

A supplement to

E&P

Oil and Gas
Investor

A tall, silver metal drilling rig stands prominently in the center-left of the frame. The rig is a lattice structure with various platforms and equipment. In the background, a vast valley stretches out, with rolling hills and mountains under a clear blue sky. The foreground shows a wellhead area with several large blue storage tanks, a white control building, and other industrial equipment. The overall scene is a typical oil and gas drilling site in a mountainous region.

An
Investor's
Guide to
the Rockies

December 2005

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A TOUR OF THE ROCKIES

From the green valleys and brown mesas to the mountaintops, the Rocky Mountain region offers a rich and vast resource for recreation, farming and ranching and natural resources development. In some of the loveliest places in the nation—and some of the most remote—oil and gas producers are working to bring more energy to America.

Since 1990, pipeline expansion projects and new construction have combined with higher oil and gas prices and better fracturing technologies to allow Rockies production to soar. The production potential is extensive, ranking the region in aggregate as the best in the U.S., outside of the deepwater Gulf of Mexico.

If you cannot go there in person, this special report could be the next best thing. We thought we'd give investors a tour of the various basins and plays found in the Rockies. Senior exploration editor Peggy Williams, a geologist by training and experience, gives you a brief overview of the characteristics that make each basin special and worthy of drilling.

In the Piceance Basin of western Colorado alone, authorities estimate there may be 200- to 300 trillion cubic feet (Tcf) of natural gas in place. Companies such as EnCana and Bill Barrett Corp. are drilling hundreds of wells per year there.

Wyoming is the third-largest gas producing state in the Lower 48. There, in the Greater Green River Basin, high-profile Jonah Field and Pinedale Anticline have made significant successes possible for companies such as Ultra Petroleum and Questar. Jonah is now thought to contain 8 Tcf of gas, and with recently approved 10-acre spacing—not to mention 5-acre pilot projects—more gas will be recovered.

Contributing editor David Wagman has compiled a handy database of key public companies with significant operations in the Rockies. Here you can locate a basin and see which companies are active there, or locate an E&P company to see in which basins it is drilling.

John Harpole of Mercator Energy in Denver updates the always-important pipeline situation. Capacity must rise—and it is—for all that Rocky Mountain gas to flow to energy-hungry California and the Midwest.

Finally, contributors Karen Brown and Monica Yetter, both of Energy Strategies and Solutions LLC, analyze the regulatory and environmental barriers that unfortunately, still threaten to block timely development of the region's resources.

Leslie Haines
Editor-in-chief
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ABOUT THE COVER: With as much as an estimated 300-plus trillion cubic feet of gas resource in place, Colorado's Piceance Basin may well be the biggest natural gas play in North America. (Photo by Lowell Georgia)



ROCKIES AT THE FOREFRONT

The Rocky Mountain region is rich in energy resources, and companies are pushing hard to extract those riches.

BY PEGGY WILLIAMS, EXPLORATION EDITOR, OIL AND GAS INVESTOR

A bundant oil and natural gas resources grace the Rocky Mountain region. Nonetheless, the Rockies languished during the decades of America's massive industrialization as oil and gas supplies from the great fields of Texas, Louisiana, Oklahoma and California shouldered Rockies production aside. Even the smaller Appalachian Basin natural-gas fields, so handily located adjacent to the Eastern Seaboard, flourished while gas from the Rockies fetched a pittance.

The Rockies suffered because its fields were far from the crowded coastlines of the continent, and transportation costs made the resources economically unattractive. Moreover, the light population densities in the Western states didn't create much regional demand. In addition, the tight and clay-filled rocks that stuffed the mountain basins meant that wells flowed reluctantly, albeit for many years.

Today, the Rockies are no longer the redheaded stepchild of the industry. Technology has advanced, and new multi-stage fracturing and horizontal drilling techniques have bumped up initial well rates. Major expansions of the pipeline network have improved the region's connections to markets, and wellhead prices have rocketed. Unconventional reservoirs in shales, coal seams and tight-gas sandstones are extremely economic, and offer long-lived reserves and solid production growth.

The Rockies are crowded with rigs, and companies large and small are working on a plethora of prospects and projects. For investors interested in joining the party, the region is replete with opportunities.

Tight-gas basins

Tight-gas reservoirs abound throughout the Rockies. These are generally sandstones with extremely low permeabilities that must be stimulated with fracture treatments to produce economic quantities of gas. The primary tight-gas basins in the region are the Greater Green River, the San Juan, the Piceance, the Uinta and the Denver-Julesburg.

Tight-gas plays are appealing because they contain immense resources, usually in stacked sequences of discontinuous sands. They are characterized by long-lived reserves with high initial production rates that drop rapidly then flatten out to produce modest volumes for decades. Often, because the recovery per well is quite low, existing tight-gas fields can be downspaced, supporting multiple wells per section.

1 *Green River*—Wyoming's Greater Green River Basin produces about 2.5 billion cubic feet (Bcf) of gas and 32,000 barrels

of oil per day. Some 70 rigs are drilling in the region, which includes the Green River and the smaller Washakie, Red Desert and Great Divide basins as well as the Rock Springs Uplift in southwestern Wyoming and the Sand Wash Basin in northwestern Colorado. Two of the well-known plays in the basin are Jonah and Pinedale, neighboring fields that produce from extremely thick, gas-charged discontinuous sands in the Upper Cretaceous Lance formation.

Jonah is a 36-square-mile field on the eastern side of the Green River Basin in Sublette County. It contains 600 wells that are producing 700 million cubic feet of gas per day. In November 2004, the state regulatory agency approved fieldwide 10-acre spacing at Jonah, which has recoverable reserves of 8.5 trillion cubic feet (Tcf) of gas. The overpressured field produces from a completed interval of some 2,200 feet of pay. Well costs are in the range of \$2.5 million each, and operating costs run about \$0.14 per thousand cubic feet of gas. Calgary-based EnCana Corp. is the principal operator in Jonah, producing about 400 million cubic feet of gas per day from some 350 net gas wells. BP also holds a significant position.

Pinedale is an adjacent 75-square-mile field that is being developed on the crest and flanks of a 40-mile-long anticline. It contains 300 wells that are making 500 million per day. The initial wells at Pinedale were drilled in the 1950s and 1960s, although it took an evolution of completion technology to open up the area's huge resource potential. The productive sandstones are in the Lance interval, and the average completed interval spans 5,000 feet. Operators report well costs of \$5 million and finding and development costs of less than \$1 per thousand cubic feet of gas.

Development has been proceeding on 20- and 40-acre spacing units, but in mid-summer, Wyoming regulators decided to allow wells on 10-acre spacing on the northern third of the feature, an area dominated by Questar Corp. Ultra Petroleum is one of the other main leaseholders at Pinedale; Shell has a sizeable program; and Stone Energy Corp. and Western Gas Resources are active on the Anticline as well. Additionally, private firms PetroGulf Corp., Anschutz and Yates Petroleum operate in Pinedale.

Another area of intense interest is Wamsutter, in Carbon and Sweetwater counties, Wyoming, in the Washakie Basin. Supergiant Wamsutter covers some 2,500 square miles and has already produced 2 Tcf of gas from the Cretaceous Almond formation, out of original gas-in-place of 50 Tcf. Downspacing was recently approved for Wamsutter, allowing wells to be drilled on 80-acre spacing.

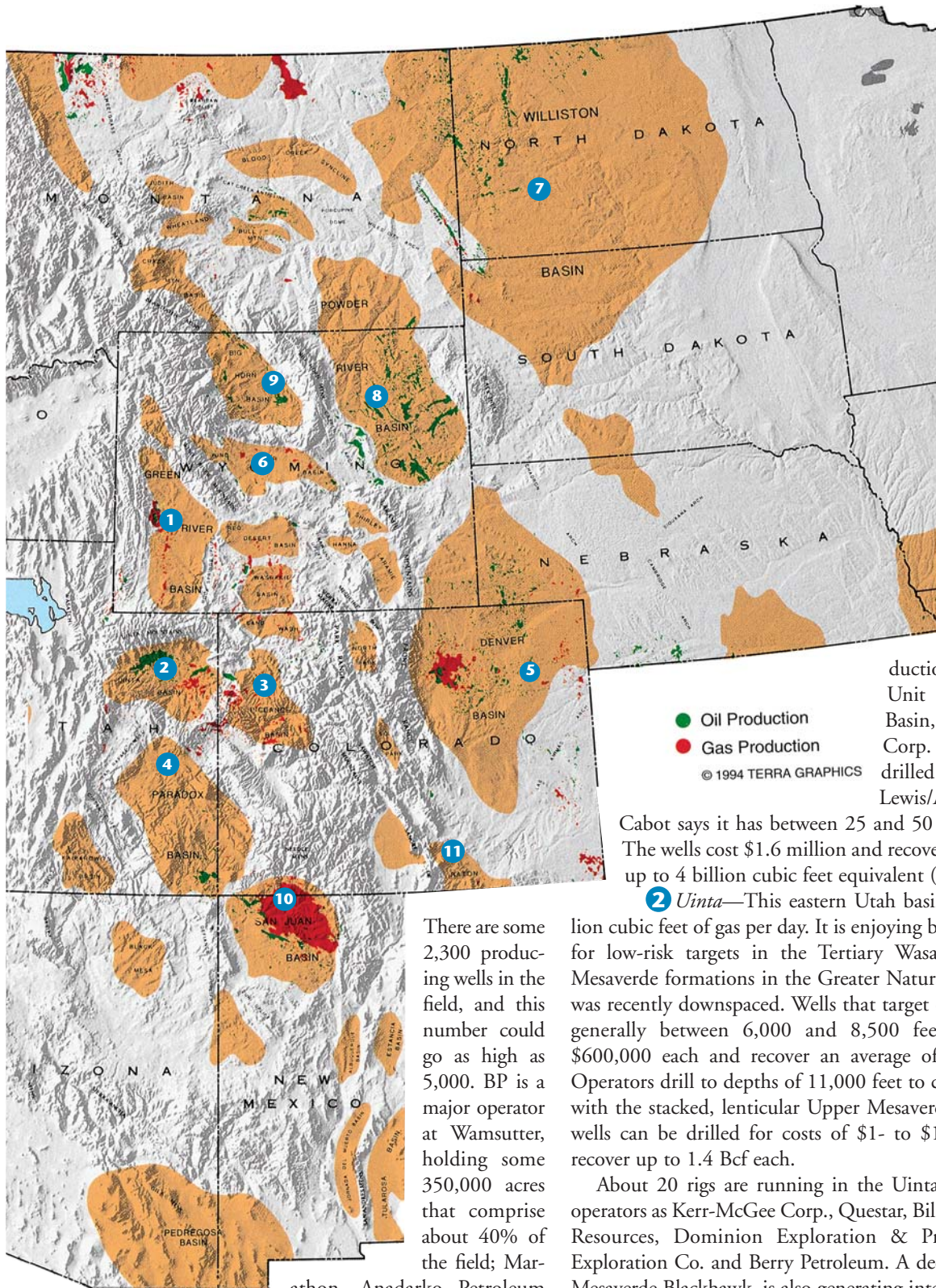


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Other projects of note are ongoing in the Greater Green River Basin. On the Wyoming-Colorado state line in the Sand Wash Basin, Questar is evaluating deep potential below the existing producing fields of Alkali Gulch, Hiawatha and Canyon Creek. A new resource play could emerge in the Lower Cretaceous and Jurassic sediments between 10,000 and 15,000 feet, beneath the legacy Mesaverde production.

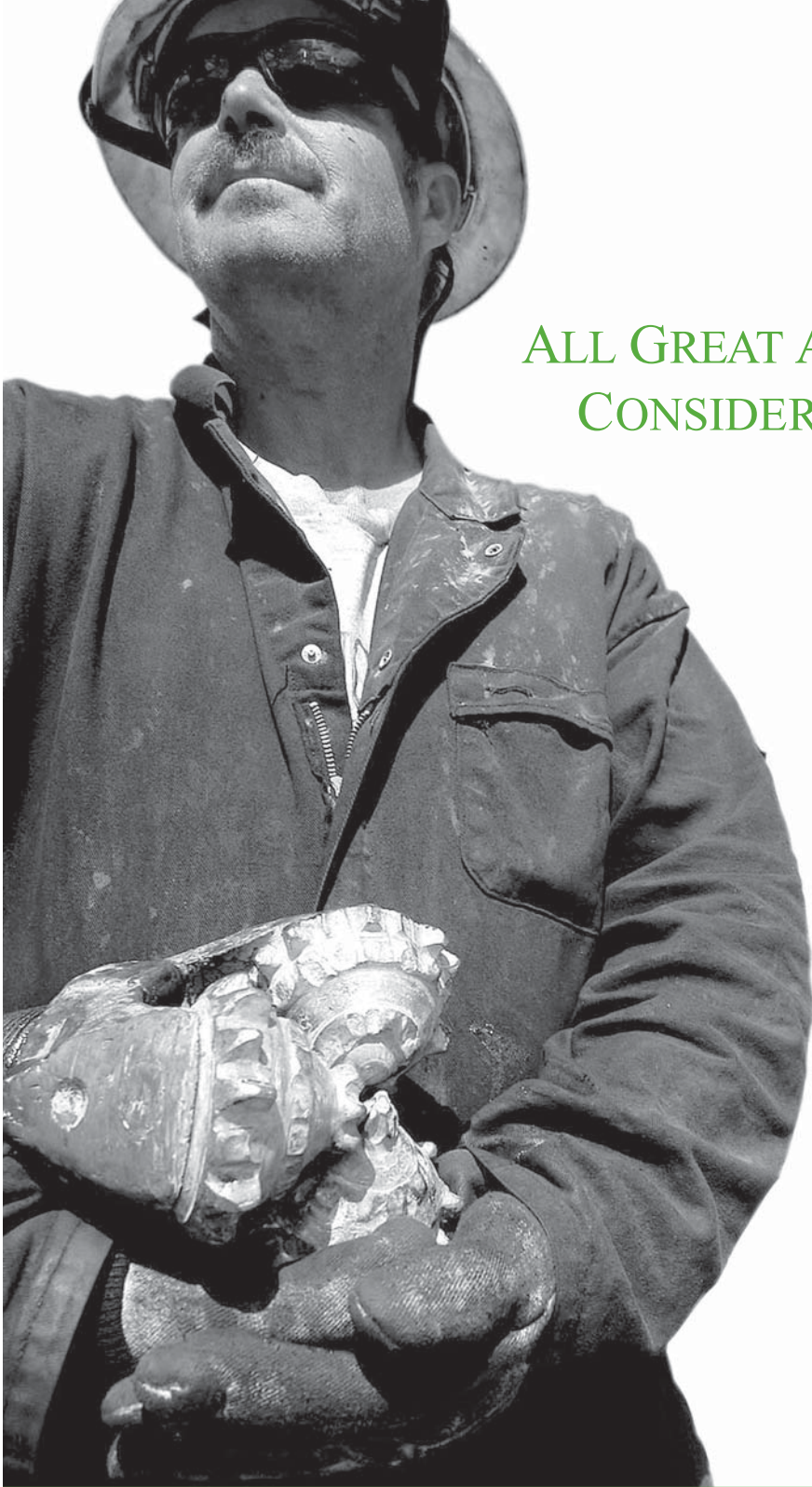
In Wind Dancer Unit in the Red Desert Basin, Cabot Oil & Gas Corp. and GMT Energy drilled six wells last year for Lewis/Almond targets, and

Cabot says it has between 25 and 50 additional locations. The wells cost \$1.6 million and recover ultimate reserves of up to 4 billion cubic feet equivalent (Bcfe).

2 *Uinta*—This eastern Utah basin produces 740 million cubic feet of gas per day. It is enjoying brisk tight-gas drilling for low-risk targets in the Tertiary Wasatch and Cretaceous Mesaverde formations in the Greater Natural Buttes area, which was recently downspaced. Wells that target only the Wasatch are generally between 6,000 and 8,500 feet deep, cost about \$600,000 each and recover an average of 1.25 Bcf per well. Operators drill to depths of 11,000 feet to combine the Wasatch with the stacked, lenticular Upper Mesaverde sandstones. These wells can be drilled for costs of \$1- to \$1.5 million, and can recover up to 1.4 Bcf each.

About 20 rigs are running in the Uinta, contracted to such operators as Kerr-McGee Corp., Questar, Bill Barrett Corp., EOG Resources, Dominion Exploration & Production, Houston Exploration Co. and Berry Petroleum. A deeper zone, the Lower Mesaverde Blackhawk, is also generating interest. These wells cost upward of \$3 million each and can recover up to 2.8 Bcf, according to Gasco Energy. That firm plans 20 Blackhawk wells this year.

There are some 2,300 producing wells in the field, and this number could go as high as 5,000. BP is a major operator at Wamsutter, holding some 350,000 acres that comprise about 40% of the field; Marathon, Anadarko Petroleum and Devon Energy also have noteworthy positions.



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EnCana may have turned a few heads when we began focusing on innovative ways to tap unconventional reservoirs. As it turns out, those resources are capable of sustaining energy growth right here in the American West. Which is a great advance indeed.



3 Piceance—Northwestern Colorado’s Piceance Basin is home to a vast oil-shale resource and as much as 300 Tcf of in-place gas resource. At present, the basin produces 800 million cubic feet of gas and 18,000 barrels of oil per day. The productive reservoirs are mainly in the Williams Fork section of the Cretaceous Mesaverde formation, at depths between 4,500 and 8,500 feet. Average wells cost about \$1.1 million and recover 1.2 to 1.4 Bcf apiece, and fields are drilled on spacing as tight as 10 acres per well.

About 50 rigs are working in the basin, mainly in a fairway that encompasses Grand Valley, Parachute, Rulison and Mamm Creek fields. EnCana, Williams, Bill Barrett, Teton Energy, Delta Petroleum and XTO Energy are all working in the Uinta; Noble Energy, Occidental Petroleum and Petroleum Development Corp. have ongoing programs as well. Privately held Laramie Energy and Orion Energy Partners also have projects.

4 Paradox—Southeastern Utah and southwestern Colorado’s Paradox Basin produces about 100 million cubic feet of gas per day, plus 11,000 barrels of oil. It is also the home of McElmo Dome, a carbon dioxide field that makes about 1 Bcf per day. The Paradox wells generally target the Honaker Trail, Cutler, Hermosa and Ismay gas zones, and are 10,000 feet or less in depth. Reserves can be up to 4 Bcf per well.

Cabot, EnCana and Questar are engaged in programs in the Paradox. Cabot discovered Double Eagle and Single Eagle fields in the San Miguel County, Colorado, and EnCana has been running a drilling program in the same county at Hamilton Creek Field. Additionally, the Calgary company recently made a discovery at Bull Horn Field in San Juan County, Utah.

5 Denver-Julesburg—The DJ Basin lies in eastern Colorado, southeastern Wyoming and southwestern Nebraska. Nearly 20 rigs are drilling in the basin, which produces some 625 million cubic feet of gas and 38,000 barrels of oil per day. The basin is home to 3-Tcf Wattenberg Field, one of the largest gas fields in the U.S. onshore. The Cretaceous Codell and Niobrara formations are drilled on 40-acre spacing in Wattenberg and offer substantial downspacing potential.

Kerr-McGee Corp., which has more than half a million acres in the basin and operates 3,700 wells there, is running a pilot project that features a fifth well in the center of a quarter section. The company has drilled 160 such wells through May and says that 75% of the increased density wells are encountering virgin reservoir pressures. It anticipates receiving final approval from Colorado regulators for 20-acre downspacing at Wattenberg late this year. The company says that the infill wells can recover 30,000 to 60,000 barrels of oil equivalent (BOE), and have returns between 20% and 50%. It could have 2,000 potential drillsites and a gross reserve potential of 60- to 120 million barrels of oil.

Noble Energy, which recently acquired long-time Wattenberg operator Patina Oil & Gas, has said that it has identified more than 8,700 projects in the field on its 220,000 net acres of leases. The projects could add 120 million BOE to the 157 million BOE

in proved reserves Noble acquired in the Patina deal. Petroleum Development Corp. also works Weld County.

Additionally, a bustling play has been blooming in the shallow Niobrara in the eastern portion of the basin. This is not the typical tight-gas play, as the reservoir is actually a low-permeability chalk. Operators such as Houston Exploration, Teton Petroleum Co., Tipperary Oil & Gas Corp., Berry Petroleum, Western Gas Resources and Bill Barrett are drilling wells in the continuous-type biogenic gas reservoir. Commercial fields are developed on “sweet spots” usually associated with structural features.

Finally, with all of the attention on unconventional resources, conventional gas plays sometimes are overlooked. Indeed, the dividing line between the two classifications often seems blurry, but conventional plays remain an integral part of Rocky Mountain production and underpin the region’s supply picture. Southeastern Colorado’s Las Animas Arch persists as a favorite of independents that prospect for moderate-depth Pennsylvanian and Mississippian reservoirs. North-central Montana’s shallow Cretaceous plays in Phillips and Blaine counties are popular.

6 Wind River—This central Wyoming basin produces some 680 million cubic feet of gas and 11,300 barrels of oil per day from conventional and unconventional reservoirs. The basin is particularly lively these days, and several companies have substantial programs in progress.

Burlington Resources, the major producer in the basin, continues to develop its Madden Field area, where it produces gas from eight ultradeep, extremely prolific Madison wells. The company also drills 30 to 40 wells annually into Lower Fort Union reservoirs at Madden. Bill Barrett has projects near Waltman and Cave Gulch fields. EnCana gained a strong position in the Wind River Basin with its acquisition of Tom Brown in May 2004. Chevron has been a long-time producer and operator, and newcomer Delta Petroleum has a large play at Howard Ranch west of Madden Field. This is a deep Mesaverde prospect, with the potential for up to 260 locations, with possible reserves between 7 and 10 Bcf per well.

Oil-prone basins

While the Rocky Mountain region is considered a gas-supply powerhouse, it also holds hefty reserves of oil. Several basins are strongly oil-prone, including the Williston, Big Horn and Powder River. Montana’s Sweetgrass Arch has been a locus for oil accumulations, and such basins as the Uinta and Paradox are home to Altamont/Bluebell, Red Wash and Aneth fields. Indeed, most of the Western basins contain meaningful oil fields, and the region produces more than 400,000 barrels of oil and condensate per day.

Several firms are engaged in secondary recovery operations. Burlington Resources is producing 30,000 barrels of oil per day gross from its horizontal waterfloods at Cedar Hills South and East Lookout Butte fields in the Williston Basin. Continental Resources and Encore Acquisition Co. also have large projects



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under way on the Cedar Creek Anticline. Anadarko Petroleum is pushing ahead with tertiary oil recovery ventures in the Washakie and Powder River basins, and Chevron has been using carbon dioxide flooding at 860-million-barrel Rangely Field in the Piceance Basin since 1986, which still produces 14,000 barrels of oil per day.

7 *Williston*—The immense, oil-prone Williston Basin straddles portions of North Dakota, Montana and South Dakota, and extends across the U.S./Canada border into Saskatchewan. The basin is alive with activity, with 50 rigs at work at press time on the U.S. side alone. Last year, the Williston produced an average of 160,000 barrels of oil and 240 million cubic feet of gas per day.

Operators are using horizontal technology to drill phenomenal wells in the Middle Dolomite member of the Devonian Bakken formation. The hot play, which includes some 150 wells to date, is tapping oil reserves in the thin reservoir that occurs at depths of about 10,000 feet in a narrow trend in Richland County, Montana. Horizontal wells with laterals in the range of 8,000 feet can be drilled for \$2.5- to \$3 million and recover 300,000 to 500,000 BOE. Operators are working to extend the play into North Dakota, where the reservoir is thinner and the trend narrows.

Private firms Lyco Energy Corp. (recently merged with Enerplus Resources Fund), Headington Oil, Continental Resources and Slawson Exploration Co. are driving the play, and public companies with meaningful positions include Burlington Resources, St. Mary Land & Exploration, Berry Petroleum, Petroleum Development and Kodiak Oil & Gas Corp.

Companies are also tapping the Mississippian Mission Canyon, Devonian Nisku and Ordovician Red River formations. Whiting Petroleum has been using horizontal wells to access Nisku oil in Billings and Golden Valley counties, North Dakota. The company says that grassroots, dual-horizontal wells cost \$2.5 million and can recover up to 290,000 barrels of oil apiece. The re-entry of existing wells can be even more attractive, with

costs of \$900,000 to a casing-exit, single horizontal.

2 *Uinta*—While the Uinta Basin is well known for its Wasatch and Mesaverde tight-gas plays, it also has an ongoing oil play in the Green River formation. Extensive oil fields were discovered in Green River reservoirs in the 1950s, and today the basin still produces about 30,000 barrels of oil per day.

In Duchesne County, Berry Petroleum has a vibrant program in Brundage Canyon Field, developing Green River reserves in a section between 1,300 and 5,500 feet deep. The company has expanded daily production from 1,200 BOE at the time it



SST Energy Corp. Rig No. 17 of Casper drills another gas well for Bill Barrett Corp. in the Coopers Reservoir, Natrona County, Wyoming.

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acquired the property in 2003 to 5,000 BOE at present, and still holds a large drilling inventory. It has been testing 40-acre development, and plans 59 wells on the property this year.

Newfield Exploration is also busy in the basin. In August last year, it acquired Inland Resources' interests in Monument Butte. The field has 2 billion barrels of oil in place, of which only 30 million barrels have been produced. Newfield operates the 110,000-acre field and holds an average working interest of 80%. It plans to drill between 175 and 200 wells in Monument Butte annually for the next several years, and currently runs three rigs. Typical wells cost \$500,000 and recover 75,000 barrels of oil each. At the end of the first quarter, Newfield was producing 9,200 barrels of oil and 18 million cubic feet of gas a day on a gross basis from the field.

8 *Powder River*—Anadarko's Salt Creek project is an enhanced oil recovery effort in Salt Creek Field, in Natrona County, Wyoming. The field contains 1.7 billion barrels of oil in place, and has produced 665 million barrels since its discovery in 1908. The company built a 125-mile carbon dioxide supply line to Salt Creek, and ramped production up to 7,500 barrels per day at mid-year 2005. At its peak, Salt Creek will be producing 28,000 barrels per day.

El Paso recently announced its purchase of privately held Medicine Bow, which had developed a large position in the House Creek Field area in Campbell County. El Paso now is producing oil from the Sussex formation in three units and has a sizeable Parkman project in the early stages of development.

9 *Big Horn*—North-central Wyoming's Big Horn Basin does not produce a great deal of oil, making about 40,000 barrels a day, along with 60 million cubic feet of gas. Marathon Oil Co. ranks as the top producer, operating Oregon Basin, the largest oil field. At present, activity is fairly muted in the Big Horn, although Cabot has been running a drilling program in Washakie County, and such operators as Devon Energy, Hunt Oil Co. and Davis Petroleum are pushing down wells.

CBM basins

The growth in coalbed-methane (CBM) production during the past decade in the Rocky Mountain basins has been startling. The heavyweight producer remains the San Juan Basin, which makes about 2.5 Bcf per day from coal seams. The Powder River Basin ranks second, with 800 million cubic feet per day flowing from its vast CBM play. Utah contributes 230 million per day from its



Drilling up western Colorado's gas-rich Piceance Basin.

Ferron play in Carbon and Emery counties. The basin with the most notable growth potential, however, is the Greater Green River.

10 *San Juan*—The San Juan Basin, which lies in northwestern New Mexico and southwestern Colorado, produces more natural gas than any other Rockies basin. The New Mexico side makes 2.9 Bcf per day, and the Colorado portion contributes an additional 1.3 Bcf per day. About 60% of the production is from coals in the Fruitland formation, and the remainder comes from tight-gas sandstones in the Cretaceous Mesaverde, Dakota and other formations.

Burlington Resources is the dominant producer, posting volumes of about 750 million cubic feet of gas per day. About 70% of its production flows from conventional reservoirs, which have decline rates of less than 15% per year. The company says it can sustain its production volumes with modest capital investments, and that it has 2.6 Tcf of development inventory. BP, ConocoPhillips and Devon Energy, which had its start in the San Juan Basin, also have sizeable operations there. Williams operates more than 760 wells that produce 135 million cubic feet per day. Noble Energy, XTO, Williams and El Paso all have interests in the prolific San Juan.

Recently, officials in LaPlata County, Colorado, approved a plan BP advanced to increase well density to 80 acres, from the current spacing of 160 acres, on 40,000 acres of leases that it holds in the county. Samson Resources also has a substantial acreage position and may drill some 150 infill wells on its properties.

8 *Powder River*—Northeast Wyoming's Powder River Basin



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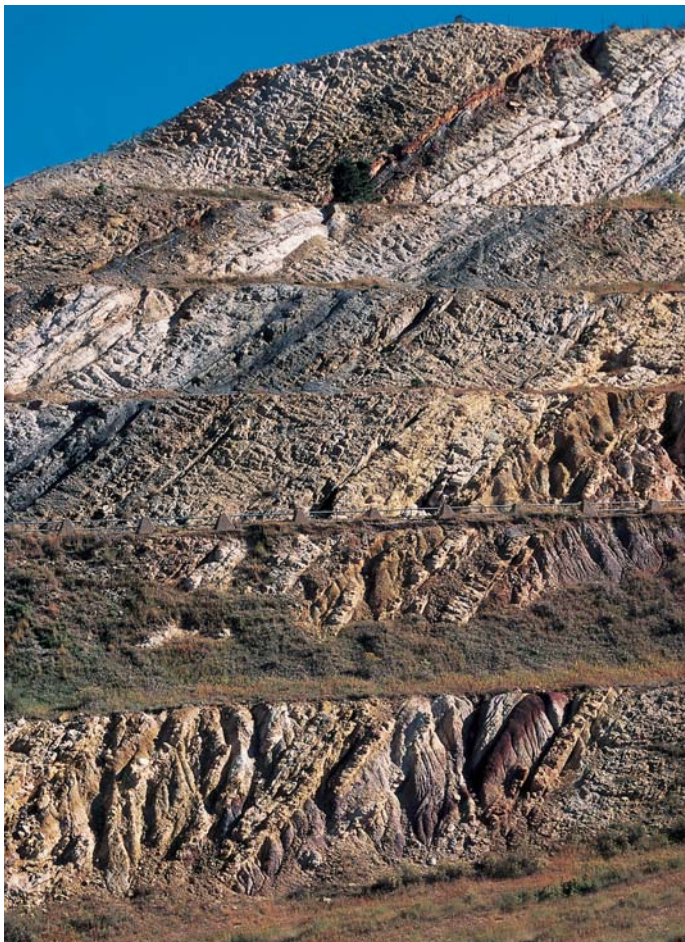
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CBM production was initially developed in the thick, shallow Wyodak coals. It has since spread to multiple-seam completions in the split coal regions and to the deeper Big George coals. Total CBM production from the Big George seam, which varies between 30 and 200 feet thick, exceeds 240 million cubic feet per day. This year, Williams and Western Gas Resources plan to drill 850 wells in the Powder River. Williams operates more than 2,800 wells that produce 150 million cubic feet per day and jointly owns with Western another 3,000 wells that produce an additional 150 million a day.

Other operators include Marathon, Bill Barrett, Galaxy Energy and Pinnacle Gas Resources. Pinnacle recently acquired some 220,000 net undeveloped acres from Marathon's Pennaco subsidiary. Petro-Canada entered the CBM play with its acquisition of Prima Energy Corp. last June, gaining the more than 1,600 proved and possible locations that Prima had amassed in the Powder River. Additionally, Fidelity Exploration & Production is spearheading a large development on the Montana side of the basin.



The Dakota sandstones, prolific oil and gas reservoirs in the Denver-Julesburg Basin, offer a unique geologic history.

In a new area under development in the western Powder River, called Hanging Woman Basin, St. Mary Land & Exploration plans to drill 150 multiple-seam wells this year. Its 160-acre wells can produce from three coals each. The company says it has 2,000 to 4,000 potential locations on its 150,000-net-acre leasehold. It currently produces 2.3 million cubic feet a day; the wells cost up to \$200,000 each and recover reserves of up to 440 million cubic feet.

1 Raton—Pioneer Natural Resources acquired Evergreen Resources in 2004, adding Evergreen's 360,000 net acres in the Raton Basin to its portfolio. This year, Pioneer plans to drill 300 wells in the Raton, located in south-central Colorado and northeastern New Mexico. It is drilling 30 to 40 wells per month, and this year expects to grow production 5% to 7% from 2004 volumes.

Pioneer is eagerly anticipating a pipeline expansion, expected to be completed soon, that will increase transportation capacity and allow production to grow from the basin's current rate of 330 million cubic feet of gas per day. El Paso is an important operator on the New Mexico side, where it produces some 70 million cubic feet per day from the 580,000-acre Vermejo Park Ranch properties.

1 Green River—A number of projects are in progress in the Green River Basin, the largest of which is Atlantic Rim in the Washakie Basin. Anadarko Petroleum holds substantial acreage, and companies Double Eagle Petroleum, Warren Resources and Kodiak Oil & Gas are also involved in the area. Development targets Mesaverde coals at depths of 1,300 feet.

At present, operators are awaiting the completion of an environmental impact study to resume CBM drilling in the area. Anadarko has some 200,000 acres in the play, and will operate the Sun Dog, Brown Cow, Doty Mountain and Blue Sky units, and Double Eagle will operate Catalina Unit. The latter firm, which holds some 30,000 net acres, reports that it has produced 3.5 Bcf from 14 wells to date in Cow Creek, and has three wells that have produced more than 700 million cubic feet. Conventional targets are prospective in the area as well, and a deep test is planned in Cow Creek Field.

Warren and Kodiak are advancing a related project called Pacific Rim. The latter firm reports that it has 15 producing wells that can recover 1.25 Bcf per well in the Almond coals. Well costs are \$450,000, including water disposal, for depths between 1,000 and 4,500 feet. Tight-gas potential also exists in this area, and Anadarko has formed the Copper Ridge Unit north of Pacific Rim to target resources in coals and sands.

Thrustbelt plays

The Wyoming Overthrust play is still a formidable producer, making 1.1 Bcf of gas and 5,500 barrels of oil per day. Its extension into Summit County, Utah, contributes another 1,500 barrels of oil and 53 million cubic feet per day to Rockies production.

Wolverine Gas & Oil Co.'s discovery last year of Covenant



Basin	Proved and Probable Reserves (Tcfe)	% of total
Greater Green River	17	28%
San Juan	12	20%
Uinta-Piceance	11	17%
Powder River	9	14%
Williston	4	6%
Denver-Julesburg	3	5%
Raton	2	4%
Wind River	2	3%
Others: Big Horn, Paradox, Northern Great Plains	2	3%
Total	62	100%

*Top 37 companies analyzed to Jan 2005

Rockies remaining reserves. (Source: Wood Mackenzie)

Field in Sevier County, Utah, in the Utah Hingeline play has revived interest in Overthrust prospects. The private firm discovered an outstanding field in a remote area, 150 miles from the nearest correlative production. The Kings Meadow Ranches No. 1-17 discovery well, completed last spring, encountered 487 feet of net oil pay in the Jurassic Navajo sandstone. The structure has 600 feet of closure, covers 1,200 acres and contains 40° gravity oil. Ten wells will be needed to develop the field, which had produced more than 300,000 barrels of oil through March.

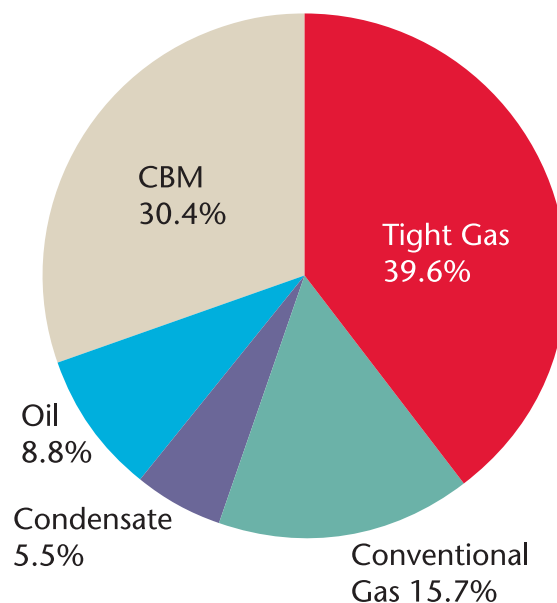
drill several more wildcats in the area.

Clearly, interest in the Rockies is at a peak. High gas prices are encouraging a spate of corporate acquisitions and a surge in exploration and development drilling. The Rocky Mountain basins are finally proving to the industry that they can deliver the production growth and long-lived reserve profiles that companies seek. ■

The Rocky Mountain basins are finally proving to the industry that they can deliver the production growth and long-lived reserve profiles that companies seek.

The Covenant discovery has touched off a mini-boom in Utah's thrust province. Wolverine has amassed half a million acres of leases in the region, and has identified more than two dozen structures on its holdings. To date, the company has drilled seven wells at Covenant Field and has spudded a wildcat 14 miles to the northeast. Cleary Petroleum Corp. is also drilling a wildcat in Juab County.

In the mature Wyoming Overthrust, Tulsa independent Zinke & Trumbo Inc. recently made news with an Amsden/Madison gas discovery in southern Lincoln County. The company has plans to



*Top 37 companies analyzed to January 2005

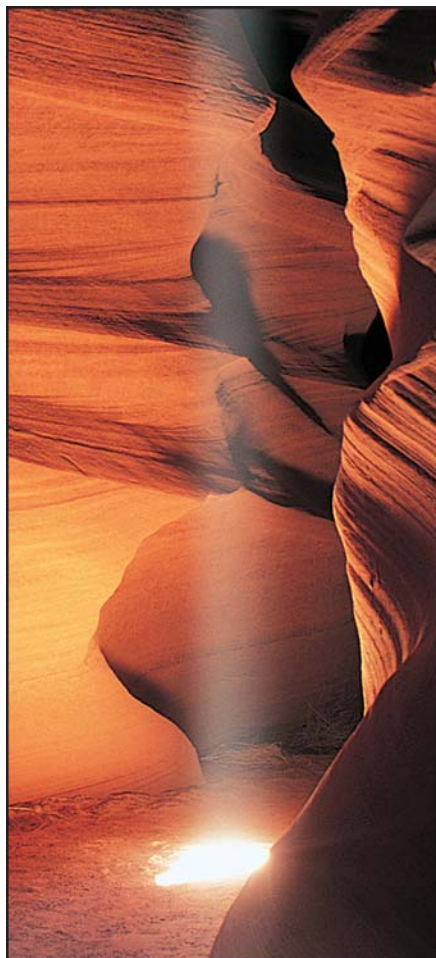
Rockies remaining reserves by hydrocarbon type—62 Tcfe.*

(Source: Wood Mackenzie)

A Company-by-Company Look at Operators in the Rocky Basins*

Company, Stock Symbol, Headquarters	Basin	Type of Play	Production from Basin	Comments
Amerada Hess Corp. (NYSE: AHC), New York City	Williston (ND)	Natural Gas/Oil	22%	Production Q2 19,000 BOE
American Oil & Gas (AMEX: AEZ), Denver	Big Horn (MT)	CBM	100%	50% working interest in approx. 18,200 leasehold acres
	Powder River (WY)	Natural Gas/Oil		50% working interest in a Mowry oil shale project
	Williston (MT)	Oil		Horizontal drilling program targeting Mississippian Bakken Formation
Anadarko Petroleum (NYSE: APC), The Woodlands, TX	Denver-Julesburg (CO)	Natural Gas		
	Green River (WY)	Natural Gas/Oil		
	Land Grant (WY, CO, UT)	Natural Gas/Oil	22% of total US MBOE/d	
	Powder River (WY)	CBM		
Berry Petroleum (NYSE: BRY), Bakersfield, CA	Uinta (UT)	Oil and Natural Gas		Brundage Canyon leasehold totals 47,300 gross acres (45,420 net)
Bill Barrett Corp. (NYSE: BBG), Denver	Big Horn (WY)	Natural Gas	100%	Company acquired 112,295 net undeveloped acres (70% working interest) in this exploration project
	Denver-Julesburg (CO)	Natural Gas		Nearing completion of 530 linear mile 2-D seismic survey and plans to acquire up to 100 square miles of 3-D seismic before year end
	Green River (WY)	Natural Gas		
	Piceance (CO)	Natural Gas		Twenty wells drilled in 2005 have been completed at initial maximum daily rates ranging from 375 Mcf/d to 2,400 Mcf/d (gross)
	Uinta (UT)	Natural Gas		Initial production in West Tavaputs ranged between 1.1 MMcf/d to 3.1 MMcf/d (gross)
	Wind River (WY)	Natural Gas		Largest producing area; projects include infill, expansion and eight exploration projects
Burlington Resources (NYSE: BR), Houston	San Juan (NM, CO)	Natural Gas	26%	Net production during 2004 was 744 MMcfe/d
Cabot Oil & Gas (NYSE: COG), Houston	Big Horn (WY)	Natural Gas		
	Green River (WY)	Natural Gas	31% natural gas 9% oil (Q2 2005)	Produced 5.7 Bcf of gas and 45 MMbbl of oil in Q2 2005
	Paradox (CO)	Natural Gas		
	Wind River (WY)	Natural Gas		
Chevron (NYSE: CVX), San Ramon, CA	Wyoming	Natural Gas/Oil	5% of US total production	
ConocoPhillips (NYSE: COP), Houston	San Juan (NM)	CBM	33% of US total production	Produced 94 MBOE/d in 2004
	Uinta (UT)	CBM	Oil	Produced 972 Bbl/d; 356,000 barrels total in 2004
Continental Energy Corp. (OTCBB: CPPXF), Enid, OK	Big Horn (WY)	Oil	66%	Produced 7,344 Bbl/d; 2.7 million barrels total in 2004
	Denver-Julesburg (CO)	Natural Gas		
Delta Petroleum (NASDAQ: DPTR), Denver	Piceance (CO)	Natural Gas		
	Wind River (WY)	Natural Gas	30%	
	Big Horn (WY)	Natural Gas		
Devon Energy (NYSE: DVN), Oklahoma City	Green River (WY)	Natural Gas		
	Powder River (WY)	CBM		Natural gas production was approx. 76 MMcf/d as of December 31, 2004
	Uinta (UT)	Oil		
	Washakie (WY)	Natural Gas	9%	Devon's most significant conventional natural gas play in Rockies. Net production approx. 15 MBOE/d
	Wind River (WY)	Natural Gas		
	Uinta (UT)	Natural Gas	10%	113 MMcfe/d average daily production
Dominion E&P (NYSE: D), Richmond, VA	Green River (WY)			
Double Eagle (NASDAQ: DBLE), Casper, WY	Washakie (WY)			
	Wind River (WY)		100%	
	Piceance (CO)	Natural Gas/Oil		
El Paso (NYSE: EP), Houston	Powder River (WY)	Natural Gas/Oil	15%	Pre-Medicine Bow acquisition (August 31) production net to company was 21 MMcfe/d; with closing estimated average added 103 MMcfe/d
	Uinta (UT)	Natural Gas/Oil		
El Paso (NYSE: EP), Houston	Wind River (WY)	Natural Gas/Oil		

Company, Stock Symbol, Headquarters	Basin	Type of Play	Production from Basin	Comments
EnCana Corp. (NYSE: ECA; TSX: ECA), Calgary	Jonah (WY)	Natural Gas	20%	First 6 mos. 2005 Daily production 424 MMcf/d
	Piceance (CO)	Natural Gas	14%	
Energen Resources (NYSE: EGN), Birmingham, AL	San Juan (NM)	CBM	38%	First 6 mos. 2005 Daily production 300 MMcf/d
	Green River (WY)			
EOG Resources (NYSE: EOG), Houston	Powder River (WY)			
	Uinta (UT)			
	Williston (MT)		12% natural gas/23% oil	Net daily Rocky Mountain production averaged 129 MMcf/d of natural gas and 6.3 MBbl/d of crude oil, condensate and natural gas liquids
Fidelity Exploration & Production (NYSE: MDU), Denver	Denver-Julesburg (CO)	Natural Gas	71%	
	Powder River (WY)	CBM		
Galaxy (OTC BB: GAXI US), Denver	Williston (MT)	Natural Gas		March 2, company entered a Lease Acquisition and Development Agreement to acquire 58-1/3% working interest in unevaluated oil and gas properties During the 6 mos. ended May 31 recorded natural gas sales volumes of 70,000 Mcf
	Piceance (CO)	Natural Gas		
Gasco Energy (AMEX: GSX), Denver	Powder River (WY, MT)	CBM	100%	
	Green River (WY)	Natural Gas		
Geo Resources (NASDAQ: GEOI), Williston, ND	Uinta (UT)	Natural Gas	100%	Produced 281.9 MMcfe in Q2 2005 Sold 29,323 BOE, or 322 BOE/d, during Q2 2005
	Williston (MT, ND)	Oil and Natural Gas	100%	
Infinity Energy (NASDAQ: IFNY), Denver	Green River (WY)	Natural Gas/Oil		Produced 1.2 Bcfe in Rockies in 2004; 98% from Green River Basin
	Piceance (CO)	Natural Gas/Oil		
Kerr-McGee (NYSE: KMG), Oklahoma City	Sand Wash (CO)	Natural Gas/Oil		
	Denver-Julesburg (CO)	Natural Gas		



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Company, Stock Symbol, Headquarters	Basin	Type of Play	Production from Basin	Comments
Kerr-McGee (NYSE: KMG), Oklahoma City	Green River (WY)			2004 production 57 MMcf/d; 540Bbl/d
	Powder River (WY)			Divesting
	Uinta (UT)	Natural Gas		Gross production 2004, 153 MMcf/d
	Williston (MT, ND)		45% (reserves)	
	Wind River (WY)			600 Bbl/d, 61 MMcf/d
Kodiak Oil & Gas Corp. (TSX Venture: KOG.V), Denver	Green River (WY)	Natural Gas/Oil	100%	
	Williston (ND)	Natural Gas/Oil		
Marathon Oil (NYSE: MRO), Houston	Powder River (WY)	CBM	8% of 2002 resource base	Daily production 69 net MMcf/d during 2004, compared to 82 net MMcf/d in 2003
Newfield (NYSE: NFX), Houston	Uinta (UT)	Natural Gas/Oil	20% (proved reserves)	Acquired Inland Resources in 2004 for \$575 million
Noble Energy (NYSE: NBL), Houston	Denver-Julesburg (CO)	Natural Gas	14%	May, completed acquisition of Patina Energy
	Green River (WY)	Natural Gas		
	Piceance (CO)	Natural Gas		Minimal Production
	San Juan (NM)	Natural Gas		
	Wind River (WY)	Natural Gas		
Peoples Energy (NYSE: PGL), Chicago	San Juan (NM)	Natural Gas		
	Williston (MT)	Natural Gas		
Petro-Canada (TSX: PCA; NYSE: PCZ), Calgary	Denver-Julesburg (CO)	Natural Gas		2004 acquired Prima Energy Corp. 55 MMcf/d production from PRB and D-J
	Powder River (WY)	CBM		
Petroleum Development (NASDAQ: PETDE), Bridgeport, WV	Denver-Julesburg (CO)	Natural Gas/Oil	75%	
	Piceance (CO)	Natural Gas/Oil		
	Pioneer Natural Resources (NYSE: PXD), Dallas	Piceance (CO)	CBM	

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Company, Stock Symbol, Headquarters	Basin	Type of Play	Production from Basin	Comments
Pioneer Natural Resources (NYSE: PXD), Dallas	Raton (NM)	CBM	26% (proved reserves; includes Canada)	September 2004 completed \$1.8B merger with Evergreen
	Uinta (UT)	CBM		
Pyr Energy (AMEX: PYR), Denver	Montana Foothills (MT)	Natural Gas		1 well; 240000 acres
	Overthrust Belt (WY)	Natural Gas	no production	1well; 7000 acres
Questar Corp. (NYSE: STR), Salt Lake City	Green River (WY)	Natural Gas	57%	Produced 6.5 Bcfe in Q2 2005
	Piceance (CO)	Natural Gas		R&D project. Wells to cost \$3-4MM to drill and complete
	Uinta (UT)	Natural Gas		Produced 6.9 Bcfe in Q2 2005
St. Mary Land & Exploration (NYSE: SM), Denver	Great Horn (WY)			
	Green River (WY)			
	Powder River (WY, MT)			
	Williston (MT, ND)		41%	
Stone Energy (NYSE: SGY), Lafayette, LA	Wind River (WY)			
	Green River (WY)	Natural Gas/Oil		21 wells drilled or completed in Pinedale Anticline
	Uinta (UT)	CBM		
	Williston (MT, ND)	Oil		Daily production totals 804 BOE; new core area
The Houston Exploration Co. (NYSE: THX), Houston	Wind River (WY)	Natural Gas/Oil	11%	
	Denver-Julesburg (CO)	Natural Gas		Completed first well in 2005; production was to begin in July
	Green River (WY)	Natural Gas		
	Piceance (CO)	Natural Gas		
Warren Resources Inc. (NASDAQ: WRES), New York City	Uinta (UT)	Natural Gas		Company anticipates a 2005 exit rate for the Uinta Basin of 10 MMcfe/d
	Williston (MT)	Natural Gas	1%	
	Powder River (WY)	CBM	25%	Daily production 1300 Mcf/d
Western Gas Resources (NYSE: WGR), Denver	Washakie (WY)	CBM	23%	Daily production 1200 Mcf/d
	Green River (WY)	Natural Gas		Produced 36.6 MMcf in Pinedale Anticline and 3.3 Bcfe in Jonah field in Q2 2005
	Powder River (WY)	Natural Gas	100%	Production of 10.2 Bcf in Q2 2005
	San Juan (NM)	Natural Gas		Produced 10.1 MMcf/d
Whiting Petroleum (NYSE: WLL), Denver	Sand Wash (CO)			Produced 0.5 Bcfe/d in Q2 2005
	Green River (WY)	Natural Gas		Entered through 2004 Equity Oil Co. acquisition
	Piceance (CO)			Not yet producing
Williams (NYSE: WMB), Tulsa	Williston (MT, ND)	Oil	39% as of July 2005	Year-end 2004 net priced reserves total 172 Bcfe
	Piceance (CO)	Natural Gas	94% of proved reserves	In 2004 drilled 270 gross wells and produced approx. 81 Bcfe
	Powder River (WY)	CBM		In 2004 drilled 723 gross wells and produced approx. 43 Bcfe
Wysak Petroleum (OTC: WYSK), Seattle	San Juan (NM)	CBM		In 2004 participated in 241 gross wells and produced approx. 55 Bcfe
	Bighorn (WY)	Natural Gas/Oil		
	Green River (WY)	Natural Gas/Oil		
XTO Energy (NYSE: XTO), Ft. Worth	Powder River (WY)	CBM		
	Green River (WY)	Natural Gas		
	Piceance (CO)	Natural Gas	18% proved reserves	
	Powder River (WY)	CBM		
	Raton (NM)	CBM		
	San Juan (NM)	Natural Gas		
	Uinta (UT)	CBM		

*Informational chart compiled by Contributing Editor David Wagman.

A Basin-by-Basin Look at Operators in the Rocky Mountains*

Basin	Company, Stock Symbol, Headquarters	Type of Play	Production from Rockies	Comments
Big Horn (MT)	American Oil & Gas (AMEX: AEZ), Denver	CBM	100%	50% working interest in approx. 18,200 leasehold acres
	Bill Barrett Corp. (NYSE: BBG), Denver	Natural Gas	100%	Company acquired 112,295 net undeveloped acres (70% working interest) in this exploration project
	Cabot Oil & Gas (NYSE: COG), Houston	Natural Gas		
	Continental Energy Corp., Enid, OK	Oil		Produced 972 Bbl/d; 356,000 barrels total in 2004
	Devon Energy (NYSE: DVN), Oklahoma City	Natural Gas		
Denver-Julesburg (CO)	Wysak Petroleum (OTC: WYSK), Seattle	Natural Gas/Oil		
	Anadarko Petroleum (NYSE: APC), The Woodlands, TX	Natural Gas		
	Berry Petroleum (NYSE: BRY), Bakersfield, CA	Natural Gas	23%	Current production is approx. 9 MMcf/d of natural gas. Nearing completion of 530 linear mile 2-D seismic survey and plans to acquire up to 100 square miles of 3-D seismic before year end
	Bill Barrett Corp. (NYSE: BBG), Denver	Natural Gas		
	Delta Petroleum (NASDAQ: DPTR), Denver	Natural Gas		
	Fidelity Exploration & Production (NYSE: MDU), Denver	Natural Gas	71%	
	Kerr-McGee (NYSE: KMG), Oklahoma City	Natural Gas		Acquired 2001, operates 3,700 wells; 2004 production was 235 MMcf/d 8,300 bb/d
	Noble Energy (NYSE: NBL), Houston	Natural Gas	14%	May 2005 completed acquisition of Patina Energy
	Petro-Canada (TSX: PCA; NYSE: PCZ), Calgary	Natural Gas		2004 acquired Prima Energy Corp. 55 MMcf/d production from PRB and D-J
	Petroleum Development (NASDAQ, NMS: PETDE), Bridgeport, WV	Natural Gas/Oil	75%	
The Houston Exploration Co. (NYSE: THX), Houston	Natural Gas		Completed first well in 2005; production was to begin in July	
Great Horn (WY)	St. Mary Land & Exploration (NYSE: SM), Denver			
Green River (WY)	Anadarko Petroleum (NYSE: APC), The Woodlands, TX	Natural Gas/Oil		
	Bill Barrett Corp. (NYSE: BBG), Denver	Natural Gas		
	Cabot Oil & Gas (NYSE: COG), Houston	Natural Gas	31% natural gas 9% oil (Q2 2005)	Produced 5.7 Bcf of gas and 45 MMbl of oil in Q2 2005
	Devon Energy (NYSE: DVN), Oklahoma City	Natural Gas		
	Double Eagle (NASDAQ: DBLE), Casper, WY			
	EOG Resources (NYSE: EOG), Houston			
	Gasco Energy (AMEX: GSX), Denver	Natural Gas		
	Infinity Energy (NASDAQ: IFNY), Denver	Natural Gas/Oil		Produced 1.2 Bcfe in Rockies in 2004; 98% from Green River Basin
	Kerr-McGee (NYSE: KMG), Oklahoma City		100%	
	Noble Energy (NYSE: NBL), Houston	Natural Gas		
Western Gas Resources (NYSE: WGR), Denver	Natural Gas		Produced 36.6 MMcf in Pinedale Anticline and 3.3 Bcfe in Jonah field in Q2 2005	
Whiting Petroleum (NYSE: WLL), Denver	Whiting Petroleum (NYSE: WLL), Denver	Natural Gas		Entered through 2004 Equity Oil Co. acquisition
	Wysak Petroleum (OTC: WYSK), Seattle	Natural Gas/Oil		
	XTO Energy (NYSE: XTO), Ft. Worth	Natural Gas		
	Questar Corp. (NYSE: STR), Salt Lake City	Natural Gas		R&D project. Wells to cost \$3-4MM to drill and complete
	The Houston Exploration Co. (NYSE: THX), Houston	Natural Gas		
Piceance (CO)	Whiting Petroleum (NYSE: WLL), Denver			Not yet producing
	Whiting Petroleum (NYSE: WLL), Denver	Not yet producing		
	Williams (NYSE: WMB), Tulsa	Natural Gas	94% of proved reserves	In 2004 drilled 270 gross wells and produced approx. 81 Bcfe
	XTO Energy (NYSE: XTO), Ft. Worth	Natural Gas		
Powder River (WY)	American Oil & Gas (AMEX: AEZ), Denver	Natural Gas/Oil		50% working interest in a Mowry oil shale project
	Anadarko Petroleum (NYSE: APC), The Woodlands, TX	CBM		
	Berry Petroleum (NYSE: BRY), Bakersfield, CA	CBM		
	Bill Barrett Corp. (NYSE: BBG), Denver	CBM		
	Devon Energy (NYSE: DVN), Oklahoma City	CBM		For 2005, company expects to drill 219 CBM wells. Natural gas production was approx. 76 MMcf/d as of December 31, 2004
	El Paso (NYSE: EP), Houston	Natural Gas/Oil	15%	Pre-Medicine Bow acquisition (August 31) production net to company was 21 MMcf/d; with closing estimated average added 103 MMcf/d
	EOG Resources (NYSE: EOG), Houston			
	Fidelity Exploration & Production (NYSE: MDU), Denver	CBM		
	Kerr-McGee (NYSE: KMG), Oklahoma City			Divesting
	Marathon Oil (NYSE: MRO), Houston	CBM	8% of 2002 resource base	Daily production 69 net MMcf/d during 2004, compared to 82 net MMcf/d in 2003
Petro-Canada (TSX: PCA; NYSE: PCZ), Calgary	CBM		2004 acquired Prima Energy Corp. 55 MMcf/d production from PRB and D-J	

Basin	Company, Stock Symbol, Headquarters	Type of Play	Production from Rockies	Comments
Powder River (WY)	Warren Resources Inc. (NASDAQ: WRES), New York City	CBM	25%	Daily production 1300 Mcf/d
	Western Gas Resources (NYSE: WGR), Denver	Natural Gas	100%	Production of 10.2 Bcf in Q2 2005
	Williams (NYSE: WMB), Tulsa	CBM		In 2004 drilled 723 gross wells and produced approx. 43 Bcfe
	Wysak Petroleum (OTC: WYSK), Seattle	CBM		
	XTO Energy (NYSE: XTO), Ft. Worth	CBM	18% proved reserves	
Raton (NM)	Galaxy (OTC BB: GAXI US), Denver	CBM	100%	During the six months ended May 31 recorded natural gas sales volumes of 70,000 Mcf
	St. Mary Land & Exploration (NYSE: SM), Denver			
	Pioneer Natural Resources (NYSE: PXD), Dallas	CBM	26% (proved reserves; includes Canada)	September 2004 completed \$1.8B merger with Evergreen
San Juan (NM)	XTO Energy (NYSE: XTO), Ft. Worth	CBM		
	ConocoPhillips (NYSE: COP), Houston	CBM	33% of US total production	Produced 94 MBOE/D in 2004
	Devon Energy (NYSE: DVN), Oklahoma City	CBM		
	Energen Resources (NYSE: EGN), Birmingham, AL	CBM	38%	
	Noble Energy (NYSE: NBL), Houston	Natural Gas		
	Peoples Energy (NYSE: PGL), Chicago	Natural Gas		
	Western Gas Resources (NYSE: WGR), Denver	Natural Gas		Produced 10.1 MMcf/d
Sand Wash (CO)	Williams (NYSE: WMB), Tulsa	CBM		In 2004 participated in 241 gross wells and produced approx. 55 Bcfe
	XTO Energy (NYSE: XTO), Ft. Worth	Natural Gas		
	Burlington Resources (NYSE: BR), Houston	Natural Gas	26%	Net production during 2004 was 744 MMcfe/d
Uinta (UT)	Infinity Energy (NASDAQ: IFNY), Denver	Natural Gas/Oil		
	Western Gas Resources (NYSE: WGR), Denver			Produced 0.5 Bcfe/d in Q2, 2005
ConocoPhillips (NYSE: COP), Houston	Berry Petroleum (NYSE: BRY), Bakersfield, CA	Oil and Natural Gas		Brundage Canyon leasehold totals 47,300 gross acres (45,420 net)
	Bill Barrett Corp. (NYSE: BBG), Denver	Natural Gas		Initial production in West Tavaputs ranged between 1.1 MMcf/d to 3.1 MMcf/d (gross)
	Devon Energy (NYSE: DVN), Oklahoma City	Oil		

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Basin	Company, Stock Symbol, Headquarters	Type of Play	Production from Rockies	Comments
Uinta (UT)	Dominion E&P (NYSE: D), Richmond, VA	Natural Gas	10%	113 MMcfe/d average daily production
	El Paso (NYSE: EP), Houston	Natural Gas/Oil		
	EOG Resources (NYSE: EOG), Houston			
	Gasco Energy (AMEX: GSX), Denver	Natural Gas	100%	Produced 281.9 MMcfe in Q2 2005
	Kerr-McGee (NYSE: KMG), Oklahoma City	Natural Gas		Gross production 2004, 153 MMcf/d
	Newfield (NYSE: NFX), Houston	Natural Gas/Oil	20% (proved reserves)	Acquired Inland Resources in 2004 for \$575 million
	Pioneer Natural Resources (NYSE: PXD), Dallas	CBM		
	Questar Corp. (NYSE: STR), Salt Lake City	Natural Gas		Produced 6.9 Bcfe in Q2 2005
	Stone Energy (NYSE: SGY), Lafayette, LA	CBM		
	The Houston Exploration Co. (NYSE: THX), Houston	Natural Gas		Company anticipates a 2005 exit rate for the Uinta Basin of 10 MMcfe/d
Washakie (WY)	XTO Energy (NYSE: XTO), Ft. Worth	CBM		
	Devon Energy (NYSE: DVN), Oklahoma City	Natural Gas	9%	Devon's most significant conventional natural gas play in Rockies. Net production approximately 15 MBoe/d
Williston (MT)	Double Eagle (NASDAQ: DBLE), Casper, WY			
	Warren Resources Inc. (NASDAQ: WRES), New York City	CBM	23%	Daily production 1200 Mcf/d
	American Oil & Gas (AMEX: AEZ), Denver	Oil		Horizontal drilling program targeting Mississippian Bakken Formation
	EOG Resources (NYSE: EOG), Houston		12% natural gas/23% oil	Net daily Rocky Mountain production averaged 129 MMcf/d of natural gas and 6.3 MBbl/d of crude oil, condensate and natural gas liquids
	EOG Resources (NYSE: EOG), Houston			
Williston (MT, ND)	Fidelity Exploration & Production (NYSE: MDU), Denver	Natural Gas		
	Peoples Energy (NYSE: PGL), Chicago	Natural Gas		
	The Houston Exploration Co. (NYSE: THX), Houston	Natural Gas	1%	
Whiting Petroleum (NYSE: WLL), Denver	Oil	39% as of July		Year-end 2004 net priced reserves total 172 Bcfe

**Informational chart compiled by Contributing Editor David Wagman.*

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EXTREME MAKEOVER: ROCKIES GAS PIPELINES

Market dynamics have led to a flurry of pipeline expansions and new proposals, making it easier for producers to market growing gas output.

BY JOHN A. HARPOLE, CEO, MERCATOR ENERGY, DENVER

I can't remember exactly when it was, spring 1993 or 1994, but I was helping a four-person Casper, Wyo., oil and gas company market its small volumes of natural gas out of a handful of wells, from a tiny field near Pinedale, Wyo. That month the Colorado Interstate Gas (CIG) index price for gas had dropped below a dollar at the tailgate of the Opal, Wyo., gas-processing plant.

That index translated to a mere 60-cent netback to the well-head for McMurry Oil's production at its fledgling Jonah Field.

Back then the Altamont gas pipeline had been proposed, which would go from the Western Canadian Sedimentary Basin down to Wyoming to connect with Kern River's California-bound pipeline. We determined that 80% of the shippers on Altamont had matching existing capacity volumes on Kern River. Thus, if Altamont were built, about 500,000 MMBtu/d of Wyoming gas that had been flowing down Kern River toward California would be immediately shut-in.

Jonah's gas production, less than 10,000 MMBtu/d at the time, would be shut-in. Things looked ugly.

Fast-forward 10 years: the fledgling Jonah gas field is now producing more than 1 billion cubic feet (Bcf) a day, making it one of the largest gas fields in the United States. Jonah was recently featured in *National Geographic's* July issue. There's even a second Jonah field in Wyoming now. The University of Wyoming renamed its football field "the Jonah Field" following a \$5-million donation from Jonah gas field legends Mick McMurry and John Martin.

Jonah gas production isn't the only thing growing in Wyoming. Pipeline export capacity out of the state—and the rest of the Rockies—has increased three-fold since 1991. That extreme pipeline makeover is just the beginning.

Recently, thanks in part to the one-two punch of hurricanes Katrina and Rita, the Nymex February 2006 natural gas futures contract actually had a "14" in front of it. That's \$14 per MMBtu. Rockies gas is also in the \$10-per-MMBtu range for the foreseeable future. What's happening?

Factors affecting gas prices

The relevance of crude oil's impact on natural gas is undeniable; the two commodities have been dancing a tight tango across the Nymex trading floor for years. The ratio of value, crude oil to natural gas, has recently rarely been outside 8-to-1. Quite simply, \$68-a-barrel crude equates to \$9 per MMBtu for gas.

Rockies price predictability has always been the worst in North America compared with the Nymex Henry Hub gas futures price. Although crude oil prices are the biggest factor affecting gas prices, other issues deserve analysis.

Two years ago, the key when discussing Rocky Mountain basis differential (the Rockies price versus the Nymex Henry Hub price) was concerns over index price manipulation. These have, for the most part, been negated by the Commodity Futures Trading Commission (CFTC). During the past two years, the CFTC has imposed and collected more than \$250 million in fines from marketing companies that attempted to manipulate index prices.

Current index prices are real and grounded in actual trades. That's especially true in the Rockies where the four critical spot price indexes on pipelines—Kern, Northwest Pipeline, CIG and Questar, as reported by *Inside FERC Gas Market Report*—have averaged more than 400 reported trades per month per printed index price.

The relevance of crude oil's impact on natural gas is undeniable; the two commodities have been dancing a tight tango across the Nymex trading floor for years.

Another key factor is pipeline capacity. As in the early 1990s, export pipeline and production capacity issues still dictate price movements in the Rockies. For years it's been impossible to have pipeline export capacity that is exactly equal to productive capacity.

In what can only be described as a rare occurrence, current pipeline capacity out of the Rockies exceeds production capacity. That is great news for Rocky Mountain prices. The Rockies basis differential is \$1.40 per MMBtu looking one year out. At a one-year Nymex forward strip of \$11.60 per MMBtu, that translates to an expected Rockies price of \$10.20 per MMBtu for the next year.

The real question is how long excess export capacity will remain available.

Cheyenne Plains

Regional pipeline export capacity increases are helping producers immeasurably. The most recent pipeline expansion, El Paso



Natural Gas Co.'s Cheyenne Plains expansion, is nearly full at 560,000 MMBtu/d—not bad for a newly minted pipeline less than a year old.

The market quickly determines which pipeline provides the highest netback price for producers, the highest margin for its pipeline shippers, and the lowest delivered price for utilities and other consumers. The market has spoken loudly in its endorsement of Cheyenne Plains, which has relatively low costs for compression fuel.

When a gas shipper purchases 10 years of pipeline capacity, a reservation fee for that pipeline capacity and a commodity fee (tied to the actual gas that is transported) is paid. In addition, the shipper pays for fuel, also known as compressor fuel.

A quick review of the fuel cost for pipelines moving gas east from the Rockies shows that Cheyenne Plains' compression cost is one-third of some of its eastward-bound competitors. Although a competitor's 3.3% fuel cost does not seem like much, when you consider that Rockies natural gas is worth \$10 per MMBtu, that's about 33 cents worth of natural gas being consumed for each MMBtu headed east. Comparative fuel costs on Cheyenne Plains are about 13 cents. Newer pipelines and new compression will always have an advantage over older competitors.

Most of the pipes emanating from the Cheyenne Hub take gas eastward to be re-delivered to Midcontinent pipelines that serve utilities and end-users in Illinois, Indiana, Iowa, Ohio, Wisconsin, Missouri, Minnesota and Michigan. From 2001 through 2002, the Midcontinent basis differential—the price difference between natural gas produced in mid-continent production areas, such as Oklahoma—and the Henry Hub Index, averaged about negative

15 cents. This meant gas produced in or delivered to the Midcontinent region was worth 15 cents less than the Nymex Henry Hub price.

The Midcontinent basis differential has now blown out to a negative 95 cents; that marks a six-fold increase in less than two years. This is unprecedented for Midcontinent producers. No one single factor is to blame. However, increasing Rocky Mountain gas production being delivered to the Midcontinent has definitely affected it.

Another Cheyenne Plains Pipeline expansion is in the works for January. That's another 170,000 MMBtu/d of gas headed east. On top of that, Cheyenne Plains can eventually be expanded up to a total of 1.7 Bcf/d with only additional compression. The next massive Cheyenne Plains expansion may well be filled by a producer-driven expansion that caught most market observers off guard last year.

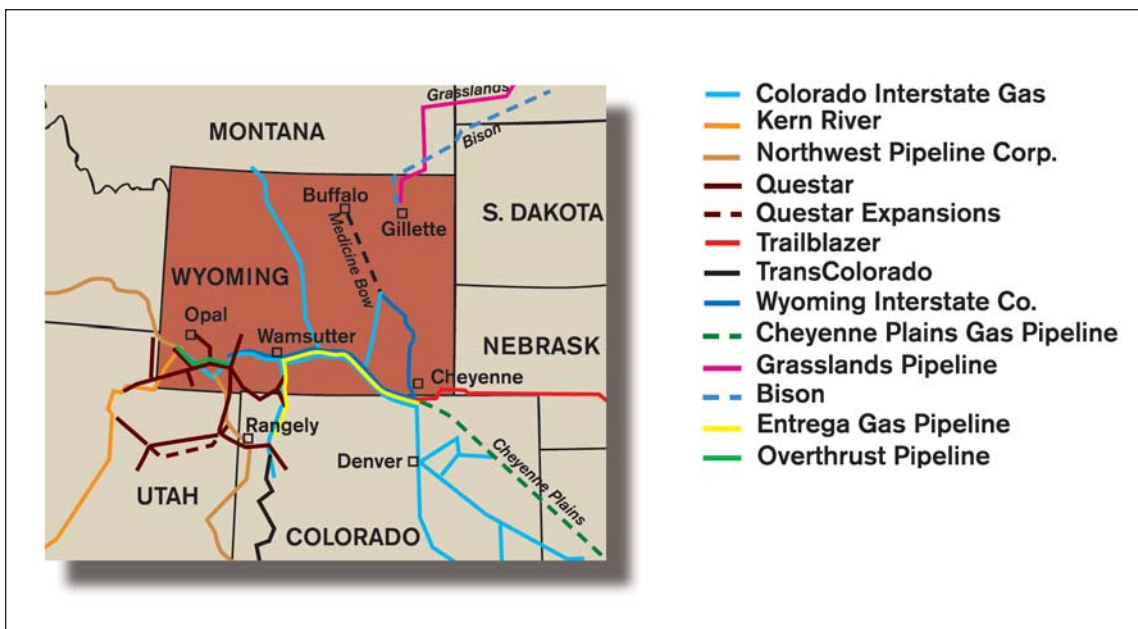
Wyoming Interstate

Simultaneously, Wyoming Interstate Co. (WIC), an El Paso company, announced its WIC Piceance lateral extension, to primarily move Williams Production Cos.' Piceance Basin production north from Greasewood, Colo., to Wamsutter, Wyo. This new pipeline is expected to be in service by January.

In June, El Paso also proposed an extension of the existing and underutilized Overthrust Pipeline, an expansion that would connect Overthrust by extending it up to 21 miles into the Opal, Wyo., market hub. El Paso calls this the WIC Opal West Extension. A critical element is a capacity agreement between Overthrust and WIC. WIC's proposed open season could create

true optionality across the axis of the continental divide for natural gas producers, marketers and shippers. In an apparent competitive "throw down the gauntlet," El Paso-CIG seems to be challenging the second phase of the Entrega pipeline.

Apparently, 42-inch-diameter pipe is becoming the "in" thing. Recently, two basis-busting announcements have been made by two competing eastward-bound pipeline projects.



A rough schematic of each Rockies pipeline.

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Rockies Export Capacity

Description	MMcf/d	Year Added
Base Export Capacity	2,135	1991
Kern River	700	February 1992
Trailblazer	105	August 1997
Pony Express	255	November 1997
Williams	30	December 1997
TransColorado	310	April 1999
Kern River	135	July 2001
Trailblazer	225	April 2002
Kern River	1,000	May 2003
Williston Basin	80	December 2003
TransColorado	125	August 2004
Cheyenne Plains	560	December 2004
Cheyenne Plains Expansion	170	January 2006
Total	5,830	

Source: Craig Coombs, El Paso

The most significant pipeline expansions.

Entrega Pipeline

About a year ago, EnCana Oil & Gas USA announced its own pipeline project: the Entrega Pipeline. This move came as a surprise to many because this was the same EnCana that didn't acquire any pipeline capacity on last year's Kern River expansion—even though EnCana had acquired the prolific Jonah Field from McMurry Oil Co.

EnCana also is developing the Mamm Creek Field in the Piceance Basin in western Colorado, a potential 1 Bcf/d "little sister" to its vast Jonah Field. Those two fields make EnCana the 800-pound production gorilla in the Rockies.

Through Entrega, EnCana was trying to control the timeframe of pipeline expansion required to move its significant Rocky Mountain gas reserves to market, as the pipeline would be used only for its own gas. It was an aggressive and appropriate solution for EnCana.

By proposing the 327-mile Entrega pipeline, EnCana was ignoring the imaginary demarcation line that runs along the axis of the continental divide of the Rocky Mountains. That imaginary line rarely saw gas from the west side of the continental divide move to eastern markets and eastern gas move to western markets. In a "teardown that iron curtain" kind of announcement, EnCana said it would build its own pipeline and freely move its production.

Perhaps the most unusual piece of the Entrega proposal was the reported diameter of the pipeline from Wamsutter to the

Cheyenne Hub—42 inches for that segment is unheard of in the Rockies. That 191 miles of 42-inch diameter pipeline allows for an estimated ultimate design capacity from Wamsutter to Cheyenne of 2 trillion Btu/d. The second phase of the pipeline is scheduled to be in service by late next year.

At press time, however, Kinder Morgan Energy Partners and Sempra Energy agreed to buy Entrega and market its capacity, along with its own new pipeline capacity plans.

Rockies Express

Kinder Morgan Energy Partners and Sempra Pipelines & Storage recently announced plans to build the Rockies Express, a 42-inch-diameter pipeline with capacity to ship 2 Bcf/d to eastern Ohio, from a spot in southwestern Wyoming at Wamsutter hub. That's a distance of 1,500 miles at a cost estimated at \$3 billion.

The ultimate route will be selected based on shipper's interest. Sempra Energy has agreed to bid for 200,000 MMBtu/d and plans to own one-third of the equity interest in the new pipeline. The Wyoming Natural Gas Pipeline Authority (WNGPA) has also committed 200,000 MMBtu/d to help underwrite the project. EnCana also will be an anchor shipper on this line.

With WNGPA's support, it is anticipated that the Wamsutter-to-Cheyenne portion of the project could be completed by late 2006. The portion from there to the Midwest could be completed by year-end 2007. The eastern portion, which provides direct access to markets in the Northeast, could be in service in late 2008 or early 2009.

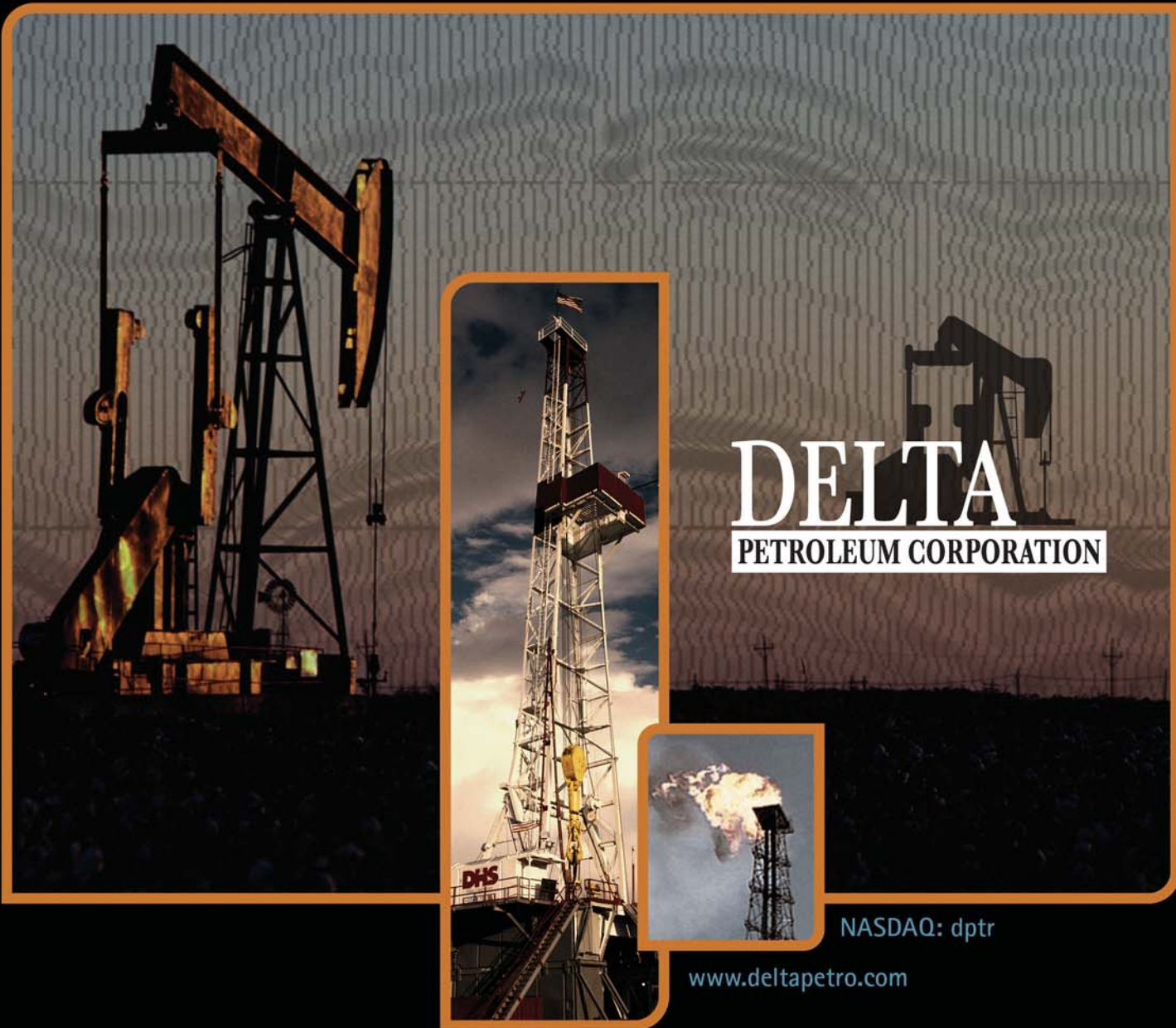
Continental Connector

On October 4, El Paso Corp. proposed a competing line, the Continental Connector project. This would involve construction of more than 1,000 miles of up to 42-inch-diameter pipeline to connect El Paso's CIG Pipeline, WIC Pipeline and Cheyenne Plains Pipeline to ANR Pipeline, Tennessee Gas Pipeline and Southern Natural Gas Pipeline.

El Paso anticipates the in-service date for this pipeline could be as early as November 2008. It was to conduct a non-binding open season to seek input from potential gas shippers through November 4.

It is clear El Paso and Kinder Morgan realize building a pipe to eastern Kansas just moves the Rockies constraint point eastward. It is their opinion that a 2 Bcf/d pipeline to the eastern U.S. is supported by current price and basis differential prognostications. The market will clearly respond to their proposals.

What does all this mean? The flurry of pipeline construction and expansion proposals is good news for Rockies producers. New pipe means new connectivity, which means critical optionality for Rockies gas. We are in the middle of an extreme makeover for Rocky Mountain pipelines. In a turn of Horace Greeley's famous quote, we can now truly say, "Go west—or east—young gas molecule." ■



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HURDLES TO DEVELOPMENT OF WESTERN OIL AND GAS

Regulatory and environmental barriers are the growing hurdles to overcome for oil and gas development in America's energy paradise, also known as the Rocky Mountains.

BY KAREN BROWN, PARTNER, ENERGY STRATEGIES AND SOLUTIONS LLC, DENVER; AND MONICA YETTER, TECHNICAL JOURNALIST, ENERGY STRATEGIES AND SOLUTIONS LLC, WYOMING

One of the key risks for energy development used to be finding the reserves. With the advent of the resource play and advanced technology, reserves are much more predictable. Reserve risk is being replaced by the risks of growing regulatory and environmental barriers that limit access, produce delays or increase development costs.

Is the occasionally tortuous paper trail and time-consuming process worth tackling for operators during the various stages of oil and gas development? Considering the amount of reserves and the record-high gas and oil prices—the answer is unequivocally, yes.

The companies that will be most successful are those mastering the process and evolving requirements, thus allowing a continuous stream of drillable projects, permits and incoming revenue.

Duane Zavadil, vice president, government and regulatory affairs at Bill Barrett Corp., sees operating in the Rockies, with its regulations and environmental considerations, as an opportunity for improvement. It is a new area of expertise for companies, he says.

“You better have your wits about you to start developing in the Rockies, or you will be incredibly frustrated,” Zavadil says.

When painting a large picture of the Rocky Mountains, oil and gas operators say reasonable and timely access to federal lands is critical. Given that 68% of the remaining domestic oil and gas resources are on federal lands in the Western U.S., these concerns are legitimate.

Access problems identified by the Bureau of Land Management (BLM) and U.S. Department of Energy through public comment include concerns about a complex regulatory maze and complicated leasing stipulations that are in some cases inconsistent from region to region.

The specific leasing concerns identified include areas that are closed or restricted; areas where mineral rights can be leased, but the land surface cannot be occupied; split estates where the mineral rights are owned by the state or federal government, but the surface land is privately owned; areas where access to the lease site is restricted (road issues); and roadless areas.

Split estates

Split estates are an emerging issue. Problems can arise when there is a separation in ownership between the entity that owns the sur-

face and the entity that owns the minerals. Because the minerals and its owner have dominance, there has been a push by some organizations and surface owners to increase the input surface owners have on the development process.

Numerous states have passed or introduced split-estate legislation. In Wyoming, a state that recently signed into law split-estate legislation, the expectation is that the development process may take longer as a result of the new time allotments given to ensure the surface owner is notified of various activities that will occur on the land.

The situation is encompassing because the federal government owns mineral resources under about 700 million acres of land onshore. Of this acreage, about 10.5 million acres fall within Colorado, Utah, New Mexico, Montana and Wyoming. In the Rockies, about 20% of land is split estate.

State	Acreage
Arkansas	1 in 9 acres
California	1 in 19 acres
Colorado	1 in 6 acres
Idaho	1 in 4 acres
Montana	1 in 5 acres
New Mexico	1 in 4 acres
North Dakota	1 in 8 acres
Oregon	1 in 14 acres
South Dakota	1 in 24 acres
Utah	1 in 11 acres
Wyoming	1 in 2 1/4 acres

Alaska, Nebraska, Nevada, Oklahoma, Washington and Eastern states Alabama, Florida, Illinois, Indiana, Iowa, Kansas, Louisiana, Michigan, Minnesota, Missouri, Ohio and Wisconsin. Split estates total 92,000 acres, representing small to very small fractions of privately owned land.

Source: BLM

Split Estates—The BLM manages (controls) subsurface acreage of privately owned land.



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Consider oil and gas development in North Dakota versus Wyoming: roughly 12% of North Dakota is split-estate, while 44% of Wyoming is split-estate. This difference points to the potentially more time-consuming processes an operator might encounter when working with separate interest owners in Wyoming.

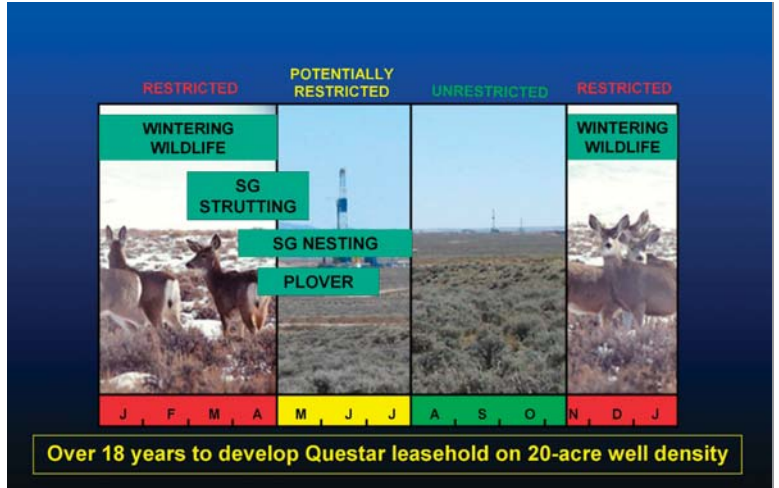
Environmental issues

In addition to leasing concerns, environmental issues are comprehensive and result from adhering to and implementing the Endangered Species Act (ESA). Protecting some 1,265 endangered species in the U.S. leads the environmental concerns. The most significant impact is the seasonal limitations placed on drilling activities. Restrictions based on breeding and winter habitat of wildlife are at the top of the list.

Greg Schnacke, executive vice president of the Colorado Oil & Gas Association, says the problem with the ESA list is that once a species gets on the list, it never comes off. Thus, industry has continually growing restrictions with potential for increasing numbers of species being protected.

Ron Hogan, general manager of the Pinedale division, Questar Exploration, says solutions exist to ensure protection of winter habitat and allow for continuing development. During a two-year period, Questar created a plan to address concerns expressed during the environmental impact statement (EIS) process over mule deer winter habitat as well as fragile sage grouse habitat.

Environmental groups have petitioned the federal government for increased protections for sage grouse, citing declining popula-



At Pinedale, wildlife restrictions compressed drilling activity into a narrow window. (Graphic courtesy of Questar)

tions throughout the West. So far, those appeals have been unsuccessful, but most agencies that have any dealings with sage grouse habitat look more closely at how development occurs in areas where sage grouse are present. Opponents suggest oil and gas development should be prohibited or significantly reduced in areas like the Pinedale Anticline and Wamsutter because of the fragile ecosystem.

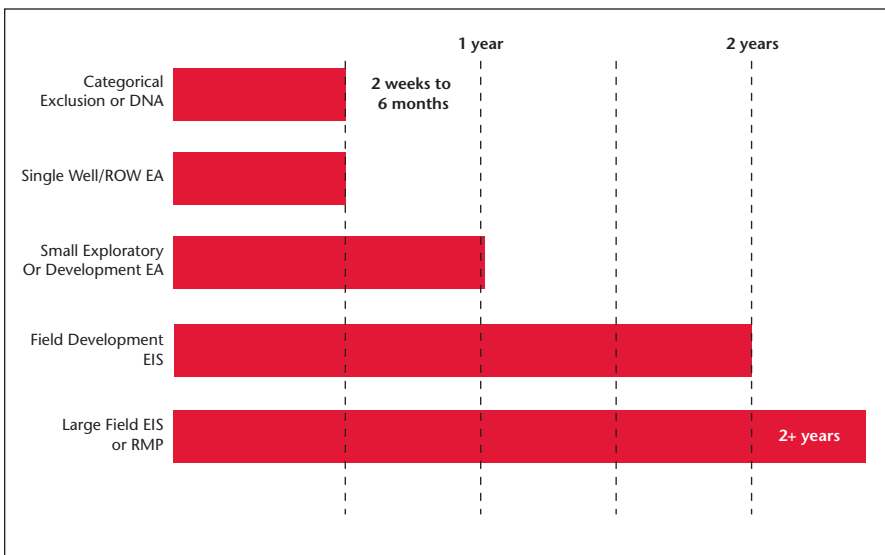
By making use of advanced drilling technology to utilize a pad and multiple S-type wellbores from the same pad, they are able to cut the surface disturbance in half, improving the mule deer and sage grouse conditions relative to the EIS accepted plan. They were also able to expedite the recovery of reserves from 18 years to 9 years—improving the return on investment.

The National Environment Protection Act

The common concerns shared in the Rockies revolve around the National Environmental Protection Act (NEPA). It predominately affects the West, because most of it is federal lands.

“It was created with a good purpose,” says Doug Hock, director of community and public relations with EnCana, “but it has become a ‘tool of obstruction’ that has gone beyond the original intent.”

While EnCana has 22 EIS documents outstanding throughout the U.S., Hock says the company is confident it will work through the process, albeit a bit slower than the desired pace. He says it has become the



As NEPA compliance becomes more in depth and the number of wells in a proposed area increases, the time requirement for permit completion is extended even longer. (Source: Bill Barrett Corp.)



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NEPA governs oil and gas development on federal and Indian land and requires the BLM, Forest Service, Bureau of Indian Affairs and Minerals Management Service, as well as all other federal agencies, to assess and report on the possible environmental impacts of any land management activities they plan or endorse that significantly affect environmental quality, through an environmental assessment (EA).

If an EA determines the activity will in fact affect the environment, the agency requires an EIS to be conducted. The time required to complete an EA or EIS can be up to two years or longer, depending on location and environmental issues.

Since NEPA is a process-intensive law and the BLM and other agencies are improving on their own understanding of the process, the door is open to questions about every action to ensure the process is followed. This has resulted in significant challenges and/or litigation by environmental groups.

NEPA paves the way for public challenges, which run the gamut from when lease parcels are selected for sale, an operator takes a lease, geophysical surveys are requested, EA, EIS and

resource management plans are prepared and more. Whether the challenges are successful, it can mean serious time delays, sometimes even years. The situation is not just one EIS for one lease; smaller numbers of wells are subject to the processes than ever before.

As a result, regulatory agencies are slowing down, scrupulously working to ensure no lawsuit takes place, or if one does, it is a lawsuit they can win. Additionally, companies are helping to ensure all the data are gathered and documentation is included in the EA or EIS.

“It is hard to tiptoe through the process without setting something off,” says Tom Richmond, division administrator of the Montana Board of Oil and Gas Conservation).

Rebecca Watson, assistant secretary of the Department of Interior, said gas protests have risen sharply during the past four years. Pre-lease parcel protests increased from 666 to 4,425—a shocking 664% from one administration to the other. Lease appeals jumped from 366 to 925 during the same period, resulting in a 253% increase.

Additional federal laws also come into play (and sometimes overlap) and require attention. The Clean Water Act and Clean Air

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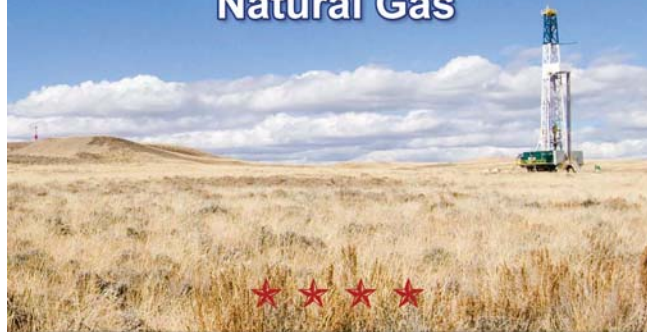
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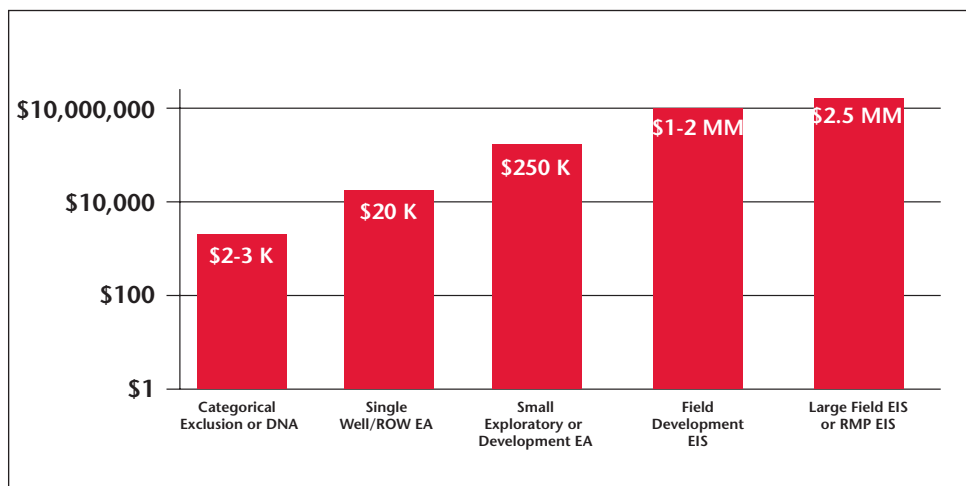
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When NEPA compliance becomes more involved, the number of wells in a proposed area increases and therefore, the time and money to complete the EA, EIS, RMP or DNA also increases. (Source:

Bill Barrett Corp.)

Act play crucial roles in development. They concentrate on making sure the water and air remain safe throughout the development process. Particulate matter is closely watched and water standards are set in many areas and are monitored to quantify the relation between oil and gas development and its effect on the environment.

State laws vary

On a state level, the Department of Environmental Quality, State Engineer's Office, Oil and Gas Conservation Commissions and Game and Fish all have their own rules and regulations, ensuring responsible development in their state with a fine-tooth comb.

Montana—A multitude of regulatory agencies are a barrier to oil and gas development in Montana. It is a case of, “too many players with too many overlapping rules,” Richmond says. Much of this is due to the Montana Environmental Policy Act (MEPA). MEPA and NEPA are the center of the majority of lawsuits that take place.

Wyoming—Water management issues are at the forefront of debate in the Powder River Basin. Potential impacts of discharging or disposing produced water generated during coalbed-gas development are being monitored and studied in an ongoing fashion. To seek more answers and limit controversy and concern, producers are experimenting with different water management techniques including injection into shallow or deep formations, various treatment options along with more sophisticated impoundments. If treatment or injection techniques are used, such techniques will likely be more costly to implement.

Development of coal-seam gas in the Atlantic Rim play faces water challenges as well. Because the coal is deeper and water quality is not as good as in the Powder River Basin, disposal methods are generally injection, which somewhat increases costs.

The high drilling density in Jonah Field makes it unique from

other Wyoming areas. Wells are being downspaced, in some cases to five acres, to maximize recovery, and the dense spacing is feared to negatively affect wildlife. Another concern at Jonah is air quality. Ongoing monitoring and air quality programs are under way to ensure air quality does not deteriorate.

In the Vermillion Basin, near Rock Springs, dominant issues are right-of-way problems for pipelines. Sometimes it takes more than a year to get a right-of-way permit.

Utah and Colorado—Compared with Wyoming's Powder River Basin, the Uinta Basin is considered frontier land and has limited existing infrastructure to support development. There has been sharp and critical

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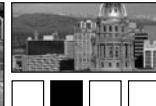
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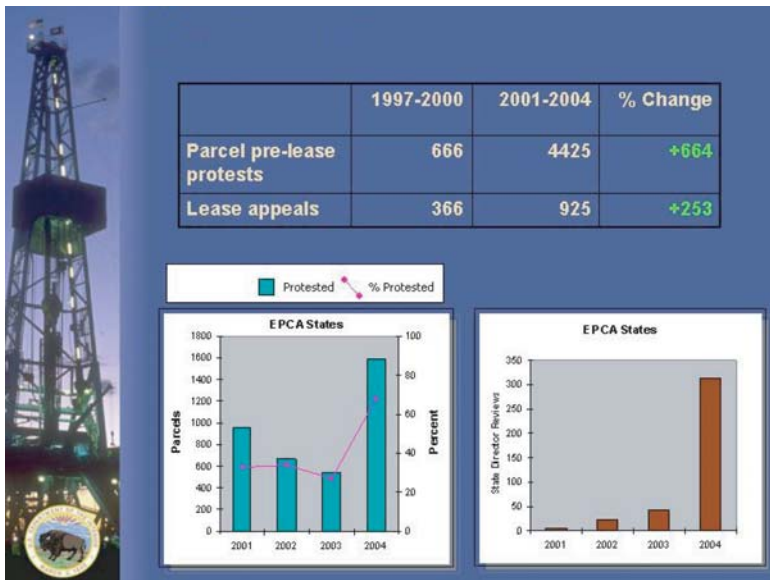
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Oil and gas protests. (Source: Department of the Interior)

debate about proposed wilderness designations in Utah and Colorado.

Leasing is difficult in the Uinta Basin, mostly because of outdated resource management plans. Backlogs for permits to drill and rights-of-way are common. Revisions to the resource management plans often require additional environmental analyses, which must be finished before gas leasing or development can occur. Insufficient staffing compounds the delays.

In the Piceance Basin, the key issue is split estates, which comes down to more of a civil matter than a regulatory issue.

New Mexico—Outdated resource management plans and lack of staff to accommodate the permits are also major problems. Companies are confident that wells will receive permits, but the timing is uncertain. In the San Juan Basin, reserve certainty keeps the ball rolling, however.

Company responses

To cope with regulatory delays, Rockies operators have added manpower in the form of environmental and regulatory specialists. There has also been an increase in investments for special studies and litigation, leading technology, public relations and community involvement to better understand local issues and provide enhanced education and information. As always, serious consideration is given to the annual budgeting to provide maximum benefits to the shareholders and comfort to the analysts who rate their stocks.

It's becoming common for companies to initiate special studies to provide federal regulators with facts to counter environmental protests, reviews and appeals. Oil and gas firms are also spending more money in litigation to protect their rights to develop leases.

Additionally, companies are increasing their up-front spending on new technology. Where seasonal limitations have been imposed because of surface damages affecting breeding or wildlife winter habitat, creative solutions exploiting some of the newest pad and drilling technologies are being deployed.

Greg McMichael, consultant and previous industry analyst at A.G. Edwards, says, "Delays in development hold valuations down. Any slowdown—whether it is caused by a regulatory delay, new law, new process, ESA listing, new environmental consideration—is considered negative from an investor or shareholder perspective. It means a company is less likely to meet its projected revenue, thus reducing the returns to shareholders and stock prices."

He suggests blending the actual science and operations of development with the financial considerations in the marketplace requires a balancing act. A company has to be optimistic about its future drilling and development programs, but at the same time remain cautious so it meets its financial targets.

Nonetheless, at prices of \$10 or more for every thousand cubic feet of gas, and more than \$60 per barrel of oil, there are strong incentives to drill. While development in the new era may require more time and dollars to recover the reserves, the economic gains outweigh the costs.

"Any slowdown—whether it is caused by a regulatory delay, new law, new process, ESA listing, new environmental consideration— is considered negative from an investor or shareholder perspective."
—Greg McMichael, consultant

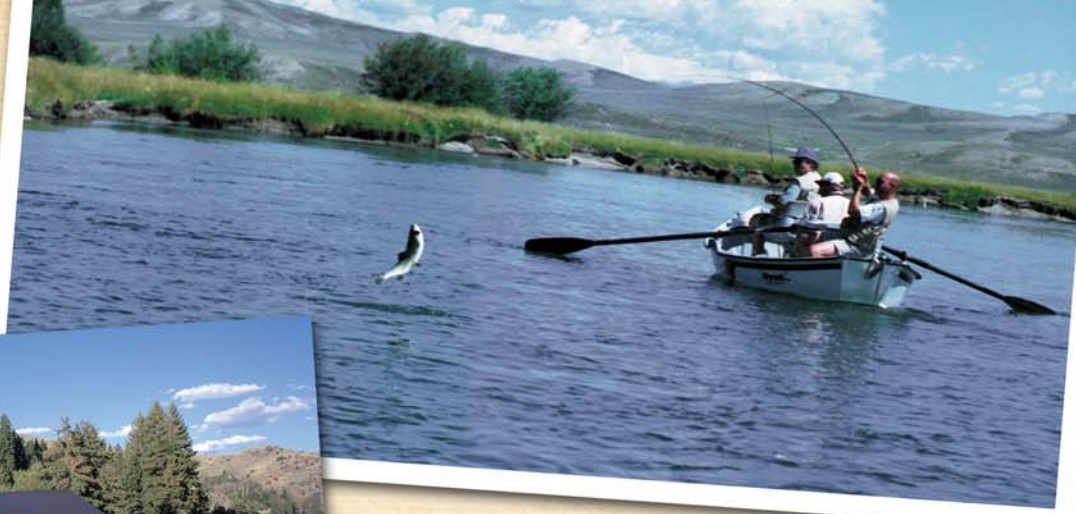
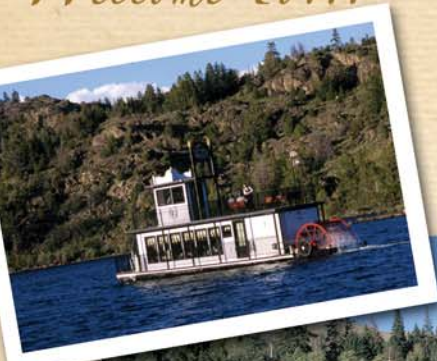
Ron Wirth, director of investor relations with Western Gas Resources, says his firm will work through the issues and nothing is at a magnitude that will stop them.

"If you are a company that understands the regulatory pitfalls, you can work around it. We spend a lot of time and money doing just that. It is just something to overcome," Bill Barrett's Zavdil says.

The risk of finding reserves used to be the main business concern of oil and gas operators, but today risk is shifting to concerns around the certainty, consistency and finality of the regulatory process. The rising price of gas pairs well with the new evolving risk factors, because it keeps the market alive.

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