 Seven-member stranded gas negotiation
- team includes Rutherford, van Meurs • Aug. 17 Alaska gas pipeline application in works • May 18 Wanted: More wells
- Way to Wanted. More wens

2000

• Oct. 28 It's a whole new world of high oil prices, says van Meurs

• June 28 Middle East governments offer sweet deals to private oil companies

1999

• May 28 Knowles brings in outside experts to help review team

1998

• Dec. 28 Improving the odds

"In the case of Alaska, our rate of return is typically below the world," he said. The heavy, upfront investment for a 2,000-mile gas pipeline just makes it worse. "There is nothing Alaska can do about that."

His analysis showed the Alaska gas line could produce an internal rate of return as low as 8 percent or as much as 20 percent, depending on pipeline tariffs and market prices for the gas. That compares to a range of between 9 percent and more than 35 percent on the three producers' combined 30 largest oil and gas projects worldwide.

Alaska looks worst at the far end of the chart, where low market prices and high construction costs are combined. "Under bad conditions the risk is too large for any of the producers," van Meurs said.

He's not alone in warning that the "what ifs" are a problem for the Alaska gas line.

The total tariff on a line moving 4.5 billion cubic feet of gas per day would exceed \$10 million a day. "Anyone want to guess what the price of gas will be in the Lower 48 and bet \$120 a second on it?" ConocoPhillips Alaska Inc. President Kevin Meyers asked the Fairbanks Chamber of Commerce last month.

Pipeline company also warns of economics

"The project needs to be economic in a wide range of assumptions," Kirk Morgan of MidAmerican Energy Holdings Co. told the Alaska Senate Resources Committee on March 31. The Iowa-based pipeline company a week earlier dropped its proposal to build the line after the governor refused to grant its demand for exclusive rights to the project.

"Pipeline companies by themselves cannot change the economics of this project," van Meurs told legislaPETROLEUM NEWS • WEEK OF APRIL 18, 2004

tors, acknowledging MidAmerican's departure — not unless pipeline companies are willing to share in the costs and, so far, no pipe companies have said yes.

A fiscal contract under the Stranded Gas Act could help lessen the risk, van Meurs said, by attempting to provide project developers with more certainty in their payments to the state and municipalities. Passage of the gas line incentives in the stalled federal energy bill also would help.

But the federal provisions and a Stranded Gas Act contract may not be enough to get the line built. The state needs to consider taking a share of the risk, he said. That could include signing a long-term shipping contract for the state's 12.5 percent royalty share of gas production, guaranteeing payment of the pipeline tariff regardless of the cost or market price for the gas, van Meurs explained.

Governor wants funding for state risk study

The governor has asked lawmakers for almost \$1.6 million for a four-month project this spring and summer to study if state risk-sharing could help the project and, if so, how the state could take on some of the financial risk. The Legislature has not taken action on the request.

The state could have a model completed this summer to show revenues from a gas line under all possible circumstances, van Meurs said.

Oil and gas companies like to get a 15 percent rate of return on their successful investments, van Meurs said, with the return needed to cover the losses from bad investments. That isn't very far from the 12 percent to 14 percent return that MidAmerican said it wanted on the Alaska project before the company withdrew its Stranded Gas Act application.

Several legislators questioned van Meurs on whether North Slope producers were ignoring Alaska for other natural gas projects in their worldwide portfolio and why the companies are hesitant to proceed in Alaska when gas prices are twice as high as in 1999.

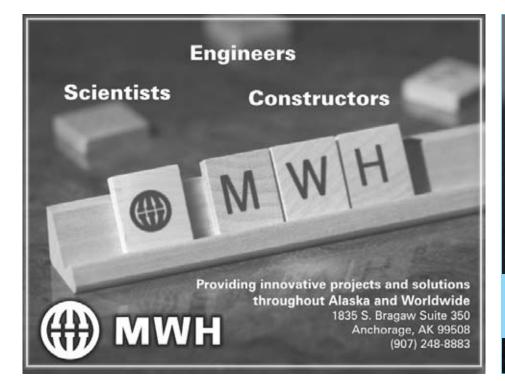
"Would oil companies have ulterior motives to shut out Alaska? I don't think so," he said. Gas production is declining across North America and in the companies' North Sea fields, and all three producers need new supplies. "The only way to stay in business is to develop resources."

Price volatility a concern

And despite yesterday's, today's and tomorrow's high natural gas prices, "It is inherently impossible to predict the North America gas prices," van Meurs said. "That is why producers have to take a conservative approach."

Lawmakers also asked if the state should focus on a liquefied natural gas project to the U.S. West Coast instead of waiting for a pipeline to mid-America. Doubtful, van Meurs said. "The future is clearly one of huge volumes of LNG being shipped around the world at lower costs. (Alaska) LNG will have a tough time competing."

And, at 2 bcf per day for proposed LNG projects vs. a gas line at 4.5 bcf per day, betting the state's future revenues on a smaller LNG project is like selling only the upper floor of a house, he said. "Alaska wants to sell the entire house." \bullet



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THE REST OF THE STORY

continued from page A1 BREAKTHROUGH

Viscous production across the slope is now some 30,000 barrels per day, and with some 22,000 bpd from Milne Point, viscous accounts for 40 percent of production at the BP Exploration (Alaska) field, Ed LaFehr, Milne Point asset manager, told the Alaska Support Industry Alliance April 8.

Current success follows years of effort to find the right technology to produce viscous oil, but it's only the beginning.

LaFehr said he believes that in the struggle to commercialize viscous oil, the North Slope producers have established a base camp at the 7,000-foot level of the mountain, and are starting to see what lies ahead.

But, he cautioned, it's still a long way to the top of the mountain - significant commercial development.

Viscous a third of BP's Alaska resource

Viscous oil is critical to both Alaska and to BP, LaFehr said. It accounts for a third of BP's Alaska resource - conventional oil and natural gas are each about a third - and will bridge the gap to gas production, he said.

While BP has "essentially shut down exploration," it is "still spending risk capital - but we've shifted it from exploration over into the viscous arena and other areas... but we're spending \$400 million plus or minus inside the fields on things that are challenging, that require enormous innovation and a lot of scientific and engineering envelopepushing off that."

The Alaska business unit has the largest resource base of the BP business units, he said, but "most of the BP Alaska resource base is ... economically challenged or ... gas," and Alaska is also "the highest-cost region" in BP, some \$5 a barrel above the BP upstream average.

That makes the competition for investment dollars tough, he said.

On the plus side, viscous has "relatively short cycle times to production" and is "really green" because there is minimal new infrastructure required: "A lot of this extended reach drilling has been a phenomenal breakthrough for us to come off of existing gravel. You can't do that in very many parts of the world," he said.

BP's production from Alaska is still a significant portion of the company's total production, at 330,000 bpd some 8-9 percent of the almost 4 million bpd the company produces, but it's less than half of what it was at the peak in the late 1980s, and the goal, he said, is to keep that production level, and "to reinvest in the existing resource base to hold production flat" until gas can be produced.

But LaFehr said he believes that strategy is only possible "if viscous oil happens and if it happens in a relatively material way," not just in bits and pieces.

What's heavy oil and what ain't

In most places viscous oil equals heavy oil, but that isn't the case on the North Slope, where the term viscous is a better fit than heavy for the shallower, colder crude oil BP and ConocoPhillips are tapping at Milne Point, Kuparuk and Prudhoe Bay.

BP's Milne Point asset manager, Ed LaFehr, says that while heavy oil and viscous oil are not always "directly correlated, most of the time they are," and so in most places it's just called heavy oil.

But not on the North Slope, he said.

So what's the difference?

BP spokesman Daren Beaudo said on the North Slope viscous oil is generally any crude oil with an American Petroleum Institute gravity of less than 22 degrees and a viscosity greater than 10 centipoises.



DAREN BEAUDO

Conventional North Slope crude oils, the lighter oils, have

higher API gravities. The Alaska Oil and Gas Conservation Commission lists oil from the main Prudhoe Bay reservoir at 28 degree API and oil from Kuparuk at 24 degrees API. Oil from the Alpine and Northstar fields is much lighter, 40 degrees and 44 degrees respectively.

A centipoise is a measure of the viscosity of a liquid - how it flows. Water has a centipoise of 1 at atmospheric pressure and temperature, and anything with a higher number isn't as fluid as water.

"Heavy oils," Beaudo said, "will typically have much lower API gravities, but could have similar viscosities as the reservoir temperature in many basins is higher than the North Slope.

"The distinction between heavy and viscous is really that on the North Slope we are producing relatively light oil at higher reservoir viscosities --- thus viscous oil."

LaFehr said North Slope viscous oil is "low sulfur, low metals." And, he said, because there is so much light oil going into the trans-Alaska pipeline from Alpine and Northstar, viscous oil "actually helps the blend" in the pipeline and keeps the overall crude a good fit for West Coast refineries.

said, and leverage infrastructure costs, "coming off of existing gravel, minimizing pads and new pipelines."

Since 2000, BP has spent more than \$300 million on viscous, "largely developing S pad at Milne Point," and in 2004 will spend more than \$100 million as its share of more than 30 wells, some 13 of those at Milne Point, 15 or so at Prudhoe Bay and others at Kuparuk.

Plan size from five pads to one

The original plan for Milne Point viscous development called for five new drilling pads, 75 miles of new pipeline and 10 miles of new road.

What BP did, however, was to build one new pad which will "access nearly the same reserve pool" with extended reach drilling. With wells reaching out as much as 12,500 feet, to an accumulation at four or five thousand feet vertical depth, the wells are "just laid out on their side," LaFehr said, "pushing the shallow extended reach drilling envelope for BP."

BP is using jet pumps for lift and drilling multilateral wells from a small pad. Geologic models lead "to predictability in our geo-steering" and have resulted in wells staying in the productive sands 90 to 93 percent of the time.

And when it comes to drilling, "what Doyon 14 has done, what 141 did before that, just blew the doors down.

front-end attention or project management for the facilities side of S pad, LaFehr said, and it was too schedule driven. "We pushed ourselves into a pretty tough ... scheduledriven approach, and we met the schedule, but we paid a premium on the facilities' side."

Where next

With development success at S pad, "if we start seeing signs that the next evolution of technology works, and the economics are there ... there are hundreds of millions of dollars over the next decade that we would spend ...

"It's a phenomenally large project," LaFehr said.

With success have come new challenges: long-rate delivery; issues around how water flood in the field is run; understanding the reservoir; and how sand is managed through the facilities.

Sand management is part of issues around "cost of operations and operability (that) have started to creep in," LaFehr said, with something like 35 barrels a day of sand now being trucked off of S pad (viscous oil reservoirs aren't well consolidated, so sand, bits of the reservoir, is produced along with the oil). We knew there would be sand, he said, "it's a bit more challenging than we had thought."

Then there are new types of wells.

In addition to multilateral wells, LaFehr said ConocoPhillips in Venezuela has drilled wells using what he called "the fish-bone concept," where many drain holes are drilled off of a lateral line, exposing "huge volumes of reservoir, so your ... productivities are greater" in viscous oils, which really don't want to flow.

"There's concept thinking on where we go next with the drilling, and then cost transformation and project management has to be improved."

And, he said, "it's pretty clear that the access costs have to continue to come down, everything from engineering to procurement to construction to ... fabricating... We need to continue to drive the cost of business in the right direction to make a marginal project like this ... happen, and so the pie gets bigger."

How big could this pie be?

Once you get into enhanced oil recovery, LaFehr said, "you start getting into the big numbers."

While the viscous resource is 15 billion barrels, for various reasons probably only 10 percent can be extracted, but "that's one and a half billion barrels — and we only have maybe 100 million, 100 to 200 million under development."

Looking at this as a mountain, "it gives you a sense of where we are - we're just above the foothills."

> -KRISTEN NELSON, Petroleum News editor-in-chief



Much has been accomplished

Industry has known about the viscous resource for a long time, LaFehr said, and the North Slope producers collectively spent more than half a billion dollars in the 1980s and 1990s, trying to produce viscous, "pushing the envelope" with such techniques as fracturing for sand control and drilling smaller wells.

But "none of that worked: it was all uneconomic," he said.

The horizontal well drilled in 1999 showed promise, and BP tackled things needed to make viscous economic: tripling well productivity to sustained rates of 1,000 barrels per day and reducing life-cycle costs by finding a way to lift the oil other than with electric submersible pumps.

"We also had to radically reduce our costs of drilling per unit of production," LaFehr

"We've seen the best drilling performance in all of BP sitting right out there on the tundra."

In addition, he said, "the safety performance has been outstanding, the cost delivery has been 20 percent below what we authorized" and on drilling measures like days to 10,000 feet, "we're beating those by about 20 percent."

And "trouble time on drilling has been very, very low - half the slope average roughly," he said.

"So a lot of technology all the way from subsurface to facilities has been driving the breakthrough in performance."

Viscous oil production from S pad is a success, LaFehr said: "we've seen our first commercial project at S pad."

What BP would do differently in the future, he said, was management of facilities construction.

Because so many surface facilities have been built on the slope, there wasn't enough

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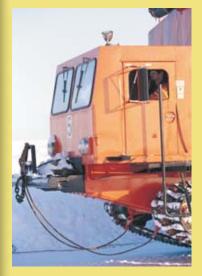
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Security Aviation Celebrates 20 Years of Safe Flying

Company continues O'Neill's legacy of aviation integrity

By SUSAN BRAUND

Petroleum Directory Contributing Writer

ome companies have catchy, attention-getting names, some simply describe their service, but others are right on point — like Security Aviation.

Customers who fly with this long-time Alaska-owned air charter can be secure in the knowledge that they come first, that pilots are well-trained, planes well-maintained and that safety is the watchword.

But Security's President Joe Kapper doesn't want you to take his word for it. He encourages consumers to do their own due diligence, "Ask about the charter company's safety history and the pilot's qualifications. Charter operators should freely offer you this information. Do your homework before choosing a company to fly you or your loved ones."

Big shoes

Kapper took the helm of the company after the passing of his stepfather and company founder Mike O'Neill in late 2002.

"Mike lived and breathed the business. In 1994, he had his first heart attack, definitely a wake up call for our family. My wife and I had lived in Napa for 17 years at that point and decided it would be a good time to come home. Shortly upon returning to Alaska, I stepped in at Security Aviation in hopes of getting Mike to back off of work a little. He eventually purchased a cabin at Big Lake and became a commuter — in his Cessna 180 on floats. "He was finding there was more to life than work," says

Kapper, "Mike taught me a great deal, for which I'm grateful. He left some pretty big shoes to fill; I have a deep appreciation for what he built."

Security is synonymous with safety

The company is based on a culture of safety. "It's paramount to what Mike was trying to achieve. Safety has been the number one priority from day one and we have never wavered. After 20 years of accident-free flying, our customers expect it."

Since 1998, aviation insur-

ance in Alaska has skyrocketed. Accidents raise rates for everyone, regardless of individual safety records. Security Aviation, however, is proactive, putting earnings back into aircraft and training for pilots and mechanics. As a result, the company ranks in the top 3 percent for charter safety in the Lower 48 and Alaska combined.

Alaska requires \$150,000 insurance coverage per seat, but Security doesn't stop there. Kapper explains, "Because of our safety record, our history and the way we operate,



The Piper Navajo Chieftain. One of two at Security Aviation, the reliable Navajo is known as the twin engine workhorse of Alaska. All of the company aircraft have leather seats and interiors, club seating, refreshment centers and service tables.

got tattered and worn, he spray-painted and repaired it. When he found a new electronic digital model he was like a kid with a new toy," remembers Kapper. "It's all about the customer."

Security goes the extra mile for its clients. Accommodating dietary and beverage requests, providing courtesy shuttle vans, shopping for gear or groceries, planning logistics and on-board SAT-phones are just a handful of the services offered.

Clients include a whole gamut of folks. Author James

Michener, President Jimmy Carter, golf-great Jack Nicklaus, members of Congress and state government, workers and execs from the oil, gas, mining, construction and fishing industries and Native corporations have flown with Security Aviation. The company's U.S. Air Force Department of Defense contract is in its ninth year of transporting maintenance crews to remote radar sites, and in the summer, a steady stream of sport fishermen head for remote lodges. Although they also fly in

Canada, the Lower 48, Eastern

Russia and more recently, India, the bulk of Security's flying is within Alaska. Available 24/7, the charter is frequently called upon for emergency medical runs and to ferry critical parts from oil field to factory for immediate repairs.

Engineering firms and other agencies with multi-stop,

BRAU

complicated logistics planning, including ground transportation and Seattle. All of the aircraft have leather seats and interiors, club seating, refreshment centers and service tables.

The fleet is maintained in the 7,000 square foot company hangar, keeping four mechanics busy full time. In fact, the aircraft are so well maintained that the FAA chooses to do its proficiency training tests in them.

Security has some of the most stringent hiring standards for pilots in the industry. "We don't hire young pilots looking to build flight time. We look for older, more mature experienced pilots with 5,000 hours total time, 2,000 hours multi-engine time and 1,000 hours Alaska time and experience in the aircraft type, plus an airline transport pilot (ATP) rating. All carry first class medical certificates, which require twice a year refreshers. All pilot hiring is done by a review panel. All pilots have commercial aviation backgrounds."

O'Neill's credo endures

"What sets us apart?" asks Kapper. "Although we are a Part 135 operator, we choose to operate as a 121 commercial operator in regard to safety operations, which makes us even more credible. We've been able to provide the highest level of safety and service on a day-in day-out basis because of policies and procedures set up by Mike. His safety directive, posted the day the doors opened in 1985 still hangs on the wall. It reads, simply, "To all pilots and staff: There is no flight that you have to make. If you have any reservations about the weather, aircraft load, aircraft mechanical condition, runway condition, or your own ability, do not make the flight. There will be no pressure by me, staff, or any client to push a pilot into anything that is not safe. This policy applies to all flights, even those of an emergency nature."

Matt Thomas, director of operations and safety, joined



the company in 2002. Prior to that, he flew for major airlines and air taxis and as an Air National Guard reserve pilot. Further, he spent time as an FAA Safety Inspector and Accident Investigator for the National Transportation Safety Board. "Having flown in Alaska since the late '80s and working as an NTSB investigator in the late '90s. I developed a verv short list of companies I would be interested in fly-



Security Aviation President Joe Kapper encourages people to inquire about a charter company's safety history and pilot qualifications before flying.

our insurance company affords us the option to offer our clients the highest coverage currently attainable in the state at \$10 million smooth."

"Flying in Alaska is challenging. My crusade is to set the bar as high as possible so that others will follow. Aviation in Alaska is beginning to grow up — and it's about time. There is no reason to take risks; your last great adventure should have nothing to do with air charter. A positive approach is long overdue. Credible aviation safety programs exist in Alaska, however the verdict is still out. The proof will be when insurance companies start lowering their rates based on individual operators' performance."

Relax ... it's a charter

At Security Aviation, service starts from the moment a customer steps into the newly renovated company headquarters. The attention to detail is immediately obvious.

"Mike's greeter board is the first thing you see after walking through the door — it's a company tradition. The original board required hand-placing customized messages, letter by letter. It was near and dear to Mike— as it and lodging rely on Security's flexibility. The company recently went above and beyond for an engineering firm that needed federal permits, expediting the process and saving the work season for the client.

Pilots and planes

Anticipating future purchases, Security keeps pulse on what aircraft best suit its expanding

client base. Currently the fleet consists of a broad selection of twin-engine aircraft suited to Alaska's environment: two Piper Navajo Chieftains, two turbo-prop Citation IIs and two Cessna Conquests.

The reliable and dependable Navajo is the twin-engine workhorse of Alaska. The fast and efficient fully pressurized turbo-prop Conquests and Citation Jet get up above the weather and work well for trips to the Aleutian Chain

Security Aviation's waiting room. Comfortable leather couches and pleasing custom décor are part of the company's recent headquarters renovation. Security celebrates its 20th anniversary this year.

ing and working for. When Mike O'Neill offered me the opportunity to be his director of safety and operations at Security Aviation, I felt honored. Customer service, reliability and a major emphasis on safety — that says it all for me." •

Editor's note: Susan Braund owns Firestar Media Services in Anchorage, Alaska.

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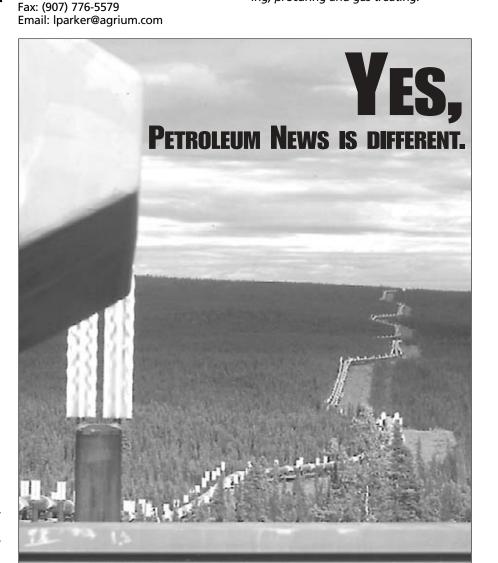
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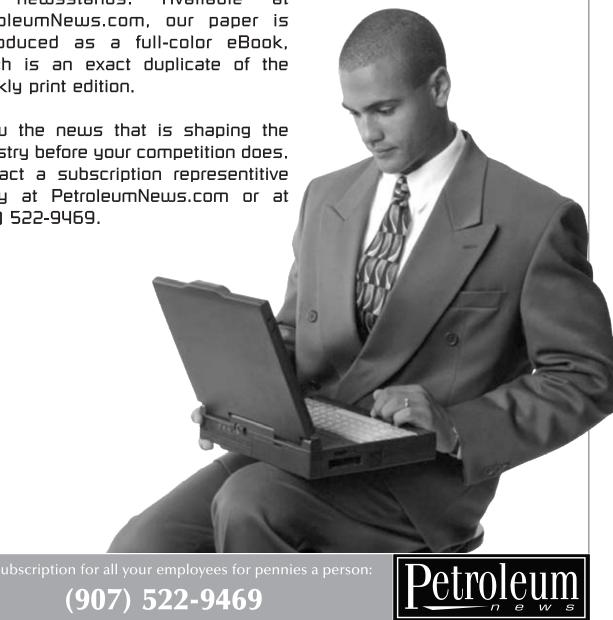
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Schlumberger gets Amerada Hess communications contract

Schlumberger Information Solutions will provide data links for Amerada Hess to connect its offshore and onshore facilities in West Africa to offices in Houston, Texas, and Aberdeen, Scotland, Schlumberger has announced.

Schlumberger's satellite technology will be used to provide real-time voice, fax and data transmission for offshore oil rigs, the African land offices of the company, and other company facilities. Schlumberger is using its very small aperture terminal system to provide the secure network for Amerada Hess via a satellite downlink to Schlumberger's Aberdeen teleport facility.

ASCG adds four employees to its staff

Michael Cutler, P.E., has been hired by ASCG Inc. of Anchorage as a structural engineer. Cutler has six years of experience in various areas of design. He has a B.S. in civil engineering from the University of Idaho and will work for the buildings division.

Christopher Wolpert, P.E., is now a civil engineer in the public works division. Wolpert is a professional civil engineer with half a dozen years of experience from trails and roads to buildings and marine projects. He has a civil engineering degree from the University of Alaska Fairbanks.

Todd Proffitt has come on as a project superintendent and estimator in the construction services department. He has 11 years of construction experience and is a certified mechanical drafter.

Patricia Garcia is a new interior designer in the buildings division. She has 25 years of experience, working in varied fields including public and commercial interiors, lighting, project management and facilities management.

ASCG, a subsidiary of Arctic Slope Regional Corp., is an engineering, architectural and technical service firm with offices in Alaska and the Lower 48.

U.S. Bearings teams up with Henkel Loctite on training workshop

U.S. Bearings and Drives and Henkel Loctite Corp. have teamed up to bring a Loctite training workshop to Anchorage on May 4. The team is also offering the three-hour program to US Bearings customers - at the customer's office.

According to U.S. Bearings, the objective of the program is to learn how today's MRO technology helps users cut maintenance time and costs while increasing the reliability of equipment.

The brochure for the training says, "You'll gain a working knowledge of faster, better, lower cost ways to bond, seal, fasten, gasket and assemble parts in a proactive fashion."

The focus of the training is "on proactive techniques, not product specifications," U.S. Bearings said in its literature.

"Attendees will learn how to eliminate chronic failures, thereby reducing downtime, increasing productivity, and extending equipment life," the company said.

Who does U.S. Bearings recommend attend? Supervisors, productivity managers, maintenance managers, production managers, superintendents, leadmen, purchasing agents and reliability engineers.

Henkel Loctite instructors will be on hand to assist attendees with maintenance advice.

U.S. Bearings said participants should bring their "parts, prints and problems" with them to the training session. Instructors will "study your specific applications and suggest new and better methods to increase up-time," the company said.

The training session will be held from 8:30 a.m. to 11:30 a.m. at the University of Alaska-Anchorage, Business Education Building,

For more information call Dena Kelley of U.S. Bearings at (907) 563-3000 or email Dena at dkelley@bearings.com

ASRC Energy Services receives two Governor Safety Awards for 2003

5401 Fairbanks St., Ste. 3 Anchorage, AK 99518 Phone: (907) 770-9400 Fax: (907) 770-9450 Contact: Mark Hylen, president/ceo Email: mhylen@kakivik.com Web site: www.kakivik.com **Fairbanks Office** Phone: (907) 451-4898 Fax: (907) 451-4897 Valdez Office Phone: (907) 831-1390 Offering all elements of nondestructive testing, inspection services, quality control and asset management.

Kuukpik-LCMF

139 E. 51st Ave. Anchorage, AK 99503 Contact: Richard Rearick, architectural mgr. Contact: Willey Wilhelm, engineering mgr. Contact: Tony Hoffman, survey mgr. Phone: (907) 273-1830 Phone: (800) 955-1830 Fax: (907) 273-1831 Email: lcmfanch@alaska.net Other Offices: Barrow: (800) 478-8213 Email: ktoovak@lcmf.com Alpine: (907) 670-4739 Email: alp1035@ppco.com Arctic specialized architectural and engineering design for all structures; water/sewer, fuel and transportation systems design; contractor support surveying and permitting for oil and gas development; dredging operations, remote site land and hydrographic surveying. MWH

4100 Spenard Rd. Anchorage, AK 99517 Contact: Brett Jokela Phone: (907) 248-8883 Fax: (907) 248-8884 Email: Brett.Jokela@mwhglobal.com MWH is a design-build engineering firm that has been providing environmental engineering, construction, and remediation services in Alaska for the last 25 vears.

NANA/Colt Engineering

700 G Street, 5th floor Anchorage, AK 99501 Phone: (907) 273-3900 Fax: (907) 273-3990 Contact: John Minier NANA/Colt offers project management, engineering, design, construction management, and procurement services to the oil industry.

Natco Group

P.O. Box 850, Stn. T Calgary, Alberta T2H2H3 Contact: Kevin Baird, bus. dev. mgr. Phone: (403) 203-2103 Fax: (403) 236-0488 Email: kbaird@natco-ca.com Web site: www.natco-ca.com Natco Group engineers, designs and manufactures process, wellhead and water treatment equipment and systems used in the production of oil and gas worldwide.

PDC Harris Group

1231 Gambell St. Anchorage, AK 99501 Contact: Steve Theno Phone: (907) 644-4716 Fax: (907) 561-7028 Email: stevetheno@pdceng.com Contact: Mike Moora Phone: same as above Fax: same as above Email: mike.moora@harrisgroup.com Web site: www.harrisgroup.com PDC-Harris Group provides front-end engineering design, detailed design, and environmental permitting services to the oil, gas, and power generation markets.

949 E. 36th Ave., Ste. 500 Anchorage, AK 99508 Contact: Emily Cross Phone: (907) 762-1510 Fax: (907) 762-1001 Email: emily.cross@veco.com Web site: www.VECO.com VECO is a multi-national corporation that provides services, project management, engineering, procurement, construction, operations and maintenance to the energy, resource and process industries and the public sector.

Environmental Engineering & Consulting

AES Lynx Enterprises

1029 W. 3rd Ave., Ste.400 Anchorage, AK 99501 Contact: Mark Schindler, President & CEO Contact: Diane Fleisher, office mgr. Phone: (907) 277-4611 Fax: (907) 277-4717 Email: mschindler@lynxalaska.com Lynx professionals offer the following services: major project strategic planning and project management; onshore and offshore projects, exploration and development phases, permits and right-ofway acquisition, National Environmental Policy Act (NEPA) documentation, Environmental Assessment (EA) and Environmental Impact Statement (EIS) preparation.

Alaska Anvil

509 W. 3rd Ave. Anchorage, AK 99501-2237 **Contact: Frank Weiss** Phone: (907) 276-2747 Fax: (907) 279-4088 Web site: anvilcorp.com Other office: Kenai 50720 Kenai Spur Hwy, Mile 24.5 Kenai, AK 99611 Phone: (907) 776-5870 Fax: (907) 770-5871 Multi-discipline engineering and design services including construction management for petro-chemical and heavy industrial client projects.

Alpine-Meadow

11043 Tsusena Circle Eagle River, AK 99577 Contact: George Snodgrass, president Phone: (907) 694-7423 Fax: (907) 694-7423 Email: grsnodgrass@alpine-meadow.com Website: www.alpine-meadow.com We are a small, low-cost, professional, personal company with 18 years engineering and environmental experience in Alaska with major oil companies. We offer permitting and compliance, strategic planning, incident investigations, crisis management services.

ENSR International

1835 S. Bragaw St., Ste. 490 Anchorage, AK 99512 Contact: Chris L. Humphrey, P.E. Phone: (907) 561-5700 Fax: (907) 273-4555 Email: chumphrey@ensr.com Serving Alaska since 1977. ENSR is an environmental engineering and consulting firm with more than 70 offices worldwide providing environmental planning, assessment, permitting, compliance management and contamination cleanup.

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ASRC Energy Services Inc. received two 2003 Governor Safety Awards of Excellence on March 16.

The first was to AES Lynx Enterprises Inc. for achieving a perfect accidentfree record since the company's inception July 1, 2000, to Dec. 31, 2003. Lynx, which logged 112,753 man hours during the two and a half year period, was recently acquired by ASRC Energy Services.

The recognition follows a Green Star Award presented to AES Lynx in February for achieving Green Star standards to increase sustainability and reduce energy consumption and waste.

Headquartered in Alaska, AES Lynx also has an office in Denver, Colo.

The second Governor's safety award presented to an ASRC Energy Services company went to the Kuparuk Construction and Maintenance group of the Operations and Maintenance Business Unit.

This group received the award for making great strides toward achieving a zero incident safety culture over the past three years.

The Construction and Maintenance group also has developed a safety program and processes that "more than meets the criteria established for the award, namely management commitment, leadership, employee involvement, and hazard analysis and reduction," ASRC Energy Services said in a press release March 23.

-PETROLEUM NEWS

Petrotechnical Resources of Alaska (PRA)

3601 C St., Ste. 1378 Anchorage, AK 99503 Contact: Tom Walsh Phone: (907) 272-1232 Fax: (907) 272-1344 Email: info@petroak.com

Our multidisciplinary staff of qualified and experienced professionals possess a diverse array of technical capabilities to provide our clients with a full spectrum of geoscience and engineering consulting services.

Golder Associates

1750 Abbott Rd., Ste. 200 Anchorage, AK 99507 Contact: Bob Dugan, mgr., Tom Krzewinski, Mark Musial, Bucky Tart Phone: (907) 344-6001 Fax: (907) 344-6011 Website: www.golder.com Providing geotechnical engineering, water resource, and geosciences services in support of resource development projects in Alaska and the Arctic. Other offices worldwide.

MWH

1835 S. Bragaw St., Ste. 350 Anchorage, AK 99508 Contact: Brett Jokela Phone: (907) 248-8883 Fax: (907) 248-8884 Email: Brett.Jokela@mwhglobal.com The engineers, scientists, and constructors of MWH provide innovative projects

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and solutions for clients throughout Alaska and Worldwide.

Pacific Environmental (PENCO)

6000 A St. Anchorage, AK 99518 Contact: Tom Ulrich, reg. mgr. American Maine svc. group Phone: (907) 562-5420 Fax: (907) 562-5426 Email: alaska@amsghq.com Web site: www.amsghg.com PENCO provides environmental response, containment and clean up. Hazardous wastes and contaminated site clean up and remediation. Asbestos and lead abatement. Petroleum vessel services and bulk fuel oil facility and storage tank maintenance, management and operations.

PDC Harris Group

1231 Gambell St. Anchorage, AK 99501 Contact: Steve Theno Phone: (907) 644-4716 Fax: (907) 561-7028 Email: stevetheno@pdceng.com Contact: Mike Moora Phone: same as above Fax: same as above Email: mike.moora@harrisgroup.com Web site: www.harrisgroup.com PDC-Harris Group provides front-end engineering design, detailed design, and environmental permitting services to the oil, gas, and power generation markets.

Quadco

6116 Nielson Way Anchorage, AK 99518 Contact: David Baggett, vp, AK mgr. Phone: (907) 563-8999 Fax: (907) 563-8985 Email: dbaggett@guadcoinc.com Other offices: Farmington NM, Denver CO, Casper WY Quadco has supplied services to the Alaska oilfield since 1976. We have trained personnel to help with instrumentation, solids control, pipe handling and Top Drive drilling equipment. 24 hour on call

Environmental Response & Cleanup

Alaska Interstate Construction

P.O. Box 233769 Anchorage, AK 99523 Contact: John Ellsworth Phone: (907) 562-2792 Fax: (907) 562-4179 Email: info@aicllc.com Website: www.aicllc.com AIC provides cost-effective solutions to resource development industries. We provide innovative ideas to meet each requirement through the provision of best-in-class people and equipment coupled with exceptional performance.

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Unitech of Alaska

2130 E. Dimond Blvd. Anchorage, AK 99507 Contact: Debbie Hawley Phone: (907) 349-5142 Phone: (800) 649-5859 Fax: (907) 349-2733 Email: unitech@alaska.com Email: dhawley@unitechofalaska.com UOA is Alaska's only 24-hour oil spill remediation, environmental and industrial supply company. Specialty areas include sorbents, geotextile, containment berms, drums and ice melt.

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Equipment & Heavy Hauling

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1800 E. 1st Ave. Anchorage, AK 99501 Contact: Linda Leary Ph: (907) 267-7797 Fax: (907) 276-6786 Email: lleary@carlilekw.com Other Offices: Fairbanks, Prudhoe Bay, Kenai, Seward, Federal Way, WA, Houston, TX, Edomonton, ALTA Alaska owned and operated, full service, multi-modal, transportation and logistics company.

PETROLEUM DIRECTORY

COMPANY NEWS

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Lynden redesigns web site

Lynden Inc., which prides itself on offering innovative transportation solutions, recently completed a redesign of its web site at www.lynden.com.

Among other things the new site includes a link for new customers. It takes visitors to a page with a toll free number for individuals to call for assistance or an online

alternative called the Service Finder that takes visitors first to a world map. You click on where your shipment originates; to another map to select its destination. Next, you select your delivery speed (four choices from overnight to eight-plus days) or mode of transport (eight variations). From there you move to the Lynden company that can best handle your needs.

Among other things the new site includes a link for new customers. It takes visitors to a page with a toll free number for individuals to call for assistance or an online alternative called the Service Finder that takes visitors first to a world map.

Another link takes you to one of 13 Lynden transportations companies, including:

Alaska Hovercraft, Alaska Marine Lines, Alaska Marine Trucking, Alaska Railbelt Marine, Alaska West Express, Alaska West Training, Bering Marine, LTI Inc., Lynden Air Cargo, Lynden Air Freight, Lynden Expo Air, Lynden Inc., Lynden International, Lynden International, Lynden Logistics, Lynden Transport, Lynden Air Freight, Milky Way

Over land, on the water, in the air - or in any combination, the Lynden family of companies have been helping customers solve transportation problems for almost a century.

To find out which Lynden company best serves your needs, call 1-888-596-3361. You can also use the Service Finder to determine which Lynden company you would like to contact directly.

Schlumberger contributes software to Southern Alberta Institute of Technology

ing firm with more than 70 offices worldwide providing environmental planning, assessment, permitting, compliance management and contamination cleanup.

Great Northwest

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Pacific Environmental (PENCO)

6000 A St. Anchorage, AK 99518 Contact: Tom Ulrich, reg. mgr. American Maine svc. group Phone: (907) 562-5420 Fax: (907) 562-5426 Email: alaska@amsghg.com

Crowley Alaska

2525 C St., Ste. 303 Anchorage, AK 99503 Contact: Craig Tornga Phone: (907) 278-4978 Fax: (907) 257-2828 Email: cms.@crowley.com Marine transportation throughout Alaska. North Slope heavy hauling with CATCO all-terrain vehicles.

Northern Transportation

310 K St., Ste. 200 Anchorage, AK 99501 Contact: John Marshall, Lynette Storoz Phone: (907) 264-6682 Fax: (907) 264-6602 Email: email@ntcl.com

Schlumberger Information Solutions has contributed software to Calgary's Southern Alberta Institute of Technology valued at C\$16.7 million, the company announced March 30.

The donation includes a package of Eclipse reservoir simulation software, plus the Merak Peep economic evaluation and decline analysis software. The contribution will allow students in geosciences to practice on the systems, cutting training costs for the companies who eventually hire them.

"The software will be used to broaden student exposure to state-of-the-art software currently used by companies in the energy industry," says Faramarz Azar-Nejad, an instructor at the institute's program for applied petroleum engineering technology.

"Access to the latest geoscientific and business software not only helps students to better understand the theory and concepts in the classroom, it also prepares them to enter the oil and gas industry as highly productive technologists and engineers."

Schlumberger has been providing software for earth science departments around the globe, and offering low-cost maintenance, training and technical support for the colleges, since 1998.

-PETROLEUM NEWS

PDC Harris Group creates northern synergy

Energy sector engineering joint venture pays off

By SUSAN BRAUND

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Petroleum Directory Contributing Writer

ractical visionary Buckminster Fuller was a mover and a shaker. When he injected his theory of synergistics into the Way We Think, he activated an exponential, global mind shift. According to forwardthinking Fuller, synergy is a mutually advantageous conjunction of distinct elements. Simply put, synergy is a relationship where everyone benefits through sharing what each can do. If this is true, the PDC Harris Group is rockin' and rollin.'

Two engineering entities -Alaska's PDC and Seattlebased Harris Group - joined forces as PDC Harris Group LLC in 2002 to enhance their abilities to provide engineering and design services to cold region clients in the oil and gas, power generation and Department of Defense arenas. Both firms bring more than 25 years of experience to the table. For five years prior to the union, they worked cooperatively on numerous Alaska energy sector emissions control and air permitting projects.

"In general, since we formed the PDC Harris Group we have achieved the financial and market penetrations goals we set," says General Manager Mike Moora. PDC Harris Group has successfully executed small and mid-scale engineering projects for several of the independent producers, both on the North Slope and in Cook Inlet, as well as for local electrical utilities.

Oil and gas, cold regions experience combined

The company has the strength of combining oil and gas experience and knowledge of cold regions engineering challenges. Engineering services include: upstream and

downstream production and processing systems, power generation, owner's engineering, cold regions design, infrastructure and facilities, and environmental permitting. PDC Harris Group staffs engineering projects in the chemical, civil, control systems, cost estimating, electrical, environmental, fire protection, mechanical, piping design, project management, structural and surveying disciplines, all geared toward meeting the needs of the client work-



PDC Harris Group General Manager Mike Moora

ing in remote, rigorous environments where transportation and logistics are difficult.

"We support a diverse client base — some come to us because of our experience working in remote regions and extreme engineering environments, and others come because we can respond to smaller, fast-track projects or both," explains Moora. "We understand our clients' business, so we can provide efficient service delivery and can absolutely do more with less because we have leaner structures."

Clients include upstream and downstream oil and gas producers, processors and refiners; utilities, independent



Simple cycle gas turbine electric power generating station engineered by PDC Harris Group.

Power generation: a good track record

Harris Group has provided engineering services for numerous energy sector projects in the Lower 48, from front-end engineering design through preparation and evaluation of procurement documents, detailed design engineering and support during construction, commissioning and performance testing.

"Our company is looking to build on our experience and qualifications with gas turbine projects in the Lower 48 - we've engineered over 1,000 megawatts of turbine generation capacity — an average plant is 50 megawatts," explains Moora. "We have the experience and qualifications in energy sector work and have the methods and procedures in place to do so competitively and manage projects according to industry standards."

At the Amundsen-Scott Station's power plant project at the South Pole, Antarctica, the climate demanded close attention to energy efficiency, personnel safety (ventilation, exhaust, fire detection, fire suppression and heating) and installation techniques to accommodate extreme climatic conditions such as a winter design temperature of -120degrees F at a barometric altitude of 12,000 feet.

And, there's a lot of upcoming power-related activity in Alaska, not only in the Anchorage area, but also in

Fairbanks. Golden Valley Electric Association's planned North Pole Plant Expansion is one such example. GVEA will purchase low-sulfur distillate from the North Pole refinery, and may eventually switch over to natural gas, Ō when it becomes available. "It's an exciting engineerprocure-construct project, due to be awarded in May, and the competition is anticipated to be fierce," says Moora. With PDC Harris Group's depth of experience on similar projects, Moora feels his team and offering will "raise the bar."

struction management and start-up. Recent experience has expanded the scope of coal-fired power plant services to include control system upgrades, capacity expansion, retrofits, environmental upgrades and due diligence.

Extra bennies

Another advantage to the joint venture is sharing expanded services like the Harris Group financial consulting unit, which provides assistance with development, financing, monitoring and acquisition in a variety of industries, including power generation, oil and gas, and forest industries markets. Lenders, developers and project owners call on the financial consulting unit to provide timely and accurate information on project development and financing. Based in Denver, the consulting unit reviews projects on a national and international scope.

Many hats

General Manager Moora is the firm's main man in Alaska. Fortunately, he is a cold-region kind of guy. He admits that the siren call of the Alaska outdoors was 60 percent of his decision to come North - he enjoys skiing, rafting, hiking, biking and climbing, so Alaska is a good fit. Last summer he went on Alaska Wilderness Journey's



Russian Far East Kamchatka expedition, full of miniadventures like white water rafting, volcano exploration and sightseeing. "Kamchatka is likely

power producers and rural electric associations; and Department of Defense agencies.

"In the oil and gas arena our focus is on the independents who are moving into the oil patch and taking over for the bigger companies," says Moora. "They are more efficient and cost conscious than their big brothers, just as we are more so than our big brothers, which makes us a good match."

Project management: communicating change

PDC Harris places high priority on strong and responsive project management, project control and management of change.

"We use rigorous and standardized methodologies for project control, meeting milestones, and controlling expenditures," says Moora. "In an era when intelligent design tools get you more efficiency they can also wreak havoc in terms of introducing too much change. You can't just press a button to make a change without managing the change and having it occur on a scheduled basis. Management of change involves a lot of communication between project participants."

Interest in coal power is increasing because of the lower fuel costs. PDC Harris Group has already executed several coal-fired power plants in Alaska, including the Healy Clean Coal Project and the Usibelli Coal's conceptual project at Emma Creek, near their Healy mine.

The Harris Group Inc. has a team of engineers that were there in the '70s and '80s involved in the design of more than 12 coal-fired power plants. They know what makes a plant work environmentally, economically and operationally — a detailed process that their engineers have been doing successfully for over 30 years. They can guide perspective clients through site and coal selection, cycle analysis, water treatment, environmental permitting, design, con-

Natural gas compressor station engineered by PDC Harris Group.

to be like Alaska was 75 years ago," he notes.

Moora is primarily responsible for business development, but changes

hats as needed, demonstrating the do-what-it-takes flexibility that characterizes the company. He also manages projects, has fiduciary responsibility for corporate reporting and tracking, supervises project engineers, oversees and implements marketing and sales efforts and guides long term planning.

"Business is good, industry project budgets are up, projects are moving forward — we're happy," enthuses Moora. "Like most Alaskans, though, we're patiently waiting for the uptick anticipated with North Slope natural gas. We feel certain that our cross-industry experience and handson capabilities put us in a strong position when the time is right."●

Editor's note: Susan Braund owns Firestar Media Services in Anchorage, Alaska.

Agrium adds value to Alaska, Cook Inlet natural gas

The company's plant on Alaska's Kenai Peninsula produces urea and ammonia from natural gas

By ALAN BAILEY

Petroleum Directory Contributing Writer

S ince its startup in 1968 the fertilizer plant at Nikiski on Alaska's Kenai Peninsula has become a mainstay of the local economy and a major exporter of valueadded natural gas products from Alaska. And when Agrium Inc. bought the plant from Unocal in 2000, the plant joined one of the world's major suppliers of agricultural fertilizers.

"We're an international fertilizer company," Richard Downey, Agrium's director of investor and media relations, told Petroleum News. "We've been on the New York and Toronto Stock Exchanges since 1993, but we've been in the fertilizer business for almost 75 years through previous companies."

Agrium expanded considerably after going public in 1993, acquiring assets throughout North America and in South America, Downey said. When the company bought the Unocal fertilizer business, Agrium obtained some small facilities in Washington State and California, as well as the Nikiski plant.

"Our total (annual) sales are approximately \$2.5 billion and we produce all three nutrients — nitrogen, phosphate and potash, as well as a significant retail business in North and South America," Downey said.

And fertilizers like this underpin world crop yields.

"Fertilizers account for as much as a third of the crop yields that the world gets, so it's a significant contributor to feeding the world," Downey said.

Uncertain future of this important plant

The Nikiski plant manufactures a significant part of Agrium's total fertilizer production.

"It's an important plant for Agrium," Richard Downey, Agrium's director of investor and media relations, told Petroleum News. "It accounts for over 15 percent of our total fertilizer capacity."

For many years the plant has operated in a classic stranded gas situation, with an excess of gas supply over demand around the Cook Inlet. However, reduced gas sup-



Agrium's fertilizer plant at Nikiski on Alaska's Kenai Peninsula.

er plant creates a steady, year-round demand for gas. Utility gas demand, in contrast, is very cyclical with peak demand occurring in the winter.

Exports support local economy

Because the Jones Act requires products within the United States to be shipped on U.S. flagged vessels, almost all the products from the Nikiski plant go overseas to places like Korea, Taiwan and Mexico. The company does ship some urea to the Lower 48, but there aren't any U.S. flagged ammonia ships, Downey said.

In fact Agrium is one of the largest exporters of a value-added product from Alaska, Downey said.

"We were recognized as the 2001 Alaska Exporter of the Year because we're upgrading raw material into finished product," Downey said. Agrium accounts for about 7 percent of Alaska's export market.

And this all makes a major contribution to the Alaska economy. With 230 jobs in the Nikiski plant and the indirect impact of these jobs, Agrium brings about \$330 million into Alaska each year.

"We did business with over 380 Alaska businesses last year on the vagaries of supply and demand. For example, grain prices and the closure or opening of fertilizer plants affect fertilizer prices.

"So fertilizer prices tend to be cyclical in nature," Downey said. "At the peak of the cycle you might be able to pay slightly more than \$2 (for gas) ... but at the bottom of the cycle you are going to have a hard time unless it's below \$2."

As a result, fertilizer companies build export facilities in parts of the world where there's stranded gas at competitive prices.

"You look at the Middle East and their gas is less than \$1 and that's true in Russia as well," Downey said.

And fertilizer production provides a convenient use for the stranded gas in these places.

"Unless you liquefy it, gas is difficult to transport ... so one of the processes is to make it into nitrogen fertilizer and export it around the world," Downey said.

Using the pipelines

Agrium thinks that increased access to the gas pipeline systems in the Cook Inlet would help open up additional gas supplies for the Nikiski plant. Mike Palmer, Agrium's manager of gas development, told Petroleum News that companies new to the Cook Inlet can't ship gas for industrial use by pipeline from the west side of the Inlet to the Nikiski plant on the east side of the Inlet because the pipelines are proprietary.

"There are some other companies that would like to develop gas on the west side (of the Inlet)," Palmer said. "We'd like to be able to enter into purchasing agreements with them, where we could then buy gas on the west side and transport it across the Inlet to our plant." Palmer said that making the Cook Inlet Gas Gathering system into a common carrier pipeline and enabling bidirectional gas flow in one of the pipelines on the west side of the Inlet would enable any company to supply Nikiski with industrial gas directly across the Inlet. Downey also thinks that opening up the pipeline system would encourage competition for exploration around the Inlet.



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Agrium workers discuss a project.

ply deliverability from Unocal for the operation of the plant has led to significantly lower operating rates and a great deal of uncertainty about the future operation of the facility. The issue of the reduced deliverability of natural gas from Unocal to Agrium's Kenai facility is currently subject to binding arbitration, scheduled for May 2004.

"This winter, the plant had to cut back its production rates and operated at 50 percent of capacity due to the current shortfall in Cook Inlet gas deliverability," Downey said.

Agrium continues to explore all opportunities to secure additional gas supplies for its plant. "If there was a significant find in the region we would be very interested in getting long-term gas supplies, but they would have to be at a reasonable price to compete on world markets," Downey said.

As well as offering long-term gas contracts, the fertiliz-

alone," Downey said.

Making ammonia and urea

The core process in the Nikiski plant consists of using

a catalyst to react natural gas with nitrogen from the air to form ammonia. The gas provides hydrogen for the ammonia. Ammonia forms the basic building block for all nitrogen fertilizers. At Nikiski, the plant combines some of the ammonia production with carbon dioxide to form urea, a dry granular product that's easy to ship. In terms of volume and value, urea is the largest traded nitrogen fertilizer in the world, Downey said.

Some of the ammonia and urea from Nikiski supplies industrial processes such as the manufacture of resins and artificial fibers. However, a significant portion of the production ends up as fertilizer.

Fertilizer economics

Natural gas accounts for about 80 percent of the cost of nitrogen fertilizers, Downey said.

As with any commodity, the price of fertilizer depends

"We'd like to have it opened up to allow some new producers to get into the market," Downey said.

Agrium is leaving no stone unturned in its quest to find economically viable gas in the region, as the company is anxious to see the plant continue to operate.

"It's been in operation since 1968, and if at all possible, we would like to be in operation for another 35 years," Downey said. \bullet

Editor's note: Alan Bailey owns Badger Productions in Anchorage, Alaska

Keeping the machinery moving

U.S. Bearings and Drives supplies the critical components for almost every type of mechanical power transmission system

By ALAN BAILEY

Petroleum Directory Contributing Writer

ook at any type of machine and chances are you'll see moving parts such as ball bearings, gears, drive belts and pulleys. U.S. Bearings and Drives Inc. specializes in these critical components that transmit

power through much of the machinery we depend on every day.

"Anything that moves something from point A to point B is power transmission. If it rolls or moves in a linear direction we probably sell the parts for it," Dena Kelley, the Anchorage branch manager for U.S. Bearings and Drives told Petroleum News.

The company's Alaska and Seattle operations started in 1952 as Bearing Engineering and Supplies or BESCO. Three years ago U.S. Bearings and Drives bought out BESCO and acquired the company's outlets in Anchorage, Fairbanks and Seattle. U.S. Bearings and Drives forms part of the BC Bearing Group, based in Burnaby, British Columbia.

U.S. Bearings and Drives operates 15 branches in various parts of the United States.

Industrial applications

The company deals mainly in parts for industrial applications and different branches tend to specialize in the needs of local industries.

"We focus on industrial products, so (in Alaska) we sell to the mines, the oil companies and the drilling companies," Kelley said. The Anchorage branch also sells HVAC components like motors, pulleys and belts, as well as some automotive components such as wheel bearings, Kelley said.

U.S. Bearings and Drive's aggregate division supplies parts and expertise for making, handling and sifting rock aggregate.

The division supports the Alaska aggregate and mining industries — the company supplies rock crushers and the Anchorage branch carries aggregate handling components, including the motor drives, rollers, idlers and scrapers for conveyor belts.

Wide range of products

A tour of the company's Anchorage warehouse reveals a bewildering array of parts ranging from heavyduty electric motors and motor couplings to a variety of gears. Wheel bearings of many types and sizes occupy one line of shelves, while other shelves contain sprockets and chains for highpower industrial drive systems.

"(Drive) belts are our biggest line," Kelley said. "Loctite (chemicals) are our



U.S. Bearings and Drives' 5,000 square-foot warehouse in Anchorage contains a particularly large and comprehensive supply of parts.

Small company-style local service

Although the original BESCO company has become part of a large organization, Kelley takes pride in continuing BESCO's tradition of providing a small company-style of local service. In fact, U.S. Bearings and Drives gives each branch a high level of autonomy in how it operates. For example, a local branch may carry specific products for local customers.

Company personnel assist customers in finding parts they need and in following up on any problems encountered.

And customers sometimes need assistance with the installation of equipment.

For example, the variable frequency drives that the company sells require particularly careful installation — a

variable frequency drive enables an electric motor to run at a range of horsepower settings.

"If you do (the install) wrong you can fry the whole box," Kelley said. "We like to have someone knowledgeable and experienced there to make sure that everything goes fine."

Training and expertise

Maintaining the expertise to help customers involves continuous training. be backed up ... because what the engineering staff recommends will be warrantied."

Large parts inventory

For off-the-shelf components, many customers look for rapid response in obtaining spare parts — local availability of parts may be critical to a customer's operations. To meet this need, U.S. Bearings and Drives' 5,000 square-foot warehouse in Anchorage contains a particularly large and comprehensive supply of parts.

At the moment Kelley is expanding the inventory of parts for aggregate processing for the sand and gravel industry's summer operations.

"The sand and gravel companies, if they have a breakdown, it's costing them a lot of money every hour because of our short (summer) season," Kelley said. "So our goal was ... to be able to provide anything they needed out of stock, so they wouldn't have to wait a day for us to fly something out of Seattle."

Competitive pricing

Although Kelley ensures that her branch office focuses on providing an excellent local service, she sees major benefits in being part of a large corporation. For example, she can offer her customers very competitive prices for the products: "We've got unlimited buying power and we can take advantage of the price incentives and pre-paid freight incentives that vendors will offer to U.S. Bearings and Drives," she said.

And U.S. Bearings and Drives' internal computer system, known as Eclipse, minimizes inventory costs by mon-



second biggest line."

The chemicals include anti-seize compounds for preventing seized bolts, thread locking paste for preventing bolts from working loose and special-purpose lubricants for industrial applications.

"We carry a line of lubricants called Superlube and Viperlube, which are high-temperature, salt water-resistant lubricants," Kelley said. They're really good for applications in Alaska and we sell them to the marine industry, she said. In fact Alaska conditions tend to require particularly robust materials and equipment.

"Typically, because our climate conditions are so rough, (our customers) are looking for products that will last and most of the time ... they want to know that we're going to sell them a quality product that's not going to fail," Kelley said.

However, Kelley emphasized that the company also carries an economy line of products for less demanding applications.

U.S. Bearings and Drives carries an array of parts ranging from heavy-duty electric motors and motor couplings to a variety of gears.

continuous training.

"We have an on-going training program," Kelley said. "We do staff training once a week. Sometimes it's a vendor that comes up and

does the training and other times it comes out of videos

or books."

The Anchorage branch also maintains an extensive library of reference publications for both company personnel and customers.

"We also offer free training to the customers," Kelley said. "We just recently did a seminar with Loctite where we went onto Elmendorf and did a presentation for 30 people on how to use Loctite products."

And many manufacturers provide expert support. For example, a manufacturer's engineering staff can design products such as the massive motor couplings that go into some oilfield facilities.

"Once the engineering staff has determined what the customer needs, then we go ahead and quote them that product," Kelley said. "And that way they're guaranteed to itoring inventory levels in relation to product demand.

"I don't have to continuously pay attention to what is being sold ... because Eclipse will pay attention for me and it will tell me to order it," Kelley said. "It also keeps track of what's not selling and it will tell me to send that back."

The computer system also enables all the company branches to see each other's inventories. If one branch doesn't carry a product that a customer needs, the sales staff can reserve and order the product from another branch. The sales staff also uses the system to send messages to staff in other branches.

"If we're looking for a hard-to-find item ... nine times out of ten somebody's going to come back and say 'yep, I know exactly where to get that'," Kelley said.

It all comes back to customer service.

"Our goal is to actually be a partner to our customer," Kelley said. "We don't want them to just come to buy things from us. We want to be there ... and bring value to them by offering expertise and helping them out." ●

Editor's note: Alan Bailey owns Badger Productions in Anchorage, Alaska

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Jason Ward, director of logistics at Security Aviation, updates a flight schedule. See the company profile on page B2.

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VECO and Nanuq Inc. team up on projects, training

By SUSAN BRAUND

Petroleum Directory Contributing Writer

he primary definition of welding is to unite pieces of metal or plastic together with heat and hammering or fusion. Secondarily it means to bring into close association or union.

A little of both is taking place in a teaming agreement between VECO Alaska Inc. and Nanuq Inc., as the two entities link up to partner on construction projects and provide training in various construction trades to Kuukpik shareholders. Nanuq is the construction arm of Kuukpik, the Nuiqsut Village Native Corp.

"Both parties act as independent contractors and conduct operations in their own name and in the name of various subsidiary companies, but benefit by pursuing work opportunities that utilize the resources of both companies," says Tom Maloney, VECO vice president of business development.

"The mentor-protégé portion of the agreement provides an efficient vehicle for training," reports Maloney, who, along with Lee Gabrielson of Nanuq, serves as designated relationship manager for mentor-protégé activities.

Three welder trainees at work

"Right now we have three trainees who are learning to be structural welders and fitters, a skill set that will maximize future shareholder opportunities in Anchorage or in the oil field. This is a solid career path with lots of opportunity," says Maloney. "Once we find the person with high interest who wants to learn ... the support is in place."

Three days a week the welder trainees, Thomas Napageak, Amanda Napageak and Edward Baker, spend several hours a day with a certified welder/instructor at the





Welding trainee Amanda Napageak was working in the paint shop on the day Petroleum News visited the VECO fabrication facility. Cross training is important to marketability.

VECO fabrication plant. The other two days they "practice, practice," according to Baker.

"I like the program and the way everyone helps out. It's a good, clean environment, plus, it's nice to work inside!" says Thomas Napageak. "Everybody is willing to teach newcomers. It's safe and we all watch out for each other." Amanda is in demand around the plant, according to the fabrication facility plant manager Mathew Schipper. "She's been working in the paint shop this week and the painters don't want to let her go, she's such a good worker! Since our goal is cross-training, they may each work in fabrication, installation, painting, welding, electrical, instrumentation and tubing before they're out of here." Amanda reports that she first developed her interest in welding in high school. "It's a good job, good atmosphere. I'm getting a taste of welding, blasting, grinding — all the good stuff!" Nanuq's General Manager Scott Eliason says, "we're working together to ensure that opportunities in engineering, construction and operations and maintenance are made available to Kuukpik shareholders and their immediate family members. Currently Nanuq is actively recruiting for additional fabrication and electrical candidates." Kuukpik President Thomas Napageak Sr. supports the agreement: "The strategy behind this arrangement is to have VECO mentor Nanuq Inc. into a more rounded contracting company capable of fulfilling the future needs of those companies operating in the North Slope and more importantly, those that are and will be operating on the



NANUQ Inc. General Manager Scott Eliason, welding trainee Thomas Napageak, and VECO fabrication facility Project Manager Mathew Schipper at VECO's Anchorage fabrication facility.

lands owned by Kuukpik and those affecting the village of Nuiqsut."

Alpine work under way at fabrication shop

Currently VECO and Nanuq are working on subcontractor projects at the VECO fabrication shop and Alpine. The facility is the perfect training ground for aspiring welders. Supportive, long-term welders and other skilled plant employees surround trainees as they receive realtime, on-the-job project experience.

"The plant, now located in Anchorage, opened to build truckable modules in the late '80s in the Matanuska Valley," says Schipper. "Since that time we've built 400 truckable modules. We have multiple building disciplines here — structural, piping, electrical, welding, fitting — so the students have lots of exposure and gain a broader perspective. We are trying to make them highly marketable and also make them valuable to us. We want to train them to do the job and get them certified in structural steel welding."

When Petroleum News visited the facility, crews were working on a fast track schedule to complete two, 20-foot wide, 78-foot long, 15.5-foot tall, 100-ton SWIX (seawater injection) pump modules by the first week of April. The first of the modules left the facility on March 22 headed for Kuparuk. The second module was scheduled to leave Anchorage a few days later.

Four additional Black Start generator modules, also part of the Alpine Capacity Expansion Project Phase 1, or ACX1, are under construction. The Black Start Solar turbine generators provide immediate start up from diesel



Welding trainee Ed Baker and certified structural welder Alvin Millard. Baker is one of three welding trainees participating in the mentor-protégé program, part of a teaming agreement between NANUQ Inc. and VECO that links the entities on construction projects and training of Kuukpik shareholders.

during a blackout, allowing operators to bring power back online and bring systems back up. The 50-ton modules are 16 feet wide, 50 feet long and 14 feet tall.

"We were able to meet the aggressive schedule, and without safety incidents. There was good cooperation between the engineering client and the fabrication crew," says Schipper. "And the trainees are progressing successfully. I'm confident they will be able to reach a skill level to be productive for the module install. They are all eagerly anticipating going up for the install!" ●



VECO Vice President of Business Development Tom Maloney. Along with Lee Gabrielson of NANUQ, Maloney serves as designated relationship manager for mentor-protégé activities. NANUQ is the construction arm of Kuukpik, the Nuiqsut Village Native Corporation.

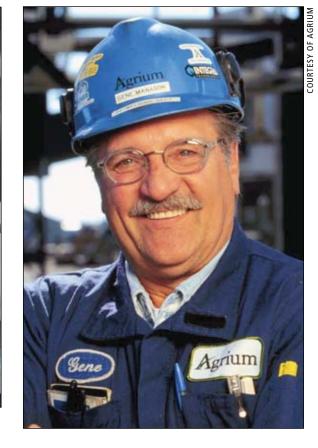
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At left, the staff at the Anchorage offices of U.S. Bearings and Drives. Above, U.S. Bearings parts in service at Providence Alaska Medical Center in Anchorage.



Pebble activity heats up

Co

Claim staking continues around gold-copper deposit, fourth player announces land holdings

Israeli firm bids again DGI Group gets light-hearted response from BHP Billiton regarding Ekati diamond mine

> A special supplement to Petroleum News WEEK OF Dotroloum

April 18, 2004

Petroleum

RTH OF 60

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NEWS

PHOTO BY CHRIS AREND/COURTESY USIBELLI COAL MINE

• INTERIOR ALASKA

AngloGold 'keen' on Alaska projects

Major plans \$2 million budget on Pogo, Livengood properties, with reconnaissance prospecting, drilling, more land acquisition

BY PATRICIA LILES

Mining News Editor

D escribing Alaska as "a good place to do business," AngloGold (U.S.A.) Exploration's president of North America said the company's focus is shifting away from projects in Nevada and parts of Canada.

The company increased its landholdings through a sizeable claim staking effort in recent months in the area surrounding the Pogo gold deposit, and is negotiating a land lease in the Livengood area.

Total exploration spending in Alaska is planned for \$2 million, which is more than two-thirds of the company's North America green-field spending, according to North America Exploration Manager Jeff Pontius, in a telephone interview with Mining News on April 9.

That will include reconnaissance prospecting, as well as drilling more than 19,000 feet on properties neighboring Pogo and at Livengood. (See sidebar.)

AngloGold is also interested in looking at other prospective gold properties in Alaska, he added. "We'll probably be covering a lot of ground in Alaska," Pontius said. "We think Alaska has got a lot of potential for a lot more discoveries."

That includes looking at gold properties being worked by junior exploration companies, said AngloGold North America President Don Ewigleben.

"In the last year or so, people have come to know that we are working in Alaska," he said. "We like to see all the activity by the junior exploration companies and hope they come visit us with their successes."

Ewigleben's past experience in Alaska, working with Amax Gold in developing the Fort Knox gold mine near Fairbanks and with Echo Bay on the A.J. Mine near Juneau, has encouraged him to return.

"We see Alaska as a good place to do business," Ewigleben said. "We're shifting our emphasis in North American exploration in the direction of Alaska."

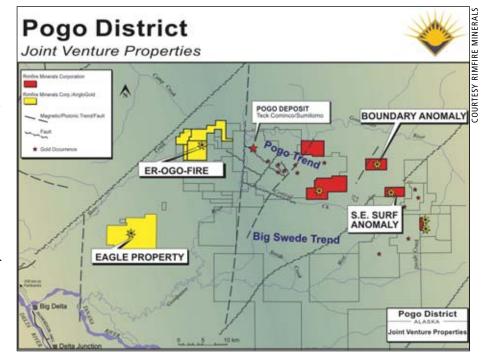
Not only does Alaska offer potentially large geological discoveries and considerable lands that are relatively unexplored, the state has good infrastructure and talented workers to supply most facets of mine development.

"We're aware of the very educated workforce of available people with talents we would need in a mining operation," Ewigleben said. "There are good consultants in Fairbanks, Anchorage and Juneau that we would need for environmental, regulatory and community affairs ... the non-geological assets."

Pogo area land holdings grow

AngloGold recently has focused considerable attention and effort on expanding its land holdings around the Pogo gold deposit, being developed by Teck-Cominco and Sumitomo Metal Mining Co.

Claim staking expanded Anglo's presence in the district, giving it a "pretty significant and sizeable" land package, Pontius said. The company's total acreage now is 61,000 hectares (235 square miles).



Anglo's staking, which started in late 2002 and has continued through this spring, includes areas immediately south of the Pogo claim block, several miles southeast and southwest of Pogo, and an area near the Richardson Highway called Shaw Creek.

AngloGold and its joint venture partner on the ER and the Eagle properties, Rimfire Minerals, together staked additional ground surrounding those prospects late last year. The ER property, just a few miles west of Pogo, is now a 16.5-square mile claim block, according to Rimfire.

Eagle, several miles southwest of Pogo, is 24.6 square miles in size. That property will be drilled this year, as will ER, Pontius said.

"We have a geology model that we're following, and that is what is driving our staking," Pontius said. "We're following our exploration sense and looking for areas of opportunity."

Resurgence in Pogo staking

Anglo is leading what appears to be resurgence in claim staking surrounding Pogo, which sparked more than 150 square miles of claim staking in 1998, after developers announced a resource and development plans for the high-grade deposit.

Pogo, estimated to contain about 5.5

One large land package still available is 30 to 40 miles north of Pogo. The Alaska Mental Health Trust Authority has 180,000 acres of land that has been previously leased by majors in the exploration and mining industry ..., said Mike Franger, manager for the trust's minerals and oil and gas leasing.

million ounces of gold with an average grade of about a half-ounce per ton of rock, has recently received all state and federal permits and has moved into the pre-construction stage.

"Pogo never got the due attention it should ... it's going to be a low-cost, good money maker for its developers," said David Caulfield, president of Rimfire Minerals. "It's a good jurisdiction in that you can still go and stake close or pretty close to Pogo." Rimfire was one of the few juniors that held onto its Pogo-area land, through the late 1990s and into 2000, when it signed a joint venture agreement with AngloGold. "Because of the downturn in the market, the Canadian juniors found it very difficult to hold onto their ground, and a lot came open," Pontius said. "Those claim positions that were dropped we've taken advantage of to stake perspective opportunities." Total claims staked in the Pogo area are more than 500 square miles, or 322,920 acres, according to Kerwin Krause, property manager for the Alaska Department of Natural Resources.



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Of those claims, about 200,000 acres

Changing names

Businesses occasionally change names, usually to reflect a different structure, ownership or image. It's a task not lightly undertaken, as the transformation process can sometimes be confusing.

For example, there's answering telephone calls — a daily ritual. A company or business name

change affects that comfortable opening line of conversation. Sometimes it

takes a while to work out the details, as I am learning. My changed name recently, when married the love of my life. Just a few



days after our wedding, my husband and I attended an aircraft construction workshop. We were asked to introduce ourselves to the group, and I stumbled over my new name, Patricia Liles, an identity different from my old one, Patricia Jones.

It's becoming more comfortable now, as I have more practice in using my new name. And after 36 years of living as one identity, it takes awhile to change everything that has your name on it.

Initially, I planned to continue using my maiden name for writing. Journalists

depend on their identity and accompanying reputation of their names, perhaps more than any other asset.

It's the image — positive or negative - that comes to mind when a source is contacted for information. The source has to decide, sometimes almost instantly, whether to carve out a few minutes from an already busy day to provide information to the journalist.

Previously, I thought my name change could confuse the communications process. But having two identities became confusing, answering the telephone one way, then just a few minutes later, making a call using the other name. I've stumbled and stuttered my way through an introduction more than once.

The bottom line is — my identity has changed, on these pages and in all that I do, professionally and personally. In every aspect of my life, I am a different person, new and improved over my old self. This new name is mine for the rest of my life, so now is the time to change my by-line.

Now, I just need to figure out how to change the pop-up on my computer, which keeps trying to insert my old name when I type Patricia Liles.

-PATRICIA LILES, Mining News editor

CORRECTIONS

In the March edition of North of 60 Mining News the Rock Creek photo on page 2 was incorrectly credited to Patricia Jones. That photo came from NovaGold.

On page 3 of the March edition, in the story about Alaska's mineral industry, the amount reported for Red Dog mine's 2003 profit was \$59 million. That number is incorrect. Red Dog's profit last year was \$50 million.

Dan Wilcox

Mary Craig

Kay Cashman

Kristen Nelson

Steve Sutherlin

Patricia Liles

Larry Persily

Forrest Crane

Steven Merritt

Tom Kearney

Gary Park

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SOUTHCENTRAL ALASKA

Spring drilling for diamonds at Shulin Lake property completed

Calgary-based Golconda Resources Ltd., operator of the Shulin Lake diamond exploration joint venture, has concluded a spring drilling program conducted in March at the Southcentral Alaska property.

About 25 miles due west of the Parks Highway and about 80 miles north of Anchorage, the Shulin Lake project is targeting a volcanic occurrence that has previously yielded micro-diamonds and diamond indicator minerals. It's the first known discovery of diamonds from a bedrock source in Alaska, according to joint venture partner Shear Minerals.

Golconda conducted drilling this March, although no results or detailed information about that work was available from the company. According to a Feb. 4 press release, the joint venture planned to drill 10 holes for a total of 3,000 feet to test different areas of a circular structure, visible on a satellite photo of the property.

Winter drilling involves access from Trapper Creek, involving traveling about 10 miles by winter trails, according to Kevin Adler, vice president of On-Line Exploration Services, an Anchorage-based geological consultant on the property since 1999.

Drilling work depends on "how long the snow lasts," Adler told Mining News in mid-March. In September 2003, the joint venture drilled two holes into the circular structure, which has a diameter of about two kilometers, according to Golconda's press release.

The holes intersected a volcanic sequence of sandy tuffs and fine ash, "indicating that this feature is most likely a volcanic center and the source of the diamond indicator minerals and micro-diamonds found in earlier programs," the press release said. Indicator minerals show a chemical composition similar to eclogitic minerals found in lamproitic environments elsewhere, the release said.

Placer miners prospecting for gold initially discovered the diamond indicator minerals, according to Adler and to property information on Shear Minerals' website.

Core drilling in the spring of 2002 yielded samples that contained 15 micro-diamonds, less than 0.5 millimeter in one direction with a minimum of 0.1 millimeter in one dimension. A macro-diamond, measuring 0.71 by 0.57 by 0.47 millimeters was also found, in the same hole, at a depth of 574 to 609 feet, according to Shear.

The micro-diamonds were characterized by consultant Lakefield Research as generally being white, transparent, mostly fragments, some with crystal faces, frosted surfaces and graphic coatings.

-PATRICIA LILES, Mining News editor



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ALASKA

Alaska releases bedrock geological maps for Pogo area

The Alaska Division of Geological and Geophysical Surveys has published a new bedrock geologic map of the Salcha River-Pogo area in the central Big Delta quadrangle of Alaska.

The bedrock geologic map, released in late March, covers approximately 435 square miles within parts of the Fairbanks and Goodpaster mining districts, including the Pogo gold deposit, an area seeing a resurgence of claim staking activity in recent months.

The map provides ground-truth geologic mapping, conducted during the summers of 2000 through 2002, of the southern portion of the Salcha River-Pogo airborne geophysical survey released in 2000 by the division.

The map shows the distribution of bedrock units and structures, as well as other supporting geologic data. It also provides information useful for guiding exploration for new mineral resources in the area and for locating bedrock engineering-material sites.

The publication is available as a 1:63,360-scale, full-color paper map sheet with a 19-page booklet containing explanatory text and tables, and as digital GIS files. The report is available for the cost of reproduction.

Maps can be inspected and purchased from the Alaska Division of Geological and Geophysical Surveys, 3354 College Rd., Fairbanks AK 99709-3707 and from the Alaska Department of Natural Resources Public Information Center, 550 West 7th Ave., Suite 1260, Anchorage AK 99501.

—PATRICIA LILES, Mining News editor

JUNEAU, ALASKA

Mining bill awaits Alaska House concurrence on technical changes

Alaska miners who file their paperwork late will not immediately lose a mining claim, but would pay a penalty for the late filing under a bill that passed the Alaska Senate April 6 and was headed back to the House for concur-

rence on technical changes.

House Bill 344, sponsored by Rep. Hugh Fate, R-Fairbanks, changes the current law that says if a miner misses the filing deadline for annual rental fees, statements of annual labor and production royalty for a mining claim, the claim is He said he has "actually seen people come in 10 minutes late to the recorder's office," and their claim was, as a result,

legally abandoned.

considered abandoned. Both the early March vote in the House and the April 6 vote in the Senate were unanimous.

This bill helps smaller miners, Fate told the Senate Resources Committee March 24, and thanked both the Department of Natural Resources and the Alaska Miners Association for assisting with the bill.

Under current law, a miner who misses the filing deadline is deemed to have abandoned the claim and is required to wait a year before he can re-file on that claim, Fate said. He said he has "actually seen people come in 10 minutes late to the recorder's office," and their claim was, as a result, legally abandoned.

Under HB 344 a miner would still lose his claim if he files late

• C A N A D A

Gold poised to leap ahead in Canada

Improved prices spur exploration in British Columbia, northern territories; Canadian government holds out hope of exploration tax credit extension

Last

BY GARY PARK

Mining News Calgary Correspondent

old exploration is being fired up in British Columbia and Canada's three northern territories, rekindled by improved metal prices.

"The industry is finally coming back," declared Dan Jepsen, executive director of the British Columbia and Yukon Chamber of Mines.

The British Columbia Ministry of Energy and Mines is counting on exploration doubling last year's spending of C\$55 million, helped by the provincial government's efforts to reduce bureaucratic delays and introduce tax incentives for mining investments.

Optimism has also been raised by Canada's Natural Resources Minister John Efford, who said a 15 percent mineral exploration tax credit may be extended three years to the end of 2007.

He told the 72nd annual convention of the Prospectors and Developers Association of Canada in Toronto that mining firms, as well as energy and forestry companies, need a break as they struggle to adjust to a stronger Canadian dollar, which gained 20 percent in value over the last year against its U.S. counterpart.

"One of the things they have to face is the rise in the Canadian dollar in an exporting industry," Efford said.

"We've got to make some improvements in our tax regime to try and help the industry."

Streamlining permit process the priority

Efford also promised to slash the time mining and energy companies need to obtain environmental permits.

He said those approvals can often take up to two years, compared to 120 days in the United States

Streamlining the process, is his "number one priority," Efford said.

But he hailed Canada's "rapid advancement in the diamond industry," noting that last year 11.2 million carats worth C\$1.7 billion were mined, compared with 4.9 million carats valued at C\$790 million in 2002.

"To be ranked third in the world in the value of diamond production after only five years is nothing short of remarkable," he said.

With their confidence growing, investors are pulling British Columbia out of a decade-long slump.

NORTHWEST TERRITORIES

Columbia-based companies raised C\$800 million in financing, double the previous year, according to Jim Mustard, senior mining analyst at Haywood Securities, noting that last year was the fourth in succession when exploration spending rose.

year,



The renewed interest shows Canada's Natural Resources Minister

every sign of spilling over to **John Efford** Canada's most remote regions — the Northwest Territories, Yukon and Nunavut.

British

In the Northwest Territories, the surge in gold prices over the last five years has set the stage for a revival of old projects outside the immediate orbit of Yellowknife.

Anaconda options Damoti Lake property

Topping that list, Anaconda Gold has optioned the Damoti Lake property, 105 miles north of Yellowknife, from Doublestar Resources after extensive drilling during the 1990s; Seabridge Gold has acquired operating interests from Newmont Mining and Total Resources (a unit of the French energy giant) to revive the Courageous Lake project; and junior mining company Tyhee Development, based on revised resource estimates, believes it can inject fresh life into the Discovery mine that produced 1 million ounces of gold over 20 years to 1969.

In the Yukon, a joint venture has been formed by StrataGold and Northgate Exploration to spend C\$700,000 this year drilling the Hyland property, 45 miles northeast of Watson Lake.

Success would give the Yukon its first producing gold mine since the closure of the Brewer Creek mine, which yielded 266,000 ounces from 1997 to 2001.

For Nunavut, the biggest hope rests with Edmonton-based Committee Bay Resources, which has collected samples along a 180-mile rock formation southwest of Melville Peninsula.

Chief Executive Officer John Williamson said his company hopes to complete sufficient drilling to calculate an "inferred" resource, offering an insight into the gold potential of one location, known as Three Hills.

He said Committee Bay's prospecting during the 1990s has allowed it to select "high quality land." ●

After rebuff, Israeli consortium bids second

4

and someone else has top-filed a claim over the same area, or files a claim over the area after the missed filing date and before the original miner rectifies the late paperwork and payments, Fate told the committee. This doesn't alter the law that allows someone else to file on open ground, he said, but addresses a concern of small miners who have lost claims through not being able to get into the recorder's office.

"This provides a much needed option to the existing statutes that will create a benefit to the overall mining industry and primarily to the small miners," Bob Loeffler, director of the Alaska Division of Mining, Land and Water, said in a fiscal note for HB 344.

"It is unfortunate that, despite the best intentions of the miners, inadvertent delays to filing do occur," Loeffler said. "This has resulted in small family operations that have been active for generations sometimes losing their claims and, in some cases, their livelihood."

HB 344 provides that if no other claim has been filed, the miner who missed the filing deadline could retain his claim by filing the necessary paperwork, paying the royalties and rent due, plus a penalty equal to one year's rent.

-NORTH OF 60 MINING NEWS

time for BHP Billiton's Ekati diamond mine

Having been rebuffed last June, an Israeli diamond consortium has made a second unsolicited bid for the lucrative Ekati mine in Canada's Northwest Territories.

But the offer by the DGI Group of Cos. drew a light-hearted response from Ekati owner BHP Billiton, with a spokesman in Yellowknife suggesting that "this comes around every year ... take it with a pinch of salt."

Graeme Currie, a mining analyst with Canaccord Capital, told the Financial Post that BHP, having spent millions of dollars to secure diamond exploration prospects in the Northwest Territories and Nunavut, would be unlikely to sell without opening up a data room to seek the highest offers. The Israeli company said it has put Ekati at the top of its list of target companies as it embarks on a US\$2 billion global shopping mission to acquire diamond mines.

The Israeli company said it has put Ekati at the top of its list of target companies as it embarks on a US\$2 billion global shopping mission to acquire diamond mines.

No firm price tag, says Israili consortium

A DGI Group spokesman said there is no firm price tag attached to the Ekati bid, "but it is an offer to negotiate and to reach an agreement to buy," he said, claiming the company is aware of competing offers of up to US\$700 million.

see **EKATI** page 5

ALASKA

Claim staking takes off

Mineral prospectors laid claim to more than 500 square miles of Alaska in 2003, staking continues in early 2004

which host Pogo.

BY PATRICIA LILES

Mining News Editor

rospectors looking for valuable minerals in Alaska hit the ground hard in 2003, laying claim to 507 square miles of state and federally controlled land in the Last Frontier.

That's about double the effort by claim stakers in 2002, said Dave Szumigala, a geologist with the Alaska Division of Geological and Geophysical Surveys, during a presentation at the March 2004 biennial conference of the Alaska Miners Association in Fairbanks.

"It shows that Alaska is on people's radar screens world-

wide," he said. Claim staking has

continued at a rapid pace in early 2004, according to documents filed with the recorders' state offices in Alaska.

Key areas include Pogo

Key areas of claim staking activity include the rolling hills surrounding the Pogo gold deposit northeast of Delta Junction, the Denali Block area in the Alaska Range near Paxson and the Pebble gold-copper-molybdenum deposit near Iliamna Lake.

According to Kerwin Krause, property manager in the Alaska Department of Natural Resources, those three prospecting areas make up 903,240 acres of active claims, equal to 1,411.3 square miles of ground.

That's roughly one-third of the total amount of land in Alaska staked for mineral exploration and development. In 2003, 2.8 million acres or 4,401 square miles of Alaska was covered by active mining claims or prospecting sites, according to Szumigala.

State land staked in 2003, in both 40acre and 160-acre claims and in 160-acre prospecting sites, totaled 311,520 acres, or 486.7 square miles, according to a recent update of land data in Szumigala's presentation.

That's nearly double the 167,440 acres, or 261.6 square miles, of state land staked in 2002. State land staked in 2001 totaled 147,680 acres, or 230.7 square miles.

Claim staking on federal land also increased, doubling from the 5,220 acres staked in 2002 to the 13,520 acres in

records.

Attention and interest in Pebble, which contains both copper and gold in large amounts, is also fueled by an increase in gold prices. The weakening U.S. dollar and global political uncertainties are also increasing demand for gold, Freeman said.

"With demand for these metals up, the producers are scrambling to find more supplies after spending five years in hibernation due to low demand and flat metal prices," Freeman said. "Their interest has translated downstream to the junior explorers such as Rimfire and Liberty Star who can now go to the public mar-

kets and raise venture capital, a near impossible task from 1997 to 2003." involves the successful permitting

process for the Pogo gold deposit.

"That's huge news down here - it changes the whole area from a good discovery and deposit to now officially a mining district," said David Caulfield, president of Rimfire Minerals Corp., a Vancouver, B.C.-based exploration company with considerable land holdings neighboring Pogo.

Large parts of Alaska underexplored

Despite its rich mining history, large portions of Alaska remain under explored, including the Goodpaster River drainages, which host Pogo.

"It's an area that's basically untouched - not the third or fourth generation of field work that you see in the States," Caulfield said. "You can count the number of properties on one hand that have seen drilling ... it's not like you're trying to find the morsel between the last two meals." •

continued from page 4 EKATI

DGI Group said it sent a letter expressing its interest to BHP Billiton Chairman Don Argus.

BHP owns 80 percent of Ekati, having paid C\$750 million in 2001 to buy out a 29 percent minority stake. The remaining 20 percent is in the hands of geologists Charles Fipke and Steart Blusson, who discovered the deposit.

Ekati currently produces about 4 million carats of diamonds a year, with profit margins that run at 35 percent or better. The mine accounts for about 4 percent of the world's diamond production by weight and 6 percent by value.

5

DGI Group describes itself as one of the world's leading wholesale distributors of rough and polished diamonds and says it has accumulated US\$2 billion in cash to purchase operating assets.

> -GARY PARK, Mining News Calgary correspondent





Despite its rich mining history, large portions of Alaska remain under explored, including the Goodpaster River drainages,

Another consideration in the recent increase of claim staking, particularly in the Interior,

2003.

Macroeconomics of global metal markets driving Alaska staking

Macroeconomics of global metal markets is driving the recent claim-staking in Alaska, according to Curt Freeman, a Fairbanks-based consulting geologist and owner of Avalon Development.

"Worldwide demand for copper, nickel and the platinum group elements is outstripping supplies so these metals are getting looked at hard by mining companies," he said, referring to activity at Pebble and the Denali Block. (See Pebble claim staking story and Nevada Star story in this issue.)

Claims surrounding Pebble jumped from roughly 350 square miles recorded at the end of 2003 to 564 square miles, recorded by the first of April, according to geologists working in the area and state

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• NORTHWESTERN ALASKA

Ambler JV agreement announced

NovaGold signs deal with Kennecott to earn a 51% interest in Ambler VMS deposit, plans to spend \$1.5 million this year



Ambler property in northwestern Alaska

BY PATRICIA LILES

Mining News Editor

unting hard in remote elephant country, NovaGold Resources can claim a lion's share of kills. Now the aggressive junior has to prove whether it's found any trophies that will make the company a metals producer.

NovaGold announced March 26 an agreement with Kennecott Exploration and Kennecott Arctic to acquire a 51 percent interest in the Ambler gold, silver, copper and base metals property in remote northwestern Alaska.

Previous exploration on Arctic, the most advanced target on the Ambler property, identified an inferred resource containing 817,000 ounces of gold, 62.1 million ounces of silver, 3.2 billion pounds of copper, 4.2 billion pounds of lead and 640 million pounds of lead.

That puts the Arctic deposit in the top volcanogenic massive sulfide deposits in the world based on in-situ metal value, according to the company's statement. With the Ambler agreement in place, NovaGold now has a share in its third such large mineral deposit in North America.

NovaGold currently holds a 70 percent interest in Donlin Creek in southwestern Alaska, estimated to contain about 28 million ounces of gold. Partner Placer Dome must spend \$30 million to earn back a 70 percent share of that development project.

NovaGold, through its Canadian subsidiary, also is working to earn a 100 percent interest in Galore Creek, in northwestern British Columbia, estimated to contain 5 million ounces of gold, 60 million ounces of silver and 5 billion pounds of copper.

It's quite an impressive list for a company that started less than seven years ago with a few geologists dedicated to Alaska exploration.

"We're growing as a company," Greg Johnson, vice president of corporate development, told Mining News in an interview April 2. "Our goal as a company is to grow into a quality, exploration-focused, producer ... a mid-tier gold producer in the northwest."

2004 spending plans outlined

NovaGold plans to spend about \$7 million on projects in Alaska this year, with the bulk of that — about \$5 million — going to develop the company's 100 percent owned Rock Creek gold project.

NovaGold is preparing to initiate the permitting process for Rock Creek, now in the hands of engineers, later this year; work that will run concurrently with completion of a final feasibility study. The goal is gold production beginning sometime in late 2005 or early 2006.

The company will also spend about \$500,000 on its Nome Gold project, a large, low-grade placer gold resource, part of its sand and gravel operation in Nome,

NovaGold to capture remaining Spectrum shares, consolidate firms

NovaGold plans to acquire the approximately 44 percent of the remaining common shares of its Canadian subsidiary, SpectrumGold, bringing the assets of both companies under the NovaGold banner.

The agreement, announced March 30, involves a share exchange, giving shareholders of SpectrumGold one common share of NovaGold for every 1.35 SpectrumGold shares held.

For SpectrumGold shareholders, this represents an approximately 34.9 percent premium to the 90day average trading price of the common shares of both companies, the company said.

NovaGold currently holds a 56 percent interest in SpectrumGold, a Canadian-focused exploration company created last summer in an agreement with Quest Capital Corp., formerly Viceroy Resources Corp.

Quest/Viceroy contributed to the partnership cash and exploration rights to the Brewery Creek Gold Mine in the Yukon and other mineral assets in British Columbia. NovaGold contributed cash and its four early-stage exploration properties in the Yukon.

Shortly after formation of SpectrumGold, the company signed an option agreement in August 2003 to acquire a 100 percent interest in the Galore Creek gold-silver-copper project in northwestern British Columbia from subsidiaries of Rio Tinto and AngloAmerican.

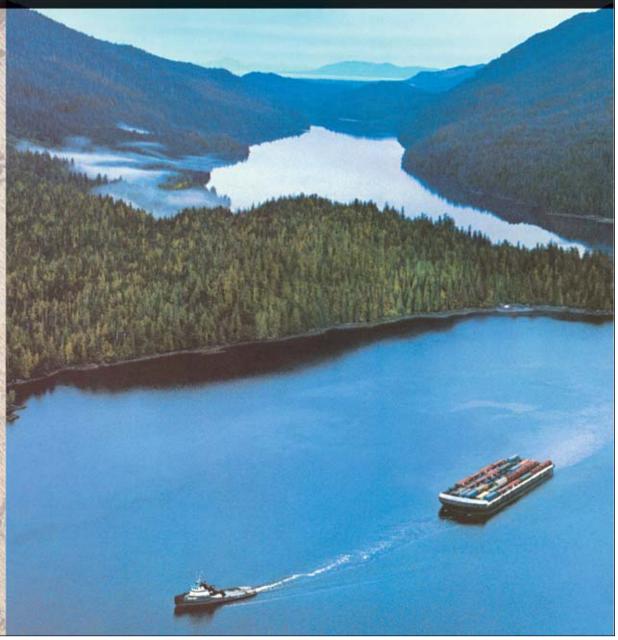
Based on past work by Kennecott, that project is estimated to contain 5 million ounces of gold, 60 mil-

see NOVAGOLD page 7

see AMBLER page 7

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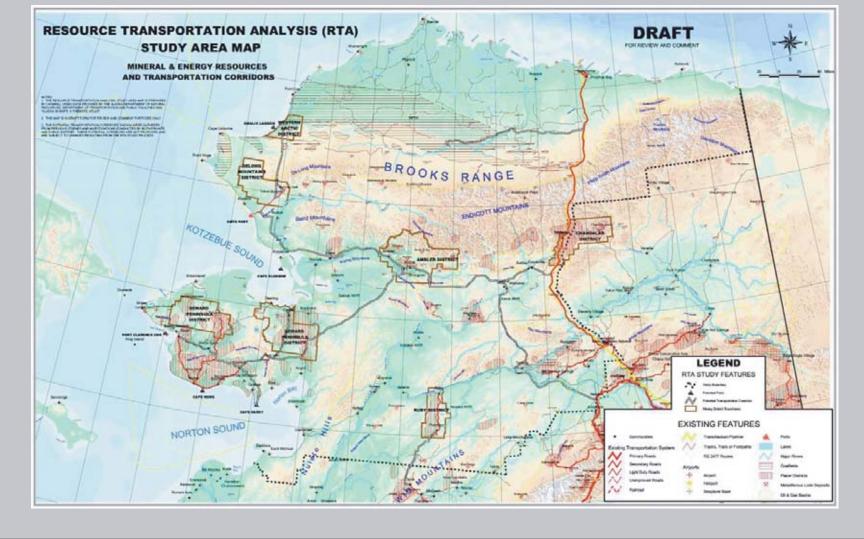
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continued from page 6

AMBLER

acquired in its purchase of Alaska Gold in 1999.

On the recently acquired Ambler property, NovaGold plans to spend about \$1.5 million this year, to develop an updated geologic model through detailed re-logging of existing core. An initial 6,000-foot core drill program is also planned later this summer.

To fund exploration in Alaska, NovaGold anticipates re-investing this year's revenue from its Nome sand-andgravel, land and gold businesses.

Across the border, NovaGold will spend about \$5 million on Galore Creek, including completion of an updated geological model and resource estimate, a scoping study and a summer drilling program to complete a minimum of 60,000 feet of samples.

The company's other early-stage exploration properties in northwestern Canada will also receive some attention, with spending planned from \$500,000 to \$1 million. Brewery Creek in the Yukon will be the main focus.

NovaGold's partners on two other properties are also spending millions this year. At Donlin Creek, operator Placer Dome plans to spend \$6 million, Johnson said. And at the Shotgun gold project in southwest Alaska, operator TNR will spend up to \$1.5 million, he said. model suggests that mineralization extends deeper," the 1999 state report said. "No work was done in 1999, but the company is considering the possibility of developing Arctic as an open pit and underground mine. Lack of access to transportation remains the key problem to making Bornite and Arctic viable mining operations."

Other companies, including Teck and Cominco, explored the area. Several other volcanogenic massive sulfide deposits have been identified in the region, according to state reports.

The Arctic deposit estimate reported by the Alaska Division of Geological and Geophysical Surveys was based on 70 wide spaced drill holes, according to NovaGold's press release.

Ambler agreement details

NovaGold's agreement with Kennecott allows the junior to earn a 51 percent interest in the Ambler property, by matching Kennecott's historical spending on the property, totaling \$20 million. NovaGold has until 2016 to do so, although as operator, it must spend a minimum of \$5 million on exploration and development during the first five years of the agreement.

In addition, NovaGold must obtain agreements with area land owners to provide access for mine development. "The strategy in our approach is for us to work with local Native corporations and the state of Alaska to develop the best options for access and infrastructure," Johnson said. hosts the volcanogenic massive sulfide mineralization throughout the district has been mapped over a strike length exceeding 50 miles east and west of the Arctic mineralization, according to NovaGold's press release. \bullet

see AMBLER page 8

continued from page 6 **NOVAGOLD**

lion ounces of silver and 5 billion pounds of copper, said Greg Johnson, vice president of corporate development for NovaGold.

New resource number expected later this year

A new resource number is expected to be released later this year, based on historical data and additional drilling conducted by SpectrumGold last fall.

"After completing our due diligence work on the Galore Creek project over the past year that included an initial round of drilling, development of a new geologic model and discussions with the Tahltan First Nation peoples and the Provincial government, management developed great confidence in the quality of the project and we believe it will become a core asset for NovaGold," Johnson told Mining News on April 2. "As such we felt it would be the best value for our shareholders to acquire the remaining 44 percent of SpectrumGold rather than develop it indirectly through our subsidiary." The combined assets of the two companies will include in excess of \$45 million in cash and one of the largest resource bases in gold, silver and copper of any advanced-exploration-stage precious metals company. The combined total net resource base after all earn-ins would include 17 million ounces of gold, 93 million ounces of silver, and 7.8 billion pounds of copper, according to the press release. "The stronger balance sheet of the combined companies will assist project development," Johnson said. 'The project at Galore Creek has great potential and we believe the project will advance rapidly under the larger combined company."

Ambler's history

NovaGold's latest project should breathe new life into a long-explored but never developed property in northwest Alaska. One hundred and fifty miles east of Kotzebue Sound, the Ambler property consists of 35,000 acres of patented and Alaska State mining claims that cover a large volcanogenic massive sulfide district.

Rio Tinto subsidiaries Kennecott Exploration and Kennecott Arctic discovered the property in 1967 and worked on it, off and on, through late 1990s. Within the Ambler property is the Arctic resource, a mineralized area that received extensive exploration.

Following airborne geophysical surveys completed in 1996, Kennecott staked a "very large group of claims in the Ambler-Survey Pass area," according to the 1997 Alaska Mineral Industry report.

In 1998, Kennecott spent \$2 million on the western part of the Ambler Copper Belt, the state said, and reported "encouraging" results from drilling. "A new geologic During the second phase, NovaGold must complete a pre-feasibility study, resulting in a positive rate of return for a mining project. The company's focus will be to make the Ambler property "as attractive of an investment as possible," Johnson said.

Upon completion of a positive feasibility study, Kennecott can regain management and acquire an extra 2 percent of the project by making a payment to NovaGold equal to 4 percent of the project's net present value at that time.

It's a monetary incentive to NovaGold that also allows Kennecott's parent company to achieve its goal of developing a large-scale project, Johnson said. "Rio Tinto is only interested in very large projects that have long mine lives," he said.

The potential for growth certainly exists. Mineralization generally parallels topography and occurs within 600 feet or less from surface. The felsic volcanic package which

-PATRICIA LILES, Mining News editor

● JUNEAU, ALASKA

Kensington gold mine review moves forward

State and federal agencies release draft SEIS for hardrock mill and administration facilities in the Johnson Creek drainage near the Julian mine 45 miles north of Juneau, proposed project and three alternatives offered for public comment

BY PATRICIA LILES

Mining News Editor

S tate and federal regulatory agencies released a draft version of a supplemental environmental impact statement Jan. 23 for the Kensington underground hard rock gold mine.

Project developer Coeur Alaska Inc., a subsidiary of Coeur d'Alene Mines Corp., one of the world's largest silver producers, wants to build mine and mill facilities that would produce approximately 2,000 tons of gold-rich ore per day, requiring a year-round work force of about 225 people.

It's the third time have agencies reviewed the Kensington project under the National Environmental Policy Act since the original plan of operations was submitted in 1990. While receiving past regulatory approval, no mine

has ever been built at Kensington, 45 miles north of Juneau and a few miles inland from Comet Beach on Lynn Canal.

Coeur has been involved in the Kensington project since 1990, developing initial plans with partner Echo Bay Exploration. Now, Coeur is the sole developer of the project.

Development proposal

Public meetings to discuss the proposed project and three alternatives outlined in the draft supplemental EIS will be held Feb. 24 in Juneau and Feb. 26 in Haines. Written comments are due March 8 to the lead agency, the U.S. Forest Service.

The company has proposed building a hardrock mill and administration facilities in the Johnson Creek drainage, in the vicinity of the Jualin Mine, which is a little more than two miles south of the Kensington deposit.

Coeur proposes constructing a 12,000 foot tunnel to access both the Jualin and the Kensington mineralized areas, and mining only higher-grade material from

the two deposits.

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Project developer Coeur Alaska Inc., a subsidiary of Coeur d'Alene Mines Corp., one of the world's largest silver producers, wants to build mine and mill facilities that would produce approximately 2,000 tons of gold-rich ore per day, requiring a year-round work force of about 225 people.

> Lower Slate Lake. Tailings would be transported via a buried pipeline, and the total tailings disposal would be 4.5 million tons.

Employees would access the mine via a daily ferry service that would operate between Cascade Point and Slate Creek Cove, where a marine terminal to receive supplies and to ship ore would be constructed in the cove off of Berners Bay.

An existing five-mile road from the water terminal to the Jualin Mine would be upgraded to handle mine traffic, and a 3.5 mile pipeline access road and a one-mile cutoff road connecting the other



The camp at the Kensington gold project being developed by Coeur d'Alene Mines Corp. some 45 miles north of Juneau, Alaska.

two roads would be constructed.

Mining operations that would employ an estimated 225 workers would last an estimated 10 years, following an 18month construction period. Construction workers would range from 135 to 179 people.

Three other options

Three other options have been included in the environmental review, prepared by Tetra Tech Inc., a third party contractor under the direction of the Forest Service, the Environmental Protection Agency, the U.S. Army Corps of Engineers and the Alaska Department of Natural Resources.

The no-action alternative reflects a previous action by agencies, which is the

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project approved in a 1997 record of decision.

Major changes to that previously approved plan include the location of mill and administration facilities, disposal of tailings and construction of on-site employee housing. Supply and freight access would be from a marine terminal on Comet Beach, on Lynn Canal.

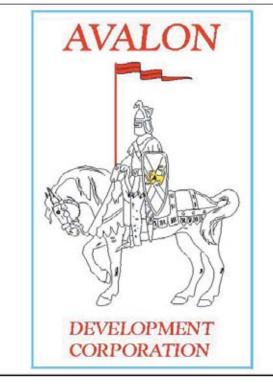
Production rate would be 4,000 tons of ore per day, and 400 tons of waste rock per day. No ore would be processed through an on-site cyanidation circuit.

An alternative to that no-action option involves a reduced mining and tailings production rate, equal to the production rate proposed by the company. The life of the operation would be reduced to 10 years, following an estimated two-year construction period.

A third option would involve a ferry transportation dock at Echo Cove, using that access rather than Cascade Point. A landing craft ramp at the Slate Creek Cove terminal would be eliminated.

Water would not be recycled from the tailings facility to the mill circuit. Instead, diversion channels would be constructed to direct flow from Mid-Lake East Fork Slate Creek and overland runoff from undisturbed areas around the tailing disposal. Diverted water would discharge to a spillway at the top of the tailings dam. \bullet

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• C O L U M N

NORTH OF 60 MINING

Alaska sees significant mining developments in March, says Freeman

Teck Cominco and Sumitomo Metal Mining receive final permits for Pogo; Anglo American acquires its first U.S. mineral property in years; NovaGold and Kennecott will joint venture on Arctic deposit at Ambler; Joe Kizis gets gets promotion

CURT FREEMAN

For North of 60 Mining News

lthough the traditional Alaska field season has not really arrived yet, three significant developments occurred in March: Teck Cominco and Sumitomo Metal Mining received final permits for the Pogo gold project from the U.S. Environmental Protection Agency allowing construction to move ahead at flank speed, Anglo American acquired its first U.S. mineral property in years by signing a joint venture option on Nevada Star's MAN nickel-copper-platinum group element project and NovaGold and Kennecott signed a joint venture on one of Alaska's golden oldies, the Arctic copper, gold, silver, zinc and lead deposit in the prolific Ambler massive sulfide belt.

These milestones are important in that the Pogo project moved from nothing to mine construction in less than 10 years, the MAN project represents the culmination of several new exploration techniques which successfully located nickel, copper and platinum group elements, all of which have future demand curves that bode well for the project, and the Ambler district went to sleep when Czar Jimmy Carter pushed ANILCA through Congress in 1980 and threw future Brooks Range development into doubt. The most significant commonality among these properties is the fact that the districts in which they are located possess significant potential for additional discoveries, a thought that warms the heart of exploration geologists like me!

Western Alaska

Dynasty Northern Minerals announced that it had begun engineering and environmental/permitting studies at its Pebble copper-gold project near Iliamna. These studies include access and power alternatives, optimum milling rates (currently estimated at 90,000 to 200,000 tonnes per day), environmental baseline data, and other items that will be required for completion of an environmental impact statement. In this regard, the Tundra Telegraph reported that fieldwork related to diamond drilling at Pebble began in March, well before the snows of winter left the project.

Liberty Star Gold Corp. reported that

The author

The author Curt Freeman, CPG #6901, is a well-known geologist who

lives in Fairbanks. He prepared this column March 31. Freeman can be reached by mail at P.O. Box 80268, Fairbanks, AK 99708. His work phone number at Avalon Development is (907) 457-5159 and his fax is (907) 455-8069. His email is avalon@alaska.net and his web site is

www.avalonalaska.com.

NovaGold Resources also said that it is continuing engineering and exploration work to evaluate the potential to restart placer mining at its Nome gold project in the Nome district. The property contains a measured and indicated resource estimated at 1.2 million ounces of gold and an inferred resource estimated at 1.1 million ounces of gold. More than 4 million ounces of gold have been extracted from the property since its discovery around 1900. Mining on the project was terminated in 1998 due to low gold prices. The company has budgeted \$500,000 for delineation drilling and engineering work in 2004.

NovaGold Resources announced that its joint venture partner, Placer Dome, plans to spend \$6 million in 2004 on environmental and engineering studies for development of the Donlin Creek project.

Eastern Interior

Freegold Ventures Ltd. and joint venture partner Meridian Gold announced that diamond core drilling had begun at its Golden Summit project in the Fairbanks district. Initial drilling will be targeting the strike extension of previously intersected high-grade mineralization at the historic Cleary Hill mine. Drill efforts will be probing below levels previously mined on the property. Tri-Valley Corp. announced plans to spin off its 42 square mile Richardson gold project into a new public company designed specifically to develop its gold properties. The company plans to raise up In a breath from the past, NovaGold Resources said that it had acquired an option from Kennecott Exploration Co. and Kennecott Arctic Co. to explore and develop the Ambler project in the southern Brooks Range. For those of you still wet behind the ears, the Ambler project contains several know volcanogenic massive sulfide occurrences discovered in the 1970s but not significantly explored in more than a decade.

to \$25 million through future public offerings.

The biggest news of the year (at least so far!) came on March 15 when the EPA approved the discharge permit for **Teck Cominco** and **Sumitomo Metal Mining's** Pogo gold project in the Goodpaster district. This marked the final permit needed for the project and was followed soon thereafter by the sound of personnel and equipment beginning the 25-33 month task of building a mine, access road and power facilities for the 5.6 million ounce deposit. Congratulations Teck Cominco and Sumitomo Metal Mining on a job well done!

Alaska Range

Nevada Star Resources came in with much anticipated news by announcing that Anglo mining giant American Exploration (Canada) has exercised its option to enter into a joint venture on Nevada Star's MAN nickel-copper-platinum group element project in the Delta district. Under the terms of the proposed option/joint venture agreement, Anglo American can earn a 51 percent interest in a portion of the property by spending a total of \$12 million over a five-year earn-in period. Anglo American has the right to increase its interest by an additional 19 percent by completing a feasibility study and an additional 5 percent by arranging production financing for both partners. Nevada Star also announced results from more than 500 soil samples collected over the Fish Lake and Dunite Hill intrusive complexes. Proprietary sampling techniques utilized in this sampling confirmed the presence of elevated nickel-copperplatinum-palladium-cobalt-iron in soils, with up to 542 parts per million nickel and 80 parts per million copper in soils at the Tres Equis nickel prospect in the Fish Lake complex. The survey also revealed a 1.5kilometer long anomalous soil zone on the Fish Lake complex where values up to 881 parts per million nickel and 589 parts per million cobalt were detected. At Dunite Hill, elevated nickel-copper-platinum-palladium soil concentrations of up to 1,455 parts per million nickel and 131 parts per million copper confirm the location of previous Mobile Metal Ion Ni soil anomalies

near the north side of the complex, west of Fourteenmile Lake. **Nevada Star** also announced that it is seeking joint venture participation in its Canwell, Rainy, Broxson, Eureka and Summit Hill prospects, also located in the same area as the Fish Lake and Dunite Hill complexes optioned to Anglo American.

The Pogo project moved from nothing to mine construction in less than 10 years.

Northern Alaska

In a breath from the past, NovaGold Resources said that it had acquired an option from Kennecott Exploration Co. and Kennecott Arctic Co. to explore and develop the Ambler project in the southern Brooks Range. For those of you still wet behind the ears, the Ambler project contains several know volcanogenic massive sulfide occurrences discovered in the 1970s but not significantly explored in more than a decade. The most advanced target on the property is the Arctic deposit which has an inferred resource of 36.3 million tonnes with precious metals grading 0.7 grams of gold per tonne and 54.9 grams of silver per tonne (1.64 grams per tonne gold equivalent) and base metals grading 4 percent copper, 5.5 percent zinc and 0.8 percent lead (7 percent copper equivalent). The contained precious metals in this resource total 817,000 ounces of gold and 62.1 million ounces of silver (1.9 million ounces gold equivalent) and the base metals total 3.2 billion pounds of copper, 4.2 billion pounds of zinc and 640 million pounds of lead (5.6 billion pounds copper equivalent using US\$350 per ounce of gold and US\$6 per ounce silver, and US90 cents per pound copper, US45 cents per pound zinc and US35 cents per pound lead). This estimate was based on 70 widespaced drill holes and ranks the deposit as one of the largest volcanogenic massive sulfides in the world. The favorable mineralized horizon at the Arctic deposit has been mapped over a strike length exceeding 50 miles east and west of the deposit. Under the terms of the agreement,



airborne magnetics surveys were 80 percent complete at its BC copper-gold property near Iliamna. This effort is designed to help delineate additional porphyry coppergold targets in the recently identified Big Chunk volcanic caldera which hosts the nearby Pebble deposit. The survey is designed to include approximately 18,099 line-kilometers at 275-meter line spacings and is expected to be completed in May with field exploration commencing in mid-May.

NovaGold Resources announced that its joint venture partner, **Placer Dome**, plans to spend \$6 million in 2004 on environmental and engineering studies for development of the Donlin Creek project. On-going studies have identified feasible alternatives for project access and power supply. Drilling activities related to engineering studies have already begun on the project. see FREEMAN page 10



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● VALDEZ, ALASKA

Going underground at Cliff Mine

Next step for Western Warrior's exploration of historical gold lode mine is geological mapping of vein structure, more drilling planned this year at mine near Valdez; company looking for more exploration property throughout Alaska

BY PATRICIA LILES

Mining News Editor

algary-based Western Warrior Resources Inc. plans to conduct underground geological mapping and additional drilling this year at the company's Cliff Mine gold exploration project at tidewater near Valdez,

Alaska. "As soon as the snow goes out, we'll start more geological mapping and sampling," company President Bruce Evans told Mining News in early March. "We plan to go underground to do some of the mapping and we will conduct more drilling.'

Western Warrior holds a 100 percent interest in the historical Cliff Gold Mine, seven miles west of Valdez on a steeply sloping cliff rising directly from the sea. Access is by boat or helicopter.

More than 50,000 ounces of gold were mined from the high-grade underground lode deposit between 1910 and 1942. with an average recovered grade of 1.74 ounces of gold per ton of rock.

Western Warrior punched the firstever exploration drill holes on the property last fall, completing 4,855 feet of core drilling in six holes. Results were released in a company press release in early January, and Evans said he was "pretty encouraged by what we saw. It's definitely time to follow up on it."

Intercepts reported ranged from 0.2 to 32 grams of gold per ton of rock, in holes drilled more than 800 feet deep. "I would have liked to get more higher grade intercepts ... more splashy intercepts, but that's the way it shook out this time."

The company is currently working on a three-dimensional model of the deposit's structure and mineralized veins, Evans said, and information about that modeling will soon be released.

Spring mapping planned

No budget has been set yet for exploration work at Cliff this year, Evans said. Initial work will consist of inexpensive geological sam-

"As soon as the snow goes out, we'll start more geological mapping and sampling. We plan to go

underground to do some of the mapping and we will conduct more drilling." —Bruce Evans, Western Warrior Resources

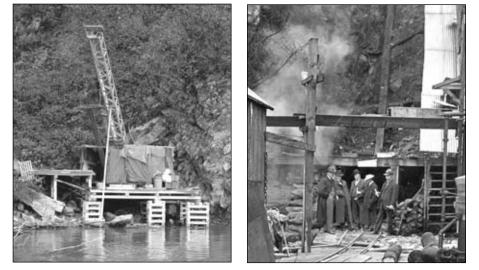
pling and mapping, both from the surface and from accessible underground workings.

"Quite a few of the workings are above the water table, so we can get in there and have a look at the veins

and the vein structure," he said. "The structure that hosts the veins - understanding its geometry is paramount in understanding where to drill."

Last fall's drilling provided valuable information about the geological setting that hosts the high-grade mineralization.

"We see distinct geochemical zones or halos around the gold mineralization zones and we can use that tool to help continue exploration at Cliff," Evans said. Those geochemical signatures can help geologists trace mineralization in the



(left) Last year's drill program, (right) Lower and second tunnels, Cliff Mine

underground deposit.

Following the geological mapping work, Western Warrior will kick off a "major program" of diamond core drilling at Cliff later this year. How many feet will be drilled has not yet been determined, but it will be considerably more than last year's 4,800-foot program, Evans said.

"It depends on the markets," he said. "Last year we were just taking a peak at it."

Western Warrior spent about \$285,000 on the 2003 drill program, considerably less than the \$350,000 Evans planned to spend. That's because he planned for expensive helicopter time to move the drill rig, a cost that was lowered as the company's landing craft contractor, Valdez Fuels, was able to move drilling equipment.

Acquisition mode

Western Warrior has also been working to acquire more exploration property, Evans said, not just land surrounding Cliff, but in the Southcentral region of Alaska and in other areas of the state.

"We're on an acquisition trend and are looking for more ground all over Alaska," Evans said. "There are acquisitions in all sorts of forms."

According to the company's Jan. 8 press release, Western Warrior is in the process of staking additional ground in the general area of the Cliff Mine, due to the success of the initial exploration program.

Western Warrior owns six patented and two unpatented mining claims at Cliff, for a total of 121 acres.

NORTHWEST TERRITORIES NWT Diavik mine outlook muddied

Northwest Territories diamond mine trims 2004 production forecast because of mud surrounding ore body; Aber shares dip

BY GARY PARK

Mining News Calgary Correspondent

ow-grade ore has delivered a setback to the flourishing Diavik diamond mine in the Northwest Territories.

Toronto-based Aber Diamond, 40 percent operator of the joint venture with 60 percent partner Rio Tinto, said the material has forced it to revise this year's production target from 8.2 million carats to the "mid to upper range" of 7 to 8 million carats.

effect, is not well understood."

The announcement trimmed 4.4 percent off Aber shares, which are continuing to trade around C\$41.20, well below the 52-week high of C\$52.50.

It followed a strong 2003, when Aber posted a C\$27.7 million profit in the first year of operation at Diavik and said it looked forward to "playing an expanded role in a robust diamond market."

Full production was only reached in the third quarter of 2003, with Aber Chief Executive Officer Robert Gannicott praising the "success of Rio Tinto in bringing this extraordinary mine to production without delays or cost overruns."

The joint venture plans to spend C\$46 million on exploration this year as it evaluates the commercial value of 62 kimberlite pipes. Aber is also hoping to wrap up a deal this month to buy U.S. jewelry chain Harry Winston and provide direct access to the retail market for Diavik diamonds.

Aber's share at 1.53 million carats, including 440,000 in the final quarter

10

It said the problem is a "shell of low-grade kimberlite mud surrounding the ore body.

"This low-grade material will continue to dilute the grade of ore processed through a substantial period of 2004. Because the kimberlite mud has not been adequately recovered in earlier ore reserve estimation drilling, its diamond content and therefore its dilutive

But there were hints of troubles in the fourth quarter, when results were down from the previous three months due to the cost of stripping mud from the top of a kimberlite pipe.

Diavik yielded 3.83 million carats for 2003, with

The joint venture plans to spend C\$46 million on exploration this year as it evaluates the commercial value of 62 kimberlite pipes.

Aber is also hoping to wrap up a deal this month to buy U.S. jewelry chain Harry Winston and provide direct access to the retail market for Diavik diamonds.

continued from page 9

FREEMAN

NovaGold can earn a 51 percent interest in the project by matching Kennecott's expenditures on the property totaling US\$20 million before 2016. During the first five years of the agreement NovaGold must spend a minimum of US\$5 million on exploration and development work and obtain memorandums of understanding with land owners in the region necessary to provide access for mine development. During the second phase of the agreement NovaGold must spend the balance of the earn-in funds an extra 2 percent interest in the project, (to total \$US20 and take over

and management of Nevada Star Resources came in with much complete a preconstruction anticipated news by announcing that feasibility study and operation of mining giant Anglo American Exploration resulting in a the mine by (Canada) has exercised its option to enter positive rate of making a payreturn using a into a joint venture on Nevada Star's MAN ment NovaGold 10 percent disnickel-copper-platinum group element rate. equivalent to 4 project in the Delta district. percent of the is

project through to the completion of a final positive feasibility study at which time Kennecott has a one-time option to acquire

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NovaGold

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present value using a 12.5 percent discount rate. NovaGold has budgeted a minimum \$1 million for exploration and development work on the Ambler project for 2004 including an initial 6,000-foot core drilling program.

Other

to

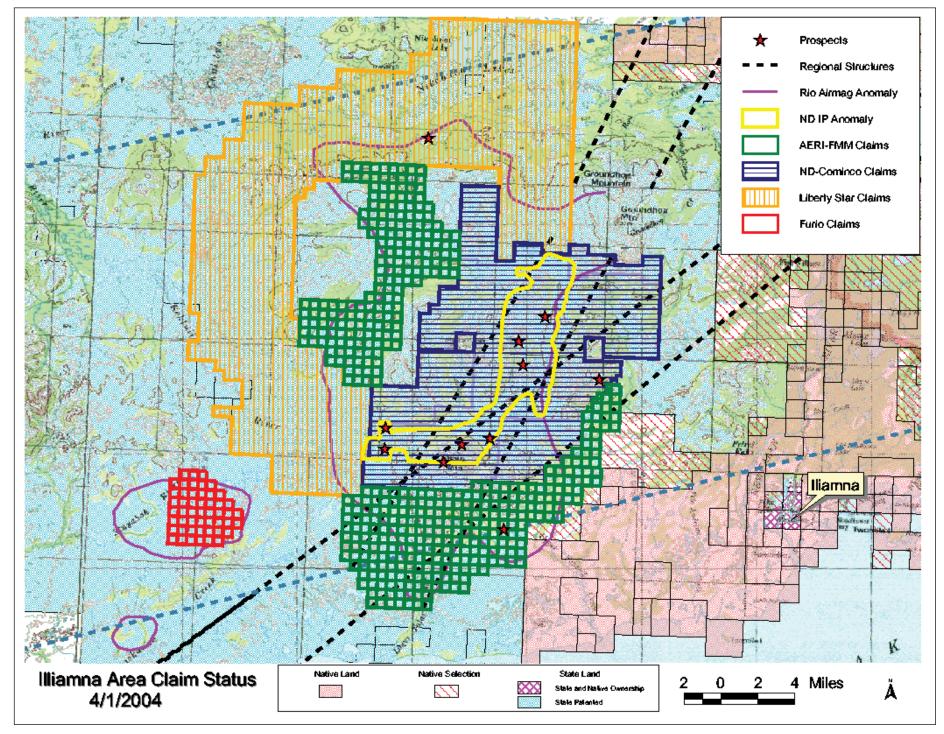
project's net

Rio Fortuna Exploration and Bravo Venture Group jointly announced that Joe Kizis has become president of both companies. Joe is a well-known Great Basin expert and will be bringing his extensive experience to Rio Fortuna's Divide gold project near Nome and Bravo's Woewodski Island massive sulfide project near Petersburg. Welcome to Alaska Joe! •

● ILIAMNA, ALASKA

Pebble activity in southwestern Alaska heats up

Claim staking continues around gold-copper deposit northwest of Iliamna, fourth player in the region announces land holdings



"It finally clicked with people

that this is an economic area."

-Bill Ellis, Alaska Earth

Sciences

BY PATRICIA LILES

Mining News Editor

surge in claim staking surrounding the Pebble gold-copper-molybdenum deposit in southwestern Alaska has continued through the first three months of 2004.

Anchorage-based geological consultant Bill Ellis, part owner of Alaska Earth Sciences, estimates a total of 512 square miles of land has been recently staked for mineral prospecting in an area surrounding the Pebble deposit.

State records show that a total of 564 square miles, or 361,440 acres, is claimed by mineral prospectors in the Pebble area, according to Kerwin Krause, property manager in the Alaska Department of Natural Resources.

staked a majority of those claims — per. about 300 square

miles — last December. The claim staking work continued this spring, and two other companies have joined the fray.

"The perception

has been that a major mining company was working in this area but had not hit any high grade zones and that it was not economic. Then the price of gold and copper increased significantly and the size of the deposit increased significantly," Ellis said. "It finally clicked with people that this is an economic area." But the surge in claim staking surrounding Pebble kicked off prior to that announcement. Alaska Earth Sciences led the way last December, staksquare miles of land to

ing an initial 28 square miles of land to the southeast of the large existing claim block held by Northern Dynasty and also by Teck Cominco.

Alaska Earth Sciences was back at the Iliamna area prospect this spring, Ellis said, staking in February and early March. staked an additional 12.5 square miles of land about 22 miles southwest of the Pebble mineralization for a new player in Alaska's mineral exploration company, Furio Resources Inc.

Half of those claims are for a fifth, unidentified, company, said Furio's chief financial officer, Patrick McGrath. "The claims are on trend to Northern Dynasty's deposit," he told Petroleum News on April 7.

Furio, a recently formed Vancouver, British Columbia-based exploration company, picked the Pebble area to start its work, McGrath said, after seeing the new resource number released by Northern Dynasty. "We decided to see if there was additional ground available in the area," McGrath said.

Pebble, part of a large porphyry mineralized zone, is about 17 miles northwest of the town of Iliamna on the north side of Iliamna Lake in southwest Alaska.

The region's three largest landholders

Northern Dynasty, operator of the Pebble project, in late January released an updated resource for Pebble, based on new drilling completed in 2002 and 2003 and data from past exploration work.

Resource estimates for Pebble put it at 2.74 billion tons of mineralization, containing an estimated 26.5 million ounces of gold and 16.5 billion pounds of cop-



Most of the new staking was for Full Metal Minerals, which signed a land lease deal agreement announced in early March with Alaska Earth Sciences. Full Metal now has 115.5 square miles of mining claims for prospecting in the Pebble area, according to Ellis.

On-Line Exploration Services, another Anchorage-based geological consultant, staked more land in December and also in March for its client Northern Dynasty, according to On-Line Vice President Kevin Adler.

Northern Dynasty and Teck Cominco now hold a total of 150 square miles of claims surrounding Pebble. Liberty Star Gold Corp. staked its 237 square miles of claims, also last December.

Furio joins Pebble area exploration

This spring, Alaska Earth Sciences

The reputation of Northern Dynasty, a Hunter Dickinson-managed company, also motivated Furio's decision to start work in Alaska.

"Northern Dynasty is run by management that has a history of turning deposits into mines," McGrath said.

Furio plans to spend up to \$30,000 on its property this year, starting with initial geophysical ground work. "We'll follow up that with drilling," McGrath said.

Liberty Star conducts large airborne survey

Furio's property is about two miles southwest of a large claim block staked

see **PEBBLE** page 12

ADVERTISEMENT

continued from page 2

ANGLOGOLD

of land — 312.5 square miles — have been staked since late 2002, throughout 2003 and in the first months of 2004, Krause said on April 7.

Claim staking activity "triggered when the (Pogo environmental impact statement) was almost done and the gold price went up," he added.

In addition to lands adjacent to Pogo, interest picked up on the Shaw Creek/Richardson Highway area, Krause said. About one-quarter of the Pogo area claims - some 80,000 acres of land has been staked by several companies in that area, including AngloGold, Rimfire, WGM, On-Line Exploration, Kennecott and Great American Minerals Inc.

"Anglo has had no competition in the district, so they've had time to slowly plod away and sort out what is going on there. They've acquired a lot of land and you need a large land position because you do not know where the next one will be," Caulfield said. "This will be the year that people start to wake up."

One large land package still available is 30 to 40 miles north of Pogo. The Alaska Mental Health Trust Authority has

continued from page 11 PEBBLE

last December by Avalon Development for Liberty Star Gold Corp.

The largest one-time acquisition of state claims in Alaska's mining history, Liberty Star holds mineral exploration rights to 981 claims, or about 237 square miles, to the north and west of the existing Pebble claim block.

"We think we've already got every-

Return to Livengood for more drilling

Part of AngloGold's drilling budget of 19,000 feet will go toward the company's holdings in the Livengood area. The company is currently negotiating with the Alaska Mental Health Trust Authority for a lease of 8,500 acres near Money Knob. That will give AngloGold a total of about 10,000 acres of land to explore in the heavily mined placer gold district.

In 2003, AngloGold drilled eight holes on land leased from two Fairbanksans, Richard Hudson and Richard Geraghty, according to AngloGold's hardrock exploration application submitted to the Alaska Department of Natural Resources last year.

Dubbed the BAF Project, those claims are just south of the Livengood town site, in an area on the northeast flank of Money Knob.

Results produced "significant intercepts of low grade gold mineralization," said Jeff Pontius, North American exploration manager for AngloGold North America, a subsidiary of the global mining giant, AngloGold.

Some of those intercepts produced grades ranging between a half-gram and one gram, for 20-plus meters, he said. That translates to 0.016 to 0.032 ounces per ton of rock over a 65-foot interval.

"That's generally what we're finding out there," Pontius said. "Generally, it looks like most other deposits in the Interior, like Fort Knox, a similar kind of geochemistry."

180,000 acres of land that has been previ-

thing that's important," said James

Briscoe, president of Liberty Star, which

did not stake any more claims this spring. Instead, Liberty Star started work on a

large, detailed air magnetic geophysical

program, designed to help identify poten-

interpreted as generally favorable,"

Briscoe told Mining News on April 2.

"With computer technology, we're

receiving pretty much up to date infor-

"The results are highly detailed and

tial drill targets for later this summer.

and oil and gas leasing.

mation as it comes in."

-PATRICIA LILES, Mining News editor

Final budgets not out

ously leased by majors in the exploration With that much land for prospecting, and mining industry, including Barrick, Anglo's contractor, Fairbanks-based Newmont and Kennecott, said Mike Northern Associates, will have a number Franger, manager for the trust's minerals of workers on the ground, sampling and conducting basic reconnaissance work,

> Liberty Star paid for an airborne survey of 1,402 square miles of land, geophysical data that extends beyond their existing claims. Follow-up groundwork will start, "as soon as the snow melts," Briscoe said.

> The company plans to spend about \$3 million on its property, dubbed the Big Chunk, this year. "It's going to a very, very aggressive program," Briscoe said. "We're taking a variety of steps to make sure the data flows more rapidly than ever seen on a project of this size."

Pontius said. He expects a crew ranging from 15 to 20 workers to begin work in late May, depending on weather conditions.

Anglo's final budget for its Alaska properties has not yet been determined, and exploration permits have not yet been filed.

Last summer, crews drilled about 7,000 feet in six holes on the ER property, according to Rimfire's press release. A total of 24 intercepts with gold grades greater than one gram per ton (0.032 ounces per ton) were reported by Rimfire last September.

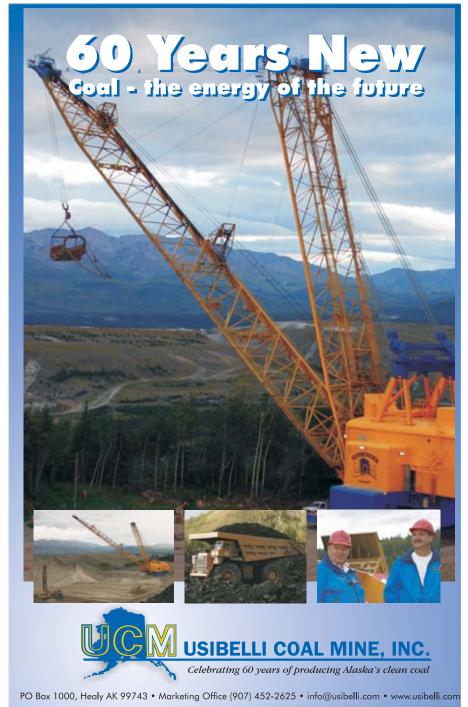
The largest intercept measured 12.4 feet with an average grade of 0.03 ounces per ton. The highest grade was a half-foot intercept, grading more than five ounces of gold per ton of rock, producing visible gold in the core.

"The noise, the smoke from the samples is saying, we haven't found an ore body yet, but we're in the neighborhood," Caulfield said.

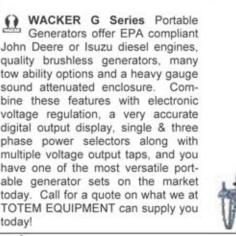
That initial drilling was "encouraging enough that we will be back taking another stab," Pontius said.

Overseeing Liberty Star's exploration program is Phil St. George, former project manager of the Donlin Creek gold project for NovaGold. St. George is the geologist credited with the initial Pebble discovery while working for Cominco, Briscoe said.

St. George is also president of Holitna Energy, a privately held company that is seeking four state shallow gas leases in the Holitna Basin about 50 miles southeast of Donlin Creek.







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