Petroleum news

page 19 Anadarko's entry into LNG needed step for gas producers

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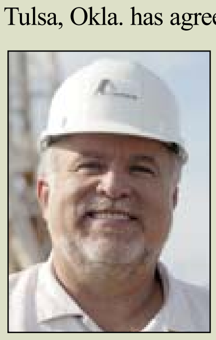
Unocal drilling second Red well

JUDY PATRICK

Unocal has drilled and is evaluating two exploration gas wells at its Nikolaevsk exploration unit on the lower Kenai Peninsula in Southcentral Alaska – the Red No. 1 and the Star No. 1. A second well at the Red pad is currently being drilled. Pictured above is Nabors rig 129 as it is being readied for the move from Star No. 1 to Red No. 2. See story on page 17.

North Fork development, gaslines get green light; Alberta on right side of multi-billion dollar slip

NORTHSTAR ENERGY GROUP President Barry Foote told Petroleum News Aug. 19 that Alliance Energy of Tulsa, Okla. has agreed under a farmout agreement to fully fund development of the North Fork unit on Alaska's southern Kenai Peninsula, including "fast-tracking" a pipeline north to connect the gas field with the Kenai Kachemak Pipeline.



BARRY FOOTE

Development of the North Fork field will include permitting and drilling a second well, No. 41-36, "as soon as January 2005," Foote said. The lion's share of the North Fork field is held by field operator Gas-Pro, which is owned by NorthStar.

Foote also said the Regulatory Commission of Alaska issued final approval last month of a gas sales agreement between

see **INSIDER** *page 4*

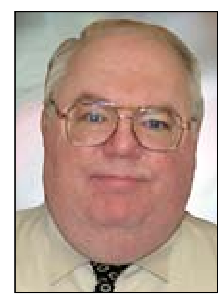
GULF OF MEXICO

Giants awaken

BP, Petrobras, Amerada Hess lead bidding in $171.4M Western Gulf sale 192

By RAY TYSON

Petroleum News Houston Correspondent



Chris Oynes, MMS regional director for the Gulf of Mexico

Like a sleeping giant who awakens from a long nap looking for something to devour, big oil companies swept into the Gulf of Mexico on Aug. 18 gobbling up federal oil and gas leases, particularly on the gas-prone continental shelf, where the potential for huge undiscovered reserves is proving to be quite appetizing.

Western Gulf of Mexico Lease Sale 192 generated a surprising $171.4 million in apparent high bids, exceeding last year's sale by nearly $23 million and making it the government's most lucrative Western Gulf offering in six years. It's also been years since the majors showed up in such force for a Gulf lease sale.

The U.S. Minerals Management Service had predicted a relatively strong sale, given the strong commodity price environment attractiveness of some prospects, but had not expected it to surpass last year's $148.7 million in high bids.

"The results of the sale were really very, very good," concluded Chris Oynes, MMS regional director for the Gulf of Mexico.

Oynes attributed the sale's success largely to high oil and gas prices and government royalty relief on gas production below 15,000 feet on the continental shelf. He said the number of bids on shelf blocks qualifying for royalty

see **GIANT** *page 24*

NORTHERN ALASKA

NPR-A looking better and better for natural gas

By KAY CASHMAN

Petroleum News Publisher & Managing Editor

When David Houseknecht says he expects USGS's estimate for northern Alaska's undiscovered, technically recoverable, natural gas to jump from 150 trillion cubic feet to 211 tcf, he also points out that the increase could be much larger because of public information gleaned from recent discoveries in the National Petroleum Reserve-Alaska. That information could lead the U.S. Geological Survey to increase its NPR-A gas estimate, which currently sits at 61.4 tcf.

1 2 SERIES

Although industry has been interested in the Alpine play area's oil potential … recent NPR-A discoveries indicate the play might also have significant gas potential, USGS geologist David Houseknecht said.

Houseknecht, a top geologist with the USGS, told a committee of Alaska legislators July 28 that the jump from 150 tcf to 211 tcf would likely occur later this year when the federal agency releases the results of its assessment of undiscovered gas resources for state onshore and Native lands in

see **BETTER** *page 22*

ARCTIC

Arctic troubles include melting ice, Mac landslide, sovereignty

By GARY PARK

Petroleum News Calgary Correspondent

A melting Arctic icecap, an underwater landslide and a dispute with Denmark over northern sovereignty all put obstacles in the way of exploiting Arctic resources.

A multinational partnership of polar scientists has just launched an historic, 10-year census of marine life, with special focus on the Canada Basin, a largely unknown hole about 12,500 feet deep immediately north of the Yukon Territory and Alaska.

The $1 billion Census of Marine Life project

see **TROUBLES** *page 5*

COURTESY MPO, PAUL DIONNE

Scientists on the Canadian Coast Guard's Amundsen icebreaker in Canada's High Arctic reported earlier this month that melting permafrost may be causing a massive slump on the seafloor of the Mackenzie Shelf on the Mackenzie Delta.

BREAKING NEWS

3 Husky happy with White Rose test: More pieces have fallen into place for oil project offshore Newfoundland, Labrador.

9 Marathon hits 50 year mark in Alaska: Special pullout section includes announcement of recent Kenai Peninsula gas discovery

17 Nova Scotia offshore comes up dry again: ExxonMobil partnership fails to generate commercial volumes in well near Sable field

Alaska - Mackenzie Rig Report

The Alaska - Mackenzie Rig Report as of August 18, 2004. Active drilling companies only listed.

TD = rigs equipped with top drive units WO = workover operations
CT = coiled tubing operation SCR = electric rig

This rig report was prepared by Wadeen Hepworth

Alaska Rig Status

North Slope - Onshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Doyon Drilling			
Dreco 1250 UE	14 (SCR/TD)	Milne Point, reentry MPI-14	BP
Sky Top Brewster NE-12	15 (SCR/TD)	Deadhorse yard	Available
Dreco 1000 UE	16 (SCR)	W pad sidetrack W-09	BP
Dreco D2000 UEBD	19 (SCR/TD)	Alpine, drilling CD2-05	ConocoPhillips
OIME 2000	141 (SCR/TD)	Infield Kuparuk, drilling 1E-126 multilateral	ConocoPhillips
Nabors Alaska Drilling			
Trans-ocean rig	CDR-1 (CT)	Stacked, Prudhoe Bay	Available
Dreco 1000 UE	2-ES (SCR)	Prudhoe Bay, 07-06B	BP
Mid-Continent U36A	3-S	Stacked, Deadhorse	Available
Oilwell 700 E	4-ES (SCR)	Milne Point, MPL-43A	BP
Dreco 1000 UE	7-ES (SCR/TD)	Prudhoe Bay, N-11C	BP
Dreco 1000 UE	9-ES (SCR/TD)	Prudhoe Bay, V-204	BP
Oilwell 2000 Hercules	14-E (SCR)	Stacked, Deadhorse	Available
Oilwell 2000 Hercules	16-E (SCR/TD)	Stacked, Prudhoe Bay	Available
Oilwell 2000	17-E (SCR/TD)	Stacked, Point McIntyre	Available
Emsco Electro-hoist -2	18-E (SCR)	Stacked, Deadhorse	Available
OIME 1000	19-E (SCR)	Stacked, Deadhorse	Available
Emsco Electro-hoist Varco TDS3	22-E (SCR/TD)	Stacked, Milne Point	Available
Emsco Electro-hoist	28-E (SCR)	Stacked, Deadhorse	Available
OIME 2000	245-E	Stacked, Kuparuk	Available
Nordic Calista Services			
Superior 700 UE	1 (SCR/TD)	DS 7-32B	BP
Superior 700 UE	2 (SCR)	Summer maintenance	BP
Ideco 900	3 (SCR/TD)	Kuparuk, stacked at 1-Q	ConocoPhillips

North Slope - Offshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Nabors Alaska Drilling			
Oilwell 2000	33-E (SCR/TD)	Stacked, NorthStar	BP
Emsco Electro-hoist Canrig 1050E	27-E (SCR/TD)	Stacked at 12-acre pad	Kerr-McGee

Cook Inlet Basin – Onshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Aurora Well Service			
Franks 300 Srs. Explorer III	AWS 1	Completing Long Lake #1	Aurora Gas
Evergreen Resources Alaska			
Wilson Super 38	96-19	Stacked in Wasilla yard	Evergreen Resources Alaska Corporation
Inlet Drilling Alaska/Cooper Construction			
Kremco 750	CC-1	Stacked, Kenai	Forest Oil
Kuukpik	5	Swanson River, drilling KGSF #7	Unocal
Marathon Oil Co. (Inlet Drilling Alaska labor contractor)			
Taylor	Glacier 1	Susan Dionne #2	Marathon
Nabors Alaska Drilling			
Rigmasters 850	129	Kenai, Red #2	Unocal
National 110 UE	160 (SCR)	Stacked, Kenai	Available
Continental Emsco E3000	273	Stacked, Kenai	Available
	51	Steelhead platform, done 12-1-03	Unocal
IDECO 2100 E	429E (SCR)	Stacked, removed from Osprey platform	Available
Water Resources International			
Ideco H-35 KD		Prep to resume operations	Pelican Hill

Cook Inlet Basin – Offshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
Cudd Pressure Control	340K	Workover, Osprey Platform	Forest Oil
Unocal (Nabors Alaska Drilling labor contractor)			
Not Available			
XTO Energy (Inlet Drilling Alaska labor contract)			
National 1320	A	Idle	XTO
National 110	C (TD)	Rigging up on well C13-13LN	XTO

Mackenzie Rig Status

Mackenzie Delta-Onshore

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
AKITA Equtak			
Dreco 1250 UE	62 (SCR/TD)	Stacked Tuktoyaktuk, NT	EnCana
Dreco 1250 UE	63 (SCR/TD)	Stacked, Lucas Point, NT	Chevron Canada
National 370	64	Stacked, Inuvik, NT	Available

Central Mackenzie Valley

Rig Owner/Rig Type	Rig No.	Rig Location/Activity	Operator or Status
AKITA/SAHTU			
Oilwell 500	51	Stacked in Norman Wells, NT	Available
Nabors Canada			
	62	Racked	Available

COURTESY OF ANADARKO CANADA

An Anadarko Canada rig in the Northwest Territories.

Baker Hughes North America rotary rig counts*

	August 13	August 6	Year Ago
US	1,232	1,235	1,096
Canada	357	384	405
Gulf	89	93	107

Highest/Lowest		
US/Highest	4530	December 1981
US/Lowest	488	April 1999
Canada/Highest	558	January 2000
Canada/Lowest	29	April 1992

*Issued by Baker Hughes since 1944

CANADA EAST COAST

Husky happy with White Rose test

More pieces have fallen into place for Husky Energy's White Rose oil project offshore Newfoundland and Labrador.

The Calgary-based company reported that four wells have been drilled so far, including an oil producer that was tested from July 20-25, and three water injectors.

Based on pressure measurements and flow rate information during the test, productive capacity of White Rose B 07 2 is estimated at 25,000-30,000 barrels per day. Oil flowed during the test at 9,000 bpd, representing the maximum volume allowed by test facilities on the rig.

Based on pressure measurements and flow rate information during the test, productive capacity of White Rose B 07 2 is estimated at 25,000-30,000 barrels per day.

Husky President and Chief Executive Officer John Lau said in a statement that the first production well "successfully confirms the quality and production estimates" of White Rose, putting the project on track for start-up by late 2005 or early 2006.

The peak output for White Rose, 72.5 percent owned by Husky and 27.5 percent by Petro-Canada, is projected at 100,000 bpd. Capital cost is estimated at C$2.35 billion and probable reserves are rated at 200 million to 250 million barrels.

It will become Newfoundland's third producing offshore field after Hibernia and Terra Nova.

In addition, Husky announced that a heavy lift campaign saw topside modules for the SeaRose FPSO, floating production, storage and offloading vessel, was completed July 31, while the towing of the riser buoy to the White Rose field started July 14. Once in place next year, the buoy will provide the anchor point for the FPSO.

—GARY PARK

CORRECTION

No crude oil processing at West Sak

A story in the Aug. 15 issue of Petroleum News incorrectly said work at the old West Sak pad involved adding crude oil processing facilities. There will be no crude oil processing at West Sak. Modules for the old West Sak pad, now Kuparuk River unit Drill Site 1J, will include a crude oil heater, but all of the West Sak crude will be processed through existing Kuparuk facilities.

"Using the existing facilities is an important economic consideration for the process," said ConocoPhillips Alaska spokeswoman Dawn Patience.

WASHINGTON, D.C.

BLM moves to ensure wildlife protection

U.S. Assistant Secretary of the Interior for Land and Minerals Management Rebecca Watson told the American Wildlife Conservation Partners annual meeting Aug. 14 in Washington, D.C., that the federal government is taking steps to help ensure that conservation of wildlife, wildlife habitat and recreation are part of the land-use planning process on public lands.

Watson said she has directed the Bureau of Land Management to remind all BLM state directors and regional offices that they have the discretion, during the preparation of a new resource-management plan, to temporarily defer leasing to protect alternatives under consideration in the new plan.

"The use of this discretion will preserve flexibility in the new land-use plan and avoid leasing in lands that may later be closed or restricted to protect wildlife in the new plan," Watson said in a statement. BLM issued this policy directive Aug. 13.

BLM said that under the policy guidance, BLM state offices are to consider temporarily deferring oil, gas and geothermal leasing on federal lands with land-use plans that are currently being revised or amended.

Does not affect Alaska

BLM Alaska state office spokesman Ed Bovy told Petroleum News Aug. 18: "It applies to us — it just doesn't affect us." BLM manages the National Petroleum Reserve-Alaska, and Bovy said BLM in Alaska doesn't "do any leasing until we have a complete plan approved."

In the Lower 48, Bovy said, there may be leases in place on land where the plan is being revised.

—KRISTEN NELSON

Issue Index

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North America's source for oil and gas news

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F. Jay Schempf	CONTRIBUTING WRITER (HOUSTON)	
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Dee Cashman	CIRCULATION REPRESENTATIVE	

ADDRESS
P.O. Box 231651
Anchorage, AK 99523-1651

EDITORIAL
Anchorage
907.522.9469

EDITORIAL EMAIL
publisher@petroleumnews.com

BOOKKEEPING & CIRCULATION
907.522.9469
Circulation Email
circulation@petroleumnews.com

ADVERTISING
907.770.5592
Advertising Email
scrane@petroleumnews.com

CLASSIFIEDS
907.644.4444

FAX FOR ALL DEPARTMENTS
907.522.9583

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ON DEADLINE

continued from page 1

INSIDER

Enstar Natural Gas Co. and NorthStar that will bring natural gas to the community of Homer from the North Fork field. (See related article in the April 11 edition of Petroleum News.)

There is a single well at the North Fork field, drilled in 1965. RCA's approval was contingent on NorthStar drilling at least one additional well to raise proved reserves at the field from 12 billion cubic feet to 14.5 bcf.

Alliance has engaged Wilbros Pipeline Engineers and ENSR "to permit and build the pipeline north" to connect with the KKPL, Foote said.

(See the full story in next week's Petroleum News.)

Alberta getting on the right side of a multi-billion dollar slip

THERE'S NOTHING LIKE UNDER-PROMISING and over-delivering to make legislators look good.

And the Alberta government has mastered that art in recent years by low-balling their oil and natural gas price forecasts, after previously taking a political hammering when they aimed too high.

Alberta Energy Minister Murray Smith

In the latest response to a year of breathtaking commodity prices, Energy Minister Murray Smith said Aug. 13 that the province is now expected to harvest more than C$8 billion in royalty revenues this fiscal year, more than double the C$3.9 billion estimated in the March budget.

But he said the government is not yet ready to raise the bar above the record C$10.28 billion it collected in 2001.

Smith said the bulk of the C$8 billion has already been earmarked for services and the prized target of wiping out Alberta's remaining C$3.7 billion debt in 2005, the province's centennial year.

The 2004-05 budget was based on West Texas Intermediate oil prices of US$26 a barrel and gas prices of C$4.20 per thousand cubic feet. WTI oil has averaged US$37.78 since January and gas on the New York Mercantile Exchange has averaged US$5.94, or about C$7.70.

Evergreen, BP win Colorado coalbed methane awards

EVERGREEN RESOURCES AND BP recently received awards from Colorado industry regulators for "outstanding operations" last year in coalbed methane operations.

Denver-based Evergreen, which is in the process of being acquired by Pioneer Natural Resources and which has been testing Alaska coal beds for possible methane gas production, received a "visual and noise impact mitigation award" from the Colorado Oil and Gas Conservation Commission for going beyond state rules to address landowner concerns in Las Animas County.

BP received an award for fine-tuning the use of directional wells to more effectively tap coalbed methane resources in the San Juan Basin.

Go to www.oil-gas.state.co.us for more information.

ArrowHealth earns recognition

ARROWHEALTH CORP.'S ANCHORAGE OFFICE has been recognized by the Drug & Alcohol Testing Industry Association as being "Nationally Accredited for Administration of Drug and Alcohol Testing Programs," the Virginia-based company recently announced.

"This accreditation means that their facility, operations and personnel meet the highest standards in areas such as regulatory compliance, client confidentiality, accountability, company service standards, operational practices, business ethics and professional competency for drug and alcohol, testing program management," ArrowHealth said in a press release.

Still room for railroad dreamers

THE DAYS OF STEEL WHEELS ON STEEL RAILS may still have a place in the 21st Century.

While Canadian and U.S. authorities explore the feasibility of a rail link from Alaska to British Columbia, a study will be released this month that is expected to make a case for a customized railroad to carry heavy industrial equipment to northern Alberta's oil sands region.

The C$2.5 million government-industry report is likely to propose moving to the next phase of building a C$1.8 billion, 265-mile railroad from Edmonton to north of Fort McMurray, with a completion date of 2009.

Jim Gray, chairman of the Athabasca Oil Sands Transportation Corp. and former president of Canadian Hunter Exploration (swallowed by Burlington Resources in 2000), believes the project is urgently needed to handle a doubling of oil sands production over the next eight years to 2 million barrels per day.

He said a railroad is vital before truck traffic through Fort McMurray doubles from the current 500 vehicles per day.

Gray said the trucks not only contribute to air pollution, but their weight is causing roads to crumble.

Upgrading the transportation system is vital to controlling the costs of oil sands mega-projects at a time when the future of Canada's production is heavily dependent on the vast resource in the Fort McMurray region, he said.

Over the past year, Gray has held meetings with leaders of government, railways and the oil sands.

He said there is unanimous agreement that building a rail line would not need highly skilled labor and would not cut into the already-stretched ranks of workers on oil sands projects.

People moves, appointments

• **ARCTIC SLOPE TECHNICAL SERVICES** said July 15 that it has hired Michael McCrum, an environmental scientist with an M.S. in geology and 18 years of project management and technical experience in environmental studies, investigations, remedial action and developing groundwater-based supply systems. He will be based in Anchorage.

Arctic Slope Technical Services, a Small Business Administration-certified 8(a) company and a subsidiary of Arctic Slope Regional Corp., is a New Mexico-based engineering, architectural and technical service consulting firm with offices in Anchorage, Denver and Seattle.

• **NORTHERN AIR CARGO** recently hired Dorothy Diamond for their statewide sales and marketing team.

NAC is a 48-year old, Alaskan-owned and operated all cargo airline with bases in Anchorage and Fairbanks, as well as stations throughout rural Alaska.

Diamond will be responsible for account management in a variety of NAC's cargo hub destinations, as well as sales and marketing with the firm's government clients.

Her career has been spent primarily in city and state government, sales and management in Anchorage and Ketchikan. ●

MEXICO

Pemex oil output up 1.7% from '03

Mexican state oil monopoly Petroleos Mexicanos said Aug. 16 it produced an average of 3.4 million barrels a day of crude oil in the first seven months of this year, up 1.7 percent from the like period in 2003.

In a statement, the consortium known as Pemex said natural gas output in the January-July period averaged 4.565 billion cubic feet a day, 2 percent more than in the first seven months of last year.

Pemex continued to increase the ratio of heavy crude to light crude, with heavy output in the first seven months of the year up 3.8 percent to 2.5 million barrels a day.

—THE ASSOCIATED PRESS

HOUSTON, TEXAS

National Oilwell to buy rival Varco

National-Oilwell, which makes equipment used in oil drilling, said it will acquire rival Varco International in an all-stock deal currently valued at about $2.52 billion.

On Aug. 13, National-Oilwell said the transaction is expected to be tax-free to Varco stockholders, and is expected to add to earnings and cash flow per share for stockholders of both Houston-based companies in 2005.

Varco stockholders will receive 0.84 common share of National-Oilwell for each Varco common share.

Based on National-Oilwell's closing price Aug. 11, the transaction is valued at $25.80 a Varco common share, with the combined company having a market capitalization in excess of $5 billion.

National-Oilwell's current stockholders will own about 51 percent of the combined company.

The combined entity will become National Oilwell Varco Inc.

—THE ASSOCIATED PRESS

continued from page 1

TROUBLES

will see biologists, geologists and physicists from several nations record and inventory biodiversity in the Arctic Ocean in a race against additional climate warming that could remove the Arctic ice cap and dramatically alter life in the region.

The mouths of Russian and Canadian rivers, which pour an estimated 2,000 cubic kilometers of freshwater annually into the ocean, will also be studied. What they find in the world's least-known ocean will make an important contribution to International Polar Year, 2007-08, and could lend weight to arguments by environmentalists against the continued extension of oil and gas activities into more remote Arctic regions.

Slump may be melting permafrost

Meanwhile, scientists on a research icebreaker in Canada's High Arctic reported earlier this month that, melting permafrost may be causing a massive slump on the seafloor of the Mackenzie Shelf, about 80 miles northwest of Tuktoyaktuk, on the Mackenzie Delta.

The researchers say it could cause major problems for companies with oil and gas leases in that area.

The slump, or underwater landslide, was discovered when the shelf was being surveyed with a multi-beam sonar.

David Scott, with Dalhousie University in Nova Scotia, warned that if the slump completely gives way it would transfer tens of cubic kilometers of sediment to the deep sea, posing a challenge for oil and gas exploration.

He said that if there was an oil lease in the middle of the slump "you wouldn't ever want to be drilling in something like that because you could lose part of the ocean floor pretty quickly."

University of Quebec scientist Andre Rochon said the slump was likely caused by the thawing of permafrost and may have been going on for some time.

The researchers will return to the area in 2005 to better determine the size of the slump and how fast it is moving.

Canadian territorial claims reaffirmed

Against that background, Canadian Prime Minister Paul Martin has reaffirmed Canada's territorial claims over the North.

While visiting Nunavut Territory on Aug. 11 he said one of his government's responsibilities is to "ensure that the sovereignty of the land is going to be there for generations of Inuit and Canadians to come."

To that end, Martin said he was "concerned about those who would challenge our sovereignty of the Arctic."

He took his stand as 200 sailors on a Canadian frigate and 160 land troops were being deployed in an area where Denmark placed its flag last year on Hans Island, midway between Canada's Ellesmere Island and the Danish colony of Greenland.

Martin praised a group of Arctic Rangers "who are the very forefront of the protection of our sovereignty." ●

FORT WORTH, TEXAS

XTO closes ChevronTexaco property deal for $912M

Exploration and production independent XTO Energy said Aug. 17 that it closed the company's previously announced acquisition of properties from ChevronTexaco for $912 million, $110 million of which was paid as a deposit in May.

XTO said its own engineers estimate acquired reserves to be 732 billion cubic feet of natural gas equivalent, after adjustments were made for preferential purchase-right elections and production sold from Jan. 1.The properties expand XTO's operations in its Eastern region, the Permian basin and Midcontinent area while opening new coalbed methane operations in the Rocky Mountains and a new operating region in South Texas.

Beginning Aug. 16, the acquired properties were contributing daily production of about 88 million cubic feet of natural gas and 14,000 barrels of oil. About 87 percent of the reserves are proved developed with 47 percent attributable to oil.

—RAY TYSON

HOUSTON, TEXAS

Worldwide rig economics improved in July

The worldwide Summary of Current Offshore Rig Economics, or SCORE, for July 2004 registered 44.7, representing a 0.1 percent increase from the previous month, contract driller and survey sponsor GlobalSantaFe reported Aug. 16.

The SCORE compares the profitability of current mobile offshore drilling rig day rates to the profitability of day rates at the 1980-81 peak of the offshore drilling cycle. In 1980-81, when the SCORE averaged 100 percent, new contract day rates equaled the sum of daily cash operating costs plus about $700 per day per million dollars invested. In addition to the worldwide SCORE covering key types of competitive offshore drilling rigs in key drilling markets, a separate SCORE is calculated for certain types of rigs and certain regions to indicate the relative condition of rig markets.

The Gulf of Mexico scored 41.7 points in July, up 3.2 percent from the previous month and up 25 percent vs. the year-ago period, while the North Sea scored 41.3 points, down 4.8 percent from the previous month but up 1 percent compared to the year-ago period. West Africa scored 50.8 points in July, up 0.9 percent from June and up 11.6 percent vs. the same monthly period last year. Southeast Asia scored 54.7 points in July, up 0.9 percent from the previous month and up 11.8 percent from the year-ago period.

The worldwide fleet of jackup rigs averaged a score of 54.6 in July, down 3.5 percent from the previous month but up 24.4 percent vs. the same period last year. Semi-submersibles averaged a score of 35.4 in July, up 7.2 percent from June and up 3.3 percent compared to the year-ago period.

—RAY TYSON

COLORADO

Natural gas industry worth more than twice the ski industry

Natural gas production is worth as much as $5 billion to the state of Colorado, twice as much as the ski industry, says the executive vice president of the Colorado Oil & Gas Association.

"That doesn't include all the investment in pipeline infrastructure and gathering systems, compression and power plant systems we've added," Greg Schnacke said in early August.

The industry pays $75 million a year in property taxes.

And Colorado is one of the few states increasing oil production, adding about 3 percent a year, Schnacke said. "That's enough to fuel 600,000 cars," he said. The state ranks 12th in oil production with 22 million barrels a year.

"We expect to see the Rocky Mountain region (gas) production increase to about 6 trillion cubic feet a year, while the country is producing about 22 trillion cubic feet," Schnacke said.

Schnacke said the production increase would be even larger except for resistance from groups who oppose production in their areas.

"Today, 29 percent or 69 trillion cubic feet of gas in the Rocky Mountains is effectively off limits. We'll never see it," he said.

—THE ASSOCIATED PRESS

● CANADA

PrimeWest Energy Trust lands Calpine assets

Calpine joins American exodus from Western Canada as energy trust makes complex deal for U.S. power producer's assets

By GARY PARK
Petroleum News Calgary Correspondent

PrimeWest Energy Trust has tightened its hold on one of the top rungs in Canada's income trust sector by grabbing the assets of another U.S.-based company fleeing Western Canada.

The C$825 million deal with power producer Calpine bolsters PrimeWest's portfolio by 14,500 barrels of oil equivalent per day, mostly liquids-rich natural gas in central and southern Alberta, from about 55 million boe of proved plus probable reserves.

Assuming the sale is closed in early September, the trust expects its full-year 2004 production to be about 35,500 boe per day.

The deal, announced Aug. 16, also includes 627,306 net acres of undeveloped land, seismic data, tax write-offs and a 25 percent stake in the Calpine Natural Gas Trust.

The reserve life index of the Calpine properties is 10.6 years, enhancing PrimeWest's reserve base of 9.6 years.

Sales will help pay for acquisitions

To help pay for the acquisitions, PrimeWest said it will sell off C$100 million of properties it no longer sees as core assets.

It will also sell 10.3 million units to an underwriting syndicate for C$251.3 million and C$250 million worth of debentures that can be converted into trust units.

"This transaction represents an opportunity for PrimeWest to acquire high-quality, long-life assets with significant development potential," PrimeWest Chief Executive Officer Donald Garner told a conference call.

Calpine Chief Financial Officer Bob Kelly said his company welcomed the opportunity to "capture significant value for our natural gas assets during attractive market conditions" and put the San Jose, Calif.-based firm "well on our way toward achieving our goal of having US$3 billion of cash and liquidity on hand by year-end."

Calpine acquisitions began in 2000

Calpine entered the Canadian E&P sector with a major splash in 2000 and 2001, following completion of the Alliance gas pipeline from northern British Columbia to Chicago, acquiring Encal Energy, TriGas Exploration and Quintana Minerals.

But it has since gone into a rapid descent, with its shares dropping by more than 90 percent from a 2001 peak of US$58 because of the debt load incurred in the buying binge.

The demand for producing properties by income trusts and the challenge of achieving growth in the maturing Western Canada Sedimentary basin has seen a broadly based exodus from the region by U.S.-based companies.

In the past year, Marathon Oil, El Paso, Murphy Oil, ChevronTexaco and Vintage Petroleum have either bailed out or drastically cut their holdings. Next

see PRIMEWEST page 7

● INTERNATIONAL

Oil prices decline; markets still packed with fear

Chavez retains presidency of Venezuela with 58 percent of vote; but there is still unrest in Iraq, concern about Yukos in Russia

By BRAD FOSS
Associated Press Business Writer

Oil prices fell Aug. 16 after the president of Venezuela survived a recall referendum, though fears of potential supply interruptions in other parts of the world kept futures above $46 a barrel. Light crude for September delivery fell 46 cents to $46.12 per barrel in Aug. 16 afternoon trading on the New York Mercantile Exchange.

The vote in Venezuela, the world's fifth-largest oil exporter, had been one of a slew of factors driving prices higher in recent weeks and so traders said the Aug. 16 decline could be short-lived.

The concern in Venezuela was that if the opposition had won there would have been a major overhaul of the state-run oil company, Petroleos de Venezuela S.A., and production would have suffered. But President Hugo Chavez had 58 percent of the vote after 94 percent of the votes had been counted.

"It means oil supplies are not in as much danger as people were thinking," said Agbeli Ameko, managing partner at the Denver-based energy research firm Enercast.com.

Signs of trouble elsewhere

Elsewhere, though, there are still signs of trouble, including unrest in Iraq and the battle by Russian oil giant Yukos to stave off bankruptcy. These uncertainties have fueled worries that oil supplies could be cut off at a time when demand is robust. Moreover, market watchers say there's little spare output capacity in the world to make up for shortfalls.

On Aug. 13, Nymex crude futures closed at an all-time high of $46.58. On an inflation-adjusted basis, though, oil is still about $11 below the price leading up to the first Gulf War.

Ed Silliere, vice president of risk management at Energy Merchant LLC in New York, said the market is still nervous about the possibility of attacks against oil infrastructure in the Middle East, particularly in Saudi Arabia, where oil workers were attacked by terrorists in May and June.

He said large institutional investors were helping to push prices higher by "buying futures in oil to protect against that type of event," which would likely cause stock prices to tumble.

see PRICES page 7

● COOK INLET, ALASKA

ConocoPhillips fined $485,000

Tyonek platform violations occurred from 1999-2004; company, EPA, say problems have been corrected

By DAN JOLING
Associated Press Writer

ConocoPhillips will pay $485,000 in penalties for violations of the Clean Water Act at its Tyonek natural gas platform in upper Cook Inlet, two federal agencies said Aug. 12.

The Department of Justice and the Environmental Protection Agency said the violations at the platform between Kenai and Anchorage — much of it the dumping of raw sewage — occurred for five years between 1999 and this year.

The Houston-based company reported more than 470 violations to the EPA. All but six were failures to comply with the facility's National Pollution Discharge Elimination System permit, which sets limits for certain pollutants to be discharged, as well as sampling and reporting requirements. Six other violations were for discharges not authorized by the permit.

ConocoPhillips spokeswoman Dawn Patience said the company voluntarily reported the violations, starting last summer.

"We regret the incidents occurred and we took steps to correct the technical nature of some of the incidents and to reduce the likelihood that similar incidents would occur in the future," she said.

Ten to 20 workers staff platform

The platform at any given time is staffed by 10 to 20 workers, EPA spokesman Bill Dunbar said. The gas platform violated its allowable discharges of copper and total suspended solids and its allowable levels of "biological oxygen demand," he said.

Copper is toxic to marine organisms, including mussels and crabs and can accumulate in oysters, according to the agency.

Suspended solids can have a direct impact on fish, Dunbar said.

"It can kill them, reduce their growth rate and their resistance to disease," Dunbar said. Increased turbidity also is a potential problem.

"It can reduce the amount of light that can penetrate the water column," he said. "That can reduce food growth."

Limits on biological oxygen demand are aimed at ensuring adequate dissolved oxygen is available for sea life in surrounding waters.

The permit also required that the platform disinfect its discharges with chlorine. The facility often failed to meet its chlorine treatment requirements, Dunbar said.

Problems have been corrected

ConocoPhillips has corrected the problems at the platform, Dunbar said, and the EPA is not demanding further action.

Patience said the company firmly believes the violations did not pose a risk to human health, safety or the environment.

"Testing done showed that the routine wastewater was diluted within a radius of three to five feet of the platform," she said. The company has performed a stringent review of compliance procedures, trained personnel and modified the platform to minimize the need for discharges of water produced from gas production. The intent is to reinject that water, Patience said.

Some violations were reported as they occurred. Others were discovered during a routine internal review and reported last summer for the first time, she said.

"Some of them were results of basically incorrect interpretation of permit limits on our part," she said.

Mike Bussell, director of the EPA office of enforcement in Seattle, said agency officials were disappointed that so many violations occurred over such a long time but was pleased with the company's cooperation.

"The company reported its violations to us and then corrected the problems," he said. "That's the way it should work." ●

continued from page 6

PRICES

In London, September Brent crude settled down 21 cents at $43.67 a barrel on London's International Petroleum Exchange. The referendum in Venezuela followed a two-year drive to oust Chavez, which included a short-lived 2002 coup, a two-month strike and political riots last March that claimed a dozen lives.

Regardless of the outcome in Venezuela, traders remain wary of continuing unrest in Iraq, where journalists were ordered Aug. 16 to leave the holy city of Najaf after talks between the Iraqi interim government and forces loyal to radical Shiite cleric Muqtada al-Sadr broke down.

Two weeks of continuous fighting have put crude pipelines at risk there, traders said, as militants threaten more attacks on the vital infrastructure. Iraq produces around 1.7 million barrels per day, or about 2 percent of the world's daily supply.

Energy markets have also been jittery amid fears of more terror attacks in Saudi Arabia — the world's number-one producer — and simmering civil unrest in Nigeria, which is the lead producer in Africa. ●

continued from page 6

PRIMEWEST

in line is Anadarko, which is expected to sell 35,000 boe per day or 40 percent of its Canadian production in the next two months, completing what is likely to be a US$1 billion transaction.

The PrimeWest-Calpine terms underscored the willingness of trusts to fork over premium prices for assets.

PrimeWest estimates it is paying C$44,800 per boe, close to C$10,000 per boe above the median purchase price in 2003.

Since then the bar has been progressively raised, with Pengrowth Energy Trust starting the year at C$35,000 per boe for Murphy Oil properties in Alberta and Saskatchewan, followed closely by Provident Energy Trust buying two small junior companies at a cost of more than C$41,000 per boe.

But those transactions pale alongside a deal by rival junior companies, with Thunder Energy paying about C$70,000 per boe in a C$147 million purchase of Impact Energy, enticed by the growth potential in Impact's exploration lands and undeveloped reserves. ●

land&leasing

CANADA

Canadian land sales attract 466 buyers in first half of 2004

Government auctions of petroleum and natural gas rights challenge any notion of an industry in decline across Canada, with 466 different companies spending almost C$700 million to lock up rights in the first half of 2004.

And there has been no sign of the pace slackening since the mid-point of the year.

Operating on behalf of undisclosed clients, brokers were two of the most active buyers to the end of June. Scott Land & Lease and Standard Land purchased 1.02 million acres and 270,000 acres for C$155.93 million and C$52.84 million, respectively.

Alberta's latest auction fetched C$33.6 million for 291,000 acres, pushing year-to-date returns to C$667.5 million, 25 percent ahead of the same time last year, although the total amount of land changing hands is up only marginally at 4.74 million acres against 4.62 million acres last year.

Top three are Contact, EnCana, Paramount

Topping the list of companies buying land in their own name were: Contact Exploration 370,000 acres (due mainly to some onshore New Brunswick purchases), EnCana 342,000 acres; Paramount Resources 334,700 acres (after transferring the bulk of its assets into an income trust); Canadian Natural Resources 90,105 acres; Husky Energy 82,500 acres; Shell Canada 66,600 acres; Devon Canada 38,300 acres and Burlington Resources Canada 25,300 acres.

Alberta's latest auction fetched C$33.6 million for 291,000 acres, pushing year-to-date returns to C$667.5 million, 25 percent ahead of the same time last year, although the total amount of land changing hands is up only marginally at 4.74 million acres against 4.62 million acres last year.

British Columbia also garnered an impressive C$22 million in its most recent sale involving 97,500 acres.

Saskatchewan lags behind

Saskatchewan notched C$10.5 million from its August auction, bringing its total revenues for the year to C$47.2 million, lagging well behind last year's C$106.6 million.

However, Industry and Resources Minister Eric Cline was not discouraged, saying land sales and drilling numbers "point to another good year."

Manitoba, the minnow among the four western provinces, collected C$1.11 million from an August auction.

But that was its best result in more than seven years and easily eclipsed the total for all of 2003 of C$294.228.

—GARY PARK

● NORTH SLOPE FOOTHILLS

Burlington Resources drops Alaska leases

With a gas pipeline from the North Slope years away, company declines to pay third year's rent on Foothills leases it won in 2001 areawide sale

By KAY CASHMAN & KRISTEN NELSON

Petroleum News

Burlington Resources has dropped the 32 leases it took in Alaska's first areawide North Slope Foothills lease sale in May of 2001.

Pat Galvin, Alaska Division of Oil and Gas petroleum land manager, told Petroleum News that an annual rent payment of $367,002 was due on the leases July 1.

"When we didn't receive it, we put in a courtesy call. They said they weren't going to pay it." The division didn't receive any other explanation, he said, nor did it receive anything in writing.

"There were several factors involved in our decision," Burlington Resources Houston spokesman James Bartlett told Petroleum News Aug. 13. The Alaska gas line appears to be at least seven to eight years away and it already has plenty of gas behind it and in the interim we would have incurred carrying the cost if we had retained the leases.

"There is a lot of opportunity in other areas of the world. Alaska is unlikely to become a core area for Burlington any time soon," he said.

That's about what the state had heard.

Division of Oil and Gas Director Mark Myers told Petroleum News: "They didn't contact us with a reason (for dropping the leases). But I ran into one of their geologists in April at the AAPG (American Association of Petroleum Geologists) conference. He said Burlington's management had concerns about the uncertainty and timing of the gas pipeline."

Company paid $1.99 million for leases

The company, bidding as "5051 Alaska Inc.," a legal entity set up by Houston-based Burlington to bid in the 2001 sale, bid on and took 32 leases for $1,982,231.46, 20 percent of the dollars bid at the $9,799,277.10 sale. The state sold 858,811 acres at the Foothills sale, at that time the most acreage ever sold in a single sale. The record was topped at the 2002 Foothills sale, when more than a million acres were sold.

The state's lease rents are progressive: $1 an acre the first year; $1.50 the second; $2 for the third year; $2.50 in the fourth year; $3 in the fifth and following years, so the rental payment would have continued to increase.

Company had looked at leases as low-risk opportunity

The leases Burlington took at the sale covered more than 183,000 acres and were in a block in the southern half of the Foothills sale area, between the Anaktuvuk and Itkillik rivers. Burlington paid $5.50 an acre for 13 of the leases and $14.44 an acre for the other 19.

Since this was the first lease sale in the area the state had to do title work on all of the acreage receiving bids after the sale and didn't issue leases until July 1, 2002. The leases had a 10-year term running from the issue date.

Ellen DeSanctis, Burlington's vice president of corporate communications, told Petroleum News after the 2001 sale that its bids were a low-risk way to enter an emerging gas opportunity.

"We are trying to get a toehold in some opportunities in the far northwest of North America that would be in concert with our efforts in the Mackenzie Delta to build a position in what could be future opportunities in North American, particularly gas," DeSanctis said in May 2001. ●

Want to know more?

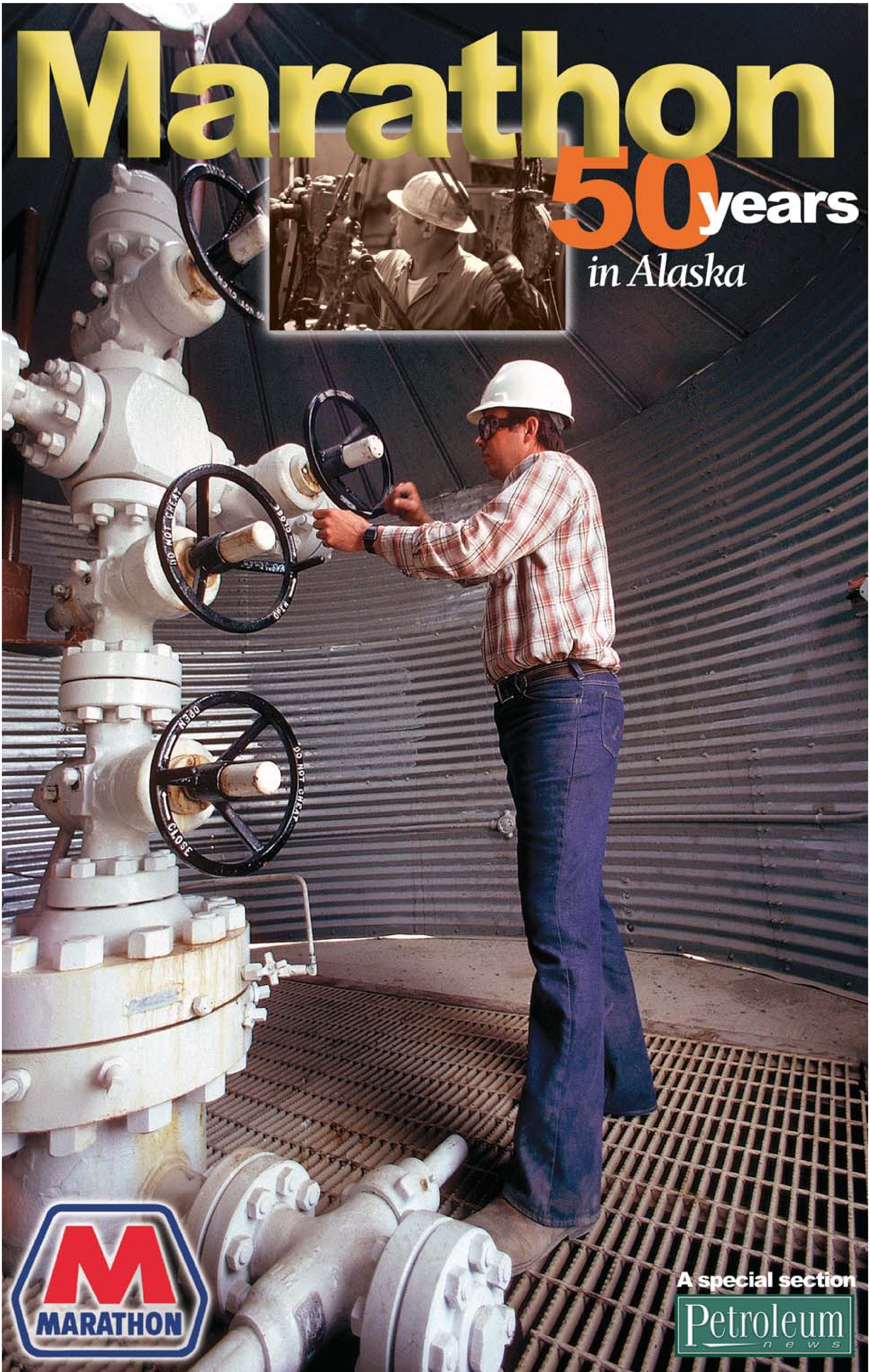
If you'd like to read more about Burlington Resources go to Petroleum News's Web site and search for these articles, published in the last month. These are just a few of the stories in which Burlington is featured or significantly addressed.

Web site: www.PetroleumNews.com

2004

- **Aug. 15** Canadian cap-ex to fall 2.2% this year, Lehman Brothers survey predicts
- **Aug. 8** EnCana plans more Mackenzie Delta gas drilling this winter
- **Aug.1** Burlington does turnaround on Canada cost-cutting

Marathon 50 years in Alaska



A special section

Petroleum news

Introduction from Petroleum News

Marathon Oil has been in Alaska for 50 years. This special section contains photos of some of Marathon's activities in the Cook Inlet basin, and some highlights of the company's work on the Kenai Peninsula and offshore in Cook Inlet.

Over the years Marathon has gone from leaseholder to explorer to oil and gas producer and partner in the first liquefied natural gas plant in the United States. Marathon focused its interests on natural gas in the 1990s, selling off its oil production, and concentrating on the natural gas market. In addition to supplying some of the gas to the liquefied natural gas plant at Nikiski, a business in which Marathon partners with ConocoPhillips, Marathon also supplies more than half of the natural gas for Southcentral Alaska utilities.

Marathon is focused on maximizing production from its existing natural gas fields, and invented the Excape completion technology for Beluga formation gas sands at its Kenai field, allowing it to produce gas not previously thought economic.

The company also had a truck-mounted drilling rig purpose built for its Kenai Peninsula development and exploration drilling, although it used a larger rig in its recent successful multi-lateral Kasilof exploration well.

—**KRISTEN NELSON,** Petroleum News Editor-in-Chief

JUDY PATRICK

John Barnes, Marathon's Alaska business unit manager, has a degree in petroleum engineering from the Colorado School of Mines. Barnes first came to Alaska for Marathon in 1981 and stayed until 1989. He returned in 1998.

Timeline of key events for Marathon in Alaska

● **1954**: Marathon, then the Ohio Oil Co., and partners file for leases in the Swanson River area

● **1957**: Swanson River oil field discovery — Alaska's first big oil strike

● **1959**: Kenai gas field discovery — the largest gas field in Cook Inlet with cumulative production to date of over 2.3 trillion cubic feet

● **1965**: Trading Bay and McArthur River oil field discoveries — Marathon's first offshore oil discoveries in Cook Inlet

● **1967**: Beaver Creek gas field discovery — in the Kenai National Wildlife Refuge; and Dolly Varden platform installation — part of the McArthur River field, this was the first Marathon-operated offshore platform in Cook Inlet

● **1969**: Kenai LNG facility dedication and first LNG cargo delivery to Japan — the only LNG export facility in the United States, and the first source of LNG to Japanese markets

● **1979**: Cannery Loop gas field discovery — operated in quiet coexistence among residents near the city of Kenai

● **1986**: Steelhead platform installation — designed and installed by Marathon, this is the largest offshore platform in Cook Inlet

● **1998**: Wolf Lake gas field discovery — the first new gas discovery brought to the Cook Inlet market since 1979

● **2000**: Glacier drilling rig commissioned — a specially designed drilling rig for Marathon's Cook Inlet needs, designed to minimize costs and environmental impacts, the Glacier rig has drilled more than 30 wells and 250,000 feet of hole

● **2002**: Ninilchik gas field discovery — the largest gas discovery in Cook Inlet in 20 years

● **2004**: Marathon's 50th year on the Last Frontier

● COOK INLET

Marathon evaluating gas discovery at Kasilof

Ninilchik discovery made in 2002, Kenai Kachemak Pipeline begins moving that gas in 2003; 1998 Wolf Lake gas field

By KRISTEN NELSON
Petroleum News Editor-in-Chief

Marathon's exploration well at Kasilof is a gas discovery, the company's Alaska business unit manager, John Barnes, said Aug. 13.

The Kasilof well is Marathon's first dual-lateral well in Alaska, and Barnes said the company also believes it is the first dual-lateral well in Cook Inlet. He said the well "has full integrity on both legs for pressure and fluid control."

In November Barnes told the Resource Development Council that drilling was under way at Kasilof, a 17,000-foot extended reach well. The well, drilled from onshore between Glam Gulch and Kenai north of the Ninilchik unit, had offshore bottom holes in Marathon's Kasilof unit.

"That's probably the most ambitious well we've drilled in several years," Barnes said Nov. 20, adding that the junction had been set and Marathon was drilling the first well from the main bore.

Well under evaluation

Marathon provided few details on the discovery, but Houston-based Marathon spokesman Paul Weeditz told Petroleum News Aug. 18 that the well, the Kasilof South No. 1, was completed in February. "Both legs of the dual lateral encountered natural gas," he said.

"The results of the well are under evaluation as part of determining economic feasibility of development," Weeditz said. If development is sanctioned, he said, it will take about five miles of pipe to tie Kasilof into the Kenai Kachemak Pipeline.

Marathon owns its own drilling rig, but Barnes said Aug. 13 that the company used Nabors rig 273 at Kasilof, because there "was only one rig available that could drill that big a well."

Recent drilling success

Kasilof is the most recent of Marathon's successful exploration wells.

Marathon has drilled 38 gas wells in the Cook Inlet basin since 1998, including 12 exploration wells. The company said nine of the exploration wells have been successful and three have been suspended pending further evaluation.

That level of drilling activity, Barnes said, reflects a step change, most of which occurred when the company had a truck-mounted rig, Glacier Rig No. 1, built for drilling on the peninsula.

In the late 1990s, prior to the arrival of the Glacier rig, he said, a couple of wells a year was about the norm.

The Glacier rig began work in early 2000, and Barnes said that aside from Christmas holiday shutdowns and maintenance, the rig has worked pretty much non-stop, "drilling wells primarily, a couple of re-drills" and rehabilitating some old wells.

Over this last winter, Barnes, said, drilling activity spiked, with three rigs working, two Nabors rigs in addition to the Glacier rig.


COURTESY OF MARATHON

Marathon discovered the Wolf Lake gas field, the first new gas discovery brought to the Cook Inlet market since 1979.

The expectation over the next year is for "relatively constant drilling," he said. There would be a possibility Marathon would use a second rig, depending on drilling opportunities.

Ninilchik unit and KKPL

The Marathon-Unocal discovery at Ninilchik was announced in early 2002, with the discovery well on the 25,000-acre Ninilchik prospect testing gas at restricted flow rates of up to 11.2 million cubic feet per day. Marathon, operator at Ninilchik, holds a 60 percent working interest ownership in the prospect.

Drilling so far has been at either end of the formation, he said, with three-dimensional seismic over the center of the structure being evaluated. "Based on that seismic we'll drill the central portion of the structure," he said. Ninilchik, like Kasilof, is an offshore formation drilled from onshore.

There are four drilling locations now, and there will probably be one or possibly two more locations to fully delineate the field, Barnes said, "and then an ongoing drilling and development program there after it's fully delineated."

Seven wells have been drilled at Ninilchik, Barnes said, with probably at least 10 more wells to be drilled.

To tie Ninilchik gas into the Kenai Peninsula gas pipeline system, Marathon and Unocal formed Kenai Kachemak Pipeline LLC, and built a pipeline running from Ninilchik to the nearest tie-in point. Gas began moving through that line Sept. 2, 2003, Barnes said. "The Kenai Kachemak Pipeline is the first new gas transmission line … in the Cook Inlet … in well over a decade," he noted.

Wolf Lake

In 1998, Marathon announced its Wolf Lake gas field discovery, Barnes said, discovering gas in an area that had previously been explored for oil.

Wolf Lake, in the Kenai National Wildlife Refuge some 12 miles northeast of Soldotna, came on line in November 2001, via a five-mile pipeline, "the first Cook Inlet gas field discovery to be brought to market since 1979," Barnes said when production was announced. "The Wolf Lake discovery is a direct result of Marathon's commitment to a multi-year drilling effort in the Cook Inlet," he said, noting that Marathon has viewed "Cook Inlet as an area with a proven resource base, waiting on the right market conditions to support development."

Marathon has also, Barnes said, completed an environmental impact statement for its East Swanson prospect on the wildlife refuge, "only the second EIS that has been approved for development on the refuge; the first was our Wolf Lake project."

And, Barnes said, Marathon has "exploration prospects at Swanson River and around the town of Sterling where we shot an onshore seismic survey last year," as well as other leads the company is working in the geologic and geophysical areas. ●

● COOK INLET

Marathon celebrates 50 years in Alaska

Company focuses on exploration opportunities for natural gas in Cook Inlet; faces permitting, regulatory, challenges

By KRISTEN NELSON
Petroleum News Editor-in-Chief

Marathon Oil is marking its 50th year in Alaska.

Marathon, then known as the Ohio Oil Co., purchased its first leases on the Kenai Peninsula in 1954.

"Marathon and other partners leased the Swanson River area," John Barnes, Marathon's Alaska business unit manager, said Aug. 13. Marathon had an interest in the 1957 Swanson River oil discovery, the event which convinced Congress that Alaska, then a territory, could support itself as a state.

In the years that followed Marathon was a player in both oil and gas in the Cook Inlet basin: In 1959 Marathon participated in the Kenai natural gas field discovery and in 1961 began supplying natural gas to the Anchorage utility market.

Marathon's first offshore oil field discoveries were at Trading Bay and McArthur River in 1965. Marathon partnered with Unocal in the Monopod platform at Trading Bay and the Grayling platform at McArthur River, and in 1967 set the Grayling platform as operator in partnership with Unocal.

Marathon discovered the Cannery Loop gas field near Kenai in 1979.

In 1986, Marathon set the Steelhead platform at McArthur River. This platform, designed and installed by Marathon, is the largest offshore platform in Cook Inlet.

COURTESY OF MARATHON

In 1959, Marathon discovered the Kenai gas field – the largest gas field in Cook Inlet with cumulative production to date of over 2.3 trillion cubic feet.

The LNG business

Companies were exploring for oil in Cook Inlet, but they found a lot of gas, and using that gas was a challenge. Marathon began looking at opportunities in liquefied natural gas, and partnered with Phillips Petroleum (now ConocoPhillips) in the liquefied natural gas plant at Nikiski, the first LNG export out of North America, and the first LNG imported into Japan. Marathon manages shipping to the Far East, while ConocoPhillips manages the plant.

Marathon was active in both oil and gas in the inlet until 1996, when it sold most of its oil production to Forcenergy.

The company then focused on natural gas, and in recent years has been an aggressive natural gas explorer, with discoveries at Wolf Creek, Ninilchik and most recently Kasilof.

Marathon sees opportunities in Cook Inlet, Barnes said, but there are also challenges: permitting, pipeline regulation and a shrinking industry.

The challenges

Barnes said challenges include the number of permits required for a project. The permitting issue is a difficult one to solve, he said, "because in and of itself, each one of these permits makes sense," and there is a good intention behind each permit. It's the cumulative effect, he said, that is the problem, with 30-plus, 40-plus or even 50-plus permits required for a project, depending on the project and the landowner.

Barnes described the result as "issue creep, where what you thought would take a year takes two years, and you just start to accept that. And then two years is four years. It's one permit; it's now 45 permits.

"And it's that creep, across the board, whether it's on cost, permitting, timing, regulation, that's a tough thing to turn around…"

Marathon is working with the state administration and the Legislature on these issues, he said.

If you don't know how long it will take to complete a project because of permitting and regulatory uncertainties, he said, that is "not conducive to investment."

The shrinking industry

Barnes said there is another challenge: the shrinking Cook Inlet service industry. In the 1980s, he said, when he first saw the Kenai, there were a lot of service companies.

"That's not the case anymore," he said.

The oil and gas industry in the inlet has gotten smaller, and the number of service and supply companies has shrunk. Fewer people are employed in the industry, he said, and there is less competition and fewer alternatives for service, "so it's harder to see a vibrant strong industry in that environment."

It's a factor of activity level, he said, and as a result, "it almost feels like we're becoming more remote, not less. … if you were working in Gabon or Russia, you might actually have a stronger service industry than we have here… it's where the industry hot spot is," he said.

see **50 YEARS** *page 16*

● COOK INLET

Natural gas pipelines the next big issue

Marathon talking to state about pipeline regulatory issues

By KRISTEN NELSON
Petroleum News Editor-in-Chief

Cook Inlet used to have a lack of drilling. "We used to say more wells need to get drilled in Cook Inlet," says John Barnes, Marathon Oil's Alaska business unit manager. Industry is now drilling wells, but that has exposed an infrastructure problem, he said. "The next thing is we need to have an efficient, effective pipeline mechanism so that more pipelines get built to move gas around."


FORREST CRANE
Kent Hampton, Marathon's marketing manager for North America natural gas

Marathon has been concerned for some time about how long it is taking to get a tariff on the new Kenai Kachemak Pipeline, and about how much the regulatory process for that pipeline is costing. Barnes said it will probably be more than 36 months before it gets an approved tariff for Kenai Kachemak, and the regulatory cost is still running.

This isn't good in an area that is going to need more gas pipelines, he said.

"There's a lack of incentives for investing in new and existing gas pipelines in Cook Inlet," Barnes said, and "… new pipeline investments are going to be needed as new fields are discovered."

RCA must find balance

The Regulatory Commission of Alaska, which approves tariffs, "has a challenge," Barnes said, since they have to balance the desire of a pipeline owner for a fair return on investment, the desire of a shipper to have a low tariff and the desire of the state to have a high netback — which translates into a low tariff. But, he said, if the tariff is too low, there will be no one to build new gas pipelines that will be needed as new gas fields are discovered.

Barnes said Marathon thinks the state has an opportunity to look at things like a reasonable rate of return, and ask "how do we create an incentive for pipeline development?"

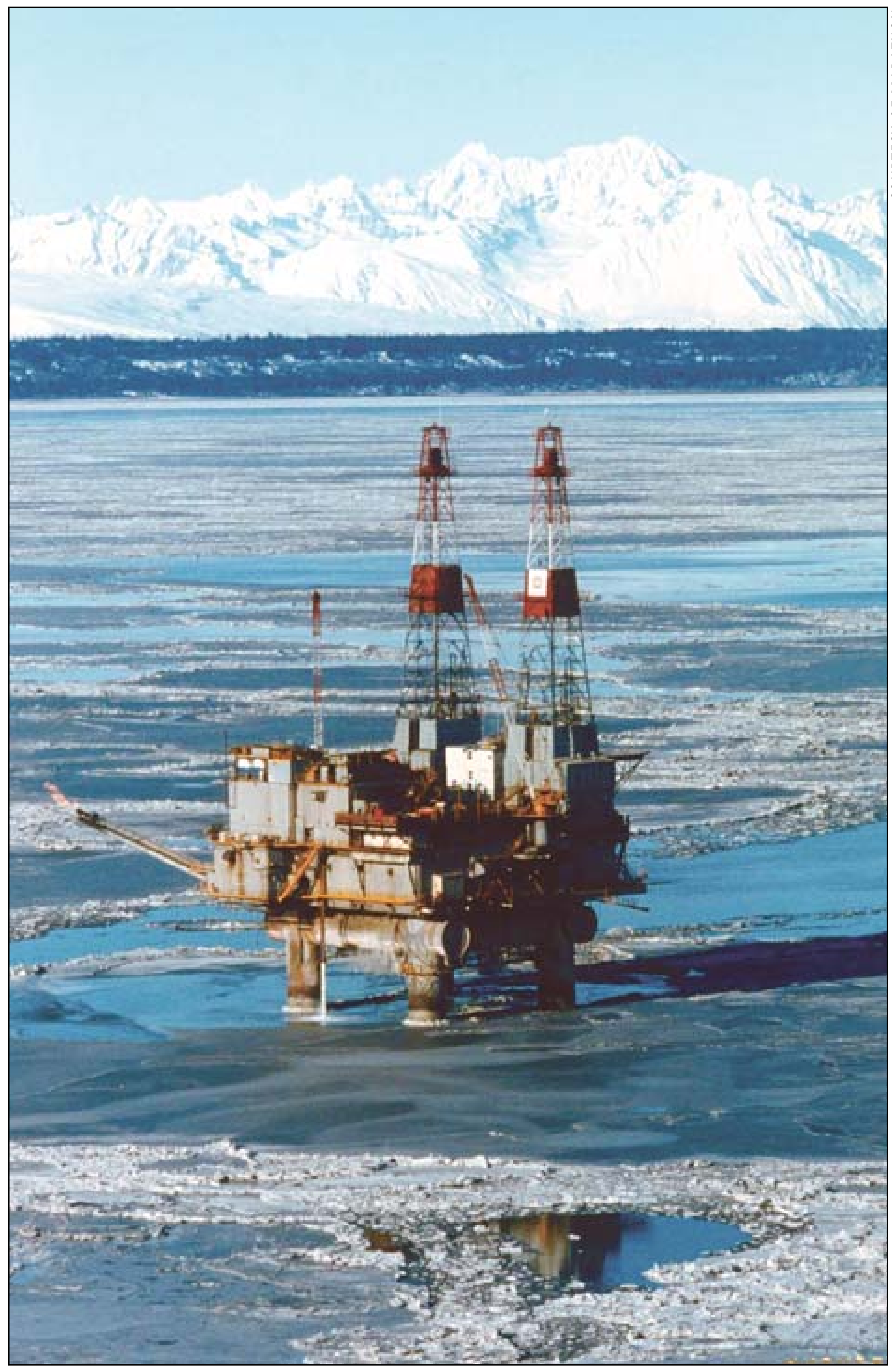
And it's not just new pipelines.

Kent Hampton, Marathon's marketing manager for North America natural gas, said "there are a lot of pipelines that could be recycled" to carry gas in Cook Inlet, lines that were built to serve the oil and gas needs of the inlet decades ago. These lines "can be recycled and reused," Hampton said, but that will require "a lot of investment." The direction in which lines flow may need to be reversed and metering and other equipment may need to be installed.

"But the bottom line is, you need an incentive to do this. … It's great to drill all these wells, but if you can't get it to the market it doesn't do any good. … We need to focus on the glue that holds the production and markets together, and that is the pipelines… That will complete the picture."

Doug Thierwechter, Marathon's manager of government affairs, described it as an experience issue. In the Lower 48, he said, major producing states have dealt with the regulatory complexities of pipelines for decades. Marathon doesn't have any specific solutions, he said, but is talking with the state administration and Legislature: "We're in the process now of just pointing out where we see the problems."

Barnes agreed. This is "nothing we haven't shared with the Legislature," along with Marathon's concern with permit streamlining. The state had a pipeline regulatory process that really wasn't being used, he said, so "it wasn't an issue." Now it is. ●


COURTESY OF MARATHON
During 1967, Marathon installed the Dolly Varden platform in the Cook Inlet.

● KENAI PENINSULA

Glacier Rig purpose-built for Marathon's peninsula drilling

By KRISTEN NELSON

Petroleum News Editor-in-Chief

Marathon's purpose-built mobile drilling rig arrived in Alaska in early 2000. "It basically sits on a huge drip plan to protect the environment from spills," John Barnes, Marathon's Alaska business unit manager, said Aug. 13.

Glacier Drilling No. 1 is a truck-mounted rig owned by a Marathon subsidiary and operated for Marathon by Inlet Drilling, the company's Alaska business unit manager, Barnes said.

Barnes described the rig in more detail in a March 2001 talk to the Alaska Support Industry Alliance.

He said a separate substructure, built specifically for the rig, is also mobile, as are two pit and pump trailers, including a totally self-contained mud system.

The rig spud its first well April 7, 2000, and by early 2001 had "drilled to nearly 12,000 feet; it's also drilled a 2,600-foot horizontal at nearly 9,000 feet," he said.

Barnes said the rig has "basically met or beat every drilling curve that we've compared it to in the Cook Inlet — and we're looking at the bigger rigs that have been used historically." The rig was

Glacier Drilling No. 1 is a truck-mounted rig owned by a Marathon subsidiary and operated for Marathon by Inlet Drilling, the company's Alaska business unit manager.

designed for work close to neighborhoods, the situation Marathon faces at its Cannery Loop field. Barnes said it was designed with a small footprint, total containment of fluids and hospital-quiet mufflers."

It's not usual for an operator in North America to own a rig, Barnes said, but the company anticipated a multi-year drilling program, knew there would be a need for the rig in the Cook Inlet area and wanted to be sure a rig would be available when Marathon needed it. A rig that was the right size for its projects and lower costs were also considerations.

"If you can lower your cost on your wells that you can drill for a fixed capital budget, you can drill more wells," Barnes told the Alliance.

Marathon said that by August 2004, the Glacier drilling rig had drilled more than 30 wells and more than 250,000 feet of hole. ●

COURTESY OF MARATHON

Marathon commissioned the Glacier drilling rig during 2000. The rig was specially designed to meet Marathon's Cook Inlet needs, minimizing cost and environmental impacts. The Glacier rig has drilled more than 27 wells and 250,000 feet of hole since commissioning.

COURTESY OF MARATHON

Marathon dedicated the Kenai liquefied natural gas facility and commenced first LNG cargo deliveries to Japan in 1969. These operations include the only LNG export facility in the United States and two specially designed tankers, one of which is shown above.

COURTESY OF MARATHON

Marathon discovered the Cannery Loop gas field in 1979. The field is operated in quiet coexistence among residents near the City of Kenai.

● COOK INLET

Marathon designs completion technology for Kenai gas field

Some 35% of current field production result of Excape-type completions, technology Marathon has now commercialized

By KRISTEN NELSON

Petroleum News Editor-in-Chief

Marathon Oil developed a new completion technology for its Kenai gas field Beluga formation wells.

Marathon's Alaska business unit manager, John Barnes, said Aug. 13 that the Excape technology received an award from "World Oil" as the best drilling and completion technology of the year. The technology "was developed specifically for our Kenai gas field, as an offshoot of how do you go into these older, tighter, less productive reservoirs," Barnes said.

And is it successful? A "significant proportion of our ongoing expenditure is directed toward the Excape completions in the Beluga formation in the Kenai gas field," Barnes said, with about 35 percent of gas now being produced at Kenai a result of Excape-type completions. A large portion of the Beluga formation, prior to Excape, was not regarded as commercial, Barnes said.

Excape is used extensively at Kenai, he said, and Marathon has commercialized the technology "and it's starting to take off in some other locations" with other operators.

Designed on a cocktail napkin

Barnes described the technology in some detail in a talk to the Alaska Support Industry Alliance in March 2001.

The Kenai gas field wells are drilled through multiple pay intervals, he said, and within a single well you can have different qualities of rock, sometimes high-quality, prolific zones and sometimes lower quality zones that need to be stimulated to produce.

"You either pump some acid to clean them up or perhaps you pump a fracture treatment," he said. Marathon's approach was to stimulate each interval separately, because stimulating multiple intervals at once didn't do as good a job as giving each interval a specific treatment designed for it. That might require a week's work, he said, because of multiple wireline trips and multiple fracture treatments.

"So the goal here was obviously cost control," Barnes said.

A "significant proportion of our ongoing expenditure is directed toward the Excape completions in the Beluga formation in the Kenai gas field," Barnes said, with about 35 percent of gas now being produced at Kenai a result of Excape-type completions.

Continuous completion

The new completion system, Excape, is a continuous completion technique, he said. Perforating guns are run and cemented in place. The lowest interval is perforated and then treated. When the shots are fired for perforation of the next interval, an isolation valve closes, separating it from the lower, previously treated interval. When all of the intervals in the well have been treated, the isolation disks are broken out.

Although Excape was invented for the Kenai gas field Beluga formation, he said, the technique was first run in the Lower 48, and then in February 2001 it was used for the first time in the Kenai gas field.

"Oftentimes you'll hear about inventions that have been conceived on a bar napkin and I've seen one actually happen now in my career," Barnes said: "I didn't see the napkin, but I … approved the business expense report for the bar." ●

continued from page 12

50 YEARS

The activity level in Cook Inlet is down, he said, and as it has declined, the industry has gotten weaker.

It's all the service industries, he said: drilling, mud, labor, welding.

Barnes said Marathon's capital budget in Alaska is a changing number as projects are added or deleted during the year, but said $70 million was probably in the ballpark.

Ben Schoffmann, Marathon's Alaska asset team operations superintendent, said the company's Alaska drilling budget has been "fairly flat, but slightly increasing on the number of wells, as we've improved efficiency." Infrastructure has become a bigger capital requirement "as we have to move away from our mature assets and find new fields." If a well is "off the infrastructure," Schoffmann said, "then you've got a significant facility investment that's required," as opposed to the moderate investment to tie in a well at an existing field.

New infrastructure includes everything from field gathering systems to a building to put a computer in to new pipelines, he said.

Key production

Marathon has 30-plus employees in Alaska, Barnes said, and when you add dedicated contractor employees from VECO and Inlet Drilling the number is probably about three times that.

The company's key production fields are Beaver Creek, Cannery Loop, Kenai, McArthur River, Wolf Lake and Ninilchik, with production from these properties averaging 168 million cubic feet per day for the first six months of this year. Production peaked at 220 million cubic feet on cold winter days. In 2003, Barnes said, Marathon sold about 65.8 billion cubic feet of natural gas, about a third of Cook Inlet production, supplying more than 50 percent of local utility demands.

Marathon is the largest supplier of natural gas to Southcentral Alaska utilities Enstar Natural Gas and Chugach Electric Association, and is a major supplier to industrial customers such as Kenai LNG Corp., Agrium and the Tesoro refinery.

The company has ownership in more than 118 miles of major natural gas lines serving these Cook Inlet markets. ●

COURTESY OF MARATHON

In 1957, Marathon participated in the Swanson River oil field discovery – Alaska's first big oil strike.

COURTESY OF MARATHON

Marathon installed the Steelhead platform, the largest offshore platform in Cook Inlet, in 1986.

NORTH AMERICA

Canadian rig count falls by 27, U.S. down three

The number of rotary rigs operating in North America during the week ending Aug. 13 stood at 1,589, down 30 compared to the previous week but up by 88 vs. the same period last year, according to rig monitor Baker Hughes.

Canada accounted for most of the decline in the recent week, losing 27 rigs compared to the previous week for a total of 357. Canada's rig count also was down by 48 vs. the same weekly period last year.

The United States lost a net three rigs vs. the prior week for a total of 1,232 rigs. The rig count still was up by 136 compared to the year-ago period. Compared to the prior week, the number of offshore rigs alone fell by four to 94, while land rigs slipped by one to 1,117. Inland waters picked up two rigs for a total of 21.

Of the total number of rigs operating in the United States during the recent week, 1,063 were drilling for natural gas and 168 for oil, while one rig was being used for miscellaneous purposes. Of the total, 757 were vertical wells, 324 directional wells, and 151 horizontal wells.

Among the leading U.S. producing states, Oklahoma took the biggest hit vs. the previous week, losing eight rigs to total 167. New Mexico's rig count was down by five to 59. Texas gained seven rigs to total 522. Louisiana picked up three rigs to total 171, while Alaska's rig count increased by three to 11. Wyoming remained unchanged with 83 rigs, as well as California with 25 rigs.

—RAY TYSON

KENAI PENINSULA, ALASKA

Unocal on third Nikolaevsk unit gas exploration well

Unocal has drilled and is evaluating two exploration gas wells at its Nikolaevsk exploration unit on the lower Kenai Peninsula in Southcentral Alaska. The Red No. 1 well, in the southwestern area of the unit, has been drilled and is being evaluated, Unocal Alaska spokeswoman Roxanne Sinz told Petroleum News in mid-August. Sinz said Unocal was "drilling ahead" on the Red No. 2 well.

Both Red wells were permitted from surface locations in section 8, township 4 south, range 13 west, Seward Meridian. The proposed bottomhole for the Red No. 1 is in section 8; the proposed bottomhole for Red No. 2 is in section 7.

Sinz also said Unocal has also drilled the Star No. 1 on the Star pad.

This well was permitted with a surface location in section 24, township 3 south, range 14 west, Seward Meridian; the proposed bottomhole is in section 23. This location puts the Star pad and well in the northeastern area of the Nikolaevsk unit.

Unocal said in applications to the state in March that the

see UNOCAL page 22

● NOVA SCOTIA

Offshore comes up dry again

ExxonMobil partnership fails to generate commercial volumes in shallow-water well near Sable field; Marathon's Crimson well carries hopes for rest of 2004

By GARY PARK

Petroleum News Calgary Correspondent

Offshore Nova Scotia hasn't sunk yet, but it is taking on water at a rapid rate.

The region's dreams of joining the big leagues of offshore basins were jolted again with word from ExxonMobil Canada on Aug. 12 that it had plugged and abandoned its Cree I-34 well in shallow waters after encountering "non-commercial quantities of hydrocarbons."

ExxonMobil is operator with a 30 percent interest and sister company Imperial Oil held another 30 percent, leaving Shell Canada with 40 percent.

The well was abandoned at 12,940 feet, just short of the projected depth of 12,995 feet. Costs were not disclosed although wells in Nova Scotia waters generally run from C$30 million to C$100 million in deeper waters.

Cree had the potential to be tied in to the producing Sable project 25 miles to the northeast to sustain volumes in Nova Scotia's only commercial field.

COURTESY OF TRANSOCEAN

Transocean's Deepwater Pathfinder drilled ExxonMobil Canada's Cree I-34 well.

Cree's disappointment comes on the heels of two other unsuccessful wells this year: Weymouth A-45, with EnCana as operator, which cost about C$100 million, and Mariner I-85, which was plugged in March by Canadian Superior Energy at a cost of about US$35 million.

see NOVA SCOTIA page 18

● TENNESSEE

High prices prompting oil 'rush' in Tennessee

State has areas that still haven't been drilled, and there has been some recent successful exploration

By MATT GOURAS

Associated Press Writer

Prospectors have been drilling in Tennessee since the Civil War, searching for oil. While the industry has never amounted to much, this year, some big strikes and healthy prices have got the state back on wildcatters' maps.

As crude oil prices hover above $43 a barrel, new wells are being drilled in Tennessee and other unlikely states.

The number of U.S. oil rigs has increased from 750 in 2002 to more than 1,200 this summer, according to oilfield services company Baker Hughes. The industry publication World Oil said nearly every oil state is seeing more activity.

> *"Tennessee is still a place where you can knock on a door and get a lease for $1 (an acre a year plus royalties), and they'll offer you a cup of coffee, too."* **—Bill Goodwin, president, Tennessee Oil and Gas Association**

"There are fewer temporary abandoned wells than there have been in the past few years," said Larry Bengal, supervisor of the Illinois Oil and Gas Division. "Some marginal wells are now active that

see TENNESSEE page 18

GULF OF MEXICO

Current Deepwater Activity

Operator	Area/ Block	OCS Lease	Rig Name	Prospect Name	Water Depth (ft)
Shell Offshore Inc.	LL 399	G23480	TSF DEEPWATER NAUTILUS	Cheyenne	8,951
Shell Offshore Inc.	AC 857	G17565	TSF DISCOVERER DEEP SEAS	Great White	8,220
BP Exploration & Production Inc.	WR 724	G17011	D.O. CONFIDENCE	Das Bump	7,591
BP Exploration & Production Inc.	GC 743	G15606	T.O. DEEPWATER HORIZON	Atlantis(GC)	6,829
Union Oil Company of California	KC 681	G20949	DISCOVERER SPIRIT	East Sardinia	6,345
BP Exploration & Production Inc.	MC 778	G09868	TSF DISCOVERER ENTERPRISE	Thunder Horse South	6,037
Dominion Exploration & Production, Inc.	MC 773	G19996	PRIDE 1503	Devil's Tower	5,610
Kerr-McGee Oil & Gas Corporation	GC 767	G24182	T.O. DEEPWATER MILLENNIUM	Conquest	5,268
Mariner Energy, Inc.	VK 962	G15444	DIAMOND OCEAN AMERICA	Swordfish	4,673
Nippon Oil Exploration U.S.A. Limited	EB 857	G20765	GLOMAR EXPLORER	Kip	4,512
BHP Billiton Petroleum (GOM) Inc.	GC 653	G20084	GSF C.R. LUIGS	Shenzi	4,340
Anadarko Petroleum Corporation	GC 608	G18402	NABORS POOL 140	Genghis Khan	4,287
Anadarko Petroleum Corporation	GC 518	G21801	NOBLE PAUL ROMANO	K2 North	4,035
Chevron U.S.A. Inc.	GC 640	G20082	T.O. CAJUN EXPRESS	Tahiti	4,017
Eni Petroleum Co. Inc.	GC 562	G11075	GSF CELTIC SEA	K2	3,925
BP Exploration & Production Inc.	VK 915	G06894	NOBLE JIM THOMPSON	Dorado	3,460
Eni Petroleum Co. Inc.	GC 298	G08010	D.O. VALIANT	Allegheney(South)	3,305
Shell Offshore Inc.	GC 248	G15565	NOBLE MAX SMITH	Glider	3,243
Shell Offshore Inc.	VK 956	G06896	H&P 205	Ram-Powell	3,214
Kerr-McGee Oil & Gas Corporation	GB 668	G17408	NABORS MODS RIG 150	Gunnison	3,152
Kerr-McGee Oil & Gas Corporation	GB 667	G17407	DIAMOND OCEAN STAR	Gunnison/Durango	3,152
Nexen Petroleum U.S.A. Inc.	GC 243	G20051	T.O. MARIANAS	Aspen	3,065
Kerr-McGee Oil & Gas Corporation	GB 669	G15927	NOBLE AMOS RUNNER	Gunnison East	2,962
Shell Offshore Inc.	GB 426	G07493	AUGER	Auger	2,862
Walter Oil & Gas Corporation	MC 583	G16624	DIAMOND OCEAN LEXINGTON	Killer Bee	2,487
Murphy Exploration & Production Company	MC 582	G16623	MODS 141	Medusa	2,215
Chevron U.S.A. Inc.	VK 786	G10944	ENSCO 25	Petronius	1,754
El Paso Production GOM Inc.	EW 1003	G06921	NABORS S.D. XI	Prince	1,483
BP Exploration & Production Inc.	VK 989	G09771	NABORS POOL 143	Pompano I	1,295

Total Deep Water Prospects with Drilling/WO Activity 29

New Deepwater Activity

Kerr-McGee Oil & Gas Corporation	GB 669	G15927	Gunnison East	2,962

continued from page 17

TENNESSEE

weren't a few years ago."

Tennessee is particularly attractive to wildcatters because there are still areas that haven't been drilled — and it didn't hurt that news of a couple of big hits earlier this year is starting to circulate through the industry.

Young Oil Corp. said a well in north-central Tennessee flowed 150 barrels a day in June, following up on another big hit earlier in the year. The average well in the state produces only about one barrel a day.

Old hands are reminded of the early 1980s oil boom.

"I tell you, it's hard to even lay down and sleep at night. It's a very, very exciting time," said Anthony Young, CEO of Young Oil. "We're getting calls from all over the United States, Canada — everywhere. I just got a call from India."

Most wells are small

Most wells in the United States outside Alaska and the Gulf of Mexico are small, so new domestic wells aren't likely to boost overall production that much or affect prices, industry experts said. But they certainly give small operators a chance to make big money.

"(Tennessee has) had a lot of wells drilled in it, but it's still got thousands of acres of undrilled territory. And that's hard to find in the states," Young said.

The activity — coupled with higher prices — has helped the economy. North Dakota, for example, took in twice what it expected for oil-tax revenues in March, collecting $3.4 million. And the number of people employed in exploration and production in the country increased to 363,900 last year from 322,400 in 1999.

Not everyone welcomes the new drilling activity. A few years ago, a well in north central Tennessee exploded and began spilling an estimated 200 to 500 barrels per hour into Clear Creek and its tributary White Creek, both of which are located inside the Obed Wild and Scenic River area.

Environmentalists were hoping for tighter restrictions in new regulations due out soon, including a buffer zone between streams and wells.

"We're not very happy about that. We're all writing comments into the state to tell them to get their act together," said Axel Ringe, with the Sierra Club's Knoxville chapter.

Big companies focus offshore or in Alaska

Bill Goodwin, president of the Tennessee Oil and Gas Association, said his phone rings constantly with people seeking advice on where to drill in the state.

He said the big oil companies are focusing on richer areas offshore or in Alaska, leaving places like Tennessee to entrepreneurs poking around on farm land for a new strike. The number of permits issued in Tennessee last year for new wells roughly doubled over the previous year, from 140 to 281. Production increased 14 percent to 359,924 barrels for the year, according to the Tennessee Division of Geology.

Production had been declining since a 1982 peak of more than 1 million barrels of oil. Tennessee is still a minor player and will likely remain that way. Alaska, for instance, can produce hundreds of millions of barrels a year. Fewer than one in every 8,000 U.S. barrels of oil comes from Tennessee.

The upside is that Tennessee is still a place where individuals can try their hands at the risky business of drilling for oil.

"Tennessee is still a place where you can knock on a door and get a lease for $1 (an acre a year plus royalties), and they'll offer you a cup of coffee, too," Goodwin said. ●

continued from page 17

NOVA SCOTIA

Those setbacks were part of a six-year run of drilling duds, with 13 of 16 wells abandoned and the other three suspended, indicating discoveries that are still short of being economically viable.

Crimson F-81 being drilled

All that is left now is Crimson F-81 being drilled by Marathon Oil. At last report by the Canada-Nova Scotia Offshore Petroleum Board, the well was at 19,244 feet, closing in on its targeted depth of 21,400 feet.

Harvey Doer, president of Murphy Oil, a partner in the C$80 million Crimson well, said a result in expected within weeks.

The well has been described as Nova Scotia's last immediate hope for a discovery large enough to support a stand-alone commercial project and build on Sable that has been hit by reserve write downs.

Marathon, as operator, is counting on Crimson to deliver a find that would bolster its 2002 Annapolis discovery that was suspended after encountering 100 feet of net gas pay over several zones, less than what had been hoped for.

The partners decided to tackle Crimson rather than drill more wells to evaluate Annapolis.Doer said a "good sized accumulation" is needed in such water depths to justify a project.

Two others have drilling plans

Meanwhile, only two other candidates are moving ahead with drilling plans for Nova Scotia, following a decision in June by companies to surrender 13 exploration blocks with C$275 million in work commitments and leave another 12 hanging in the balance, facing a verdict by Dec. 31.

Ever-optimistic, Canadian Superior says it is preparing for another well on the Mariner block.

The billionaire Texas-based Bass family, through BEPCo Canada, has applied to drill three exploration wells in the 2005-2007 period on a 100 percent owned exploration license. Depending on results, an additional three appraisal wells could be drilled within four to five years, based on a project description filed with the offshore board.

BEPCo plans to drill all wells in water depths greater than 4,000 feet, with the first scheduled for 9,700 feet in about 4,750 feet of water.

Because of its limited experience in deepwater drilling, BEPCo plans to contract the well drilling design and operational support activities.

The offshore board said it will consider an environmental assessment submitted by BEPCo, written public comments and expert opinion as it prepares a comprehensive study report for submission to Canada's Environment Minister Stephane Dion.

For all of the setbacks, the board is sticking with its 2002 estimates that deepwater areas could hold up to 15 trillion cubic feet of gas and 2 billion barrels of oil.

A spokeswoman told the Halifax Daily News that "there is no reason to change," based on drilling information produced in the last two years.

But the Atlantic Provinces Economic Council said in July that a "major" new discovery was needed soon to revive momentum in the offshore and to sustain investment activity in the second half of this decade. ●

natural gas

QUEBEC

Quebec LNG proponents grapple with community fears

Partners in a proposed C$700 million liquefied natural gas project on the south shore of the St. Lawrence River in Quebec are at the tricky stage of dealing with the safety fears of local residents.

Gaz Metro, Gaz de France and Enbridge are faced with the same terrorist-dominated worries that have shaped planning for LNG facilities in the United States.

The Rabaska LNG project would receive 500 million cubic feet of gas per day from about 60 tanker loads a year.

The consortium is weighing one site that is just over one mile from a community of 1,000 people against another that is 12 miles away from a suburb of about 100,000.

To ease some of the concerns, the partners are proposing to use double-hulled LNG tankers, install gas-monitoring and shutdown systems on shore and in the terminal and construct steel-alloy storage tanks with concrete shells to hold the LNG.

They expect the regulatory phase will extend over three years, although construction could start in early 2006 with a projected in-service date of late 2008.

—GARY PARK

CANADA

Canadian gas permits headed toward 19,000 for the year

Natural gas continues to hold sway in Canada, regardless of the rising tide of forecasts that oil could reach US$50 a barrel as early as the end of September.

Industry figures shows gas well completions have rocketed 34 percent ahead of last year's record pace to reach 8,379 by the end of July.

For the seventh-month period, regulators in Alberta, Saskatchewan and British Columbia issued 11,455 gas well permits, 18 percent ahead of last year's pace and within sight of more than 19,000 for the year.

Gas completions in the three provinces added another 909 during July, or 72 percent of all wells that were rig released.

More than 6,000 of this year's gas wells were drilled below 3,750 feet.

Of the gas total to the end of July, 26 percent were listed as exploratory, compared with only 16 percent of the 2,454 oil wells.

Of the licenses issued, 3,060 were for oil targets, down 14 percent from the same period of 2003.

EnCana accounted for 3,323 new well permits over the seven months, or 21 percent of the industry tally. The most active of the other operators were EOG Resources Canada, Husky Energy and Apache Canada.

—GARY PARK

● HOUSTON, TEXAS

Anadarko's entry into LNG viewed as necessary step for gas producers

Acquisition of Canada's Access Northeast Energy would give Houston-based Independent home for future gas production from Algeria and Qatar

By RAY TYSON

Petroleum News Houston Correspondent

U.S.-based Anadarko Petroleum, in the midst of restructuring itself to correct earlier corporate shortcomings, is now venturing into territory unfamiliar to most exploration and production independents, the liquefied natural gas business.

However, Anadarko's announced move to acquire Canada's Access Northeast Energy and its rights to build an LNG receiving terminal on the coast of Nova Scotia, should come as little surprise.

Bob Daniels, Anadarko's senior vice-president of exploration and production

The deal would provide Anadarko with a home for its own future overseas natural gas production from Algeria and Qatar, while keeping the company on the leading edge of one of the fastest-growing segments in industry.

"This project can provide Anadarko a competitive advantage in international natural gas development," Bob Daniels, Anadarko's senior vice president of exploration and production, said Aug. 12.

Project pegged at $400 million

Terms of the deal were not disclosed. But the project itself reportedly would cost around $400 million, a tidy sum for even a large independent to cover by itself.

So, the company said it wants to bring in national oil companies or "other major entities" to help share expenses and "to facilitate the broader value chain of investment, with the primary purpose of using (LNG) re-gasification as a leveraging vehicle into new upstream natural gas opportunities and profitability."

Anadarko already is an active explorer and producer in Algeria and Qatar. But participating in the commercialization of international natural gas resources "is becoming more necessary in the upstream industry," Daniels said.

The demand for imported LNG continues to escalate, particularly with North American natural gas production on the decline. Already, some three dozen LNG receiving terminals have been proposed in the United States to take supply from Algeria, Qatar, Nigeria, Indonesia and Trinidad and Tobago.

To help fill the void, Anadarko said it is making "a concerted effort" to expand natural gas exploration in Algeria and Qatar, two of the world's leading LNG exporting countries, as well as other unspecified producing areas.

Algeria most significant international venture

Anadarko's most significant international exploration venture to date is in Algeria's Sahara Desert, where the company holds interest in about 4 million gross acres and had booked proved reserves of 361 million barrels of oil, condensate and natural gas liquids at year-end 2003. Net production from the company's properties totaled 19 million barrels of oil, or 10 percent of its worldwide sales volumes.

Since Anadarko began drilling in Algeria in 1991, it has discovered 15 fields containing more than 2 billion barrels of oil. Anadarko develops and produces the fields in association with Sonatrach, the national oil company of Algeria, and partners Maersk and Eni-Lasmo. Current production capacity is 530,000 barrels of oil per day.

Anadarko also has a position in three blocks covering about 700,000 acres in offshore Qatar. Block 12 contains the producing Al Rayyan oil field and Blocks 11 and 13 are exploration blocks.

Anadarko completed acquisition of 100 square mile of 3-D seismic program on Block 13 in late 2003 and was to process and interpret the information during the first half of 2004. Anadarko is the operator and majority interest holder on the block.

Additionally, a 740-mile 2-D seismic program was completed on Block 11 in early 2004 with results evaluated during the first half of the year. Anadarko

see **ANADARKO** *page 20*

continued from page 19

ANADARKO

owns a 49 percent working interest in this block, operated by Wintershall AG.

Anadarko acquired its position in Qatar through the acquisition of Gulfstream Resources Canada in 2001.

Terminal would target Northeast

To the company's advantage, the proposed LNG receiving terminal in Nova Scotia, which would target the Northeastern United States, represents a short shipping distance from some of the world's largest existing and planned LNG supply regions, including Algeria and Qatar. The project would have access to the nearby Maritimes & Northeast Pipeline, according to Anadarko.

To be located at Bear Head, Point Tupper on Cape Breton Island along the ice-free Strait of Canso, the terminal would be capable of processing up to 1 billion cubic feet of gas per day. Privately held Access Northeast Energy, whose sole project was the receiving terminal, was looking to begin operations in late 2007.

Also to Anadarko's advantage, Access Northeast Energy just recently secured approval of an environmental assessment for the project, said to be the most critical consent needed from both the Canadian and provincial governments to proceed with construction. All remaining permits and approvals are expected by year-end, Anadarko said.

Moreover, Bear Head already has been designated as an industrial site, which includes fuel bunkering, marine terminals, and other heavy industrial or port activities.

"We have gained a potentially low-cost, low-risk entry into the LNG business," Anadarko's Daniels said. "Our interest in developing the Bear Head terminal is to allow us to do what we do well — explore for, develop and market valuable energy resources."

Restructuring began last year

Anadarko actually began restructuring itself last year several months after then CEO John Seitz resigned under pressure from a board of directors seriously concerned about the company's performance and lagging stock price. The company laid off about 10 percent of its workforce in an effort to save an annual $100 million, set out to reduce debt by $300 million and closed two offices in Texas.

Earlier this year the company set about selling more than $2.5 billion of high-cost oil and gas properties to pay down debt and to repurchase up to $2 billion of company stock.The property sales were expected to reduce Anadarko's reserve base by 15 percent and its production by 25 percent, but also were expected to create a stronger foundation on which to grow the company. From the reduced asset base, Anadarko raised its projected annual production growth rate to a range of 5 to 9 percent from previous guidance of 3 to 7 percent.

Anadarko stock has improved to just under $56 per share, but it remains well below its 2000 peak of $76 per share.

Anadarko's new strategy was to use profits from proven "foundation assets" onshore the United States and Canada to fuel "growth platforms" in the Gulf of Mexico, Algeria and Qatar.

Entering the LNG business "is consistent with Anadarko's growth strategy moving forward," Daniels said. ●

● NEW MEXICO

Study: high potential for coalbed methane in Valle Vidal unit

THE ASSOCIATED PRESS

There is high potential for oil and gas development in a 40,000-acre area of the Carson National Forest in northern New Mexico, according to a new study.

The report released July 29 on the forest's Valle Vidal unit is not an environmental study, but rather looks at the potential for development over the next 20 years.

About 40 percent of the 100,000-acre Valle Vidal, most of the eastern half, is being considered for coalbed methane development.

New Mexico Gov. Bill Richardson earlier in July vowed that the state would fight any effort by the Forest Service to allow coalbed methane production in the Valle Vidal.

The area is home to the state's largest elk herd and to two rivers the U.S. Forest Service has said are eligible for wild and scenic river status. Environmentalists have said the natural beauty and pristine land could be lost forever if drilling is allowed.

There currently are no oil and gas leases or producing wells on the Valle Vidal unit, according to the study, called a reasonable foreseeable development scenario.

Coalbed methane and shallow gas

The study says the primary area of interest is coalbed methane and natural gas associated with two geologic formations at a depth of less than 2,000 feet.

Development would mean associated roads and pipelines as well as drilling vertical wells, spaced one every 160 acres in allowed drilling areas, or up to 250 well pads. If the state approved doubling the spacing to one well every 80 acres, the number of wells could double as well, the study said.

The report was done by Gretchen Hoffman and Brian Brister of the New Mexico Bureau of Geology and Mineral Resources and Thomas W. Engler, chairman of the petroleum and chemical engineering department at New Mexico Tech in Socorro.

Hoffman and Brister wrote a study published in New Mexico Geology early in the year that said the Raton Basin in the northeastern part of the state, particularly the area extending from the northeastern portion of the Valle Vidal to the New Mexico-Colorado line, has potential for good coalbed methane production.

The Valle Vidal became part of the Carson National Forest in 1982 after it was donated by an oil company, Pennzoil Corp.●

MEXICO

Pemex seeks bids for gas blocks

State oil monopoly Petroleos Mexicanos, or Pemex, said Aug. 16 it published a call for bids on two more natural gas blocks in the Burgos basin of northeastern Mexico.

The two blocks, Monclova and Pirineo, are expected to involve combined investment of about US$900 million to produce 140 million cubic feet a day of natural gas.

The blocks complete the second round of tenders for multiple service contracts to produce non-associated gas for Pemex. Bids are due in November, with the 15-year contracts to be awarded later that month.

On July 30, Pemex sought bids for contracts to develop Pandura-Anahuac and Ricos, which combined are expected to generate investment of US$1.85 billion to produce 325 million cubic feet a day of natural gas by 2007.

Under the multiple service contracts, Pemex hopes to raise output at Burgos to 2 billion cubic feet a day by 2007 from 1 billion cubic feet per day at present.

Pemex awarded five blocks in the first round, which concluded in January.

—THE ASSOCIATED PRESS

Companies involved in North America's oil and gas industry

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Petroleum news

Business Spotlight

By PAULA EASLEY

FORREST CRANE

Tom Maloney, vice president business development

VECO Alaska Inc.

VECO is a leading Alaska-headquartered company founded in 1968 by Bill Allen. The company's roughly 4,000 employees worldwide do engineering, procurement, construction/operations and maintenance work. Principal business sectors are oil and gas, pipelines and terminals, and refineries and power.

Tom Maloney joined VECO 15 years ago. He was no stranger to Alaska projects having worked on numerous Alyeska Pipeline projects during his Fluor career. Tom is pleased to see Alaska companies being hired for major projects such as Exxon's Sakhalin Island venture. If you're short on golf balls, just follow him on the course, says Tom, fairly new to the game. He's married to Susan and their son, Sam, age 12, has been teaching dad a mean swing.

FORREST CRANE

C. Kevin Batters, general manager

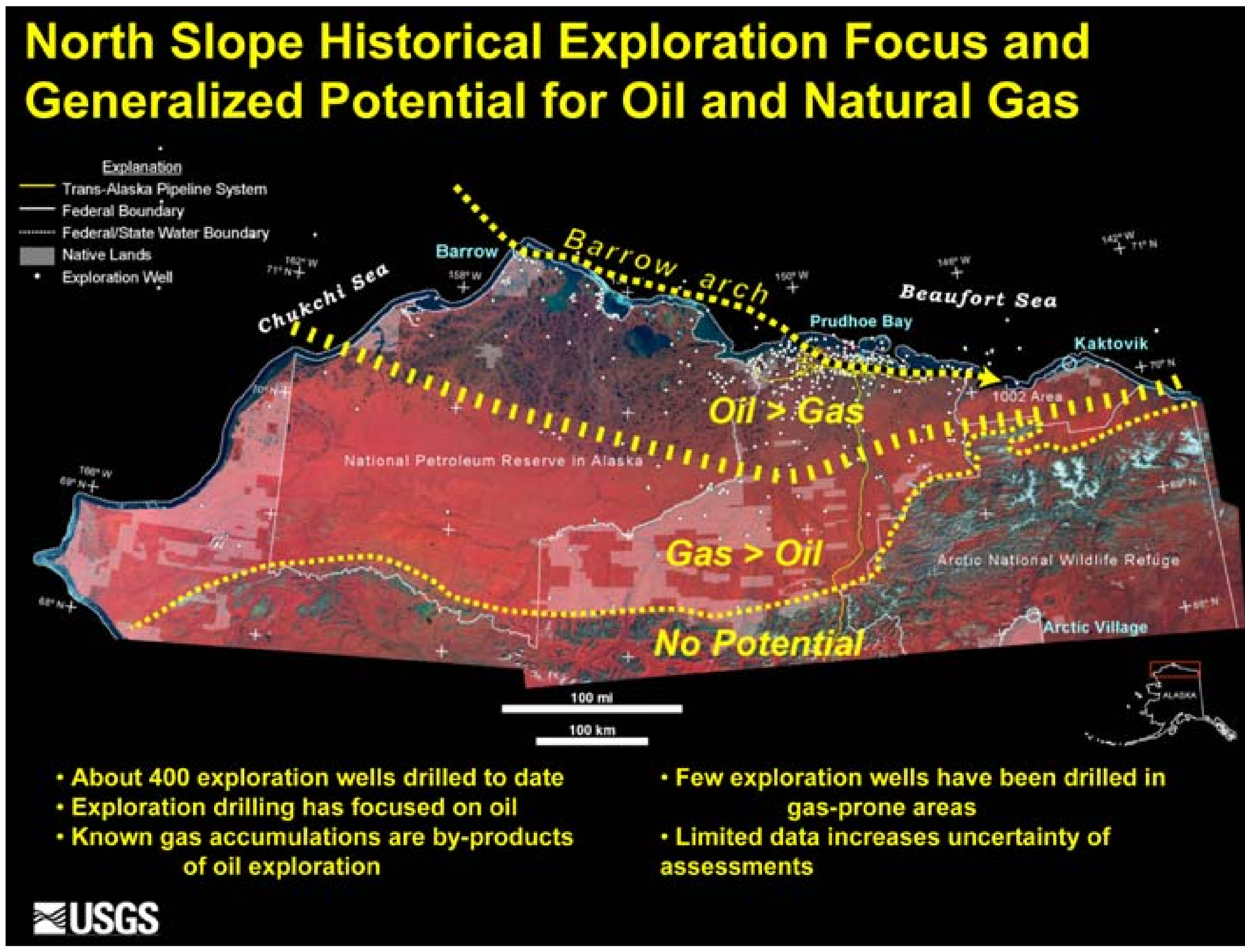
Hilton Anchorage

The Hilton Anchorage at 605 rooms is Alaska's largest hotel, with all guest rooms air conditioned and equipped with high-speed internet access. The hotel has two restaurants and two bars: the Top of the World Restaurant and Bar on the West Tower and an outside deck with food and beverage service, offering exceptional views of Anchorage and Cook.

Before Kevin Batters arrived at the Hilton Anchorage last year, he spent 27 years with Hilton in North America, London and Paris. He and wife Janice Ann are enjoying their new lifestyle and making new friends. Kevin brings a fresh outlook to three visitor industry boards on which he serves. Spearfishing and racquetball are current favorite sports, says this former rugby and ex-pro soccer player.

continued from page 1

BETTER



northern Alaska. (The 150 tcf includes only onshore federal, offshore federal and state offshore.)

"The upside potential could be much greater," he said, pointing to recent NPR-A discoveries that "certainly indicate there may be more gas present in NPR-A than we estimated just two years ago." (See map on page 23.)

There have been more than 400 exploration wells drilled on the North Slope, but those wells "are clustered along the coastline … along the Barrow Arch" where a drill bit is more likely to encounter crude oil than natural gas.

"That's where industry found oil so that's where exploration has been focused," Houseknecht said.

In the northern half of the North Slope "there is a greater probability of finding oil than gas even though gas is present. In the southern half of the North Slope, in the (Brooks Range) Foothills … there is a greater probability of encountering gas than oil," he said.

"Worldwide the largest gas resources and reserves typically occur in geologic provinces" where there is little or no oil, Houseknecht said.

"The bottom line here is that most of the known accumulations of associated gas are up on the coastal plain near the Barrow Arch; most known accumulations of the non-associated gas are in the Foothills, farther south" where "significant gas shows are pervasive in the wells that have been drilled in the Foothills."

But little is known about those wells because when oil explorers "encountered gas there they said, 'oh shucks, this isn't what we're looking for' and moved away," most often without further testing or delineation of the gas accumulations, Houseknecht said.

"And for that reason there is a lack of drilling data in the Alaska North Slope Foothills, which increases the uncertainty of the estimates we have made." That's why "we have such a wide range between our 95 percent and 5 percent probabilities in the National Petroleum Reserve," he said, referring to the USGS's 40 tcf to 85 tcf estimate, which means the agency thinks there is a 95 percent chance that there is 40 tcf of undiscovered, technically recoverable gas in the reserve and a 5 percent chance that the number could be as high as 85 tcf. The average estimate the USGS uses is 61.4 tcf.

Because the four major gas plays in NPR-A extend across the Colville River into Native and state lands, all the way eastward to the pipeline corridor, Houseknecht said he expects the average gas resource estimate for those lands to be the same as NPR-A, 61.4 tcf.

The four gas plays — the Brookian Topset structural play, the Torok structural play, the Brookian Clinoform Central play and the Brookian Clinoform South-Deep play — are in the central or southern part of the reserve outside of the oil-rich Barrow Arch along the coast to the north.

NPR-A: Oil or gas province?

To date, the largest known gas reserves on the North Slope are associated with oil and found near the coast within 25 miles of the Barrow Arch, the biggest being the gas cap at the Prudhoe Bay oil field, which contains a whopping 24 tcf of gas. The second largest is the 8 tcf at the Point Thomson field, which also hugs the coast.

But there is a lot the USGS does not know about the North Slope's geology. And what the agency is finding in its latest assessment has its scientists "puzzled," Houseknecht said. The Alpine play "represents … the type of geology that exists in the Alpine fairway," which stretches across the upper half of the reserve from the Alpine field on the east to within a few miles of NPR-A's western boundary.

Bidding at NPR-A lease sales over the last five years indicates "industry believes there is significant potential extending

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westward across NPR-A," he said.

Although industry has been interested in the Alpine play area's oil potential, which is thought to contain more than 2 billion barrels of recoverable crude in NPR-A's northeast corner, recent NPR-A discoveries indicate the play might also have significant gas potential, Houseknecht said.

Starting at the Alpine field and moving a few miles west to the Spark and then the Rendezvous oil discoveries, "there is an astoundingly rapid increase in the gravity of oil and the GOR over a very short lateral distance." Houseknecht said USGS scientists are "struggling to understand this" because of the limited amount of data that is publicly available.

Field characteristics

At the ConocoPhillips-operated Alpine field it has been determined that 500 million barrels of oil can be recovered.

That oil is 40 degree API gravity, which is the American Petroleum Institute's measure for the lightness or heaviness of oil. Alpine oil is very light, or watery, as opposed to thick, molasses-like oil.

The GOR, or gas to oil ratio, at Alpine is 840. The GOR of a well, or field, is the number of cubic feet of gas it produces per barrel of oil, and Houseknecht said 840 is a very low value.

"If we step westward to the discovery at Spark the test indicates 55 degree oil, a much lighter oil than at Alpine, and probably a condensate, a petroleum compound that is a gas in the reservoir and precipitates to a liquid at the surface," he said. (Condensate is almost pure gasoline and is generally 45 to 62 degrees API. Refiners pay almost as much for condensate as crude oil.)

Spark GOR is 10,200.

"If we step to the Rendezvous discovery the reported hydrocarbons discovered are 60 degrees gravity, even lighter, and a gas to oil ratio of almost 17,000."

These rapid increases, Houseknecht said, lead to the question, "Is the big play, or plays, in NPR-A really going to be predominantly oil or will there be a very substantial gas resource that has perhaps already been discovered, or is waiting to be discovered, along the Alpine play fairway that industry has been treating primarily as an oil play?"

With only two of the recent discoveries in NPR-A in the public domain, he said, "there are lots of unknowns." ●

continued from page 17

UNOCAL

Nikolaevsk wells are "essentially a gas exploration program," but said the Nikolaevsk unit agreement requires it "to test at potential oil-producing intervals, which may include the Hemlock, West Forelands and Upper Cretaceous formations." Unocal said those formations lie below the gas target zone at the Red No. 1 well.

The Red pad is the first in an exploration program that "includes up to three new exploration drilling sites for drilling up to four new subsurface targets," Unocal said.

Site preparation was to begin in March, with drilling expected to take up to three months.

The Red pad is approximately 14 miles southeast of Ninilchik and four miles north-

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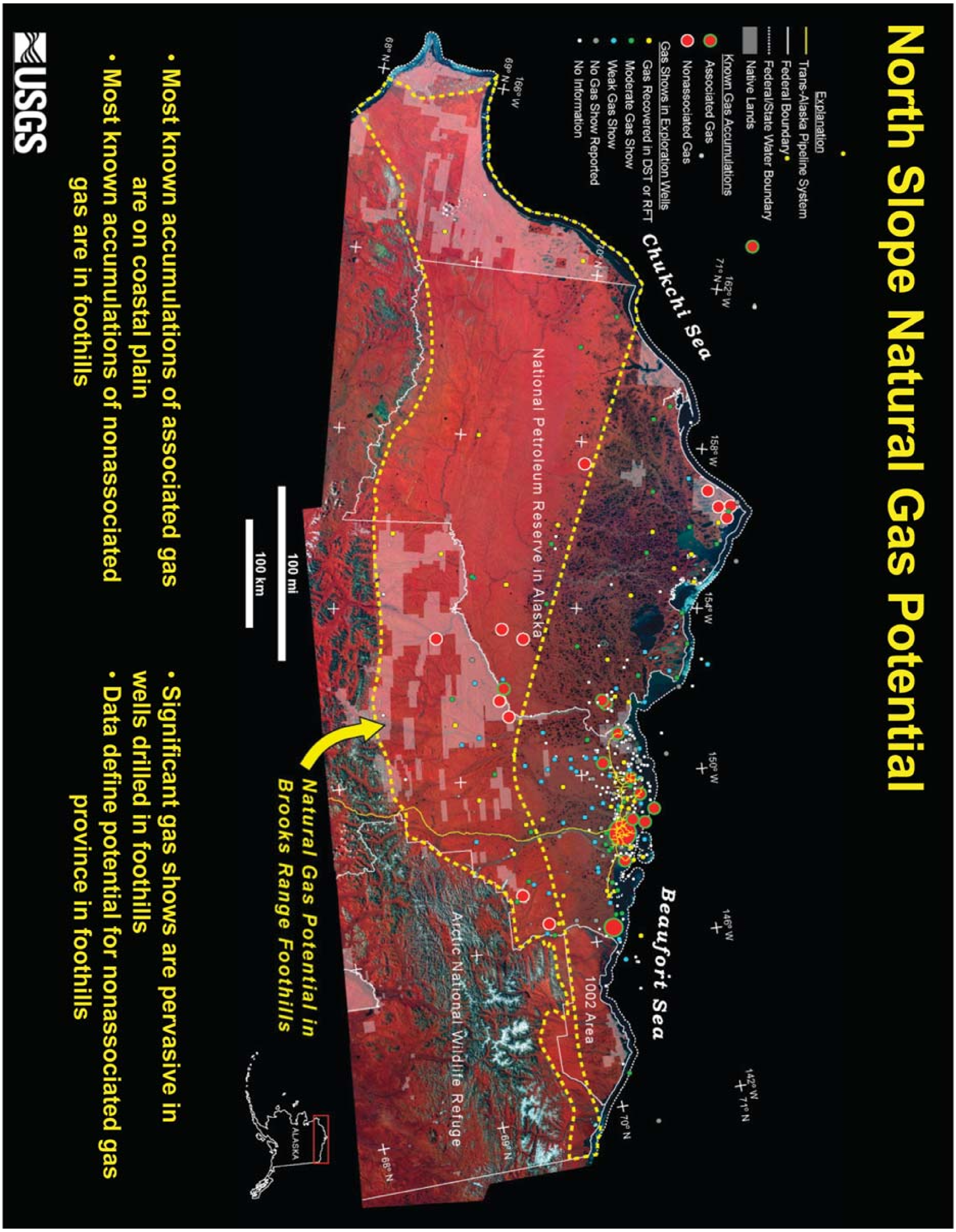
east of the community of Nikolaevsk in an upland logged area. Unocal also proposed a well from the Blue pad, with a surface in section 22, township 3 south, range 13 west, Seward Meridian. That well has not yet been permitted. The state's approval of the Nikolaevsk unit, extending lease terms in exchange for a drilling commitment, required two exploration wells and seismic over the next three years, with the first well required in the first year of the unit plan, i.e. before the end of January 2005.

—KRISTEN NELSON


North Slope Natural Gas Potential
Explanation
Trans-Alaska Pipeline System
Federal Boundary
Federal/State Water Boundary
Native Lands
Known Gas Accumulations
Associated Gas
Nonassociated Gas
Gas Shows in Exploration Wells
Gas Recovered in DST or RFT
Moderate Gas Show
Weak Gas Show
No Gas Show Reported
No Information
Chukchi Sea
Beaufort Sea
National Petroleum Reserve in Alaska
Arctic National Wildlife Refuge
1002 Area
Natural Gas Potential in Brooks Range Foothills
100 mi
100 km
ALASKA
• Most known accumulations of associated gas are on coastal plain
• Most known accumulations of nonassociated gas are in foothills
• Significant gas shows are pervasive in wells drilled in foothills
• Data define potential for nonassociated gas province in foothills
USGS

continued from page 1

GIANTS

relief was up 22 percent from last year's Western Gulf sale.

"Companies have had more time to assess the incentives MMS has put forward on deep gas and have come up with some new exploration ideas," he said. "We're continuing to see a push to look at deep gas and to take advantage of MMS incentives."

Top 10 capture nearly 50% of blocks

Top 10 winners Amerada Hess, BP Exploration & Production, Petrobras America, Shell Offshore and ConocoPhillips accounted for nearly 36 percent of the total high bids and captured 50 percent of the 351 exploration blocks that received bids. Hess, BP and Petrobras dominated the sale, collecting 143 blocks between them, or nearly 41 percent of all blocks receiving bids.

Other top 10 players were Devon Energy with $11.5 million in high bids on 26 blocks, Kerr-McGee with $14.1 million in bids on 24 blocks, Shell with $5.5 million in bids on 17 blocks, Woodside Energy with $3.1 million in bids on 17 blocks, ConocoPhillips with $3.2 million in bids on 16 blocks, Pioneer Natural Resources with $6.2 million in bids on 15 blocks, and Unocal with $3.3 million in bids on 13 blocks.

Ironically, none of the big guys ranked among the top companies in terms of highest bids placed on individual blocks. The top honor went to an independent producer, The Houston Exploration Co., which doled out a sale-high $6.8 million for a single block at High Island on the continental shelf.

BP takes 48 blocks

BP was one giant who came to Sale 192 with a particularly big appetite and an even fatter wallet, shelling out more than $28 million in high bids to capture 48 blocks. That was more than twice the $13.7 million second-place spender Hess coughed up for the 58 blocks it won. In third place was Petrobras, which paid out just $10.7 million in high bids for 37 blocks.

However, with 72 percent or 301 of the 351 blocks bid on receiving single bids, Sale 192 was not much of a competitive event. Just 36 blocks received two bids each, nine blocks received three bids each, four blocks received four bids each, and only one block garnered five bids. Just 45 companies participated in the sale but collectively submitted an impressive 421 bids.

Although there were more than a handful of leases that attracted bids of over $1 million, the sale was noticeably void of any large bids. Last year's Western Gulf sale, for example, drew a $22.6 million winning bid on a single block, three times the highest bid in Sale 192 and approaching what BP paid in total for its 48 blocks.

Rather, it was the cumulative impact of blanket bidding in which a few companies, individually or in partnership, attempt to amass tracts in particular areas that ran up the totals. That generally spells a concerted effort to secure large acreage positions in developing hydrocarbon trends, in this case the lure of potentially large, untapped natural gas reserves in the deep and particularly the "ultra-deep" geological horizons below 25,000 feet on the continental shelf.

Companies looking for large positions

Because of the high-cost, high-risk nature of drilling deep-gas wells on the continental shelf, companies generally want a lot of running room, Oynes said.

"If they are fortunate enough to have a large discovery … they would like to have a pretty large position to recover that risk position," he said.

Sale 192 stars BP and Petrobras, along with ExxonMobil, already have farmed in to Newfield Exploration's ultra-deep Treasure Island and Treasure Bay leases, and are preparing to drill a 38,000-foot exploration well at the Blackbeard prospect. BP also is said to be negotiating with drilling contractor Rowan to drill a separate 35,000-foot well. Moreover, various operators could drill as many as 18 wells over the coming months to depths greater than 18,000 feet.

Nearly 160 or 45 percent of blocks receiving bids in Sale 192 were in or near the relatively shallow waters of the continental shelf. Eight-seven or nearly 54 percent of all shelf bids were placed on blocks in High Island region, a hot area for deep drilling.

BP alone picked up 23 blocks in High Island, representing nearly half of all blocks won by the company, and another 22 blocks in the Brazos and Galveston districts on the shelf. Nearly all were noncompetitive single bids. It was a similar story for Petrobras, which captured 28 blocks in the Corpus Christi district on single bids.

Shell also factored into the competition on the shelf, picking up one tract and losing two to BP. As far an exploration, both companies are predominantly deepwater players.

Interestingly, ultra-deep Treasure Island partners Newfield and Petrobras and Treasure Bay partners Newfield and BHP Billiton teamed up to win three High Island blocks on single bids.

To a lesser extent than the majors, other independent producers were victorious on the continental shelf, including Pioneer, Devon Energy, Woodside, EOG Resources, El Paso, Murphy Exploration and Spinnaker Exploration.

Deeper waters attract fewer bids

Available exploration blocks in deeper waters of the Gulf of Mexico attracted less attention this time around, although the region provided some noted action.

For one, Hess blanket bid and won 22 blocks bids in East Breaks, 11 blocks in the Port Isabel district, and another 12 blocks in ultra-deepwater Alaminos Canyon, home to some of the largest discoveries in the Western Gulf.

Big independent Kerr-McGee was particularly active in the Garden Banks area, a leasing hot spot for industry in recent years. Either on its own or in conjunction with other companies, including Hess, Unocal, Nexen Petroleum and long-time deepwater partner Devon, Kerr-McGee secured acreage positions in some 24 blocks in the region.

ConocoPhillips and Woodside also were major players in Garden Banks, teaming up to win a dozen blocks.

The majors and large independents also put on a good show in remote, ultra-deepwater Keathley Canyon, where nearly 80 bids were placed on available blocks, some of them possibly connected to an emerging oil play known as the lower tertiary trend.

ChevronTexaco alone picked up 10 blocks in the region, followed by top winners that included Anadarko Petroleum with nine blocks and Shell with seven blocks. Devon, either by itself or in partnership with Eni Petroleum or Unocal, latched on to about a dozen blocks. Other companies that won blocks in Keathley Canyon included Petrobras, EnCana, Spinnaker, ConocoPhillips and Pioneer. ●